MORE THAN A WOMAN'S ISSUE: MEETING MENSTRUATORS' PRACTICAL AND STRATEGIC MENSTRUAL HEALTH NEEDS IN HUMANITARIAN PROGRAMMES

Georgia Isabella Hales

Submitted in accordance with the requirements for the degree of

Doctor of Philosophy

The University of Leeds

School of Civil Engineering

January 2025

DECLARATION OF AUTHORSHIP

I confirm that the work submitted is my own, except that which has formed part of jointly-authored publications. The contributions of myself and other authors has been explicitly indicated below. I confirm that appropriate credit has been given within the thesis where reference has been made to the work of others.

I opted for an alternative format thesis, as I wanted to publish the chapters as papers so that they are accessible to humanitarian researchers, practitioners, and policy makers. This also indicates that they are a significant contribution to existing literature. Each chapter has either been published or is currently under review for publication. Accordingly, it was appropriate to submit a 'thesis by publication'. The three publications, which form the main empirical chapters of the thesis, are outlined below, along with the contributions of the authors:

Paper 1: Hales, G., Hutchings, P., Roelich, K., Das, M., Machado, A., Bonucci, D., Salem, F. 2024. Centring participant experience: a realist evaluation of a menstruator-friendly facility design project in a refugee settlement, Lebanon. BMC Women's Health 24, 170.

The study protocol was shaped and agreed by all authors. Hales collected data from programme staff, and carried out analysis, synthesis, and all text writing. Supervisors Hutchings, Roelich, and Das contributed to research design and thorough reviews of paper drafts. Research partners Machado, Bonucci, and Salem contributed to coordination, contextual and programme understanding, and ensured research relevance. Salem also conducted data collection with programme participants and acted as translator for data collected from field staff by Hales. All authors reviewed the paper before submission.

Paper 2: Hales, G., Hutchings, P., Roelich, K., Das, M., Akram, N. Begum, S. Sultana, Z. What influences non-menstruator attitudes and behaviours towards menstruation among Rohingya refugees in Bangladesh? A quantitative analysis. Currently 'under review' - submitted to PLOS One [August 2024].

The study protocol was shaped and agreed by all authors. Hales developed the survey and carried out 10 survey questionnaires for refinement alongside World Vision data collectors and Sultana. Once refined, the data collectors carried out the rest of surveys overseen by Sultana. Hales carried out analysis, synthesis, and all text writing. Supervisors Hutchings, Roelich, and Das contributed to research design and thorough reviews of paper drafts. Research partners Akram, Begum, and Sultana contributed to coordination, contextual and programme understanding, and ensured research relevance. Begum and Sultana also coordinated and assisted with research dissemination, carried out by Hales. All authors reviewed the paper before submission.

Paper 3: Hales, G., Hutchings, P., Roelich, K., Das, M., Akram, N. Begum, S. Sultana, Z. Influencing non-menstruator attitudes and behaviours towards menstrual health among Rohingya refugees in Bangladesh: A realist evaluation. Currently 'invited to revise and resubmit' - PLOS Water [January 2025].

The study protocol was shaped and agreed by all authors. Hales collected data from programme staff, and carried out analysis, synthesis, and all text writing. Where Hales was unable to collect data from programme participants, she trained World Vision data collectors on conducting realist interviews. Supervisors Hutchings, Roelich, and Das contributed to research design and thorough reviews of paper drafts. Research partners Akram, Begum, and Sultana contributed to coordination, contextual and programme understanding, and ensured research relevance. Sultana acted as translator for data collected from programme staff and oversaw interviews conducted by data collectors. Begum and Sultana also coordinated and assisted with research dissemination, carried out by Hales. All authors reviewed the paper before submission.

This copy has been supplied on the understanding that it is copyright material and that no quotation from the thesis may be published without proper acknowledgement.

The right of Georgia Isabella Hales to be identified as author of this work has been asserted by her in accordance with the Copyright, Designs and Patents Act 1988.

© 2025 The University of Leeds and Georgia Isabella Hales

ACKNOWLEDGEMENTS

First and foremost, I'd love to thank Barbara Evans for introducing me to the wonderful world of WaSH. Secondarily, to her and the Water-WISER management team for bringing it into being. Many days of these past four years I've stopped to think how lucky I am to be a part of this group. I've enjoyed it more than I could have imagined. Special mention to James McKay - the cat herder of Water-WISER - thank you for remaining patient with all of us despite being inundated with ridiculous questions and requests every day. Your wacky stories have been a delight each Wiser meet up.

I think I heard somewhere that it takes 100 people to complete one PhD and in my experience, this couldn't be truer. Two of the biggest reasons people drop out of their PhDs is a poor supervisory team and isolation. Needless to say, I experienced quite the opposite of these two things.

I could not be more grateful to Paul and Katy, my PhD parents. I do not know if they cleverly happened to figure out exactly the type of supervision style I needed or it was just a lucky match, but the balance of guidance and autonomy they gave me was perfect in making me feel supported but also able to develop confidence in myself as an independent researcher. Mahua thank you for always cheerleading me on and reminding me to take time to look after myself. It's been great to learn from all of your immense knowledge and talents as academics, and simultaneously to like you as people. My supervision meetings quickly became something to look forward to, rather than dread.

A big part of why my PhD experience was so enjoyable was working with my project partners. Thanks to Farah who became a friend over Teams calls; I was so happy we could meet in Leeds after I wasn't able to come to Lebanon. Nowshad Bai, you were so generous with your time and efforts to help me settle into Cox's Bazar, sorry I'm not there to do the same for you in Leeds, though it seems like you're getting on very well without my help. Though a Wiser and not a research partner – Mahbub thanks for welcoming me into your home in Dhaka and Mohine for the best Bangladeshi food. To the dream WaSH team Zahida Apa, Tuni Apa, Milon Da and Injamam Bai. You made me feel so welcome in Cox – this experience would not have been the same without your kindness, generosity, and our open and honest conversations. Shajeda Apa thanks for the opportunities you've given me – you're the coolest. To the World Vision office for the all the cha and the chats. And a massive thanks to the World Vision data collectors. You worked so hard and did such a fantastic job – a big piece of this PhD is yours! I feel like I also have to thank Megh – she's the coolest kid I've ever met. Miss you all.

Starting the PhD in Leeds during COVID lockdown was of course strange. Thanks to my first year housemates Harri and Jake for making this experience actually fun with living room discos, mushroom foraging, and tinnies on the MVT. Also to Kiwi's Best Mates – living in Brooky for my second year was a dream. For the last two years, I'll have to thank Cousin James for allowing me to live in his flat in London for mates rates - it's been a safe haven amongst all the chaos. And thanks to Evie for making living together so fun and easy despite my being very busy very tired very stressed.

Everyone in Water-WISER you are all so fab! Love the new cohort and very sad not to get to spend more time with you. To Gin and Grace for being the best fairy godmothers of Water-WISER. I hope to be half as cool as you when I grow up. Grace please do not eat Chicken Georgia. To Richard for our online morning meditations. To the Wiser Witches – our coven meetings have been very special through tricky times. Leonie, Jonathan, and Ruth for the writing retreats. Fun and ALSO productive, despite Paul thinking we'd just sit around drinking (both can be done). The LGBTQ+ members of Wiser (aka LGBCDT). WWAIWG! This group has CHANGED ME. So happy for this space we made for ourselves. I trust we will continue to meet as people finish their PhDs, and hopefully beyond. And to Leeds C20 – couldn't have asked for better people to start and end this with.

Lastly, my lovely family! Who have always let me choose my own way and supported me in it.

I guess I should also thank myself. Well done me.

This work was supported by the UKRI Engineering and Physical Science Research Council (EPSRC) through a Ph.D. studentship as part of the EPSRC Centre for Doctoral Training in Water and Waste Infrastructure and Services Engineered for Resilience (Water-WISER). EPSRC Grant No. EP/S022066/1.

ABSTRACT

Poor access to menstrual health is a hindrance to gender equity. Experts now define menstrual health beyond the practical needs of appropriate materials, water, sanitation, and hygiene (WaSH) facilities, education, and healthcare, to address the strategic needs of reducing stigma and taboos and creating a supportive environment. Though a global need, inadequate menstrual health is exacerbated in humanitarian settings. Humanitarian guidance tells us that to address practical menstrual health needs practitioners must consult with those who menstruate, and to address the strategic needs, they must also engage those that do not menstruate. However, there is limited evidence- and context-based guidance on how to do this. To rectify this, I apply realist evaluations to two case studies: a project consulting Syrian menstruators on WaSH facility design in Lebanon, and a programme engaging Rohingya non-menstruators to become advocates of menstrual health in Bangladesh.

Realist evaluation is a theory-driven approach that allows us to understand the contextual factors necessary to establish that trigger the causal mechanisms leading to a programme's outcomes. To address menstruator's practical needs, I used this method to find the contextual factors and causal mechanisms that promote participant experience during a WaSH facility design project. These comprised individual (choices influencing and experience during participation), interpersonal (group dynamics and the role of non-menstruators), and organisational (expertise and knowledge, relationship to participants and cultural differences) factors. To address menstruator's strategic needs, realist evaluation uncovered the contextual factors and causal mechanisms that influence non-menstruator attitudes and behaviours towards menstruation. These incorporated individual (understanding and empathy towards health risks, recognising responsibility, and gaining confidence in the role), interpersonal (family responding well), community (religious framing from the Imam, community mind-set, safe spaces), and organisational (relationship to programme staff and community facilitators) factors.

The results of both evaluations give empirical evidence to humanitarian actors on the contextual factors to set up and the causal mechanisms to seek when implementing such programmes. If humanitarian actors can address menstrual health in a more holistic way that is contextually cognisant, they can address both the practical and strategic needs of menstruators. This is necessary for reducing the gender inequity created by poor menstrual health and our attitudes towards it.

CONTENTS

CHAPTER I 1

1 INTRODUCTION AND FRAMING LITERATURE 1

1.1 DEFINITIONS 1

1.2 OVERVIEW 1

1.3 RESEARCH AIM AND OBJECTIVES 2

1.4 KEY CONCEPTS FOR UNDERSTANDING THESIS 3

1.5 MENSTRUAL HEALTH IN HUMANITARIAN SETTINGS 5

1.6 PARTICIPATION IN HUMANITARIAN PROGRAMMES 8

1.7 GUIDANCE ON PARTICIPATION IN MENSTRUAL HEALTH PROGRAMMES 16

1.8 CONCLUSIONS FROM THE LITERATURE AND RESEARCH GAPS 21

1.9 REFERENCES 24

CHAPTER II 36

2 RESEARCH DESIGN AND POSITIONALITY 36

2.1 OVERVIEW 36

2.2 RESEARCH APPROACH 36

2.3 RESEARCH STRATEGY AND DESIGN: MULTIPLE CASE STUDY 41

2.4 STUDY SETTINGS 43

2.5 DATA COLLECTION AND ANALYSIS 45

2.6 ETHICAL CONSIDERATIONS 47

2.7 POSITIONALITY 49

2.8 REFERENCES 53

CHAPTER III 59

3 CENTRING PARTICIPANT EXPERIENCE: A REALIST EVALUATION OF A MENSTRUATOR-FRIENDLY FACILITY DESIGN PROJECT IN A REFUGEE SETTLEMENT, LEBANON 59

3.1 ABSTRACT 59

3.2 RESEARCHERS' REFLEXIVITY AND POSITIONALITY STATEMENT 59

3.3 BACKGROUND 60

3.4 METHODS 62

3.5 RESULTS 65

3.6 DISCUSSION 70

3.7 LIMITATIONS 73

3.8 CONCLUSION 73

3.9 ETHICS 74

3.10 REFERENCES 75

CHAPTER IV 78

4 WHAT INFLUENCES NON-MENSTRUATOR ATTITUDES AND BEHAVIOURS TOWARDS MENSTRUATION AMONG ROHINGYA REFUGEES IN BANGLADESH? A QUASI-EXPERIMENTAL, SINGLE-ARM PRE-POST STUDY (NON-RANDOMIZED), USING REPEATED MEASURES FROM THE SAME PARTICIPANTS (N = ~150) BEFORE AND AFTER A MENSTRUAL HEALTH INTERVENTION DELIVERED BY WORLD VISION 78

4.1 ABSTRACT 78

4.2 DATA SHARING, FUNDING, AND CONFLICTS OF INTEREST, REPORTING 79

4.3 INTRODUCTION 79

4.4 METHODS 80

4.5 RESULTS 84

4.6 DISCUSSION 91

4.7 LIMITATIONS AND POSITIONALITY 96

4.8 CONCLUSION 97

4.9 SUPPLEMENTARY MATERIAL 98

4.10 REFERENCES 99

CHAPTER V 103

5 INFLUENCING NON-MENSTRUATOR ATTITUDES AND BEHAVIOURS TOWARDS MENSTRUAL HEALTH AMONG ROHINGYA REFUGEES IN BANGLADESH. A REALIST EVALUATION 103

5.1 ABSTRACT 103

5.2 INTRODUCTION 104

5.3 METHODS 105

5.4 RESULTS 109

5.5 DISCUSSION 122

5.6 CONCLUSION 127

5.7 REFERENCES 129

CHAPTER VI 133

6 DISCUSSION 133

6.1 COMPARATIVE AND EMPIRICAL CONTRIBUTIONS 134

6.2 CASE STUDY COMPARISONS 136

6.3 PRACTICAL IMPLICATIONS 140

6.4 THEORETICAL CONTRIBUTIONS 143

6.5 REFLECTIONS ON METHODS 145

6.6 WIDER INSIGHTS: DEVELOPMENT TO HUMANITARIAN SECTOR 147

6.7 LIMITATIONS 149

6.8 FUTURE RESEARCH 149

6.9 REFERENCES 151

CHAPTER VII 155

7 CONCLUSION 155

APPENDICES 157

8 APPENDIX A – SUPPLEMENTARY MATERIAL FOR CHAPTER 3: JUSTIFICATIONS FOR END-USER CONSULTATION IN MENSTRUAL HEALTH PROJECTS IN HUMANITARIAN SETTINGS, WITH CORRESPONDING QUOTES 157

9 APPENDIX B - INITIAL PROGRAMME THEORIES FROM REALIST INTERVIEWS WITH HUMANITARIAN ACTORS ENGAGING ROHINGYA NON-MENSTRUATORS IN MENSTRUAL HEALTH 159

10 APPENDIX C – ETHICAL CLEARANCE FOR LEBANON CASE STUDY 183

11 APPENDIX D – ETHICAL CLEARANCE FOR BANGLADESH CASE STUDY 184

12 APPENDIX E – EXPLANATORY STATEMENT, CONSENT, AND CONFIDENTIALITY FORM 185

13 APPENDIX F – EXAMPLE OF CODING QUOTES DURING PROGRAMME THEORY DEVELOPMENT 187

14 APPENDIX G – KII QUESTIONS FOR PROJECT MANAGERS CASE STUDY ONE............................203

15 APPENDIX H – PROFORMA FOR FGDS WITH MENSTRUATORS CASE STUDY ONE....................205

16 APPENDIX I – PROFORMA FOR FGDS WITH NON-MENSTRUATORS CASE STUDY ONE.............207

17 APPENDIX J – KIIS WITH PROGRAMME STAFF CASE STUDY TWO 208

18 APPENDIX K – INTERVIEW QUESTIONS WITH SURVEY PARTICIPANTS.......................................211

19 APPENDIX L – SURVEY QUESTIONS CASE STUDY TWO..213

LIST OF FIGURES

Figure 1 - Research questions, objectives and corresponding chapters 2
Figure 2 - The Socio-Ecological Model levels used within this thesis 9
Figure 3 - Jagosh, 2019, taken from his course: coding, configuring, and conveying in realist analysis 37
Figure 4 - Context-Mechanism-Outcome configurations within realist evaluation 37
Figure 5 - Activities of the Water-Wiser Academic Inequalities Working Group 51
Figure 6 - Context-Mechanism-Outcome Configurations of the refined programme theory 72
Figure 7 - ANOVA comparison of means for contextual factors for doers and non-doers - *p≤.05, **p≤.01, ***p≤.001. n = 149 88
Figure 8 - ANOVA comparison of means – doer and non-doer - *p≤.05, **p≤.01, ***p≤.001. n = 149 89
Figure 9 - ANOVA comparison of means – baseline and endline - *p≤.05, **p≤.01, ***p≤.001. n = 149 at baseline, n= 145 at endline 90
Figure 10 - Summary of refined programme theories within context-mechanism-outcome configurations 121
Figure 11 - How initial programme theories and RANAS elements relate to and inform refined programme theories 122
Figure 12 - Research questions, objectives, and their corresponding chapters of the thesis 134
Figure 13 - summary of initial programme theories within context-mechanism-outcome configurations 175

LIST OF TABLES

Table 1 - JMP Service Ladder Definitions for Water, Sanitation, and Hygiene 4
Table 2 - Aspects of menstrual health taken from Hennegan et al. 2021 definition unpacked 1
Table 3 - Current barriers to menstrual health in humanitarian settings from the literature 5
Table 4 - References of menstruator participation in key humanitarian MHM guidelines 17
Table 5 - References of non-menstruator participation in key humanitarian MHM guidelines, adapted from Evans 2019 19
Table 6 - Pros and cons of different behaviour change techniques used in Water, Sanitation, and Hygiene programmes 39
Table 7 – Contextual comparisons of the two case studies 43
Table 8 - Number of interviewees and focus group discussion participants 63
Table 9 - Behaviour change techniques targeting different psychosocial factors 81
Table 10 - Sample size calculation using two statistical power calculations 82
Table 11 - Demographics – baseline doers, non-doers and overall 84
Table 12 - Multiple linear regression – contextual factors - Adjusted R^2 = 0.483 N=149, asterisk* = p<0.05. All factors are on a Yes/No =1/0 scale apart from age which is on an interval scale 86
Table 13 - Multiple linear regression – RANAS psychosocial factors - Adjusted R^2 = 0.595, N=149, asterisk = p ≤0.05* 86
Table 14 - Demographics of the 20 non-menstruator Rohingya interviewees 106
Table 15 - Chapter, topic, contribution and paper status 133
Table 16 - Comparing thesis results with guidance on consulting menstruators in menstrual health programmes from Table 4 141
Table 17 - Comparing thesis results with guidance on engaging non-menstruators in menstrual health from Table 5 142
Table 18 – Justifications for end-user consultation in menstrual health projects in humanitarian settings, with corresponding quotes 157

ABBREVIATIONS

ANOVA	Analysis of Variance
BCT	Behaviour Change Technique
BRC	British Red Cross
CDT	Centre for Doctoral Training
CLTS	Community-Led Total Sanitation
CMO	Context-Mechanism-Outcome
ELRHA	Enhancing Learning and Research for Humanitarian Assistance
FGD	Focus Group Discussion
FIGO	International Federation of Gynaecology and Obstetrics
GAD	Gender and Development
GBV	Gender Based Violence
GMMG	Global MHH Monitoring Group
ICDDRB	International Centre for Diarrheal Disease Research, Bangladesh
IDP	Internally Displaced Person
IFRC	International Federation of Red Cross and Red Crescent Societies
IPT	Initial Programme Theory
ISIS	Islamic State of Iraq and Syria
JMP	Joint Monitoring Programme
KII	Key Informant Interview
LRC	Lebanese Red Cross
MDG	Millennium Development Goal
MH	Menstrual Health
MHH	Menstrual Health and Hygiene
MHM	Menstrual Hygiene Management
NFI	Non-Food Item
NGO	Non-Governmental Organisation
PCOS	Polycystic Ovaries
PMDD	Pre-Menstrual Dysphoric Disorder
PT	Programme Theory
RANAS	Risks, Attitudes, Norms, Abilities and Self-regulation
SDG	Sustainable Development Goal
SRH	Sexual and Reproductive Health
TOR	Terms of Reference
UK	United Kingdom
UN	United Nations
UNHCR	United Nations High Commissioner for Refugees

UNICEF	United Nations Children's Fund
US	United States
WASH	Water, Sanitation, and Hygiene
WHO	World Health Organisation
WID	Women in Development
WV	World Vision
WWAIWG	Water-WISER Academic Inequalities Working Group

CHAPTER I

INTRODUCTION AND FRAMING LITERATURE

1.1 DEFINITIONS

I use the term 'menstruator' to denote people who have the ability to menstruate and 'non-menstruator' to denote those who do not to be inclusive of transgender, non-binary, and gender non-conforming persons. Though using dichotomous language to define global power and location differentials can be unaccommodating, I use the terms 'Majority World' and 'Minority World', as coined by Bangladeshi activist Shahidul Alum (2008), to highlight how a small group of countries whose decisions affect the majority of the world, represents only a small portion of humanity.

1.2 OVERVIEW

The first year of the PhD was intended for us to design our research proposals. I spent the year speaking to different on-the-ground practitioners asking what they thought the current research needs were. I then started to look for project partners who had research gaps I could fill. Consequently, both research projects were needs-based, where the project partners identified the research gaps I addressed as priorities.

Menstruation is a natural biological process within the reproductive cycle. Yet the stigma and silence the global community has created around it means that many people can't access what they need to manage it properly. A lack of or inappropriate solutions may cause shame, stress, exhaustion, fear, embarrassment, stigma, loss of dignity, and Gender-Based Violence (GBV); since Menstrual Hygiene Management (MHM) requires privacy, menstruators often choose to use WaSH facilities at night, leaving them susceptible to attack and sexual assault (House 2019). Since this is experienced by women and some gender diverse persons, the experiences add to upholding gender inequity. Though a global issue, menstrual needs are sorely neglected in humanitarian settings. Despite Menstrual Health and Hygiene (MHH) starting to be mentioned in humanitarian guidance from 2004 (in the Sphere standards), only from 2016 (in the IRC toolkit) did it start to recognise that to meet menstruator's practical needs in suppling culturally appropriate materials and WaSH facilities humanitarian actors need to consult with people who menstruate. More recently has guidance suggested that to meet strategic needs of challenging menstrual stigmas actors need to engage both those that do and do not menstruate in menstrual health dialogue. Yet evidence-based and contextually cognisant direction is still lacking. In this thesis, I provide empirical evidence to inform humanitarian programming to address both practical and strategic menstrual health needs.

1.3 RESEARCH AIM AND OBJECTIVES

Aim: *To address menstruators' practical and strategic menstrual health needs in humanitarian programmes by understanding how to involve people that do and do not menstruate in a contextually cognisant way.*

The first step of the research was to understand the gaps in current humanitarian guidance and academic literature. What emerged from the critical analysis of current guidance was the instruction to engage people that menstruate in the design of menstruator-friendly facilities to address practical needs and the necessity to engage those that do not menstruate in improving the population's menstrual health in order to address strategic needs. What was missing was evidence-based guidance of how to do this. Although initially wanting to address both these gaps within one case study, in the first case study non-menstruators were largely supportive of the project and their family's participation in it. Consequently, theories surrounding this aspect could not be tested. This gave way to the second case study, which aimed at exploring non-menstruator attitudes and behaviours towards menstruation in a context where the actions of non-menstruators and social dynamics of the community greatly impinged on menstruators' access to menstrual health requirements. Figure 1 provides the research questions, objectives and corresponding chapters that address them. Following this, I unpack the objectives and their contribution to novel research.

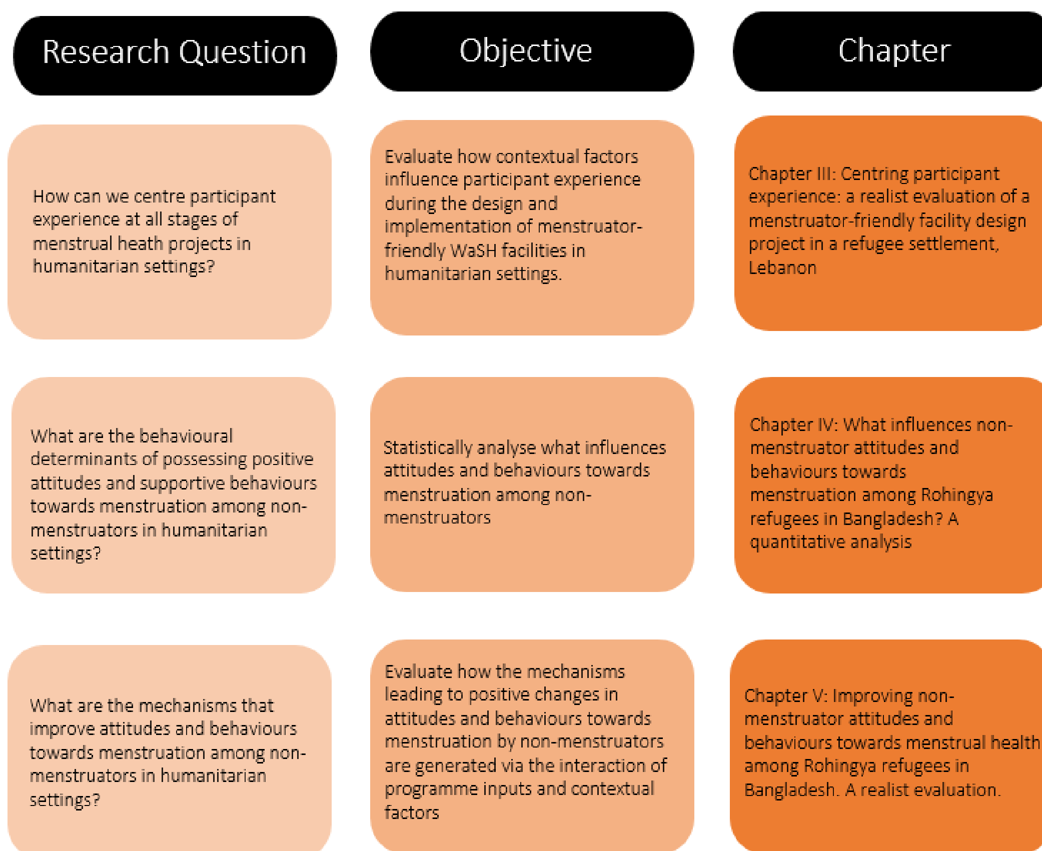


Figure 1 - Research questions, objectives and corresponding chapters

OBJECTIVE 1

A large understanding from the literature and guidance was that practitioners need to engage those who menstruate in the design of facilities and services so that they can be culturally and personally appropriate. What is missing is evidence of how to do this in a way that considers the experience of the participant. I applied a realist evaluation to a project that engages menstruators in the design of such facilities to understand which programme inputs and contextual factors are necessary to promote a positive participant experience. To date there has not been research to evaluate the contextual factors, which complement the inputs of a menstruator-friendly WaSH facility design project to promote a positive participant experience. This is necessary to give contextual grounding to guidelines, which are set out to be universal.

OBJECTIVE 2

After completing the second objective based on menstruators' practical needs with the first case study, I turned my attention to menstruators strategic needs through engaging non-menstruators in menstrual health in a second case study. I used the RANAS behaviour change approach to develop a baseline and endline survey to be conducted before and after an intervention aiming to bolster positive attitudes towards menstruation and encourage supportive behaviours towards menstruators among non-menstruators. By statistically analysing this data, I was able to uncover which of these factors were determinants of the desired attitudes and behaviours. To date there has not been a quantitative analysis to understand the contextual and psychosocial determinants of non-menstruator attitudes and behaviours towards menstruation or menstruators. This knowledge is necessary if practitioners are to effectively address negative attitudes or behaviours, which prevent menstruator access to menstrual health.

OBJECTIVE 3

The statistical analyses indicated the contextual and psychosocial factors that had a significant relationship with possessing positive attitudes and behaviours towards menstruation. What was then necessary was to evaluate the impact of the intervention and how it might be transferred to other contexts by identifying causal mechanisms and the effect of context. To do this I needed to develop initial programme theories from the statistical analyses and KIIs with programme staff. I then was able to test them through in-depth realist interviews with non-menstruators themselves. To date there has not been research exploring how non-menstruator attitudes and behaviours towards menstruation and menstruators are changed during menstrual health programmes.

1.4 KEY CONCEPTS FOR UNDERSTANDING THESIS

This section outlines the key concepts used throughout the thesis. Menstrual health is a sub-sector of Water, Sanitation, and Hygiene (WaSH). Though it also relates to gender, health, human rights, and other disciplines, I come from a WaSH background so much of the framing will be from this perspective. It is

impossible to discuss menstrual health without considering gender and its implications for gender equality, which I touch upon briefly. This leads me on to discuss the Socio-Ecological Model - a framework I use within the thesis. I also give an outline of the umbrella term 'humanitarian settings'. I then offer an overview of participation within humanitarian programming. Lastly, I provide a summary of the call for menstruator and non-menstruator participation within humanitarian guidelines.

WATER, SANITATION, AND HYGIENE

Adequate access to WaSH is necessary for maintaining health, dignity, and prosperity of all individuals. There are still 2.2 billion people without access to safely managed drinking water services, 3.5 billion without safely managed sanitation services, and 2 billion without basic handwashing facilities (JMP 2021). WHO (2024a) estimates that 1.4 million people die each year because of this lack of access to WaSH services. Cognisant of this issue, water and sanitation was included in the Millennium Development Goals (MDGs) in 2000, calling for monitoring of the provision of domestic water and sanitation through a harmonised global methodology. It was listed as part of MDG 7: Ensure Environmental Sustainability, aiming to halve the proportion of people without sustainable access to safe drinking water and basic sanitation by 2015. Following this in 2002, access to water (including for sanitation and hygiene purposes) was confirmed as a human right in international law through General Comment 15. Though the world met the MDG target for drinking water, progress was uneven across regions, between urban and rural areas, and between richer and poorer persons (WHO 2018). While the MDGs concentrated largely on so-called 'developing' countries, the 2015 Sustainable Development Goals (SDGs) succeeding them took human rights into consideration and aimed to reach the most marginalised populations among all nations – such as those living in refugee camps. The SDG for water and sanitation consisted of eight targets each with their own indicators. Although the target for sanitation and hygiene included 'paying special attention to the needs of women and girls', there was no explicit mention of menstrual health or hygiene (UN 2015). WHO and UNICEF monitor these indicators through their Joint Monitoring Programme (JMP 2015), developing 'ladders' for assessing access to WaSH services, as follows:

Table 1 - JMP Service Ladder Definitions for Water, Sanitation, and Hygiene

WASH ELEMENT	NONE	UNIMPROVED	LIMITED	BASIC	SAFELY MANAGED
DRINKING WATER	River, dam, lake, pond, stream, canal or irrigation canal	Unprotected dug well or unprotected spring	Improved source* for which collection time exceeds 30 minutes for a roundtrip including queuing	Improved source, provided collection time is not more than 30 minutes for a roundtrip including queuing	Improved source accessible on premises, available when needed and free from faecal and priority chemical contamination

** Have the potential to deliver safe water by nature of their design and construction, and include: piped water, boreholes or tubewells, protected dug wells, protected springs, rainwater, and packaged or delivered water*

SANITATION	Disposal of faeces in fields, forests, bushes, open bodies of water, beaches and other open spaces or with solid waste	Pit latrines without a slab or platform, hanging latrines or bucket latrines	Improved facilities** shared between two or more households	Improved facilities which are not shared with other households	Improved facilities not shared with other households and where excreta are safely disposed of in situ or removed and treated offsite

**Designed to hygienically separate excreta from human contact, and include: flush/pour flush toilets connected to piped sewer systems, septic tanks or pit latrines; pit latrines with slabs (including ventilated pit latrines), and composting toilets

HYGIENE	No handwashing facility on premises	N/A	Handwashing facility*** lacking soap and/or water at home	Handwashing facility with soap and water at home	N/A

***May be fixed or mobile and include a sink with tap water, buckets with taps, tippy-taps, and jugs or basins. Soap includes bar soap, liquid soap, powder detergent, and soapy water but does not include ash, soil, sand or other handwashing agents.

Though the SDGs may be responsible for some improvements in global access to WaSH services, there are some elements that are inherently neo-colonial. They have been criticised for private sector advancement in the name of Human Rights, imposing neo-colonial and neoliberal discourses, a lack of universality, and an imbalance of decision-making power between Majority and Minority World countries (Sharma 2021, Langan 2018). Many papers have also critiqued the indicators for their high potential for bias. Bartram et al. (2014) discuss the many ways in which this can occur, some resulting from marginalised communities being excluded from censuses, differences in interpretations of indicators, or socially desirable response bias wherein respondents give whichever response they believe an interviewer wants to hear. The issue with this is that the indicators often 'convey an aura of objective truth' in which direct comparisons can be made even though these 'simplified numerical forms are superficial, often misleading, and very possibly wrong' (Merry 2011). Thus it is illogical to have universal indicators when countries are not directly comparable (Goodwin 2018). For example, due to differences in geographies, climates, and infrastructural capacities, a piped water supply might be considered safely managed in a dense urban area of a high-income country whereas a protected spring may be the safest option in a rural area of a low-income country. Moreover, as Vedachalam et al. (2016) write, the indicators often rely on the category of infrastructure rather than the quality of service, meaning that improved water sources are not necessarily safe, for example. This skews comparisons if one country has higher access levels but poorer quality of services. The United Kingdom (UK) is a prime example where, though we claim to have above 99% population coverage with at least basic access to water and sanitation, many are not able to pay their water bills, there are closures of public toilets which are necessary for the rising levels of homeless persons to access basic WaSH, and many are entering menstrual hygiene poverty (Sylvester et al. 2023, Briggs 2021).

All this being said, the JMP have been forthright about the limitations of the indicators data and any comparisons between countries.

Another issue is that Minority World countries are generally celebrated for their level of coverage with a low level of scrutiny. For example, in 2021 the JMP developed indicators for monitoring menstrual health in household surveys. Yet, of the 42 countries the JMP has collected menstrual health data on, none are from Minority World countries. These indicators were awareness of menstruation before menarche (first menstruation), use of menstrual materials, access to a private place to wash and change while at home, and participation in activities during menstruation, such as school, work and social activities (JMP 2021). Since this, the Global MHH Monitoring Group (GMMG) – an initiative supported by the JMP - developed further indicators - totalling 21 – that look at materials, WaSH, knowledge discomfort/disorders, supportive social environment, menstrual health impacts, and policy (2022). Though the indicators include non-menstruators being educated about menstruation at school, the indicator for a supportive environment is limited to 'percentage of girls who have someone they feel comfortable asking for support' (GMMG 2022). There is no mention of addressing menstrual stigma or non-menstruators being involved in menstrual health. Additionally, the gendered language is binary and therefore may exclude gender diverse persons who menstruate.

GENDER

Gender is often conflated with sex, however sex is the differing biological and physiological characteristics of females, males, and intersex persons such as chromosomes, hormones, and reproductive organs. Gender is the socially constructed characteristics associated with the different sexes, including norms, behaviours, roles, and relationships between genders. This varies between societies and time. Though related, gender and sex are different to gender identity. Gender identity is someone's 'deeply felt, internal and individual experience of gender, which may or may not correspond to the person's physiology or designated sex at birth' (WHO 2024b). Since gender is a personal identity, there are infinite ways an individual can identify, making it not binary but a spectrum.

Gender produces hierarchical inequalities, largely against cisgender women and gender-diverse persons, though again, this varies between societies. The worst of this is the high level of violence these groups face based on sexism, misogyny, and transphobia. About one in three women worldwide have experienced either physical and/or sexual violence in their lifetime (WHO 2024b). Transgender persons are four times more likely to be victims of violent crime than cisgender persons (Flores 2021). When thinking about issues related to gender, it is also important to consider intersectionality, which is when someone is subject to multiple interacting systems of oppression. For example, if a woman is disabled, she may not only face discrimination for her gender e.g. her menstrual needs being overlooked, but also her disability e.g. also not having access to a disability-friendly toilet.

Though gender inequality largely discriminates against women and gender diverse persons, harmful gender norms around masculinity also affect cisgender men's health and wellbeing. For example, men are more likely to take health risks, perpetrate and be subject to violence, and not seek help for mental and physical health issues (WHO 2024b).

Gender is integral to consider when working in WaSH, hence the development of the JMP Measures and Indicators for Gender in WASH 2021. It influences people's access to services through restrictions on mobility; lack of access to decision-making power; lower literacy rates; discriminatory attitudes of communities; and lack of training and awareness amongst service providers on the needs and challenges of these groups (WHO 2024b). Caruso et al. (2017) write that it is not just the ownership of sanitation facilities that affects women's sanitation needs being met, but the gendered sociocultural and social environments in which they are (or are not) used. Therefore, programmes require not just the supplying of latrines, but transformative approaches that address environmental factors, which may act as barriers. However, this has not been happening. Caruso et al. (2024) recently conducted an important re-review of WASH trials to assess women's engagement in intervention delivery and research activities. Using the World Health Organization Gender Responsiveness Assessment Scale they found that all 133 interventions evaluated were gender unequal (36.7%) or gender unaware (63.3%). That every intervention indicated exploitative engagement highlights how sanitation programmes as they are currently being conducted are potentially hindering gender equality rather than supporting it. But, as Marphatia et al. (2025) write, sanitation programmes should not solely aim to 'do no harm' but be used as an opportunity to improve gender equality through the way it is understood, measured, designed and delivered.

To do this we need to understand the reality of the causes of gender inequalities and how programmes can target these. Kolipaka et al. (2025) make the important point that over the past few decades several gendered narratives have emerged that are widely circulated and continue to shape WaSH policy and practise without being interrogated. The three most dominant narratives they examine within their systematic review are that gender quotas enable women's active participation in water committees, that lack of household water facilities puts women at violence risk, and that improved water access leads to timesavings enabling economic empowerment. However, their findings revealed a discrepancy between these narratives and women's lived realities (Kolipaka et al. 2025). Reasons for this disparity were a lack of active participation or power redistribution when women were appointed positions of power, oversimplification of complex issues, reinforcing patriarchal controls, neglecting women's right to public spaces and male accountability, flawed assumptions, and ignoring intra-household dynamics or resource gaps (Kolipaka et al. 2025). Therefore, to ensure practitioners are targeting the right issues and in an effective way we need 'more context-sensitive, intersectional, and transdisciplinary approaches to water and gender… as well as re-centering the focus on structural inequalities and lived experiences' (Kolipaka et al. 2025). As these studies demonstrate, it is important to recognise that gender influences WaSH programmes at multiple levels from the personal to the societal.

THE SOCIO-ECOLOGICAL MODEL

The acknowledgement that the individual is affected by multiple interacting levels of influence led me to choose the Socio-Ecological Model as a framework on which to structure the research. It is depicted by nested circles that place the individual in the centre surrounded by different systems on various scales – see Figure 2. It can be adapted in different ways depending on the relevant systems within the programme of study. Within this thesis, I chose to include the individual, which may refer to feelings, demographical traits, and behaviours. The interpersonal, which refers to personal relationships, gender relations, and power dynamics. The community level, which includes leadership, culture, and social dynamics. And lastly, organisational, which refers to organisational structures, services, and systems.

It has been used widely in public health research as it provides a comprehensive framework for understanding multiple levels of influence on behaviours and outcomes of interventions (Kilanowski, 2017). It 'supports the idea that behaviours both affect and are affected by various contexts' and more than just individual choice (Scarneo et al. 2019, p.356). For example, the individual is affected by structural and systemic factors like access to MHM products, marketing, cultural norms, and policies. Additionally, it is a useful tool in developing theories of how programmes work as it allows evaluators to consider mechanisms that occur from the micro to macro levels. It provides an understanding that programme outcomes are not just influenced by the inputs, but the context in which they take place, such as community dynamics, or interpersonal relationships. It thus allows us to have a broader understanding of how programmes will transpire as it equips with an exhaustive idea of the influencing systems of a context. This is beneficial for either evaluating current programmes or designing new ones.

I chose the Socio-Ecological Model over other models such as the Health Belief Model or Theory of Planned Behaviour as they largely only focus on the individual (Janz & Becker 1984). Additionally, it looks beyond personal responsibilities to focus on structural and environmental determinants, which is especially relevant for addressing social determinants of health or behaviours influenced by context (Veer 2019). The Socio-Ecological Model is also easily adaptable to a large range of fields and to programmes of multiple sizes (as is the case in this thesis). This is also beneficial when working with multi-sectoral topics like menstrual health (Salihu 2019). The motivation for this research and its framing is based on gender and feminist theories. By emphasizing the role of structural and systemic barriers, which other models might overlook, it inherently speaks to the power dynamics and inequity relevant to the basis of this thesis (Henderson & Baffour 2015).

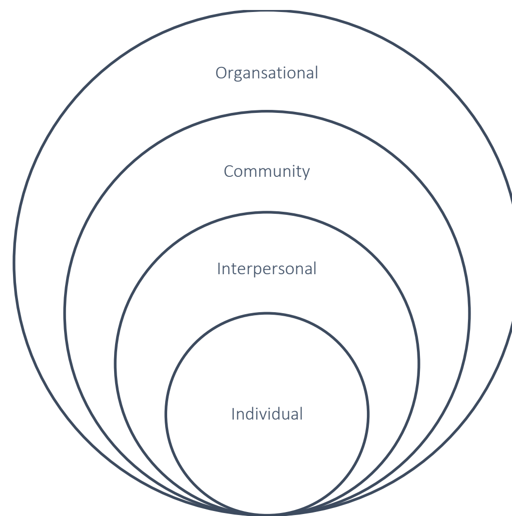


Figure 2 - The Socio-Ecological Model levels used within this thesis

MENSTRUAL HEALTH

Menstrual health is the complete physical, mental, and social wellbeing in relation to the menstrual cycle (Hennegan et al. 2021). Of the two billion people who menstruate, a quarter of them do not have the products and facilities necessary to manage their periods properly (World Bank 2022). Since poor menstrual health affects many aspects of someone's life, resolving it is 'fundamental to the equality, rights, and dignity of all individuals who menstruate' (Babbar et al. 2021, p.10). For instance, many global studies report that young menstruators start missing school or drop out completely once they begin their period due to a lack of materials, facilities, or information (Asumah et al. 2023; Vashisht 2018; Cotropia 2019; Miiro 2018). However, as seen, it was not included within the MDGs nor explicitly stated in the SDGs for health, gender equality or water and sanitation. Only now, at the 50th session of the Human Rights Council Panel (2022), is menstrual health being placed on the global health, education, human rights, and gender equality/equity agendas. Additionally, the World Health Organization (WHO) has now called for menstrual Health to be recognized, framed and addressed as a health and human rights issue, rather than just a hygiene issue (2022). Scholars have also developed a definition of menstrual health for policy, practise, and research demonstrating that it encompasses materials, facilities, education, healthcare, a supportive environment, and the choice to participate in daily activities (Hennegan et al. 2021).

Table 2 details each aspect of the definition and associates them to the JMP indicators and the Priority List of Indicators for Girls' Menstrual Health and Hygiene: Technical Guidance for National Monitoring developed by the London School of Hygiene & Tropical Medicine (LSHTM) 2022.

Table 2 - Aspects of menstrual health taken from Hennegan et al. 2021 definition unpacked

MH DEFINITION COMPONENT	JMP INDICATOR	LSHTM INDICATOR	DESCRIPTION
MATERIALS	Use of menstrual materials	% of girls who reported having enough menstrual materials during their last menstrual period. % of schools with menstrual materials available to girls in case of an emergency.	The way the global population thinks about and manages their periods differs through time and location. In ancient Greece, they wrapped lint around wood as a tampon, and Native Americans used moss and buffalo skins as pads (Kijowska, 2023). Companies are still experimenting with, adapting, and inventing new types of menstrual products, with the reasoning for purchasing different items evolving. More people are opting for reusable over disposable materials due to increasing environmental concerns, such as menstrual cups, for example. In many cultures, it is not acceptable or usual to insert something into the vagina, meaning menstrual cups and tampons are not commonly available. The reasoning for material choice may also depend on the available facilities. If there is no place to wash or dry reusable items, one may opt for something disposable. Period poverty is a concept denoting the inability to purchase menstrual products. Specific government policies can exacerbate this. For example, until January 2021 menstrual materials were considered 'luxury items' in the UK meaning people had to pay a 'tampon tax'. With the cost of living crisis, many UK-based menstruators have been unable to buy menstrual products due to 'hygiene poverty' (The Hygiene Bank 2024).
FACILITIES	Access to a private place to wash and change while at home	% of girls who reported changing their menstrual materials during their last menstrual period when at school. % of girls who changed their menstrual materials at school in a space that was clean, private, and safe during their last menstrual period. % of schools (primary/secondary) with improved sanitation facilities that are single-sex and usable (available, functional, and private) at the time of the survey.	Menstrual health is not just about the materials used to manage one's period. It also requires WaSH facilities that allow for washing, changing, drying, and disposing of those materials. The type of WaSH facilities one needs to manage their period varies widely depending on culture, society, personal preferences, and the type of menstrual materials being used. For instance, some cultures prohibit the sight of blood so any drains or bins have to be covered (Roxburgh 2020). It is important that facilities are 'menstruator friendly' meaning they are safe and comfortable to use and designed so that one is able to manage their period properly. This is not only relevant in the home, they are also required in the broader built environment such as public toilets, schools and workplaces. Because menstruation is stigmatised and secretive, many menstruators choose to use facilities or an outside space to wash and change their materials. This leaves them susceptible to GBV (Nunbogu and Elliot 2022).

		% of schools (primary/secondary) with improved sanitation facilities that are single-sex, usable (available, functional, and private), lockable from the inside, have covered disposal bins, and have discreet disposal mechanisms at the time of the survey. % of schools (primary/secondary) that have water and soap available in a private space for girls to manage menstruation.	
EDUCATION AND INFORMATION	Awareness of menstruation before menarche (first menstruation).	% of students (male/female) who have ever received education about menstruation in primary and secondary school. % of females who know about menstruation prior to menarche. % of females with correct knowledge of the fertile period during the ovulatory cycle. % of schools where education about menstruation is provided for students from age 9. Existence of pre-service or in-service teacher training about menstruation at the primary or secondary level. % of schools that have at least one teacher trained to educate primary/secondary students about menstruation. % of countries where national policy mandates education about menstruation at primary and secondary level.	The secrecy and shame around menstruation also means that many menstruators are not aware of what menstruation is by the time they enter menarche (their first period) if they are not taught about it at school or by other family members (Evans et al. 2022). This can be extremely distressing for young menstruators. What they may receive instead is incomplete or misguided information, which may continue to perpetuate certain stigmas. A common one is that menstruation is a disease or a curse (Gottlieb 2020). Not only is it important to learn about the physiology of the menstrual cycle and its role in reproduction for general life knowledge, this process also reduces stigma and negative perceptions of menstruation (Eyring et al. 2023). Menstrual education also refers to the practical information supplied to people to instruct them on how to manage their period safely and hygienically, where to buy products from, and how to use washing and disposal facilities. Formal menstrual education within the school curriculum is also important.

HEALTHCARE	Not included.	% of girls who report that they were able to reduce their menstrual (abdominal/back/cramping) pain when they needed to during their last menstrual period. % of girls who would feel comfortable seeking help for menstrual problems from a health care provider.	Each individual who menstruates can have a variety of different symptoms ranging from mood swings, to cramps, to insomnia. Menstruators tend to find ways of coping with these symptoms: painkillers, a hot water bottle, or taking time to care for their mental health. It is important that menstruators are aware of how these symptoms may affect them and how they can be managed, else they may impact their normal daily activities such as going to work or school. Some menstruators may experience more extreme symptoms such as dysmenorrhea (unusually painful cramps) or premenstrual dysphoric disorder (PMDD) which presents as depression that may be as severe as to cause the person to become suicidal. Not only is it important for menstruators to be able to access healthcare to alleviate these symptoms, unusual signs such as amenorrhea (missed periods) may be a sign of a more severe underlying health condition such as Polycystic Ovary Syndrome (PCOS) or endometrioses, which may reduce fertility. Thus, healthcare facilities or menstrual education should equip menstruators with the understanding of what is normal for their body so they can seek appropriate medical advice if abnormal changes occur.
SUPPORTIVE ENVIRONMENT	Not included.	% of girls who have someone they feel comfortable asking for support (advice, resources, emotional support) regarding menstruation.	It is not only the practical needs of menstrual health that need to be addressed but also the social environment in which people experience their periods (Rajagopal & Mathur 2017). The stigma and taboo surrounding menstruation is used to create a negative image of those who menstruate as dirty or shameful and menstruation as something not to be discussed (Peranovic and Bentley, 2017). As the majority of people who menstruate are cisgender women, this can be seen as a form of misogyny. It is frequently reported that at school, non-menstruators will tease those that menstruate, knowing that it is taboo and to try and acquire more information about it (Mason et al. 2017). This may be another factor leading to school absenteeism. As I have touched upon already, the use of facilities at night may leave menstruators susceptible to peeping, intimidation or GBV.
PARTICIPATION IN DAILY ACTIVITIES	Participation in activities during menstruation, such as school, work and social activities.	% of girls who report a menstrual period does not impact their day. % of girls whose class participation was not impacted by their last menstrual period.	In many societies, menstruators observe certain cultural practises, such as sleeping separately to their family, or not leaving the house, which may limit their ability to participate in important daily activities (Pandit et al. 2022). Some menstruators may choose to carry out these cultural practises, whereas others may be reprimanded if they do not (Hennegan et al. 2019). Any lack of power in decision-making, pooled with the threat of violence or exclusion has implications for many other human rights including education, work, and culture (Hennegan et al. 2021).

POLICY	Not included.	% of countries with policies or plans that include menstrual health and hygiene. National budget is allocated to menstrual health and hygiene; funds are dispersed to the schools in a timely and efficient manner.	Though not included within Hennegan et al.'s (2021) definition, policy is integral to the level of access menstruators face to each component of menstrual health. Hence its inclusion in the new priority indicators. From around 2010, many countries have adopted policies addressing menstrual needs (Alhelou et al. 2021). The biggest challenge to this remains menstrual stigma, leading advocates to seek 'tangible, concrete, and easily communicable entry points' such as the elimination of taxes on menstrual products (Alhelou et al. 2021). While this is still valuable, it risks 'cementing an overly narrow focus on tangible results' and 'inadvertently shuts opportunities for broader social change' (Alhelou et al. 2021). The current movement demands for a broader conceptualisation of menstrual needs, which must be translated into policy-making that frames menstrual health 'not as just an issue of WASH, infrastructure, or women's health, but as a gender justice issue' (Alhelou et al. 2021).

MENSTRUAL STIGMA

Delaney et al. (1988) write that taboos exist to protect human beings from the perception of danger. This may have been relevant before understanding the physiology of menstruation. For example, in a 1811 publication titled 'The Principles of Midwifery', British Doctor John Burns stated that menstruation is 'to be considered a disease' (Kijowska, 2023). Without an open discussion, these gaps in knowledge remain and ideas that menstruation is a disease, injury, punishment, or curse from God are instilled (Chang et al., 2013; Penakalapati 2009; Cheng et al., 2007). This means menstruation has long been considered taboo in many cultures and societies. The irony is not missed in that it is the taboo that leads to a threat to health through the perpetuation of misogyny, and limiting access to healthcare, facilities, and materials.

Though all individuals can harbour negative views on menstruation, Fromme and Emihovich (1998) found that perceptions of non-menstruators are one of the central elements that maintain menstrual myths, stigma, and taboo. Hence, this section largely talks about menstrual perceptions from the perspective of non-menstruators. One of the main opinions expressed by non-menstruators in various studies is that periods are 'shameful' and 'disgusting' (McHugh 2020, p.409-411). Participants from one United States (US) study thinking menstruation is 'gross and should be kept hidden' was also seen as a 'normal and acceptable male response'. (Allen et al. 2011, pp.151-152). One even 'essentialized his disgust as being inherently male', seeing the repulsion as the 'norm for most of the male race', it being just a 'typical guy thing' (Allen et al, 2011, pp. 147-148). Others may believe it happens 'for no reason at all… girls just do it and it is gross and there is no purpose to it' (Allen et al. 2011, p. 151). This aversion leaves the erroneous information to 'perpetuate the stigma' (Chang et al., 2012, p. 513).

Menstruation can be seen as a 'symbol of femaleness' so may indicate how a society views those who menstruate (Peranovic and Bentley, 2017, p. 113). Numerous studies have found that non-menstruators 'harbour largely negative attitudes' and 'stereotypical and uniformed' opinions on menstruation and menstruators (Peranovic and Bentley, 2017, p. 113; Chang et al., 2012, p.518). Peranovic and Bentley (2017) explain that 'negative views about menstruation… or the menstruating woman are related to negative views towards women generally, including sexism and hostility towards women' (p. 113). In short, negative views about menstruation are a vehicle for misogyny. Therefore, 'normalising menstruation is part of a broader agenda to normalise being a girl' (Wilson et al. 2018).

By the continual exclusion of non-menstruators from menstrual health discourse, the idea that menstruating individual's health issues are irrelevant to non-menstruators is created. Additionally, the stigma and taboo surrounding menstruation is upheld and society remains a place that is unaccommodating for menstruators and their needs. This generates the perpetuation of sexist stereotypes, menstruators missing their education, and the enforcement of gender roles, all of which contribute to preserving the gender gap, doing a disservice not only to the individual, but the whole of society (Williams, 2013). Thus 'the role of menstrual taboos in contributing to ongoing gender inequality cannot be underestimated' (Wilson et al. 2018). Dismantling such taboos is not only essential to ensure individuals can manage their period properly, but also to reduce sexism and misogyny.

MENSTRUAL STIGMA ACROSS CULTURES

Winkler et al. (2024) ruminate on how menstrual taboos and stigmas are largely talked about in the context of the Majority World perhaps with a presumption that they are not prevalent in the Minority World. They argue that menstrual stigma is universal, though its manifestations vary (Winkler et al. 2024). It is common for outsiders to conflate cultural and religious practises with societal stigma and to other or villainise such norms. For instance, when Western media sensationalised the practise of chhaupadi (menstrual seclusion) as it led to the death of one menstruator during a cold winter in Nepal (Ratcliffe 2019; Joshi 2022). But as outsiders it is impossible for Westerners to understand the nuances and meaning of such practises, which can be important and celebrated by the individual. In Trinidad, for example, Hindu women proclaim valuing their religious menstrual practises as part of their identity (Maharaj 2022). There are many different celebrations of menstruation across different cultures, where menstruation is seen in a positive light. In Japan it is tradition for the mother to prepare a meal called 'sekihan' of sticky rice and adzuki beans when her child gets their first period (Alzate 2020). The rest of the family is left to guess why they are eating it, the hint being the reddish colour of the dish. In Iceland the family make red and white cakes to symbolize the next stage of life (Ganguly 2021). And the Dagara people in Western Africa there is an annual festival to celebrate everyone who has entered menarche that year (Alzate 2020).

Yet Western menstrual taboo has influenced theories of indigenous menstrual customs, relying on settler colonial rhetoric to continue the politics of taboo (Risling Baldy 2017). Risling Baldy (2017) argues that 'the continued dismissal of Indigenous menstrual customs as primitive and/or oppressive of women is built from a settler colonial desire to make Indigenous knowledges obsolete and Indigenous ceremonies and cultures primitive remnants of the past' (p.22). Arvin et al. (2013) add that settler colonialism depends on social systems 'in which heterosexuality and patriarchy are perceived as normal and natural and in which other configurations are perceived as abnormal, aberrant, and abhorrent' (p.13). Risling Baldy (2017) offers the case of the Hoopa Valley Tribe where there was assumed indigenous menstrual taboo by Western researchers, to demonstrate there is actually none. Though impossible to be completely rid of bias, I aim

to present the research factually and impartially without conflating, exaggerating, or othering menstrual stigmas, which may be present in the populations of study.

HUMANITARIAN SETTINGS

To put our global humanitarian crisis in perspective I have looked at the trends over my 30-year lifetime. For the first 20 years of my life (1993-2013) the number of forcibly displaced people remained consistently between about 30-50 million people globally (UNHCR 2023). In the past 10 or so years, it has more than tripled to 117.3 million (UNHCR 2023). That's 1.4% of the global population. These numbers are made up of internally displaced persons (IDPs), refugees, asylum-seekers, and other people in need of international protection. People have to leave their homes for many reasons including conflict, violence, human rights violations, persecution, disasters, and the impact of climate change. With an increase in global conflicts and worsening effects of climate change, this is only predicted to get worse (Grandi 2024). Today's conflicts are complex, multifaceted, and too many to unpack here. But as a British person I will make the point that how Britain left its colonies – to unsupported, unstructured, and under resourced governments in charge of arbitrary regions containing many different cultures often with historical tension – is a large factor in many current conflicts (Cawley 2015). More recently, the UK and US can also be blamed for fuelling conflicts through military intervention and the sale of arms for example in Iraq, Afghanistan, Somalia, and Israel-Palestine (Stavrianakis 2022). A year on from the start of the Israeli genocide in Palestine and the UK is still selling arms to Israel (Florijancic 2025). Acknowledging this in my thesis means acknowledging my position of privilege to comment on but not be subject to living under unstable and violent conditions. It means taking an awareness of the context in which the populations of study are living in, and the programme staff are working under, understanding the constraints programmes may face and their priorities, which may not align with my research project. In terms of my positionality (which I discuss further in Chapter II), I hold inherent biases and have a mind which has been conditioned by colonialism, white supremacy, and is influenced by my lived experienced of being a white Westerner. I aimed to be reflexive in my thinking and approach, mainly through reading texts from Majority world researchers and scholars on unlearning biases, inequalities in global academia, and how to conduct research equitably such as 'Principles for increasing equity in WASH research: understanding barriers faced by LMIC WASH researchers' by Lue et al. (2023). This informed how I interacted with programme staff and research participants and influenced how I interpreted results, including the work being collaborative with the local programme partners.

Humanitarian settings are wide ranging and not explicitly defined but can encompass conflict-affected locations, natural hazard-driven disasters, complex emergencies, refugee or IDPs camps/settlements including in protracted crises, refugees and IDPs in urban settings (elrha 2024a). There are currently 123.2 million forcibly displaced people worldwide – that's 1.5% of the global population (UNHCR 2025). Of this, 30% are refugees; those who 'have fled their countries to escape conflict, violence, or persecution and have sought safety in another country' (UNHCR 2024). And of these, 20% live in camps (Calabria et al. 2022).

It is difficult to ascertain solid statistics on how long the average refugee spends living in a camp with many sources being contested (Devictor and Do 2017). In essence, the average refugee can spend years to decades living in a camp (Esses et al. 2011). Though important not to exclude displaced persons outside of camps, this thesis focuses on an informal tented settlement hosting Syrian refugees in Lebanon and Kutupalong refugee camp in Bangladesh hosting Rohingya refugees. Thus, when I refer to Humanitarian settings, I am largely referring to refugee camps/settlements. Detailed overviews of these settings can be found in Chapter II.

HUMANITARIANISM

Though having roots dating back to the 1800s, with the International Committee of the Red Cross (ICRC) being established in 1863, humanitarianism wasn't properly established until after World War II (ICRC 2025). The gravity of the war led to the formation of the United Nations with agencies specialised in addressing humanitarian crises like the United Nations High Commissioner for Refugees (UNHCR) and the United Nations Children's Fund (UNICEF). This period also saw an exponential rise in the number of aid agencies and Non-Governmental Organisations (NGOs), and humanitarian organisations, with over 200 organisations established in the four years following the war (Barnett 2011). This continued through the Cold War and the rise of globalisation.

Humanitarianism is the belief in the moral duty to provide help to people in distress, regardless of their identity or context. It is grounded in the values of humanity, impartiality, neutrality, and independence (Hammond 2015). Modern humanitarianism can be thought of as a structured system for the provision of aid to those in immediate danger (Barnett 2005). It covers a spectrum of activities designed to provide relief and support in various contexts, including emergency response e.g. providing food, water, and medical care, developmental humanitarianism e.g. education, economic stability and infrastructure, and advocacy and human rights protection e.g. promoting the rights and dignity of displaced persons (Bram & Vestergren 2012).

Despite its seemingly altruistic intentions, humanitarianism is highly criticised. A debate is continuing between old humanitarianism, based on neutrality and short-term, relief-based assistance, and new humanitarianism, which centres advocacy and development (Adami 2021). To its credit, new humanitarianism recognises that organisations often have to operate in highly politicised environments making neutrality difficult to sustain. Organisations often depend on donor funding, which can be irregular and driven by political interests e.g. neoliberalism. Moving away from short-term emergency relief towards longer-term development goals raises issues of paternalism in respecting local cultures and the difficulties of enforcing universal human rights. There are also questions around the efficiency, impact, and accountability of interventions, with cases where more harm than good is done. Spiegel (2017) feels that the 'humanitarian system is not just broke but broken' and calls for its complete restructuring (p.1). An example of shortfall in terms of service provision due to the structure of humanitarianism can be found

within the cluster approach. Adopted in 2005 as part of the broader Humanitarian Reform Initiative, different activities were divided into sectors designated agency, to enhance coordination, accountability, and resource allocation among (UNHCR 2023). However, one of their failings was that MHH got lost being both everyone and no-one's responsibility (Amadei 2023). I consider these criticisms of humanitarian structures when interpreting the results, especially when looking at the organisational level of the Socio-Ecological Model, to see if my findings align with this stance.

1.5 MENSTRUAL HEALTH IN HUMANITARIAN SETTINGS

It wasn't until the 2000s that humanitarian actors started to consider menstrual health in the humanitarian response, supplying families with hygiene kits including sanitary towels, soap, and underwear. However, this was rarely sufficient. In the DRC, for example, hygiene kits contained not even enough materials for one person to manage their period for one cycle (Brun and Michel 2009). Even more recently in 2016 did the humanitarian sector begin to think of menstrual health more holistically, recognising that it also requires facilities for washing, changing, drying, and disposing of materials and the provision of menstrual education and practical information. This manifested into the MHM in Emergencies Toolkit in 2017, and software and hardware MHM guidelines within the 2018 Sphere Standards for humanitarian action (Sommer et al. 2017; Sphere Association 2018).

BARRIERS TO MENSTRUAL HEALTH IN HUMANITARIAN SETTINGS

Though there is now comprehensive guidance, many barriers to menstrual health in these settings still exists, a lack of aid and attention to menstrual health among practitioners being the most significant. VanLeeuwen and Torondel (2018) conducted a literature review on MHM in emergency contexts between the years 2010 and 2018. In Table 3, I summarise their findings on the barriers to MHM in these settings with an adjacent column on barriers from the literature from then until 2024. Using search terms 'menstruation' and 'humanitarian' in Google Scholar, I found 16 relevant papers between 2018 and 2024 based on title screening. This overview does not account for the particular dynamics of the humanitarian setting and the culture of the people living through the emergency, though this is highly relevant to consider.

Table 3 - Current barriers to menstrual health in humanitarian settings from the literature

MENSTRUAL HEALTH COMPONENT	BARRIERS TO MENSTRUAL HEALTH IN HUMANITARIAN SETTINGS FROM 2010-2018	BARRIERS TO MENSTRUAL HEALTH IN HUMANITARIAN SETTINGS FROM 2019-2024
MATERIALS	Inadequate access to menstrual materials (absorbents, underwear, soap, storage). High product costs; limited subsidies or tax relief. Resource constraints and competing priorities.	In terms of access to sanitary materials, including underwear and soap, studies found there was a lack of provision as well as high taxes, meaning people struggled to afford them (Idris 2024). Additionally, some immediate disaster relief kits still do not consist of menstrual materials (Afzal et al. 2024). When

	Culturally or contextually inappropriate dignity kits. Poor sanitation infrastructure limits material use. Cultural norms, religion, and taboos restrict choice and management. Low awareness of MHM options. Socioeconomic barriers to product use. Misalignment between distributed and familiar products. Economic and environmental concerns. Limited access to sustainable options.	materials were distributed, menstruators were embarrassed to collect them and 'wished for a separate menstrual hygiene distribution centre staffed with women and men who would act professionally, so they could avoid embarrassment when picking up other supplies' (Hirani 2024, p.9). Aside from distribution, another common route of provision is through private sector markets, though this can be interrupted during emergencies and disasters.
FACILITIES	Inadequate WaSH facilities for private changing, washing, or disposal. Lack of gender-sensitive design. Limited privacy, space, and security in existing facilities. Absorbent products not always supported by available WASH infrastructure. Insufficient consultation with users on materials and facility design. Overgeneralization about product preferences, reducing meaningful community engagement. Poorly designed interventions due to assumptions about acceptability and needs.	There is a still a lack of adequate and hygienic housing and infrastructure. Studies have reported a lack of waste disposal systems, menstruator-friendly spaces, and space and privacy for drying materials and clothes (Hirani 2024). Frequently after a disaster event there is also a scarcity of clean water (Afzal et al. 2024). Many reports state that menstruators felt unsafe to use facilities at night (Hirani 2024). Many called for sex-segregated facilities in terms of being culturally appropriate, safe, and comfortable, as they felt uncomfortable to attend to their personal and menstrual hygiene in overcrowded shelters and tents shared with non-menstruator family members (Hirani 2024).
EDUCATION	Limited access to accurate information. Incomplete or inadequate education from caregivers (e.g. mothers sharing little about menstruation) or schools. Insufficient guidance on how to use provided menstrual products. Persistent taboos and stigma that hinder open discussion and learning.	There is still insufficient menstrual hygiene education in these spaces, including information on the menstrual cycle and hormonal changes as hygiene promotion activities still forget menstrual health as a pivotal aspect of this service (Chavez et al. 2024). This includes not having the right information to know where to go or how to change menstrual materials (Guglielmi et al. 2024). Younger menstruations are often still reported to stop attending school during or once they have started menstruation (Schuster et al. 2024).
HEALTHCARE	Use of unhygienic materials (e.g. unwashed cloth or nothing) linked to reproductive health risks. Shame and stigma around menstruation discouraging safe practices. Women prioritizing family needs over their own menstrual health.	Some studies reported that overall, equipment, medicines, supplies, and food were scarce along with a lack of age-appropriate healthcare services. Others reported a shortage of trained health workforce due to their displacement and a poor retention of health staff, heavy workloads, poor-quality services, and inefficient referral systems (Sarker et al., 2020).
SUPPORTIVE ENVIRONMENT	Stigma, shame, and secrecy associated with menstruation.	Menstruators are reported to face exploitation and abuse due to a lack of safe spaces during disasters, with

	Anxiety and fear due to cultural taboos. Inadequate access to absorbent materials and disposal methods perpetuating stigma. Psychosocial stress and loss of dignity from poor MHM. Increased risk of exploitation and sexual violence. Menstrual taboos undermining the fulfilment of basic human rights and gender equality. Restricted participation in community life (e.g., food distribution, employment) due to poor MHM. Conflicting cultural beliefs about menstruation within and across communities. Insufficient advocacy at policy and community levels to prioritise MHM.	high reports of exploitation and GBV in many different settings. One study found that – aside from structural and cultural barriers - the feelings resulting from the culture of silence and stigmatization around menstruation prevented menstruators from seeking services, supplies and healthcare (Idris 2024). When water resources are low, menstruators may be afraid that non-menstruators will see their use of more water as unfair. Additionally, mental distress and trauma due to conflicts has been reported to trigger multiple menstrual cycles per month (Sabet 2024). Overall, difficulties of access to and a lack of hygiene and privacy, lead to widespread humiliation related to menstruation.
MENTION OF NON-MENSTRUATORS	Lack of male involvement and poor social attitudes reinforcing taboos and neglect in planning.	Lots of current literature mention the role of non-menstruators. In many studies, they demonstrated how non-menstruators are the primary decision-makers in the determination and allocation of services and aid. Non-menstruators could also act as a protector against other unknown non-menstruators as one person explains saying 'We would take our men with us because the place was deserted, anything could happen there, God forbid' (Hirani 2024, p.6). Different cultural norms were mentioned such as menstruators sleeping on the other side of a curtain whilst menstruating. Another issue mentioned was that menstrual hygiene kits were often distributed by non-menstruators, in one study in Pakistan this meant husbands did not permit menstruators to collect these items (Sadique 2024). Some studies mentioned the use of toolkits to provide information to young non-menstruators to correct any misconceptions or stigmas they may have learned (Idris 2024).
MENSTRUATOR PROGRAMME PARTICIPATION	Recommendation - Consultation with girls and women before designing and implementing hardware and software interventions	Many studies posited that 'community-based collaboration, participatory assessments and consultations with those accessing menstrual services are necessary for the implementation of effective and need-based menstrual hygiene services and interventions' (Hirani 2024, pp.10-11). This is because 'participation in interventions planning and implementation enhances the effectiveness of interventions, suggests new solutions, and is critical for ensuring successful outcomes' (Alareqi et al. 2024,

		p.345). For example, one study in Uganda found that displaced menstruators were not sufficiently consulted about their menstrual needs, which meant they were unable to adopt good MHM practises (Sadique et al. 2024). Even though many current studies state that WaSH and menstrual health related programmes must include active participation among menstruators, they frequently do not detail specifically how (Sommer 2012). When participation is invited, there may be other factors, which prevent menstruators from participating such as embarrassment, long travel times or a lack of transport in camps (Downing et al. 2021; Varelis et al. 2024).
FUTURE RESEARCH	Evidence-based research should feed improvements for MHM guidelines more energy and resources should be invested by NGOs in measuring and reflecting about the failure and success of their programs Insufficient research on innovative, context-appropriate solutions.	The future research that recent studies suggested were testing the effectiveness the interventions outlined in the literature, evaluation of programmes, and further research exploring the advantages of sex-integrated GBV and sexual and reproductive health (SRH) programming (Hirani 2024; Muhaidat et al. 2024; Guglielmi et al. 2024).

To add to this, on the 15th October 2024, ELRHA's Research for Health in Humanitarian Crises (R2HC) programme gathered humanitarian experts and practitioners to review ongoing challenges of MHM in humanitarian settings (elrha 2024b). The main barriers they outlined were underfunding, limited capacity to integrate MHM into responses, field staff being uncomfortable to address the subject, insufficient integration of MHM into each relevant humanitarian cluster, cultural norms and taboos, and issues of waste management. To address these they called for collaboration between WASH, gender, and protection sectors to ensure a comprehensive response. They stressed the importance of preparedness and long-term, sustainable interventions tailored to local needs and the inclusion of engaged community volunteers. Another point was the need to adapt interventions to local contexts, considering cultural beliefs, taboos, and available resources. They said that community consultation was key to understanding preferences and needs, can help building understanding, and reduce stigma. They found that engaging men and boys in discussions can reduced stigma and promote a more supportive environment for menstruators. They noted that they are often willing to participate when approached in the right way e.g. articulating examples of roles they can play. The conclusion was that practitioners still require guidance and support to mainstream MHM into humanitarian response.

1.6 PARTICIPATION IN HUMANITARIAN PROGRAMMES

As demonstrated in *Table* 3, advice from current literature for improving barriers to menstrual health both in terms of practical and strategic needs require the participation of menstruators and non-menstruators to varying degrees. In this section, I give an overview of participation, largely drawing on the development sector where it originated, and highlighting its relevance to its increasing deployment in humanitarianism.

As Oakley (1991) writes, it is 'impossible to give one definitive term for participation' as 'the interpretation and implementation of participation may take several forms' (p.115). Broadly, it refers to the involvement of participants (typically people from a specified community) within projects and programmes. In the development context, it is a way of respecting cultural diversity, harnessing local knowledge, making programmes more context-specific, and providing 'local people with the opportunity to think and develop solutions for themselves' (Mubita et al., 2017, p.238). Arguments for good participation are not purely based on egalitarian grounds; by listening to people's needs and discouraging dependency on project implementers, results are set up to be more efficient, appropriate and thus more sustainable (Oakley 1991).

Participation within the development sector gained traction in the 1960s with demands for social equity and a criticism for the limits of colonial top-down approaches (Mubita et al. 2017). With this came the idea that development projects should be shaped around local sociocultural, economic and political situations (Mubita et al. 2017). Calls to revolutionise development by putting end-users at the centre of programming emerged through the end of the Cold War, where decolonisation began to take on a 'decidedly anti-capitalist form' (Costello, 1998, p.235). By the 1980s, it was increasingly institutionalised by large development organisations like the World Bank and UN agencies (Finnemore 1998). In the 1990s, participation had become a key principle in development frameworks and tools emerged focused on interactive participation, with NGOs advocating for this approach and aligning it with rights-based frameworks (Nyamu-Musembi & Cornwall 2004). Since the 2000s, with crises becoming more protracted and the emergence of the humanitarian-development nexus, participation has increasingly extended into humanitarian settings, where community-based approaches are 'strongly emphasized as the path towards more efficient protection and assistance' and are 'particularly constructed as a vehicle for the promotion of gender equality' (Olivius 2014, p.42).

Despite its good intentions, the effectiveness of participatory approaches is highly contested. It started to 'tyrannise' development discourse, lacking 'sufficient evidence' of 'living up to the promise of empowerment and transformative development for marginal peoples' facing challenges of power dynamics, time and resource constraints, and tokenism (Hickey and Mohan, 2004, p.3). This is intensified in humanitarian settings where factors of 'time, bureaucratic impediments, lack of incentives and funding, security and political constraints, differences between the social and cultural values of outsiders and insiders, and lack of capacity' cause it to be 'costly, complicated, time-consuming and, arguably, inappropriate for international actors' in certain situations (Brown et al., 2014, p.4). That and the 'need for a rapid response… risks of working in insecure situations, and… potential for manipulation in highly politicised environments', mean that it is often challenging to maintain full and consistent participation (Groupe URD, 2009, p.24).

But efforts continue. There have been multitudes of different approaches to improve participation and community engagement in crises contexts. For example, in 2019 Oxfam published the guide 'An

Introduction to Community Engagement in WASH', stating that 'involving communities affected by the crisis in the response, so that the delivery of facilities and services works for them, is a vital part of Oxfam's WASH response in emergencies' (Oxfam 2019). Their main approach was to listen to different groups and individuals, understand how people view risk and how they cope in a crisis to ensure that the response 'strengthens their existing capacities, enables meaningful participation and focuses on marginalized and less powerful members of a community' (Oxfam 2019). Their guide 'shows how community engagement in WASH should be a planned and dynamic process, bringing together the capacities and perspectives of communities and responders' (Oxfam 2019). The British Red Cross (2025) also have an abundance of resources outlining the minimum actions for community engagement at each stage of the response and tools to put it into practise including training packs, guides, and case studies. Most organisations try to adhere to the Risk Communication and Community Engagement (RCCE) arm, which 'enables collaboration between a wide range of organisations to increase the scale and quality of community engagement approaches' (Collective Service 2025). It does this by catalysing 'expert driven, collaborative, consistent and localised support for governments and partners involved in the national response to public health emergencies and other crises' (Collective Service 2025).

Notwithstanding these conceptual frameworks and global guideline documents, little is known about their effectiveness or 'whether they contain sufficient information to guide effective community engagement in crisis response' (Sahani et al. 2024). Using a realist analysis, Sahani et al. (2024) conducted a scoping review to find that available evidence on context, mechanisms, and outcomes of community engagement was promising but few documents were able to show details or evidence for the interactions between them, thus leaving gaps in understanding how to successfully engage communities in crisis response to ensure impactful outcomes. Thus, they attest it is necessary for further research to understand how and why specific mechanisms, in particular contexts can lead to positive outcomes, including what does and does not work and how to measure these processes (Sahani et al. 2024).

It is also important to note that there are varying degrees of participation, as illustrated by Arnstein's (1969) ladder of citizen participation wherein each rung represents increasing levels of agency, power, and control. For example, participation has historically been limited to consultation, rather than genuine decision-making power for communities (Cooke & Kothari 2001). The level of participation in the first case study in this thesis is 'consultation', defined by Arnstein as inviting citizen's opinion mainly through surveys, meetings and hearings (1969). Arnstein writes that consultation can be a 'legitimate step toward their full participation', but when 'not combined with other modes of participation, this rung of the ladder is still a sham since it offers no assurance that citizen concerns and ideas will be taken into account' (1969, p.219). However, it is argued that the level of participation required for a project is entirely dependent on its aims, and that it is sometimes not appropriate or possible for a project to achieve 'citizen control' (the top rung of the ladder) (Bass et al. 1995). In the second case study of the thesis, the level of participation is harder to define, thus I refer to it as 'engagement'. The programme leaders wanted it to be led by the community

for the community wherein they are in charge of shaping programme outcomes, with the assistance of programme staff. I consider these ideas of power relations within participation discourse throughout the thesis, especially when looking at the programme design and relationship between staff and participants.

CONSULTATION OF MENSTRUATORS IN MENSTRUAL HEALTH PROGRAMMES

Arnstein's ladder of participation helps us to consider the level of transformative power community's may experience through their level of participation. On a similar vein but specifically regarding the power of menstruators, Molyneux established the notion of development projects either meeting practical or strategic gender needs (2001). This later developed into the gender inclusion framework, which looks at three levels: the minimum standard, which aims to do no harm and meets basic needs, Empowerment, which addresses practical needs, and Transformative change, which addresses unequal power imbalances and seeks institutional change (Prosperity Fund 2020).

When menstrual health needs are considered in humanitarian programmes, there is evidence of a 'one-size-fits-all' approach being deployed both for ease and due to a lack of understanding of the associated cultural and personal needs (Sahin, 2015). It is becoming recognised that menstruators should be consulted on the design of menstrual health programmes to develop appropriate and inclusive solutions (Sommer et al. 2017). Current guidance states that menstruators should be consulted on materials and supplies, facilities, and information needs through methods such as Post Distribution Monitoring, interviews and Focus Group Discussions (FGDs) (Sommer et al. 2017). Guidance also indicates that consultations should take place at key points throughout the project rather than just at the beginning. These consultation activities help to create space for the voices of menstruators at different levels of the Socio-Ecological Model (i.e. within management/governing bodies, project implementers and service users) (House, 2019; Schmitt et al., 2021; VanLeeuwen and Torondel, 2018). However, there is limited evidence on the effectiveness of any of these approaches that have been tried to date. While best practises for consulting menstruators in humanitarian settings have been produced there is uncertainty about the extent to which these are implemented in practice, and their impact on the lives of the menstruators who are affected (Sommer et al. 2017; UNICEF, 2019). This is important as projects designed around participation may lead to unplanned, negative outcomes e.g. shaming from their partners or community (Cleaver, 1999). Another integral issue from gender and development discourse is women's 'triple burden of roles': community work, economic work, and housework and child care, wherein the burden is placed on women to improve their situations irrespective of the structures set up to work against them (Moser 1989). This begs the question of how to meet MHM needs whilst simultaneously minimising the burden on menstruators.

Engaging with different demographics presents different challenges. A 2020 UNHCR study found the main barriers to internally displaced women and girls' participation in humanitarian settings to be: preoccupation with meeting safety and survival needs; GBV and lack of security and safe spaces; loss of livelihood assets; consultation fatigue; short lived economic empowerment interventions without a strong exit strategy;

short-term projects that do not link the local to the national and lack of capacity of local organisations; negative reaction from men and boys; and gender equality not being reflected in humanitarian organisations (in terms of values and representation of female staff, especially in decision-making roles). The root cause of these gaps in female participation are ultimately 'gender inequalities embedded and reproduced within social norms, the humanitarian system, and national and international institutions of power' (Anderson, 2020, p.11). This means that participatory activities may not be representative if certain demographics are unable or unwilling to participate. It also shows that effective participation is deeply affected by context and that the transferability of good practise is not straightforward. This highlights the need for evaluation methods, which consider the role of context and unearth the hidden mechanisms that lead to change. Realist evaluation is such an approach, which I unpack in Chapter II.

ENGAGEMENT OF NON-MENSTRUATORS IN MENSTRUAL HEALTH PROGRAMMES

In this section, I examine gender in development. Since there is a longstanding history, it provides useful insights to bring to the humanitarian sector. One way of negating adverse outcomes of programmes is through the inclusion of all persons who may be directly or in-directly involved with a programme on each level of the Socio-Ecological Model. With gender historically being equated with women alone, the transition from Women in Development (WID) to Gender and Development (GAD) saw minimal change (Chant and Gutmann, 2002). Thus, non-menstruators (as a neglected component of gender) have 'rarely been drawn into development programmes in any substantial way' (Chant and Gutmann, 2002, p. 269). Consequently, GAD programmes have frequently fallen on the shoulders of menstruators, adding to their triple burden/role (productive, reproductive and community work) (Moser, 1989). Further to this, development programmes have tended to address menstruator's practical (e.g. distance to a water source) rather than strategic (e.g. the gender roles that dictate women collect water) needs, leaving unequal gender structures in tact (Molyneux, 2001). Excluding non-menstruators (who often hold more power to effect change at the household, community and governmental levels) from GAD programming is therefore not only inequitable, but also limits progress if the aim is to create effectual and lasting change (Wallace, 1991 in Chant, 2000).

As an example, programmes aiming to increase menstruator access to finance are hypothesized to improve their bargaining power and reduce intimate partner violence by relieving poverty-related stress (Ellsberg et al., 2015; Farmer and Tiefenthaler, 1997). However, this has been seen to disturb power dynamics and cause non-menstruators to feel threatened, resulting in verbal abuse or violence to reassert dominance (Eswaran and Malhotra, 2011; Bloch and Rao, 2002; Barker, 1997 in Chant, 2000). To avoid these unplanned mechanisms, researchers and practitioners first have to understand why they have arisen. This is a key component of realist evaluation, the overall approach to the research, which I discuss in Chapter II. Levtov et al. (2014) rationalises non-menstruator responses as a reaction to the inability to live up to the provider role, highlighting the ways they have been negatively socialised within the constructs of gender

relations. From here, practitioners can consider gender not just on the individual level but also the interpersonal to understand how to work within existing relationship dynamics.

A reason for neglecting non-menstruators in gender-related programmes is that – at least in western communities - gender is often synonymised with those who menstruate and we fail to see non-menstruators as gendered beings. Though non-menstruators are granted many privileges, constructs of gender can negatively affect us all. A common example of this is the pressure on non-menstruators to be stoic, egoic, and attain capitalistic ideals of success, in turn leading to higher rates of depression and suicide (Schumacher, 2019; WHO, 2016). These traits also act as a barrier to the self-awareness and empathy required to understand privilege (invisible to those who have it) and be compassionate towards menstruators (Kimmel 2015). If practitioners can focus on 'sensitising' non-menstruators to understand these constructs they can start to 'make men part of the solution, rather than part of the problem' in a way that benefits everyone (Sree Gururaja in Chant and Gutmann, 2002, p.45). Within the thesis, I look at how menstrual health-related interventions benefit not just menstruators, but non-menstruators too.

The HIV/AIDS pandemic was one of the key instigators leading to the global shift in gender development to include both non-menstruators and menstruators. Non-menstruators are much less likely to seek medical assistance or adhere to health programmes than menstruators, with many studies showing their disinclination to using HIV services (Banks 2001; Katirayi et al., 2017). Not only does this put themselves at risk, in patriarchal societies and heterosexual relationships where menstruators may have little decision making power on if and when they want to have sex - and if it's with or without a condom - they are also put in danger of contracting the virus (Madiba & Ngwenya, 2017). A study in Malawi and Zimbabwe even found that some non-menstruators would also dissuade their partners from participating in antiretroviral therapy (Katirayi et al. 2017). Therefore, 'the effectiveness of HIV/AIDS programmes and policies is greatly enhanced when gender differences are acknowledged, the gender-specific concerns and needs of women and men are addressed, and gender inequalities are reduced' (WHO, 2003, p.6). To do this, a study in Zimbabwe found the population's constructions of masculinity as being in control, knowledgeable, resilient, disease free, sexually active, and financially stable (Skovdal et al. 2011). These characteristics oppose the requirements of HIV positive patients of accepting being HIV positive, taking instructions from nurses, attending hospital visits, avoiding alcohol and refraining from unprotected sex with multiple partners. The study addressed this by reframing treatment adherence to align with their notions of masculinity, such as its impact on productivity and social value (Skovdal et al., 2011). This demonstrates the importance of understanding the local constructs of masculinity in order to tailor programmes to function in specific contexts. This is something I consider when trying to understand the mechanisms of change within the programme I evaluate in the thesis.

Non-menstruators are further excluded from programmes perceived as relating to 'women's issues', especially one as stigmatised as menstrual health (Allen et al., 2010). Without their involvement stigma is

perpetuated and menstruator needs of education, menstrual health materials and appropriate WaSH facilities are not met, which help to uphold the gender gap in a number of ways (Peranovic and Bentley, 2017). Non-menstruators can act as a barrier to menstrual health services both directly e.g. through GBV or 'peeping' when menstruators walk to or use WaSH facilities and indirectly e.g. as a result of cultural practises, for instance, not permitting menstruators to leave the house without accompaniment (Oxfam, 2018). The barriers act on different levels of the Socio-Ecological Model e.g. patriarchal governments taxing menstrual products (Seely, 2021) or majority non-menstruator humanitarian staff being unaware of and/or neglecting menstrual health needs within a response (Schmitt et al., 2017; Anderson, 2020). Thus, it is important for all non-menstruators to be engaged in menstrual health dialogue so that barriers at each level can be minimised.

One important way non-menstruators can act as a barrier to menstrual health indirectly is through preventing menstruators' participation within menstrual health programmes. The first case study of the thesis looks at meeting menstruators' practical needs through their participation in a WaSH facility design project. To do this, practitioners must consider the environment in which this takes place to ensure everyone can participate, and in a safe way. To illustrate, non-menstruator monopoly on decision-making and their beliefs on what menstruators are permitted to do are 'among the most resistant barriers to IDP [menstruators'] substantive participation, particularly as they predate and transcend displacement and conflict and penetrate all spaces of participation' (Anderson, 2020, p.10). Anderson (2020) says there is an 'evident need' to work with non-menstruators to 'deconstruct these rigid inequalities' through engaging them in 'accountable practice to [menstruators]' (p.10). It is important to note that menstruator participation 'does not always guarantee their empowerment, health, and welfare in a male-dominated society' and therefore there is a 'need to better engage [non-menstruators] during different stages of [menstruator]-focused development initiatives' (Karim et al., 2018, p.398). Though intending to explore this within the case study, the non-menstruators of the community were very supported of the project, hence my looking into a secondary case study where the non-menstruators were less supportive of menstrual health needs.

Gender is relational, structural, and variable within differing historical, social, and cultural contexts (Connell and Messerschmidt, 1995). Thus, it is capable of transformation. In fact, national and international programmes and policies are 'constantly reshaping masculinities and gender relations at multiple levels', resulting in the 'emergence of new, less oppressive and more equitable forms of masculinities', which are 'less authoritarian, less violent, more emotional, and more gender equality oriented' (Levtov et al., 2014, p.469). In this same way, the global community can transform ideals around menstruation to position it as more than a women's issue, to also concern those that do not menstruate. Menstrual health programmes that have incorporated or trained non-menstruators have resulted in freer dialogues around the subject and given the opportunity for them to support the needs of menstruators in the household, community, and school (Mahon et al., 2015). However, the literature on non-menstruator involvement in menstrual

health programmes in general, let alone in humanitarian settings, is scant (Erchull, 2020). Thus, there is a need to understand how to engage non-menstruators in menstrual health programmes aiming to transform non-menstruators' relationship to menstruation. This addresses menstruators' strategic needs within my thesis.

SUCCESSES OF INCLUDING NON-MENSTRUATORS IN MHH PROGRAMMES

There are many examples from the development sector of how non-menstruators can create impactful change in menstrual health outcomes. A virtual roundtable held by the Finish Society in India emphasized the need to involve non-menstruators in MHM to break long-standing taboos and gender inequality (Finish Society 2021). It highlighted how misinformation, shame, and silence around menstruation—especially among non-menstruators—contribute to poor awareness and social stigma. Speakers from academia, media, NGOs, and international organizations shared insights and success stories of non-menstruators supporting MHM efforts such as educating peers and breaking taboos, stressing the importance of education, cultural sensitivity, and corporate social responsibility. Educational and media institutions were recognized as powerful platforms to normalize and spread MHM messages involving non-menstruators. Overall, the discussion mobilized momentum for increasing male engagement in menstrual health conversations and actions.

Purefem highlight the ways non-menstruators can support the movement (Purefem 2024). This is by educating themselves by understanding menstruation and addressing myths and misconceptions. By engaging in conversations such as with family and friends to normalise the topic and reduce embarrassment, or listening to and supporting the experiences or concerns of those who menstruate. Advocating for supportive policies or taking community initiatives. Breaking stigma through challenging gender norms and speaking out against discrimination. Supporting education through encouraging comprehensive education in schools and engaging non-menstruators from a young age to create a generation that is informed and supportive. Providing practical support such as facilitating access to menstrual products and creating a supportive environment, such as in the workplace.

William Osal, Country Manager of Uganda at Days for Girls, is a prime example of how non-menstruators can successfully advocate for improved menstrual health (Days for Girls 2024). Alongside initiatives targeting menstruators, he also successfully promoted the inclusion of non-menstruators in menstrual health conversations through initiatives like the "Men Who Know" program, recognizing them as crucial allies in combating stigma and shaping policy. He went on to lead advocacy efforts at the national level, including participation in a steering committee focused on menstrual health policy.

Another individual success story is from Basant Lal from a village in Mirzapur India, where speaking about menstruation was taboo (UNICEF 2022). He is a man who became a vocal advocate for menstrual health and gender equality after attending UNICEF training, challenging local taboos and restrictions. He ensured all eight of his daughters received an education, even whilst menstruating and his household no longer

follows traditional restrictions. He supported his daughter in becoming a peer educator on menstrual health and joined her in community outreach projects, convinced other families to abandon gender-discriminatory practises, openly buys menstrual products for his daughters setting an example for others, and encourages hygiene education focused on health and dignity. His story exemplifies how non-menstruators can promote impactful and lasting community-wide change.

1.7 GUIDANCE ON PARTICIPATION IN MENSTRUAL HEALTH PROGRAMMES

I have illustrated the current barriers to menstrual health from the literature. Two of the main messages were the importance of consulting menstruators on their needs within programmes and engaging non-menstruators. Following is a table that summarises the involvement of menstruators and non-menstruators within current guidance for menstrual health in humanitarian settings. The column 'Non-menstruator participation context identified' was taken, adapted, and added to from the thesis 'the role of men in menstrual hygiene management interventions in emergencies' by William Godfrey Evans, (Master of Science, Loughborough University, November 2019).

Table 4 - References of menstruator participation in key humanitarian MHM guidelines

THEME	MENSTRUATOR PARTICIPATION CONTENT IDENTIFIED	GUIDANCE TITLE	AUTHOR	YEAR
PARTICIPATION AND CONSULTATION	Design culturally appropriate, private, safe, accessible toilets and bathing facilities for all with user input; consult users on locations Involve refugees, menstruators, adolescents, and marginalized groups in facility design and maintenance	WaSH in Emergencies Handbook	UNHCR	2024
	No specific mention of menstruator participation	Ethics And Professionalism Guideline 082: Menstrual Hygiene Management	International Federation of Gynaecology and Obstetrics (FIGO)	2020
	Conduct regular, gender-separated consultations, Including marginalized groups: disabled, transgender, the unaccompanied	Addressing menstrual hygiene management needs	IFRC	2019
	Conduct consultations to understand material preferences and practices, Align assistance with local standards based on community input, Use participatory programming for safe, dignified MHM	Guide to Menstrual Hygiene Materials	UNICEF	2019
	Engage menstruators with disabilities through inclusive consultations and resources by consulting disability experts for inclusive planning and partnerships. Integrate MHM into WASH programs and emergency preparedness through consultations. Consult transgender individuals for safe, inclusive MHM options	Guidance on menstrual health and hygiene	UNICEF	2019
	Consult menstruators on the design, siting and management of facilities (toilets, bathing, laundry, disposal and water supply)	The Sphere Handbook	Sphere Association	2018
	Consult menstruators, people with disabilities, adolescents, and marginalized groups for accessible, safe facility design. Involve community members in adolescent program development.	Inter-agency field manual on reproductive health in humanitarian settings	IAWG: Inter-Agency Working Group on Reproductive Health in Crises	2018
	Consult menstruators regularly on MHM needs, materials, facilities, safety, and information, using PDMs, FGDs, KIIs. Consult marginalized groups on MHM challenges; share findings from consultations across sectors	MHM in Emergencies Toolkit	IRC and Columbia University	2017
	Consult menstruators on facility location	The Gender and Sanitation Tool for Displaced Populations	MSF	2015
	Involve all in the planning, implementation, and maintenance of WaSH services to ensure their needs are met effectively. Consult all on cash and resource distribution to empower menstruators while avoiding increased tensions or risks of violence. Ensure menstrual facilities provide disposal, washing, and drying options.	Camp management toolkit	Global Camp Coordination and Camp Management Cluster - IOM, NRC and UNHCR	2015
	Consult on priority hygiene needs and culturally appropriate menstrual materials. Design communal facilities with input from menstruators and people with disabilities.	Menstrual Hygiene Matters (menstrual hygiene in emergencies module)	WaterAid/ SHARE	2012
	Involving children and parents in the planning and running of events provides a positive learning experience	Water, Sanitation and Hygiene for Schoolchildren in Emergencies	UNICEF	2011
	Parents, adolescents, and community members should be involved and consulted from the design phase of Adolescent Sexual and Reproductive Health programming to the delivery and monitoring	Adolescent Sexual and Reproductive Health Toolkit of Humanitarian Settings	United Nations Population Fund	2009
FEEDBACK MECHANISMS	Set up feedback and complaint mechanisms for community input	WaSH in Emergencies Handbook	UNHCR	2024
	Adapt assessment tools for diverse settings, Monitor with feedback disaggregated data by sex, age, disability	Guide to Menstrual Hygiene Materials	UNICEF	2019
	Regularly review how young menstruators are managing menstruation at school	Water, Sanitation and Hygiene for	UNICEF	2011

		Schoolchildren in Emergencies		
MATERIALS	Develop and distribute Dignity Kits based on feedback; plan for replenishment, ensuring safe, private distribution and providing hands-on training	Addressing menstrual hygiene management needs	IFRC	2019
	Use real menstrual product samples in consultations for design feedback	MHM in Emergencies Toolkit	IRC and Columbia University	2017
	Involve menstruators in selecting and distributing materials; support local production	Menstrual Hygiene Matters (menstrual hygiene in emergencies module)	WaterAid/ SHARE	2012
STAFF TRAINING	Adapt strategies continuously; brief staff on protection and sensitive issues	Addressing menstrual hygiene management needs	IFRC	2019
	Use standardized guidelines to improve survivor care	Inter-agency field manual on reproductive health in humanitarian settings	IAWG: Inter-Agency Working Group on Reproductive Health in Crises	2018
STAFF GENDER	Involve diverse research teams	Guide to Menstrual Hygiene Materials	UNICEF	2019
	Use all menstruator team when consulting menstruators	The Gender and Sanitation Tool for Displaced Populations	MSF	2015
SAFE SPACES	Create gender-equal sanitation committees	WaSH in Emergencies Handbook	UNHCR	2024
	Establish private, secure consultation areas	Inter-agency field manual on reproductive health in humanitarian settings	IAWG: Inter-Agency Working Group on Reproductive Health in Crises	2018
	Address needs and safety in emergencies	Menstrual Hygiene Matters (menstrual hygiene in emergencies module)	WaterAid/SHARE	2012
	Establish centres where menstruators can meet privately to provide a supportive environment in camp settings	Camp management toolkit	Global Camp Coordination and Camp Management Cluster - IOM, NRC and UNHCR	2015
MESSAGING	Use gender-responsive education plans to address disparities	Guidance on menstrual health and hygiene	UNICEF	2019
	Develop culturally sensitive messaging and integrate MHM into WaSH, education, and health plans	MHM in Emergencies Toolkit	IRC and Columbia University	2017
COMFORT	Important that menstruators know they are free to refuse any questions stop interview at any time without any negative impact for them or their families. Do not try to involve them if they do not feel comfortable	The Gender and Sanitation Tool for Displaced Populations	MSF	2015
NO SPECIFIC MENTION OF MENSTRUATOR ENGAGEMENT	N/A	Minimum Initial Service Package for Reproductive Health in Crisis Situations	Women's refugee commission	2011

Table 5 - References of non-menstruator participation in key humanitarian MHM guidelines, adapted from Evans 2019

THEME	NON-MENSTRUATOR PARTICIPATION CONTENT IDENTIFIED	GUIDANCE TITLE	AUTHOR	YEAR
STATEMENT OF INCLUDING NON-MENSTRUATORS	Statement on importance of non-menstruator engagement	Addressing menstrual hygiene management needs	IFRC	2019
	Statement on the importance of non-menstruators having knowledge on MHM, particularly teachers, traditional leaders and religious leaders	Guide to Menstrual Hygiene Materials	UNICEF	2019
	Statement on importance of non-menstruator engagement	MHM in Emergencies Toolkit	IRC and Columbia University	2017
	Include all in planning and maintaining WaSH services	Camp management toolkit	Global Camp Coordination and Camp Management Cluster - IOM, NRC and UNHCR	2015
	Engage non-menstruators in GBV prevention	Camp management toolkit	Global Camp Coordination and Camp Management Cluster - IOM, NRC and UNHCR	2015
	Statement that non-menstruators (and menstruators) should be mobilised at community level to improve MHM	Menstrual Hygiene Matters (menstrual hygiene in emergencies module)	WaterAid/ SHARE	2012
	Engage non-menstruators in deconstructing gender norms and Ensure equal access and gender-sensitive programming	Adolescent Sexual and Reproductive Health Toolkit of Humanitarian Settings	United Nations Population Fund	2009
	Statement that menstruation is a concern for menstruators and non-menstruators equally	Ethics And Professionalism Guideline 082: Menstrual Hygiene Management	International Federation of Gynaecology and Obstetrics (FIGO)	2020
HIGHLIGHTING THE ISSUE	Mentions menstruators may not receive NFIs directly, but rather through a non-menstruator intermediary, which may prevent them from accessing materials intended for MHM	Guidance on menstrual health and hygiene	UNICEF	2019
	Case studies of non-menstruators as barriers to menstrual health given (both as staff and community)	MHM in Emergencies Toolkit	IRC and Columbia University	2017
	Advice given to consider that non-menstruators at household level might discard sanitary materials if they do not know what they are for	Menstrual Hygiene Matters (menstrual hygiene in emergencies module)	WaterAid/ SHARE	2012
COMMUNITY - GENDER SEGREGATION DURING CONSULTATION	Stipulates same sex consultations	Addressing menstrual hygiene management needs	IFRC	2019
	Address cultural concerns on gender mixing	Camp management toolkit	Global Camp Coordination and Camp Management Cluster - IOM, NRC and UNHCR	2015
COMMUNITY - COMMUNITY LEADERS	Engage with menstruator and non-menstruator community leaders to generate community support	Addressing menstrual hygiene management needs	IFRC	2019
	Non-menstruators could be involved in discussions on MHM, organised by community or faith leaders	Menstrual Hygiene Matters (menstrual hygiene in emergencies module)	WaterAid/ SHARE	2012

ORGANISATIONAL - STAFF	Stipulates menstruator and non-menstruator staff should be knowledgeable in MHM, but trained separately in some situations	Addressing menstrual hygiene management needs	IFRC	2019
	Stipulates including non-menstruator staff in programme delivery – especially those involved in non-food item (NFI) distributions	Guide to Menstrual Hygiene Materials	UNICEF	2019
	Mentions first response teams are often non-menstruators – making it difficult for menstruators to share concerns about menstruation	Guidance on menstrual health and hygiene	UNICEF	2019
	Stipulates that non-menstruator staff should not directly discuss MHM with menstruator community members, though in some cases, it may be feasible for them to be involved in planning and implementing MHM activities such as distribution - consult first. Statement that non-menstruator staff should be trained in MHM, to varying degrees, depending on their seniority.	MHM in Emergencies Toolkit	IRC and Columbia University	2017
	Advises limiting local non-menstruator staff presence during menstruator consultations; expat preferred as they're outsiders	The Gender and Sanitation Tool for Displaced Populations	MSF	2015
	Ensure camp management teams and distribution committees reflect camp gender and diversity ratios	Camp management toolkit	Global Camp Coordination and Camp Management Cluster - IOM, NRC and UNHCR	2015
NO SPECIFIC MENTION OF NON-MENSTRUATORS	N/A	WaSH in Emergencies Handbook	UNHCR	2024
		Minimum Initial Service Package for Reproductive Health in Crisis Situations	Women's refugee commission	2011
		Water, Sanitation and Hygiene for Schoolchildren in Emergencies	UNICEF	2011
		Inter-agency field manual on reproductive health in humanitarian settings	IAWG: Inter-Agency Working Group on Reproductive Health in Crises	2018
		The Sphere Handbook	Sphere Association	2018

1.8 CONCLUSIONS FROM THE LITERATURE AND RESEARCH GAPS

SUMMARY OF AND GAPS IN GUIDANCE ON MENSTRUATORS

Most guidelines' mention of consultation was in reference to the design and siting of facilities, materials, and preferences to ensure safe, culturally appropriate, and accessible toilets. However, this often had little or no indication of how this should be done. There was often a specific mention to hold consultations regularly and involve the most marginalised in the community including those with disabilities, transgender persons, adolescents, and unaccompanied minors. One advised that disability experts could be consulted but no advice for how to include other marginalised groups. Two mentioned the need for safe and private consultation spaces, another on centres for menstruators to meet privately, and another on general addressing of safety needs, which is vague. One gave specific indication of how to ensure non-coercion within consultations by stating the need to ensure menstruators know they can refuse any questions or stop the interview without any negative impact for them or their families and to not involve them if they feel uncomfortable. A couple of guidelines mentioned feedback and complaint mechanisms disaggregated by sex, age, and disability, again with no specific guidance on safe and effective ways of doing this. Regarding materials, advice was to develop dignity kits based on feedback using real materials in consultations and to ensure safe and private distribution. One made mention of the need to consult all on cash and resource distribution to empower menstruators while avoiding increased tensions or risks of violence. This has been difficult to achieve in practise, as it requires deep understanding of the gender and social dynamics of the population to avoid negative unplanned outcomes (Ellsberg et al., 2015; Farmer & Tiefenthaler, 1997). Some requested to involve menstruators in distribution, others on the need to replenish items, and another on supporting local production. Going beyond consultation, some mentioned the need for participatory programming, detailing the involvement of menstruators in programme development, and the planning, implementation, and maintenance of WaSH services. However, this again puts the onus on menstruators for improving their situations and disregards the triple burden of roles they may be facing. With respect to gender, one suggested using gender-responsive education plans to address disparities, and another the need of gender-equal sanitation committees. Regarding younger menstruators, some mentioned that children have the right to be involved in decisions that affect them and encouraged parents and children to be involved in the planning and running of events and the design of programmes to delivery and monitoring. One mentions the need to regularly review how young menstruators are managing menstruation at school.

At the organisational level, one spoke of continuously adapting strategies as well as providing hands-on training and briefing staff on protection and sensitive issues. Another stresses the importance of culturally sensitive messaging and another the need for consultations to be performed by all menstruator staff, which isn't relevant for all contexts. One guideline states the need to share findings from consultations across relevant sectors. This would avoid unnecessary repetitions of questions within consultations, which would work to avoid consultation fatigue. Some spoke of the importance of contextualisation needed to align assistance with local standards based on community input and adapting assessment tools for diverse settings, though this becomes a buzzword if guidance does not indicate how to do this.

Though there is some specific and thoughtful advice on how to involve or consult with menstruators within the guidelines, much of it is anecdotal or general, without guidance on how to contextualise consulting or participatory interventions. There were also two with no mention of menstruator involvement at all. What is missing in the literature is how this guidance is carried out in practise and to what outcome. Additionally, much of the advice, though not all, is focused on the individual level, without looking at the interpersonal, community, or organisational. What I provide in the first section of my thesis is evidence of how these inputs work in practise at multiple interacting levels to centre the experience of menstruators whilst ensuring they gain access to what they need to manage their menstrual health. What the guidelines also neglect is that the underlying mechanisms of change will vary across different contexts. A couple make mention of the need to contextualise but do not give any indication how. By applying a realist evaluation to menstrual health programme implementing such guidance, I validate, nuance, and enhance what is provided by unearthing how the mechanisms of change transpire based on contextual factors.

SUMMARY OF AND GAPS IN GUIDANCE ON NON-MENSTRUATORS

As for the participation of non-menstruators, some of the guidance began by highlighting the specific issues faced when non-menstruators are not involved in menstrual health, giving case studies of both staff and community members. Examples included non-menstruators discarding sanitary materials if they do not know their use and menstruators feeling uncomfortable to discuss menstruation or receive materials from non-menstruator staff. This is minimal compared with the long list of ways non-menstruators can inhibit menstrual health, such as not budgeting for menstrual materials when they control the family's finances or peeping on menstruators when they're using WaSH facilities. Some state the importance of same-sex consultations or that cultural concerns on gender mixing should be understood. Others made a general statement on the importance of including all genders in planning and maintaining WaSH services and consultations of hygiene needs, ensuring equal access to gender-sensitive programming. Many had statements on the importance of equal non-menstruator involvement with menstrual health, particularly teachers and religious leaders. There were also statements on their involvement with GBV prevention and deconstructing gender norms. Some note that community and faith leaders should be engaged to generate community support and host discussions with non-menstruators. In terms of the organisational level, guidance stated that both menstruator and non-menstruator staff should be knowledgeable and trained on MHM to varying degrees based on their seniority. Some said the involvement of non-menstruator staff in menstrual health programmes should be limited for certain elements for example during consultations, but permissible during other planning and implementing activities such as distributions and that this can be decided based on consultations with the community.

As revealed, some of the guidelines do give some instruction on how to engage non-menstruators in menstrual health, for example understanding needs for staff and community members to be gender segregated during consultations and other menstrual health activities, utilising community and faith leaders to garner interest and instigate discussions, and the training of all staff on MHM. However, this is insufficient in being able instruct on how to plan and implement a rigorous programme. There is a huge

level of inconsistency within the guidance, with five out of 14 documents having no mention of non-menstruators at all. There is also no indication of what the underlying mechanisms of change are likely to be or how they may vary and interact across different levels. Additionally, this guidance is to be used globally, yet interventions cannot be universal due to influencing context-specific factors at the individual, community, and structural levels (Pawson & Tilley 2004). Therefore, humanitarian actors need guidance to advise how to consider context when designing menstrual health programmes. In the second part of the thesis, I apply a realist evaluation to a menstrual health programme engaging non-menstruators. This method allows me to uncover hidden causal mechanisms that lead to change based contextual components in which the programme takes place. I use the Socio-Ecological Model to develop theories based on the different interacting levels. In this way, I provide evidence of what is necessary for interventions to work based on the contextual make-up of the programme setting.

In order to improve menstrual health in humanitarian settings practitioners need to address both menstruators' practical and strategic needs. Current guidance provides some advice on how to do this, through involving both menstruators and non-menstruators in menstrual health programmes. However, there is 'insufficient data to guide policymakers and programme managers about context-specific interventions' (Patel et al. 2022, p.11). For guidance on involving menstruators, evidence of how these inputs affect them in practise is missing. For non-menstruators, an understanding of the mechanisms that lead to change is absent. Both lack direction on how to contextualise these inputs. In the next Chapter, I provide a detailed overview of how I use realist evaluation to provide contextually grounded and theory-driven evidence to fill these gaps.

1.9 REFERENCES

Adami, M. 2021. Disorder within the humanitarian sector: the old versus new humanitarianism debate. *Disasters.* **45**(-), pp, 403-423. Available from: https://doi.org/10.1111/disa.12426

Afzal, F., Das, A., Chatterjee, S. 2024. Drawing the Linkage Between Women's Reproductive Health, Climate Change, Natural Disaster, and Climate-driven Migration: Focusing on Low- and Middle-income Countries - A Systematic Overview. *Indian Journal of Community Medicine*. **49**(1), pp, 28-38. Available from: https://doi.org/10.4103/ijcm.ijcm_165_23

Alam, S., 2008. Majority world: Challenging the West's rhetoric of democracy. *Amerasia Journal.* **34**(1), pp.88-98.

Alareqi, M.M., Alshoaibi, L.H., Liu, Y., Dhital, S. and Zhang, B. 2024. The Role of Water, Sanitation and Hygiene (WaSH) Interventions on Health and Behavioral Outcomes during Humanitarian Crisis: A Systematic Review and Meta-Analysis. *Iranian Journal of Public Health*. **53**(2), p.335.

Alhelou, N., Kavattur, P. S., Rountree, L., & Winkler, I. T. (2021). 'We like things tangible:' A critical analysis of menstrual hygiene and health policy-making in India, Kenya, Senegal and the United States. Global Public Health, **17**(11), 2690–2703.

Allen, K.R., Kaestle, C.E. and Goldberg, A.E. 2011. More Than Just a Punctuation Mark: How Boys and Young Men Learn About Menstruation. *Journal of Family Issues*. **32**(2), pp.129-156.

Alzate, J. B. 2020. Embodiment and Its Violence in Kawakami Mieko's Chichi to ran: Menstruation, Beauty Ideals, and Mothering. Japanese Language and Literature, **54**(2), pp.515–550.

Amadei, A. 2023. Menstrual Health Management Challenges in Protracted Displacement Contexts: A qualitative study from the perspective of humanitarians. Masters thesis. UPPSALA UNIVERSITY. [Online]. Accessed 16 July 2025. Available from: https://www.diva-portal.org/smash/record.jsf?dswid=-2614&pid=diva2%3A1791287

Anderson, K. 2020. Tearing down the walls: Confronting the barriers to internally displaced women and girls' participation in humanitarian settings. UNHCR.

Arvin M., Tuck E., Morrill A. 2013. Decolonizing feminism: Challenging connections between settler colonialism and heteropatriarchy. *Feminist Formations.* **25**(-), pp, 8-34.

Asumah, M.N.; Adnani, Q.E.S.; Dzantor, E.K.; Beig, M.A.; Wuffele, G.M.; Donkor, D.-R.; Abdulai, A.-M.; Azanu, W.K.; Parsa, A.D.; Kabir, R.; 2023. Menstruation-Related School Absenteeism: An Urban Centre Study in the Northern Region of Ghana. *Women*. **3**(-), pp, 497-507. Available from: https://doi.org/10.3390/women3040038

Banks, I. 2001. No man's land: men, illness, and the NHS. *BMJ*. **323**(7320), pp, 1058–1060.

Barker, G. 1997. Emerging global trends related to the role of men and families, briefing notes for a Brown Bag Discussion organised by the Chapin Hall Center for Children at the University of Chicago, October.

Barnett, M. 2005. Humanitarianism Transformed. *Perspectives on Politics*. **3**(4), pp, 723-740. Available from: doi:10.1017/S1537592705050401

Barnett, M. 2011. Empire of Humanity: A History of Humanitarianism. London: Cornell University Press.

Bass, S. Dalal-Layton, B., Pretty, J. 1995. Participation in strategies for sustainable development. *Environmental planning issues.*

Bloch, F., Rao, V. 2002. Terror as a Bargaining Instrument: A Case Study of Dowry Violence in Rural India. *The American Economic Review.* **92**(4), pp, 1029–43.

Bram, S. and Vestergren, S., 2012. Emergency Response Systems: Concepts, features, evaluation and design. Retrieved from Linköping University Electronic Press website: https://urn.kb.se/resolve?urn=urn:nbn:se:liu:diva-75477.

Briggs, A. 2021. 'Period poverty' in Stoke-on-Trent, UK: new insights into gendered poverty and the lived experiences of austerity. *Journal of Poverty and Social Justice*. **29**(1), pp, 85-102. Available at: https://doi.org/10.1332/175982720X16050132762411

British Red Cross. 2025. CEA in Emergencies. [Online]. Accessed 17 July 2025. Available from: https://communityengagementhub.org/cea-in-an-emergency/

Brown, D., Donini, A. and Knox Clarke, P. 2014. Engagement of crisis-affected people in humanitarian action. Background Paper of ALNAP's 29th Annual Meeting, 11-12 March 2014, Addis Ababa. London: ALNAP/ODI.

Brun, D., & Michel, S. 2009. DRC Case Study: Addressing Female Personal Hygiene Needs. UNICEF.

Calabria E.E., Jaime, C., Shenouda, B. 2022. Anticipatory Action in Refugee and IDP Camps: Challenges, Opportunities,and Considerations. [Online]. Accessed 21 December 2024. Available from: https://www.climatecentre.org/wp-content/uploads/Anticipatory_Action_in_Refugee_and_IDP_Camps.pdf

Carpi, E. 2021. The epistemic politics of "northern-led" humanitarianism: Case of Lebanon. *Area.* **54**(2), pp.330-334. Available from: https://doi.org/10.1111/area.12770

Caruso, B.A., Ballard, A.M., Sobolik, J. et al. 2024. Systematic re-review of WASH trials to assess women's engagement in intervention delivery and research activities. Nat Water. **2**, pp. 827–836.

Caruso, B.A., Clasen, T.F., Hadley, C., Yount, K.M., Haardörfer, R., Rout, M., Dasmohapatra, M., Cooper, H.L. 2017. Understanding and defining sanitation insecurity: women's gendered experiences of urination, defecation and menstruation in rural Odisha, India. BMJ Glob Health. **2**(4):e000414.

Caruso, B.A., Salinger, A., Patrick, M., Conrad, A., Sinharoy, S. 2021. A Review of Measures and Indicators for Gender in WASH. WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation, and Hygiene, June 2021.

Cawley, C. 2015. Colonies in Conflict: The History of the British Overseas Territories. Cambridge Scholars Publishing, 4 Sept 2015.

Chang, Y.T. and Lin, M.L. 2013. Menarche and menstruation through the eyes of pubescent students in eastern Taiwan: implications in sociocultural influence and gender differences issues. *J Nurs Res*. **21**(1), pp, 10-18.

Chang, Y.-T., Hayter, M., Lin, M.-L. 2012. Pubescent male students' attitudes towards menstruation in Taiwan: implications for reproductive health education and school nursing practice. *Journal of Clinical Nursing.* **21**(3-4), pp, 513-521.

Chant, S. 2000. From 'Woman-Blind' to 'Man-Kind' Should Men Have More Space in Gender and Development? *IDS Bulletin*. **31**(2).

Chant, S. and Gutmann, M.C. 2000. Mainstreaming men into gender and development: debates, reflections, and experiences. Oxford: Oxfam.

Chavez, L.J.E., Lamy, Z.C., da Costa Veloso, L., da Silva, L.F.N., Goulart, A.M.R., Cintra, N., Neal, S., Riggirozzi, P. 2024. Barriers and facilitators for the sexual and reproductive health and rights of displaced Venezuelan adolescent girls in Brazil. *Journal of Migration and Health*, **10**(-) p, 100252.

Cleaver, F. 1999. Paradoxes of participation: questioning participatory approaches to development. *J. Int. Dev.* **11**(-), pp, 597-612.

Collective Service. 2025. For a community-led response. [Online]. Accessed 17 July 2025. Available from: https://www.rcce-collective.net/

Connell, R.W., Messerschmidt, J.W. 2005. Hegemonic Masculinity: Rethinking the Concept. *Sage Publications, Inc: Gender and Society.* **19**(6), pp, 829-859.

Cooke, B., Kothari, U. 2001. Participation: The New Tyranny? Zed Books: Business & Economics.

Cotropia, C. A. 2019. Menstruation Management in United States Schools and Implications for Attendance, Academic Performance, and Health. *Women's Reproductive Health*. **6**(4), pp, 289–305. Available from: https://doi.org/10.1080/23293691.2019.1653575

Days for girls. 2024. Putting Men in Menstrual Health. [Online]. Accessed 19 July 2025. Available from: https://www.daysforgirls.org/blog/putting-men-in-menstrual-health/

Delaney, J. Lupton, M.J., Toth, E. 1988. The Curse. A Cultural History of Menstruation. University of Illinois Press. Urbana and Chicago. Illini Books edition.

Devictor, X., & Do, Q.-T. 2017. How Many Years Have Refugees Been in Exile? Population and Development Review, **43**(2), 355–369.

Downing, S., Benjimen, S., Natoli, L. and Bell, V. 2021. Menstrual hygiene management in disasters: the concerns, needs, and preferences of women and girls in Vanuatu. *Waterlines*. **40**, pp, 144-159.

Ellsberg M., Arango D. J., Morton M., Gennari F., Kiplesund S., Contreras M., Watts C. 2015. Prevention of Violence Against Women and Girls: What does the Evidence Say? *The Lancet*. **385**(9977), pp, 1555–66.

Elrha. 2024a. HIF Support/Glossary. [Online]. Accessed 25 December 2024. Available from: https://www.elrha.org/support/hif/hif-glossary/

Elrha. 2024b. Menstrual Hygiene Management: What have we learned and how far have we come? [Online]. Accessed 24 July 2025. Available from: https://www.elrha.org/news-blogs/menstrual-hygiene-management-what-have-we-learned-and-how-far-have-we-come

Erchull M.J. 2020. "You Will Find Out When the Time Is Right": Boys, Men, and Menstruation. In: Bobel C., Winkler I.T., Fahs B., Hasson K.A., Kissling E.A., Roberts TA. (eds) The Palgrave Handbook of Critical Menstruation Studies. Palgrave Macmillan, Singapore. https://doi.org/10.1007/978-981-15-0614-7_31

Esses, V.M., Bennett-Abuayyash, C.W. and Medianu, S. 2011. Asylum Seekers and Refugees, Attitudes Toward. In The Encyclopedia of Peace Psychology, D.J. Christie (Ed.).

Eswaran ,M., Malhotra, N. 2011. Domestic Violence and Women's Autonomy in Developing Countries: Theory and Evidence. *Canadian Journal of Economics/Revue Canadienne d'Economique*. **44**(4), pp, 1222–63.

Evans RL, Harris B, Onuegbu C. 2022. Systematic review of educational interventions to improve the menstrual health of young adolescent girls. *BMJ Open*. **12**. Available from: doi: 10.1136/bmjopen-2021-057204

Evans, W. 2019. 'The role of men in menstrual hygiene management interventions in emergencies'. (Master of Science, Loughborough University, November 2019).

Eyring J.B., Crandall A., Magnusson B.M. 2023. A Modified Menstrual Attitudes Scale: Heteronormative Attitudes, Sexism, and Attitudes Toward Menstruation in Male and Female Adults. *Arch Sex Behav*. **52**(4), pp, 1535-1547. Available from: doi: 10.1007/s10508-023-02565-y.

Farmer A., Tiefenthaler J. 1997. An Economic Analysis of Domestic Violence. *Review of Social Economy.* **55.**

FIGO. 2020. Committee on Ethical and Professional Aspects of Human Reproduction and Women's Health. FIGO Ethics and Professionalism Guideline 082: Menstrual hygiene management. London. [Online]. Available from : https://www.figo.org/figo-ethics-and-professionalism-guideline-082-menstrual-hygiene-management. Accessed 5 December 2024.

Finish Society 2021. Virtual roundtable: Roll of men in MHM. [Online]. Accessed 19 July 2025. Available from: https://www.finishsociety.org/role-of-men-in-mhm/

Finnemore, M. 1998. "7. Redefining Development at the World Bank". International Development and the Social Sciences: Essays on the History and Politics of Knowledge, edited by Frederick Cooper and Randall M. Packard, Berkeley: University of California Press. pp. 203-227. https://doi.org/10.1525/9780520919440-010

Flores A.R., Meyer I.H., Langton L, Herman J.L. 2021. Gender Identity Disparities in Criminal Victimization: National Crime Victimization Survey, 2017-2018. *Am J Public Health*. **111**(4), pp, 726-729. Available from: doi: 10.2105/AJPH.2020.306099.

Florijancic, P. 2025. CONTROLLING THE NARRATIVE THROUGH TERRORISM LAWS: CASE OF UNITED KINGDOM. The Boğaziçi Law Review, **3**(1), 28-63.

Fromme, R.E. and Emihovich, C. 1998. Boys will be Boys:Young Males' Perceptions of Women, Sexuality, and Prevention. *Education and Urban Society*. **30**(2), pp, 172-188.

Ganguly, L., Satpati, L., Nath, S. 2021. "Taboos and Myth" – Indispensable Part of Menstruation. Asian Pacific Journal of Health Sciences. **8**(4), pp. 250-253.

Global Camp Coordination and Camp Management Cluster. 2015. Camp Management Toolkit. Geneva: International Organization for Migration.

Global MHH Monitoring Group. 2022. Priority List of Indicators for Girls' Menstrual Health and Hygiene: Technical Guidance for National Monitoring. Columbia University. New York.

Goodwin M. 2017. The poverty of numbers: reflections on the legitimacy of global development indicators. International Journal of Law in Context. **13**(4), pp, 485-497.

Gordon, A. 2019. Period taboo: Why can't we talk about menstruation? BBC NEWS. [Online]. [Accessed 20 April 2021]. Available from: https://www.bbc.co.uk/news/uk-northern-ireland-47254222

Grandi, F. 2024. Global Refugee Crisis Growing Worse, with Aid Workers near Breaking Point, Little Respect for Basic Rules of War, High Commissioner Warns Security Council. *United Nations: Meetings Coverage and Press Releases*. [Online]. Accessed 21 December 2024. Available from: https://press.un.org/en/2024/sc15713.doc.htm

Groupe URD. 2009. Participation Handbook for Humanitarian Field Workers. [Online]. Accessed 25 July 2023. Available at: https://www.fsnnetwork.org/resource/participation-handbook-humanitarian-field-workers

Guglielmi, S., Seager, J., Mitu, K. and Jones, N. 2024. Sexual and reproductive health for Rohingya young people living in Bangladesh: midline evidence from GAGE. Report. London: Gender and Adolescence: Global Evidence.

Hammond, L. 2015. Neutrality and Impartiality. The Routledge Companion to Humanitarian Action. 1st Edition. Routledge.

Henderson, D. X., & Baffour, T. (2015). Applying a Socio-Ecological Framework to Thematic Analysis Using a Statewide Assessment of Disproportionate Minority Contact in the United States. *The Qualitative Report*. **20**(12), pp, 1960-1973. Available from http://nsuworks.nova.edu/tqr/vol20/iss12/2

Hennegan J., Shannon A.K., Rubli J. 2019. Women's and girls' experiences of menstruation in low- and middle-income countries: a systematic review and qualitative metasynthesis. *PLoS Med*. **20116**(5). Available from: doi: 10.1371/journal.pmed.1002803

Hennegan J., Winkler I.T., Bobel C., Keiser D., Hampton J., Larsson G., Chandra-Mouli V., Plesons M., Mahon T. 2021. Menstrual health: a definition for policy, practice, and research. *Sex Reprod Health Matters*. **29**(1). Available from: doi: 10.1080/26410397.2021.1911618.

Hickey, S; Mohan, G. 2004. Participation: From Tyranny to Transformation: Exploring New Approaches to Participation in Development. Zed Books. London and New York.

Hirani, S.A.A. 2024. Barriers to Women's Menstrual Hygiene Practices during Recurrent Disasters and Displacement: A Qualitative Study. *International Journal of Environmental Research and Public Health*. **21**(2), p, 153.

House, S. 2019. Strengthening the humanity in humanitarian action in the work of the WASH sector in the Rohingya response. Gender, GBV and inclusion audit of the work of the WASH sector and capacity development assessment. SUMMARY REPORT.

ICRC. 2025. Our history. [Online]. Accessed 16 July 2025. Available at: https://www.icrc.org/en/our-history

Idris, M., 2024. Addressing Challenges to Menstrual Hygiene Management Education Among Rohingya Refugee Adolescent Girls and Young Women in Cox Bazar, Bangladesh Refugee Camp 15. Carolina Digital Depositories. University of North Carolina.

Janz N.K., Becker M.H. 1984. The Health Belief Model: A Decade Later. *Health Education Quarterly*. **11**(1), pp, 1-47. Available from: doi:10.1177/109019818401100101

JMP. 2015. Monitoring. [Online]. 21 December 2024. Available from : https://washdata.org/monitoring

JMP. 2021. Progress on household drinking water, sanitation and hygiene 2000-2020: five years into the SDGs. Geneva: World Health Organization (WHO) and the United Nations Children's Fund (UNICEF). Available from: https://washdata.org/sites/default/files/2021-07/jmp-2021-wash-households.pdf

Joshi, S. 2022. Chhaupadi practice in Nepal: A literature review. World Med. & Health Policy, **14**, pp. 121–137.

Karim, R., Lindberg, L., Wamala, S., & Emmelin, M. 2018. Men's Perceptions of Women's Participation in Development Initiatives in Rural Bangladesh. *American Journal of Men's Health.* Pp, 398–410. Available from: https://doi.org/10.1177/1557988317735394

Katirayi, L., Chadambuka, A., Muchedzi, A., Ahimbisibwe, A., Musarandega, R., Woelk, G., Tylleskar, T., Moland, K.M. 2017. Echoes of old HIV paradigms: reassessing the problem of engaging men in HIV testing and treatment through women's perspectives *Reproductive Health.* **14**(124).

Kijowska, 2023. Sanitary suspenders to Mooncups: a brief history of menstrual products. [Online]. 21 December 2024. Available from: https://www.vam.ac.uk/articles/a-brief-history-of-menstrual-products#:~:text=The%20use%20of%20menstrual%20care,to%20make%20homemade%20cloth%20pads.

Kimmel, M. 2015. Why Gender Equality Is Good for Everyone — Men Included | Michael Kimmel | TED Talks. [Accessed 10th April 2021]. Available from: https://www.youtube.com/watch?v=7n9IOH0NvyY

Kolipaka, S., Hutchings, P., Mdee, A. 2025. WASHed in stereotypes: A rigorous review of water-gender narratives in LMICs. *Earth.* Preprint. https://eartharxiv.org/repository/view/9155/

Langan, M. 2018 The UN sustainable development goals and neo-colonialism. In: Neo-Colonialism and the Poverty of 'Development' in Africa. *Contemporary African Political Economy* (E. N. Sahle, ed.). Palgrave Macmillan, Cham.

Levtov, R. G., Barker, G., Contreras-Urbina, M., Heilman, B., & Verma, R. 2014. Pathways to Gender-equitable Men: Findings from the International Men and Gender Equality Survey in Eight Countries. *Men and Masculinities*. **17**(5), pp, 467-501.

Lue J.M., Bah S., Grant K. 2023. Principles for increasing equity in WASH research: understanding barriers faced by LMIC WASH researchers. BMJ Global Health. **8**(4).

Madiba, S., Ngwenya, N. 2017. Cultural practices, gender inequality and inconsistent condom use increase vulnerability to HIV infection: narratives from married and cohabiting women in rural communities in Mpumalanga province, South Africa. *Global Health Action*. **10**(2).

Maharaj T., Winkler I.T. 2022. "You do not just do it because someone else said so": menstrual practices and women's agency in the Hindu diaspora of Trinidad. *Cult Health Sex.* **24**, pp, 827–841.

Mahon, T., Tripathy, A., Singh, N. 2015. Putting the men into menstruation: The role of men and boys in community menstrual hygiene management. *Waterlines.* **34**(1), pp, 7-14.

Marphatia, A.A., Simiyu, S., O'Kane, M.F., Alexander, K.T., de Castro, A.C.A.N., Azcona, G., Boni-Morkla, P.E., Bukachi, S.A., Busienei, P., Caruso, B.A., Chase, C., Chipungu, J., Dwivedi, A., Johnston, R., Khurana, I., Kome, A., Kuria, W., Labadia, J., Makoni, F., Mberu, B., Mojumdar, S., Mule, J., Sakwa, L.N., Njeri, N., de Souza, F.A.O., Pandolfelli, L., Ramunenyiwa, P., Ray, I., Reddy, M., Saha, P.K., Sinha, U., Sinharoy, S.S., Slaymaker, T., Uguru, E., Uhl, K., Young, S.L., Ross, I., Cumming, O. 2025. Gender equality and quality of life must be central to the design and delivery of sanitation. BMJ Global Health. **10**:e018238.

Mason, L., Sivakami, M., Thakur, H. 2017. 'We do not know': a qualitative study exploring boys perceptions of menstruation in India. *Reprod Health*. **14**, p, 174. Available from: https://doi.org/10.1186/s12978-017-0435-x

McHugh, M.C. 2020. Menstrual Shame: Exploring the Role of 'Menstrual Moaning'. In The Palgrave Handbook of Critical Menstruation Studies.

Merry, S.E. 2011. Measuring the World: Indicators, Human Rights, and Global Governance. Current Anthropology. **52**(S92).

Miiro, G., Rutakumwa, R., Nakiyingi-Miiro, J. 2018. Menstrual health and school absenteeism among adolescent girls in Uganda (MENISCUS): a feasibility study. *BMC Women's Health*. **18**(4). Available from: https://doi.org/10.1186/s12905-017-0502-z

Molyneux, M. 2001. Mobilisation without Emancipation? Women’s Interests, the State and Revolution in Nicaragua. In: Women’s Movements in International Perspective. *Institute of Latin American Studies Series.* Palgrave Macmillan, London. Available from: https://doi.org/10.1057/9780230286382_3

Moser, C.O.N. 1989. Gender planning in the third world: Meeting practical and strategic gender needs. *World Development.* **17**(11), pp, 1799-1825.

Mubita, A. Libati, M. Mulonda, M. 2017. The Importance and Limitations of Participation in Development Projects and Programmes. *European Scientific Journal*. **13**(5). Available from: doi: 10.19044/esj.2017.v13n5p238

Muhaidat, N., Karmi, J.A., Karam, A.M., Abushaikha, F. and Alshrouf, M.A., 2024. Period poverty, reuse needs, and depressive symptoms among refugee menstruators in Jordan’s camps: a cross-sectional study. *BMC Women's Health*. **24**(1), p, 384.

Nunbogu, A.M., Elliott, S.J. 2022. Characterizing gender-based violence in the context of water, sanitation, and hygiene: A scoping review of evidence in low- and middle-income countries. *Water Security*. **15**(-). Available from: https://doi.org/10.1016/j.wasec.2022.100113.

Nyamu-Musembi, C., Cornwall, A. 2004. What is the "rights-based approach" all about? : Perspectives from international development agencies. *The Institute of Development Studies and Partner Organisations*. Report. Available from: https://hdl.handle.net/20.500.12413/4073

Oakley,P. 1991. The concept of participation in development. *Landscape and Urban Planning*. **20**(1-3)., pp, 115-122. Available from: https://doi.org/10.1016/0169-2046(91)90100-Z.

Olivius, E. 2014. (Un)Governable Subjects: The Limits of Refugee Participation in the Promotion of Gender Equality in Humanitarian Aid. *Journal of Refugee Studies*. **27**(1), pp, 42–61. Available from: https://doi.org/10.1093/jrs/fet001

Oxfam. 2018. One year on: Time to put women and girls at the heart of the Rohingya response. Oxfam International. [Online]. Accessed 10th August 2021. Available from: https://s3.amazonaws.com/oxfam-us/www/static/media/files/bp-one-year-on-rohingya-refugee-women-girls-110918-en.pdf

Oxfam. 2019. An Introduction to Community Engagement in WASH. [Online]. Accessed 17 July 2025. Available from: https://policy-practice.oxfam.org/resources/an-introduction-to-community-engagement-in-wash-620611/

Pandit, K., Hasan, M.J., Islam, T. and Rakib, T.M., 2022. Constraints and current practices of menstrual hygiene among Rohingya adolescent girls. *Heliyon*. **8**(5).

Patel, K., Panda, N., Sahoo, K.C., Saxena, S., Chouhan, N.S., Singh, P., Ghosh, U. and Panda, B., 2022. A systematic review of menstrual hygiene management (MHM) during humanitarian crises and/or emergencies in low-and middle-income countries. *Frontiers in Public Health*. **10**.

Pawson, R. Tilley, N. 2004. Realist Evaluation. [Online]. Available from : https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=e092393652456869d7ccf6fa57b5a5a4d2d9e10a. Accessed 5 December 2024.

Penakalapati, G., 2013. " Boys do not have knowledge about menstruation; they think it is a bad thing"- Knowledge and Beliefs about Menstruation among Adolescent Boys in Gicumbi District, Rwanda (Master's thesis).

Peranovic, T. and Bentley, B. 2017. Men and Menstruation: A Qualitative Exploration of Beliefs, Attitudes and Experiences. *Sex Roles*. **77**(1), pp, 113-124

Priority List of Indicators for Girls' Menstrual Health and Hygiene: Technical Guidance for National Monitoring. 2022. Global MHH Monitoring Group. Columbia University. New York

Prosperity Fund. 2020. Prosperity Fund: Applying the Gender and Inclusion Framework for Primary Purpose - February 2020. [Online]. Available at Prosperity-Fund-Gender-and-Inclusion-framework.GOV.UK. Accessed 5 Nov 2024.

Purefem. 2024. The Role of Men in Supporting Menstrual Health Awareness and Equality. [Online]. Accessed 19 July 2025. Available from: https://purefem.in/2024/10/25/the-role-of-men-in-supporting-menstrual-health-awareness-and-equality/

Rajagopal, S. and Mathur, K. 2017. 'Breaking the silence around menstruation': experiences of adolescent girls in an urban setting in India. *Gender &Development*. **25**(2), pp.303-317.

Rebecca Ratcliffe, R. 2019. Young woman dies in fourth 'period hut' tragedy this year in Nepal. The Guardian. [Online]. Available at https://www.theguardian.com/global-development/2019/feb/06/young-woman-dies-fourth-period-hut-tragedy-this-year-nepal

Risling Baldy, C. 2017. mini-k'iwh'e:n (For That Purpose—I Consider Things): (Re)writing and (Re)righting Indigenous Menstrual Practices to Intervene on Contemporary Menstrual Discourse and the Politics of Taboo. *Cultural Studies ↔ Critical Methodologies*. **17**(1), pp, 21-29. Available from: https://doi.org/10.1177/1532708616638695

Roxburgh H., Hampshire K., Kaliwo T., Tilley E.A., Oliver D.M., Quilliam R.S. 2020. Power, danger, and secrecy-A socio-cultural examination of menstrual waste management in urban Malawi. *PLoS One.* **15**(6). Available from: doi: 10.1371/journal.pone.0235339. PMID: 32589649; PMCID: PMC7319299.

Sabet, C., Nguyen, D., Nada, S.A., Abuzerr, S., Taha, A.M. 2024. Women and girls in Gaza face increasingly dire physical and mental health challenges. *BMJ*. p 384.

Sadique, S., Ali, I. and Ali, S. 2024. Managing menstruation during natural disasters: menstruation hygiene management during "super floods" in Sindh province of Pakistan. *Journal of Biosocial Science*. **56**(3), pp.480-492.

Sahani, M.K., Maat, H., Balabanova, D. et al. 2024. Engaging communities as partners in health crisis response: a realist-informed scoping review for research and policy. Health Res Policy Sys 22(56).

Sahin, M. 2015. Guest editorial: Tackling the stigma and gender marginalization related to menstruation via WASH in schools programmes. *Waterlines*. **34**(1), pp, 3-6.

Salihu H.M., Wilson R.E., King L.M., Marty P.J., Whiteman V.E. 2015. Socio-ecological Model as a Framework for Overcoming Barriers and Challenges in Randomized Control Trials in Minority and Underserved Communities. *Int J MCH AIDS.* **3**(1), pp, 85-95.

Scarneo S.E., Kerr Z.Y., Kroshus E., Register-Mihalik J.K., Hosokawa Y., Stearns R.L., DiStefano L.J., Casa D.J. 2019. The Socioecological Framework: A Multifaceted Approach to Preventing Sport-Related Deaths in High School Sports. *J Athl Train*. **54**(4), pp.356-360. Available from: doi: 10.4085/1062-6050-173-18.

Schmitt, M.L., Clatworthy, D., Ratnayake, R. 2017. Understanding the menstrual hygiene management challenges facing displaced girls and women: findings from qualitative assessments in Myanmar and Lebanon. *Conflict and Health*. **11**(19). Available from: https://doi.org/10.1186/s13031-017-0121-1

Schmitt, M.L., Wood, O.R., Clatworthy, D., Rashid, F.S., Sommer, M. 2021. Innovative strategies for providing menstruation-supportive water, sanitation and hygiene (WASH) facilities: learning from refugee camps in Cox's bazar, Bangladesh. *Conflict and Health*. **15**(10).

Schumacher, H. 2019. The BBC. [Online]. 18th March 2019. [10th April 2021]. Available from: https://www.bbc.com/future/article/20190313-why-more-men-kill-themselves-than-women

Schuster, R.C., Wachter, K., Hussain, F. and Gartin, M.L. 2024. Gendered effects of climate change and health inequities among forcibly displaced populations: Displaced Rohingya women foster resilience through technology. The Journal of Climate Change and Health, 18, p.100303.

Seely, A. 2021. Research briefing: VAT on sanitary protection. House of Commons Library. [Online]. Accessed 10th August 2021. Available from: https://commonslibrary.parliament.uk/research-briefings/sn01128/

Sharma, V. 2021 Human rights are a form of neo-colonialism and cannot, therefore, address the neo-colonial injustices of the neoliberal global order. *Advance.* Preprint. https://doi.org/10.31124/advance.13698982.v1

Skovdal, M. Campbell, C., Madanhire, C., Mupambireyi, Z., Nyamukapa, C., Gregson, S. 2011. Masculinity as a barrier to men's use of HIV services in Zimbabwe. *Globalization and Health.* **7**(13).

Sommer, M., 2012. Menstrual hygiene management in humanitarian emergencies: gaps and recommendations. *Waterlines.* Pp, 83-104.

Sommer, M., Schmitt, M., Clatworthy, D. 2017. A toolkit for integrating Menstrual Hygiene Management (MHM) into humanitarian response. (First edit). New York: Columbia University, Mailman School of Public Health and International Rescue Committee

Sphere Association. 2018. The Sphere Handbook: Humanitarian Charter and Minimum Standards in Humanitarian Response, fourth edition, Geneva, Switzerland. Available from: www.spherestandards.org/handbook

Spiegel, P.B. 2017. The humanitarian system is not just broke, but broken: recommendations for future humanitarian action. *The Lancet*. Available from: https://doi.org/10.1016/S0140-6736(17)31278-3

Stavrianakis, A. 2022. Missing in Action:UK arms export controls during war and armed conflict. Defense Industries, Foreign Policy and Armed Conflict. World Peace Foundation. The Fletcher School. Tufts University.

Sylvester, R. P. Hutchings, A. Mdee. 2023. Defining and acting on water poverty in England and Wales. *Water Policy*. **25**(5), pp, 492–508. doi: https://doi.org/10.2166/wp.2023.253

The Hygiene Bank. 2024. Our latest report reveals that 4.2 million adults in the UK are unable to afford basic hygiene essentials, such as razors, laundry detergent or deodorant. [Online]. Accessed 21 December 2024. Available from : https://thehygienebank.com/hygiene-poverty-2024/#:~:text=In%202024%20hygiene%20poverty%20affects,more%20people%20into%20hygiene%20poverty

UN. 2015. SDGs Targets and Indicators. [Online]. Accessed 21 December 2024. Available from :https://sdgs.un.org/goals/goal6#targets_and_indicators

UNHCR. 2023. Cluster Approach. [Online]. Accessed 16 July 2025. Available from: https://emergency.unhcr.org/coordination-and-communication/cluster-system/cluster-approach

UNHCR. 2024. Who we protect: Refugees. [Online]. Accessed 16 July 2025. Available from: https://www.unhcr.org/uk/about-unhcr/who-we-protect/refugees

UNHCR. 2025. Refugee Data Finder [Online]. Accessed 16 July 2025. Available from: https://www.unhcr.org/refugee-statistics/

UNICEF. 2019. Guidance on Menstrual Health and Hygiene. [Online]. Accessed 26 August 2021. Available at: https://www.unicef.org/media/91341/file/UNICEF-Guidance-menstrual-health-hygiene-2019.pdf

UNICEF. 2022. Men break taboos and lead conversations around menstruation. [Online]. Accessed 19 July 2025. Available from: https://www.unicef.org/rosa/stories/men-break-taboos-and-lead-conversations-around-menstruation

VanLeeuwen, C. Torondel, B. 2018. Improving menstrual hygiene management in emergency contexts: literature review of current perspectives. *Int J Womens Health*. **10**, pp, 169–186.

Varelis, T., Allambademel, V.D.P., Ngarmbatedjimal, A., Ndingayande, A., Diarra, A., Vourbane, K., Madjigoto, R., Luketa, S. and Casey, S.E. 2024. Sexual and reproductive health knowledge, attitudes, and behaviors: A survey of 12–17 year old Sudanese refugees in Chad. *PLOS Global Public Health* **4**(1).

Vashisht, A., Pathak, R., Agarwalla, R., Patavegar, B.N. and Panda, M., 2018. School absenteeism during menstruation amongst adolescent girls in Delhi, India. *Journal of Family and Community Medicine.* **25**(3), pp.163-168.

Vedachalam, S., Macdonald, L.H., Otupiri, E., Nakua E.K., Schwab. K.J. 2016. High-risk water and sanitation practices: evidence of underreporting from eight countries. 39th WEDC international conference, Kumasi, Ghana. Ensuring availability and sustainable management of water and sanitation for all briefing paper 2445

Veer E., Golf-Papez M., Zahrai, K. 2019. Using the Socio-Ecological Model as an Holistic Approach to Behavioural Change. *Macro-Social Marketing Insights.* 1st Edition. Routledge.

Wallace, T. 1991. Case studies of ways of working with gender: introduction. in Tina Wallace with Candida March, eds, Changing Perceptions: Writings on Gender and Development, Oxford. Oxfam, pp 184-9.

WHO. 2003. Integrating Gender into HIV/AIDS Programmes: a review paper. [Online]. Switzerland. [Accessed 10th April 2021]. Available from: https://www.who.int/hiv/pub/prev_care/en/IntegratingGender.pdf

WHO. 2016. World Health Data Platform: Mental Health. [Online]. [Accessed 10th April 2021]. Available from: https://www.who.int/data/gho/data/themes/mental-health

WHO. 2018. Millennium Development Goals. [Online]. Accessed 21 December 2024. Available from : https://www.who.int/news-room/fact-sheets/detail/millennium-development-goals-(mdgs)

WHO. 2024a. Water Sanitation and Hygiene. [Online]. Accessed 21 December 2024. Available from : https://www.who.int/news-room/fact-sheets/detail/sanitation#:~:text=Overview,%2Dwater%2C%20sanitation%20and%20hygiene.

WHO. 2024b. Gender. [Online]. Accessed 21 December 2024. Available from: https://www.who.int/health-topics/gender#tab=tab_1

Wilson, E., Haver, J., Torondel, B., Rubli, J. Caruso, B.A. 2018. Dismantling menstrual taboos to overcome gender inequality. The Lancet Child & Adolescent Health, **2**(8), pp. e17.

Winkler I.T., Lhaki P., Baumann S.E. 2024. Its manifestations may vary, but menstrual stigma is universal. *Women's Health*. **20**. Available from: doi:10.1177/17455057241262007

CHAPTER II

RESEARCH DESIGN AND POSITIONALITY

2.1 OVERVIEW

This thesis provides novel evidence on how to address practical and strategic menstrual health needs by involving both menstruators and non-menstruators in menstrual health programmes in humanitarian settings. It focuses on identifying and validating the underlying causal forces that lead to the desired programme outcomes, and the contextual factors necessary for them to be activated. There currently exists a lack of evidence-based and specific guidance, despite guidelines and literature emphasising the need to involve these groups within a menstrual health response. Using realist qualitative and quantitative methods, the thesis includes programme manager, implementer, and participant voices through Key Informant Interviews (KIIs), in-depth interviews, and FGDs to create empirical evidence for how to involve all sexes in menstrual health programmes in humanitarian settings. Before I state the research aim, questions, and objectives, it is first necessary to outline some key concepts within the research approach.

2.2 RESEARCH APPROACH

2.2.1 REALIST EVALUATION

Social programmes can be regarded as 'a hypothesis about social betterment' (Pawson & Tilley 2004, p.2). By this, Pawson and Tilley (2004) mean that programmes set out an imagined path wherein wrongs are righted, behaviours ameliorated, and inequalities reduced. Evaluation then works to develop, test, and refine theories on how this prospect of change may come about. Unlike programme theory or theories of change evaluations, realist evaluation doesn't just ask *if* a programme works, but what works, for whom and under what circumstances (Nielsen and Miraglia 2017). It looks in between inputs, activities, outputs, and outcomes to discover the 'black box' containing mechanisms - or generative causal forces - that lead to change within programmes (Salter & Kothari 2014). With this careful understanding, programmes can be scaled up or deployed in other contexts.

Realist evaluation was born out of scientific realism, a philosophical perspective developed by Roy Bhaskar and others, that believes the world exists independently of our perceptions but can be studied scientifically to understand causal mechanisms (Porter 2015). It lies between positivism, which asserts that reality is directly knowable through scientific inquiry, and constructivism, which claims that reality is what we make it to be through perceptions and experiences (see *Figure 3*). The iterative theory development and testing process required by realist evaluation calls for retroductive reasoning, using both deductive and inductive logic (see Figure 3). Retroduction allows the evaluator to 'discern relations and connections that are not otherwise evident or obvious' in order to formulate new ideas or consider what might happen in a different context (Meyer & Lunnay 2013; Danermark et al. 1997, p.93). It allows evaluators to posit what connects

A to B based on informed speculations or insights and then test them accordingly. In this way realist evaluators can see something new, which is not obviously apparent at first glance.

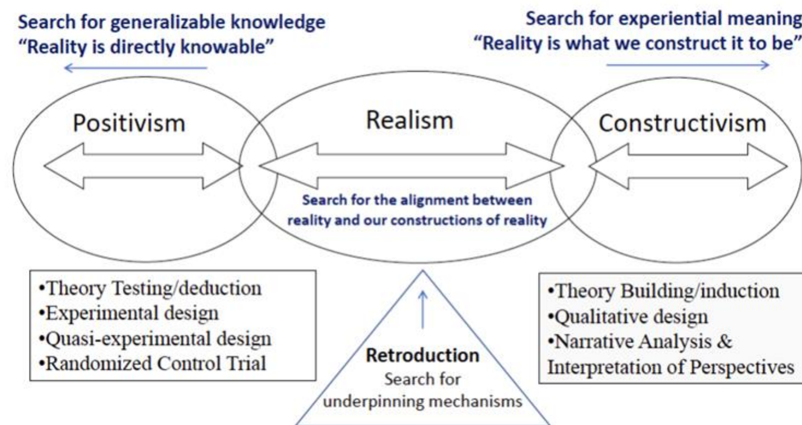


Figure 3 - Jagosh, 2019, taken from his course: coding, configuring, and conveying in realist analysis

The core conceptual framework within realist evaluation seen in Figure 4 is the Context-Mechanism-Outcome configuration (Pawson & Tilley 1997). The framework asserts that to understand how any programme works evaluators must consider Context: the environmental conditions in which the programme takes place that influences how it transpires, Mechanisms: the underlying causal forces through which the intervention takes effect and Outcomes: the results of the intervention (Pawson & Tilley 1997). The perspective on causation differs from the successionist model within positivist approaches where causation is seen as a sequence of events i.e. if A happens, B will follow. Instead, it asserts generative causation wherein causality is seen as a complex process wherein mechanisms are fired only under certain contextual circumstances (Lemire et al. 2020). As for understanding context, realist evaluators appreciate that the environment in which interventions take place is complex and dynamic, wherein the continuous multitude of variables that influences them cannot be isolated (Greenhalgh & Manzano 2021). This allows realist evaluators to accept the complexities of real-world interventions and recognise that programmes will function differently with different peoples, environments, and times.

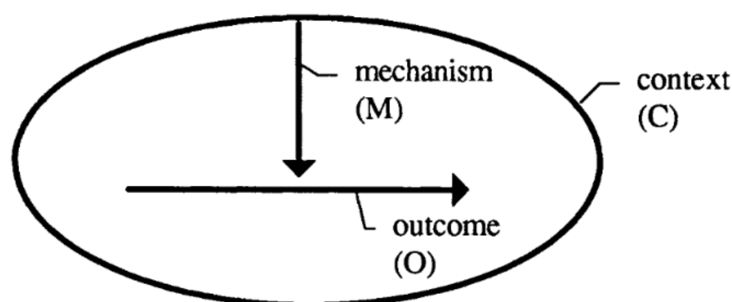


Figure 4 - Context-Mechanism-Outcome configurations within realist evaluation

Current guidance for menstrual health programmes in humanitarian settings is intended to be deployed universally. However, there is limited indication of how to adapt it to each context. With humanitarian

settings being extremely varied globally, programme implementers cannot expect the same outcomes in each situation. Thus, realist evaluation was a suitable approach as it allowed me to discover the key mechanisms of change to seek within menstrual health programmes and the contextual factors to have in place to achieve them, making for guidance that is universally applicable.

Since menstruation is a culturally stigmatised and silenced subject, the evaluation required a method that allowed me to uncover deeper and hidden feelings among participants. More specifically, it was appropriate for the first case study as I was looking at how to centre the participant experience within participatory menstrual health programmes. This meant a focus on understanding the participants' concealed feelings and responses to programme inputs – a key component of realist evaluation. For the second case study, I wanted to discover how non-menstruator attitudes and behaviours towards menstruation could be influenced. Realist evaluation allowed me to discover non-menstruators thoughts and reactions to programme inputs, which led to changes in attitudes and behaviours.

Typically, both 'quantitative and qualitative data are collected in a realist evaluation, often with quantitative data being focused on context and outcomes and qualitative data on generative mechanisms' (Belle et al. 2021). I used both qualitative and quantitative methods to explore context-mechanism-outcome configurations and provide evidence for developing the programme theories. The theories were then refined using qualitative interview data to explore mechanisms. The realist approach for the two case studies was slightly different. For the first, we were evaluating participant's experience of the programme rather than the programme itself, exploring what contextual factors are related to menstruators engaging with the programme resources. For the second, we sought to evaluate the programme itself, in terms assessing whether the desired outcomes were achieved as a result of the programme and the mechanisms through which these outcomes came about, with an awareness of the impact of context on these mechanisms.

Overall, the realist evaluations conducted within this PhD provide usable knowledge allowing actors to design and adapt interventions to real-world settings. By nesting my research design and theoretical direction with this realist lens, I go beyond outcome-focused evaluation to provide a rich and nuanced understanding of menstrual health interventions, which are theoretically robust and practically actionable.

2.2.2 RISK ATTITUDES NORMS ABILITY SELF-REGULATION (RANAS) APPROACH

As established, realist evaluation is a theory-driven approach. Since there exists some literature and guidance on consulting menstruators within menstrual health programmes I used this and feminist theory to develop my initial programme theories within the first case study and evaluation, with the literature underpinning these insights reviewed in the first chapter of this thesis. For my second case study and the work focuses on engaging non-menstruators there is limited grounding for theory development. Instead, in those chapters, I introduced the Risks, Attitudes, Norms, Abilities and Self-regulation (RANAS) approach which is a theoretical framework for understanding what influences behaviours. It provides an established systematic method for evaluating behaviour change strategies that target the 'behavioural factors of a specific behaviour in a specific population' (Contzen & Mosler 2012, p.1). It is evidenced based and

grounded in behavioural science theories drawing on psychology and sociology to identify key determinants of behaviour. The approach has been used to develop and evaluate WaSH behaviour change programmes (RANAS 2022), but only one menstrual health programme has been published (Rahamen 2022).

The RANAS approach necessitates the practitioner to first understand the psychosocial, behavioural, and contextual factors (referred to as simply 'context' in realist evaluation) influencing a behaviour in order to understand which behaviour change technique(s) to apply. This also allows for a greater understanding of where attitudes and behaviours towards a given subject may first arise, which helped to inform theory development within the realist evaluation. The psychosocial factors are Risks, Attitude, Norms, Ability, and Self-regulation, which give RANAS its name. Risk factors represent a person's understanding and awareness of the health risk. Attitude factors, a person's positive or negative stance towards a behaviour. Norm factors, the perceived social pressure towards a behaviour. Ability factors, a person's confidence in their ability to practice a behaviour. And Self-regulation factors, a person's attempts to plan and self-monitor a behaviour and to manage conflicting goals and distracting cues (Molser & Contzen 2016). Through conducting an analysis between the 'doers' and 'non-doers' of the target behaviour based on these psychosocial factors, implementers can discover the behavioural determinants: factors which influence behaviour change.

I chose to use the RANAS model to create theories within the realist evaluation because, unlike traditional theories like the Health Belief Model or Theory of Planned Behaviour, which focus on some constructs like risk or attitude, RANAS encompasses five key factors from different behaviour change approaches (Davidhizar 1983). Additionally RANAS requires researchers to identify the behavioural determinants relative to the population of study. Other models like Social Cognitive Theory commonly rely on generalised constructs that may not adapt well to nuanced cultural contexts (Beauchamp 2019). Other behaviour change theories common in the WaSH sector I could have deployed, such as Community-Led Total Sanitation (CLTS) or 'nudging' which are based on 'triggering' participants to act in a certain way, I felt lent themselves to paternalism. There is also a clear line between implementer and participant wherein the implementer has a strict goal they want participants to adhere to. The RANAS approach is more human-centred based on an understanding of the individual's thoughts and beliefs around a subject or action and develops from there. Additionally, what was important in this study is that the intervention did not intend to force, shame, or coerce participants into thinking or acting in a certain way, but to encourage the community to develop their own, distinct relationship to menstruation, in a way that promotes the health and wellbeing of menstruators. Table 6 provides a summary of the pros and cons of different behaviour change techniques used in the WaSH sector.

Table 6 - Pros and cons of different behaviour change techniques used in Water, Sanitation, and Hygiene programmes

TECHNIQUE / FRAMEWORK	PROS	CONS
COMMUNITY-LED TOTAL SANITATION (CLTS)	- Mobilizes communities for collective action - Cost-effective and scalable - Promotes norm shifts via social pressure	- Can involve shaming/coercion - Focuses heavily on toilet construction, less on hygiene

		- Sustained behaviour change not guaranteed
SOCIAL MARKETING	- Boosts demand and product uptake - Proven in hygiene campaigns (e.g., handwashing with soap) - Engages private sector	- Requires significant funding and design - Often excludes ultra-poor groups - Commercial approach may limit depth of behaviour change
NUDGE THEORY	- Cost-effective and non-intrusive - Great for routine behaviours (e.g., reminders at handwashing stations) - Easy to integrate with hardware	- Small, incremental impact - Not suitable for deep or complex behavioural shifts - Effects may fade without reinforcement
HEALTH EDUCATION	- Raises awareness and knowledge - Works well in schools or group settings - Simple to implement and replicate	- Knowledge ≠ behaviour change - Often top-down and one-size-fits-all - Tends to overlook emotional and social drivers
BEHAVIOUR-CENTERED DESIGN (BCD)	- Highly contextual and evidence-driven - Accounts for emotions, motives, context - Drives innovation (e.g., SuperAmma)	- Requires extensive formative research - Can be complex and time-intensive - Scaling needs simplification and capacity
COM-B FRAMEWORK (CAPABILITY, OPPORTUNITY, MOTIVATION – BEHAVIOUR)	- Practical and widely used - Identifies what's missing for behaviour to occur - Compatible with other frameworks	- Needs skilled facilitators for diagnosis - Risks being oversimplified - Less WASH-specific nuance compared to RANAS or IBM-WASH
INTERGRATED BEHAVIOUR MODEL (IBM)-WASH	- Designed for WASH behaviours - Incorporates contextual, psychosocial, and technological factors at multiple levels - Suitable for complex system change	- Complex model structure - Hard to apply without clear tools - More often used in research than field implementation
RANAS MODEL (RISKS, ATTITUDES, NORMS, ABILITIES, SELF-REGULATION)	- Specifically tailored for WASH - Offers structured, evidence-based diagnostics - Allows quantitative measurement of behavioural determinants - Has practical toolkits for practitioners	- Requires survey/data collection capacity - May be too rigid for fast or creative design - Focuses more on individual-level change than system change
INCENTIVES / CONDITIONAL TRANSFERS	- Motivates adoption through immediate rewards - Useful for breaking economic barriers - Can jumpstart difficult behaviour uptake	- Unsustainable without long-term support - Can undermine intrinsic motivation - Ethical concerns around conditionality
PEER INFLUENCE / ROLE MODELLING	- Utilizes existing social networks - Builds trust and credibility - Reinforces community norms	- Effectiveness varies by role model credibility - Scaling is resource-intensive - Can reinforce existing inequalities if poorly chosen
COMMITMENT DEVICES / PLEDGES	- Low-cost and public-facing - Encourages consistency with	- Doesn't guarantee actual behaviour

	stated beliefs - Can be community-led	- Superficial if not reinforced - Cultural appropriateness varies
GAMIFICATION / DIGITAL ENGAGEMENT	- Engaging and fun, especially for youth - Scalable via mobile/online platforms - Good for habit formation	- High development cost - Technology access not universal - Long-term WASH-specific evidence limited

2.3 RESEARCH STRATEGY AND DESIGN: MULTIPLE CASE STUDY

2.3.1 CASE STUDY RATIONALE

For the overall research strategy, I am using two case studies. Since I am using realist evaluation to create empirical evidence to add to and nuance existing menstrual health programme guidance, it was logical to base the research on two real-world cases on the type of programmes in question. Yin (2003) writes that this method is widely applicable and allows researchers to 'retain the holistic and meaningful characteristics of real-life events' at different levels of the Socio-Ecological Model (the framing I use in the thesis) (p.2). Case studies allow us to dive deeply into programmes, populations, and settings, which help to uncover nuances and context-specific information that broader studies might overlook (Simmons 2014). They are also useful for exploring complex and multifaceted issues, allowing researchers to look at the situation from multiple angles, incorporating social, psychological, environmental, and economic factors (Scholz & Titje 2002). Another benefit is that they can make information more relatable and memorable, rendering complex ideas digestible through their narratives to the people who need to understand them, in this case, humanitarian actors (Wandhe 2024). The type of case studies I will use are explanatory, as they aim to clarify why particular phenomena work in a certain way, and sequential (rather than parallel) due to the limitations of being an individual researcher and the timescales of the programmes being deployed (Yin, 2009). By using case studies to provide insights grounded in real-life circumstances, I provide practical recommendations based on actionable results.

CASE STUDIES AND REALIST EVALUATION

Researchers have utilised case studies within realist evaluations, demonstrating their capacity to 'sustain theory building' (Koenig 2009, p.9). Research questions within case studies often ask 'how' as opposed to 'who, what, where, how many, how much', which aligns with realist evaluation that sets out to interrogate how or why programmes transpire in certain ways (Yin 2009, p.592). Yin also highlights their ability to provide a deep understanding of contextual conditions when wanting to understand a case study in depth, a key component of realist evaluations (2009). Case studies allow a certain level of freedom and exploration, allowing new patterns and relationships to emerge wherein researchers can develop new theories, as is the basis of realist evaluation (Tellis 1997). Additionally, since they are based on real-life situations, they allow researchers to gain a clear picture of how these theories and concepts apply in practical settings, leading to applicable findings (Eisenhardt 1989). Though the case studies are specific, they can provide an exemplar that reflects broader trends, by demonstrating these theoretical concepts in action (Woodside 2003). This is especially important in subjects where knowledge is still evolving, as is the

case with menstrual health programming. Case studies also support the integration of both qualitative and quantitative methods to five a comprehensive overview of the subject, as is common in realist evaluation, (Seawright & Gerring 2008). They are also flexible allowing for adjustments in focus or methods as new insights emerge, aligning with the iterative process realist evaluation calls for (Cousin 2005).

MULTIPLE CASE STUDY RATIONALE

The primary reason for selecting two separate case studies was logistical. I was not able to find a location that was implementing a programme that was engaging both menstruators and non-menstruators simultaneously. With the first case study in Lebanon, the non-menstruators, though not wanting to be involved themselves, were already supportive of menstrual health, encouraging their family members to take part in the programme. What I required in the second part of the study was an instance where non-menstruators were acting as a barrier to menstrual health with a programme targeted at improving this. Aside from logistics, I reasoned that having multiple case studies was a good way of gaining in-depth contextual information that could be directly compared. Though it is common to conduct realist evaluations within one setting, many choose to conduct them in multiple contexts so that theories can be tested by observing how the same inputs interact in response to the differing contextual factors. With two separate case studies, I was able to examine patterns and insights across these settings in order to generalise findings and recognise broader trends. My three empirical chapters are separated with the first one based on the Lebanese case study and the last two on Bangladesh. I save cross-comparison for the Discussion in Chapter VI.

CASE STUDY SELECTION RATIONALE

For selecting case studies based on realist approaches, Emmel (2013) stresses that it should be deliberate and aligned with the research question, focusing on cases that can provide the most insightful information. I chose to use these two populations as they present two of the largest forced displacements of the 21st century. By selecting two prominent refugee populations, I create evidence adding to and nuancing what has already been provided within existing guidance. Their populations and contexts possess many similarities and differences as is illustrated in Table 7. This allowed me to compare parallels and variances in the contextual factors when looking at the results of the two realist evaluations. The case study in Lebanon presented a programme wherein menstruators were being consulted on their menstrual health needs, and the case study in Bangladesh presented a programme where non-menstruators were being engaged to change attitudes and behaviours surrounding menstrual health, which exemplify the type of cases I required to ask my research questions. IFRC, their associated societies, World Vision, and UNICEF are renowned organisations so they were able to provide exemplary programmes the humanitarian sector can take learnings from. Additionally, they presented themselves as engaged and enthusiastic partners who would directly benefit from the work. By collaborating with them, I was able to respond to their needs based on real, current situations, making this a needs-driven piece of research.

THE TRAP OF OVER-GENERALISING

Pacheco-Vega (2022) writes that 'studies in the US are written as though generalizable for the world' whereas Majority World researchers 'find themselves having to justify their choice of case studies'. This is a matter of Eurocentric dominance of knowledge wherein ideas and perspectives coming from 'Western, Educated' persons from 'Industrialized, Rich and Democratic countries' are taken as universal (Pacheco-Vega 2022). Conversely, when Minority World researchers conduct studies in the Majority World, broad generalisations are made for vastly differing countries and cultures, providing a 'single story' for the 'meta category' that is the Majority World (Waisbich 2021, p.2086). Although Gerring (2004) defines case studies as 'an intensive study of a single unit with an aim to generalize across a larger set of units', I use the two case studies to make specific observations of target communities rather than to generalise (p.352). Additionally, since realist evaluation aligns with falsifiability wherein a theory is structured in a way that allows it to be tested and potentially proven false, only context-specific theories are tested thus making it impossible to generalise (Kurbis 2019).

Table 7 – Contextual comparisons of the two case studies

CATEGORY	LEBANON CASE STUDY	BANGLADESH CASE STUDY
TOTAL REFUGEE POPULATION	1.5 million	1 million
LANGUAGE COMPARED TO HOST COMMUNITY	Same	Same/similar
SETTLEMENT TYPE	Informal tented settlement	Refugee camp (made up of 33 smaller camps)
POPULATION IN SETTLEMENT	50	1 million
REASONS FOR FLEEING	Instability from uprising against authoritarian government	Ethnic cleansing/genocide
RELIGION COMPARED TO HOST COUNTRY	Largely the same	Largely the same
ARRIVAL YEAR IN HOST COUNTRY	2011	2017

2.4 STUDY SETTINGS

SYRIAN REFUGEES IN LEBANON

The Syrian civil war, starting in 2011, stemmed from a combination of political authoritarianism, economic struggles, and social dissent, which had built up over decades under the Assad family's rule (Holliday 2013). The Assad family, who have ruled Syria since 1971, are politically authoritarian, crushing any opposition with imprisonment, torture, or execution, and controlling most aspects of society such as media and public discourse (Dagher 2019). Public discontent was largely fuelled by economic inequalities and high unemployment, especially among the youth and those living in rural areas (Ford 2019). Between 2006 and 2010, Syria also experienced one of its worst droughts on record, devastating the agricultural sector and forcing farmers and rural families to abandon their land and move to urban areas, worsening poverty and

overcrowding cities (Karnieli 2019). The government's lack of support increased anger and frustration (Karnieli 2019). The Arab Spring starting at the beginning of 2011 was a series of pro-democracy uprisings across the Middle East and North Africa (Malik & Awadallah 2013). This encouraged Syrians to peacefully demand political reform and an end to the Assad regime's authoritarian rule (Zuber & Moussa 2018). The government's harsh crackdown soon escalated into civil war. As the violence grew, portions of the military defected and formed the Free Syrian Army with other opposition groups, armed militias, rebel factions and extremist groups such as the Islamic State of Iraq and Syria (ISIS) surfacing (Shamieh & Szenes 2015). It soon became a proxy war with regional and global powers intervening on different sides, prolonging the conflict (Hughes 2014).

This resulted in half the population (over 12 million Syrians) fleeing their homes to safer parts of the country, neighbouring countries, and eventually Europe and elsewhere (UNHCR 2023). One and a half million fled to neighbouring Lebanon, leading to enormous social economic strain, rising tensions with host communities, and limited resources to support refugees, forcing them to live in unstable conditions with limited access to employment, education, or healthcare (Zreik 2024). Lebanon, a small country with already limited resources, has ended up hosting a disproportionately high number of refugees relative to its population; one of the highest per capita concentrations of refugees in the world (UNHCR 2024). Lebanon is not a signatory to the 1951 Refugee Convention, meaning that Syrians do not have refugee status, limiting their legal rights and international protections (Janmyr 2017). Many Syrians live in precarious conditions like informal tented settlements (as the population studied in this thesis) and overcrowded housing with poor infrastructure and lack of access to WaSH or electricity (Corstange 2018). Lebanon's economic crisis has also resulted in food insecurity and less employment opportunities (Hwalla 2021). Competition for jobs, resources, and schooling limits their prospects and has increased tensions between Lebanese hosts and Syrian refugees (Kheireddine et al. 2021). There is uncertainty of Syrians being able to return safely to their country, meaning sustainable efforts are required to integrate them into Lebanon with access to basic human needs and rights, such as WaSH.

ROHINGYA REFUGEES IN BANGLADESH

The Rohingya are a predominantly Muslim ethnic group living in Myanmar (formerly Burma) for generations with roots tracing back centuries in the Rakhine State (Mohajan 2018). However, the government of Myanmar views them as illegal immigrants or terrorists from Bangladesh who threaten the national identity of the majority-Buddhist country and denies them citizenship and the rights that come with it (Akins 2018). They have faced systematic discrimination and marginalisation for a long time with waves of violence breaking out against them in 1978, 1991-92, 2012, 2016, and most recently, 2017 (Leider 2018). This was the most extreme wave of violence initiated when the militant group Arakan Rohingya Salvation Army (ARSA) attacked several police posts (Lee 2021). In retaliation, the military launched what it named 'clearance operations' against the Rohingya (Adams 2019, p.435). The operation involved killings, sexual violence, torture, and the destruction of villages, driving two thirds of Rohingya out of Myanmar and largely into neighbouring Bangladesh, quickly becoming the world's largest refugee settlement (Hossein 2021). The camps conditions are dire with overcrowding, lack of access to basic services such as WaSH, food

shortages, and limited access to education or employment (Islam & Hossain 2019). The camp is also subject to intense weather patterns such as heavy monsoons and tropical cyclones, which the makeshift shelters provide inadequate protection against (Kamal et al. 2022). Though receiving a lot of international aid initially, the protracted nature of the crisis means that monetary flows are drying up, especially as global attention shifts to other, more urgent emergencies (Khaled 2021). Similarly to Lebanon, the influx has created tension between the refugee and host community through driving up local prices, straining local services, and creating a competition for resources (Ansar and Khaled 2021). Bangladesh, an already densely populated country, wants to discourage long-term settlement (Nuruzzaman 2023). It is also not a signatory to the 1951 refugee convention, meaning the Rohingya are considered as 'forcibly displaced Myanmar nationals' rather than refugees (Milton et al. 2017, p.1). Like with the Syrians in Lebanon, this also limits their legal protections and restricts their rights to education and employment (Alam 2020). Bangladesh has repeatedly called for the repatriation of Rohingya refugees, feeling their stay in Bangladesh is temporary (Mallick 2020). However, though the Rohingya want to return, they fear conditions of persecution and violence and so demand citizenship rights, security, and international monitoring before they are to go back (Ahmed 2022). The situation in Myanmar is still foreseeably hostile, especially after the military coup in 2021, so hopes of repatriation in the near future are minimal (Stokke & Kyaw 2024).

2.5 DATA COLLECTION AND ANALYSIS

Detailed methods are found within each of the empirical chapters. This section provides an overview of the research methods and their justification for each chapter.

CHAPTER III: CENTRING PARTICIPANT EXPERIENCE

The first empirical chapter is based on the first case study in Lebanon, concerned with practical menstrual health needs. The study was based on a participatory programme led by the IFRC to design menstruator-friendly WaSH facilities in a long-term Informal Tented Settlement in Qaa, Lebanon, hosting 50 Syrian refugees. The LRC recruited settlement inhabitants to partake in three rounds of FGDs through community meetings. All menstruators (total 13) were included; no one refused to take part. Their age range was between 18 and 42. Eleven were married, one widowed and one unmarried. The first FGD was to ascertain their wants and needs for the facility design. Following this the engineers constructed prototypes of the facilities. The second FGD demonstrated the prototypes to the participants to gain further feedback. After altering designs based on this, the engineers constructed the facilities. The third and final FGD was to gain feedback on the facilities themselves. Other inputs included menstrual health education. The purpose of this was so that participants could understand what they needed from the facilities to practise good MHM. The project aimed to create culturally appropriate menstruator-friendly WaSH facilities based on the users' wants and needs, using IFRC's rapid-response manual to ensure quick but effective facility deployment. By using three FGDs at the beginning, middle, and end of the design phase, the project hoped to meet all the needs of the users without demanding too much of their time, and installing the facilities rapidly. IFRC then altered participant engagement and design manuals based on learnings from the project.

The first step of the research was to read literature on participation within humanitarian programmes and gender-related participation. Following this, I conducted initial informal conversations with programme

staff to gain an insight into how they think the programme would work. This was used to develop Initial Programme Theories (IPTs), leading to questions for the KIIs with nine programme staff and four FGDs with 13 menstruators and 3 non-menstruators. All project staff and menstruators within the Informal Tented Settlement were included for data collection. I used this data to refine or refute the IPTs or add new programme theories in the format of 20 Context-Mechanism-Outcome configurations. After further analysis, I condensed these into nine refined programme theories, making up the results of this chapter.

CHAPTER IV: ENGAGING NON-MENSTRUATORS STATISTICAL ANALYSIS

The next chapter looks at strategic menstrual health needs within the second case study in Bangladesh. World Vision, with support from UNICEF, implemented a behaviour change programme to engage non-menstruators to become advocates of menstrual health for their menstruating family members. This included non-menstruators changing negative perceptions and reducing stigma around menstruation, discussing menstruation with each other and their families, offering support with gendered chores if their family were feeling unwell, budgeting for and purchasing/collecting menstrual materials, passing on important menstrual health related information and education, and advising on when to seek medical help. World Vision's main approach was to work with the community to select two menstruators and non-menstruators (two older and two younger) from each sub-block who possessed these positive attitudes and behaviours towards menstruation along with influential power. World Vision then coached them to become advocates for menstrual health among their section of the community to act as 'Menstrual Health (MH) Facilitators'. World Vision also hosted educatory sessions with the community, and employed influential figures such as the Imam to share motivational stories. The programme involved all non-menstruators aged 16 plus. The programme intended to normalise menstruation and the discussion of it, and help non-menstruators see it as their duty to assist their family members and better the whole community. The aim was that the community would start encouraging each other to make slow but steady social change.

For the research I used the RANAS approach to formulate survey questions. With the World Vision project partners, we conducted a baseline and endline survey with 146 Rohingya non-menstruators before and after the intervention. I conducted a sample size calculation for the inhabitants of the camp studied, which can be found within chapter IV. World Vision chose the 146 participants to gain a range of age, marital and parental status, general attitude and behaviours towards menstruation, arrival date in camp, block they live in, and educational level. The survey was to identify which contextual and psychosocial factors have a statistically significant influence on non-menstruator attitudes and behaviours towards menstruation. To understand these factors, the RANAS approach advises a 'doer/nondoer' analysis. I used ANOVA comparisons of means tests between the two groups accordingly, as well as between baseline and endline data to observe any significant changes following the intervention. I then used regression analyses to understand which factors were determinants of the desired attitudes and behaviours by finding the significant relationships between contextual and psychosocial factors and attitudes and behaviours towards menstruation and menstruators.

CHAPTER V: ENGAGING NON-MENSTRUATORS REALIST EVALUATION

This chapter was based on the same case study in Bangladesh. Realist evaluation often uses multiple sources of data from mixed methods. Along with the quantitative data from the statistical analysis, I developed IPTs from KIIs with all nine programme staff working on the programme on what they thought the mechanisms could be. These questions were based on a literature review, document analysis, and the first realist evaluation in Lebanon, which highlighted important contextual factors for implementing menstrual health programmes. I used both the IPTs and RANAS analysis to develop realist interview questions with a select group of 20 non-menstruators to uncover the generative causal forces driving the changes in attitudes and behaviours in response to the programme inputs. These 20 interviewees consisted of 10 'doers' and 10 'non-doers'. Each came from at least one demographical category: married/unmarried, above/below 25, educated/illiterate, children/no children, arriving before/after the 2017 influx. After analysing the data using NVivo 14, I refined 10 programme theories, formulating the results section of this final chapter.

2.6 ETHICAL CONSIDERATIONS

ETHICAL PROCESSES

Ethical approval for the first case study was gained from the University of Leeds, UK, on the 12th January 2022 under the code MEEC 21–008. Informed consent was taken from all study participants via a signed statement. The statement was in English but read aloud to non-English speaking participants in Arabic (their native tongue). I also drew up a Terms of Reference (ToR) detailing the expectations of the collaboration that was signed by myself and a member of the IFRC. The LRC also sent the authors a copy of their anti-coercion consent form for their self-collected data. For the second case study (both Chapters IV and V), ethical approval was gained from the University of Leeds on the 16th March 2023 under reference code MEEC 22-019. My access to Kutupalong Camp was granted by The Government of Bangladesh's Refugee Relief and Repatriation Commissioner on the 21st March 2023. Verbal consent was taken from participants by the World Vision data collection team as Rohingya is only a spoken, not written language. I was advised against applying nationally to ethics boards in country by World Vision as the University of Leeds' ethical approval was deemed sufficient.

BIAS

Linking back to the ontology of the thesis, philosophic realism is defined by Phillips (1987, p. 205) as 'the view that entities exist independently of being perceived, or independently of our theories about them'. This doesn't mean to say the reality we perceive is a fantasy or unreal but that perceptions and preconditions may mislead us. How we perceive or interpret things is based on our biases, life experiences, belief systems, and state of mind. As Susan Sontag said, 'reality can only be grasped indirectly — seen reflected in a mirror, staged in the theatre of the mind' (1980). This may lead to biases in the research process. This highlights the importance of collaborative work and how researchers can understand more of something by introducing multiple viewpoints. Thus, it was necessary for my supervisors and programme partners review the programme theories.

THIRD PARTY DATA COLLECTION

The research was conducted in collaboration with the IFRC, World Vision, and UNCIEF. Though some of the data was collected by myself, a large amount was collected by the project partners. Although it was always intended for the data collection to be collaborative, the programme staff ended up collecting more data than planned due to my not being able to travel to Lebanon because of the socio-political situation and my not being able to re-enter the camp in Bangladesh due to tightened security over the upcoming election. By having third party data collectors, more autonomy was given to the organisations and more comfort to participants discussing the topic with familiar staff members. There is always a power divide between programme staff and programme recipients, so the staff leading data collection could have influenced participants' willingness to share their perspective freely. Having embedded researchers may have hindered unbiased information provision and evaluation of the project, with participants perhaps offering what they thought staff wanted to hear, rather than their honest reflections. The participants in the second case study may have also experienced the Hawthorne effect: performing better knowing they're being observed at multiple instances.

When using third-party data collectors in research, ethical considerations become crucial to ensure data integrity, participant rights, and compliance with research standards. To ensure the data collectors gained informed consent from participants I provided an explanatory statement, confidentiality, and consent form and discussed the importance of its use before collecting any participant data. At my request, the project partners also gave me copies of their ethics protocols. Involving third party data collectors also puts privacy and confidentiality at risk. We established clear agreements to define who owns and has access to the data through a ToR containing a data management plan. Data were stored and shared in line with the University of Leeds research data management policy (see links: https://library.leeds.ac.uk/info/14062/research-data-management/68/research-data-management-policy; https://dataprotection.leeds.ac.uk/wp-content/uploads/sites/48/2019/05/Information-Management-Guide.pdf). An advisor from the data management team at the University of Leeds warned that putting the data in their public repository would breach compliance with the protocol approved by the research ethics board. All names were removed from data for anonymization. The process for data protection and anonymization was explained to research participants in the Participant Information sheets found in the appendix. KIIs and FGDs were recorded on a Dictaphone. Transcripts were created either by myself or a third party. The recordings have since been deleted. None of the information shared by camp inhabitants made them identifiable.

SENSITIVE TOPICS

Research on menstrual health requires sensitivity due to cultural stigmas, privacy concerns, discomfort, and the potential for traumatic personal accounts to arise. Therefore, any interviews or focus groups were held in a confidential, safe space, minimizing risk of participants feeling exposed or judged. Anonymizing data was also essential for protecting participant identities. Gaining informed consent with clear communication was critical, ensuring that participants knew their involvement is voluntary and that withdrawing from the study will not result in any negative consequences. Since menstruation is seen differently across cultures, data collectors were understanding and respectful of local beliefs, practises and sensitivities. As both Lebanese Red Cross and World Vision staff have been working with these communities

for years, they are accustomed to bridging any cultural gaps. Research questions were approved by programme staff to ensure their cultural sensitivity and altered to ensure phrasing would make sense to participants. To pilot the survey questionnaire I conducted the first 10 surveys with one World Vision research partner and one member of the data collection team to verify its applicability. From this, we removed some less-relevant questions to reduce participants' time. I asked questions without judgement.

WORKING WITH REFUGEES

Refugees are often in vulnerable and precarious circumstances. Ensuring truly informed consent can be challenging due to language and cultural barriers, trauma, and possible unfamiliarity with research processes. Data collectors explained the purpose, procedures, risks, and benefits clearly. The project partners were best to do this as they work in the same language, have cultural understandings, and know the participants enough to tell if the consent given was legitimate. Given their potentially limited freedom to decline, it is again emphasized the importance of explaining the voluntary nature of participation. Since the Syrians and Rohingya come from situations of persecution and conflict, protecting their identities was paramount. Participants may have experienced trauma, so we were cautious about re-triggering painful memories or pushing participants to disclose sensitive information. All interview and FGD questions were overseen by project partners who are familiar with the population and could check for cultural sensitivity and relevance. Plenty of time was given for participants to respond at a comfortable speed, and they were given referral options to psychological support if talking about traumatic instances.

2.7 POSITIONALITY

Joining the Water-WISER Academic Inequalities Working Group (WWAIWG) in November 2020 has allowed me to consider my position as a White, Western researcher and the ethics of my actions beyond the university's ethical approval system. Not only has it led me to realise the power imbalance between myself as the researcher and the research participants and partners, but also other researchers around the world. I will continue to write about this in the following sections.

MOTIVATION FOR THESIS

I started Civil and Environmental Engineering at the University of Leeds in 2014 quite simply because I liked maths. To my dismay, I soon discovered that buildings, bridges, and concrete did not thrill me. I did not love the degree until I had an Introduction to Public Health lecture given by Professor Barbara Evans. I was relived - I had discovered what I wanted to pursue. I signed up for all her modules for the rest of the degree and was pleased to get her as a supervisor for my third year thesis. In the integrated Masters year, Barbara's modules were taken alongside her WaSH MSc students. Hailing from all parts of the world and having experience in WaSH implementation, governance, and policy, I was excited to learn from the group. This was my first taste of what it would be like to work in WaSH academia at the University of Leeds.

Barbara was very excited to introduce Dr Dani Barrington to her team that year. Flicking through the options for thesis topics, I was intrigued to see Dani's: menstrual health. In a meeting I arranged with her to discuss it she inspired one of those moments of tremendous realisation: menstrual health was a big issue. Prior to this, I hadn't thought at all about how it related to global health, gender equality, culture, human rights,

and of course WaSH. I was immediately sold on Dani's path of undoing global menstrual stigma. We developed a research proposal where I would visit schools in Mumbai and investigate what was being taught about menstrual health to schoolboys by interviewing teachers. We collaborated with the Regional Centre for Urban and Environmental Studies and printed a condensed version of the thesis in their quarterly publication.

Following the degree in 2018, I wanted to gain some practical skills, so joined the organisation Watershed in Moria refugee camp, Lesvos, Greece. We were responsible for building and maintaining the WaSH facilities in the camp. I observed how there weren't bins inside the toilets so people ended up stuffing their sanitary towels inside the cisterns, which would then break the toilet until we could fix them again. I spoke to my bosses about it. They subsequently ordered metal bins to put in each cubicle. But the next day all the bins were outside of the cubicles. I would put them back in, but people would keep bringing them out again. I later came to understand this was because in some cultures the sight of menstrual blood is taboo. Here I was experiencing the importance of engaging with a population to understand their needs rather than implementing what I assumed was best.

With a lot of solo work in the camp I had time to ponder what I wanted to do afterwards. I had really loved doing both the theses with Barbara and Dani. So I decided to apply for a PhD. I applied for one at Ulster University and another at Cranfield, neither of which I got. I emailed Dani for advice and she told me that Barbara was applying for funding for a Centre for Doctoral Training (CDT) called Water-WISER, which would be able to support 50 PhD WaSH students. I applied as soon as I could. But by the time I got to interview stage I had already started a job as a WaSH consultant in Cambodia. Luckily, they allowed me to defer for a year to start with the second cohort in September 2020. Flying back to Leeds in the middle of the COVID-19 pandemic, here I am four years later.

WATER-WISER ACADEMIC INEQUALITIES WORKING GROUP

As everyone comes to realise, what you learn along the way is equally as important as what you learn within the PhD itself. These past four years have been a period of big change in my mentality and world outlook. In November 2020, a student in one of the first cohorts – Hannah Ritchie – set up a chat to discuss how we could address the issue of global academic inequalities within our roles as UK-funded researchers. We set up fortnightly calls to discuss concerns and how we could approach them. Activities we undertook as the Water-WISER Academic Inequalities Working Group (WWAIWG) were as follows:

DATE	ACTIVITY
JAN 2021	Workshop with senior Water-WISER academics
MAY 2021	Critique the WaterWISER remit
JUN 2021	SanCop workshop
JUL 2021	University of Gaza workshop and collaboration
SEP 2022	Present WWAIWG to the new students at each induction
JUN 2022	Positionality workshop at the Water-WISER Early Careers Researcher conference
MAY 2023	Two decolonising sessions at the IRC All Systems connect conference May 2023

MAY 2023	Positionality workshop for Water-WISER staff and students given by J'Anna-Mare Lue and Euphresia Luseka
JUL 2023	Letter to IRC All Systems connect conference critiquing a lack of discussion on colonialism and global inequalities
JUL 2024	Intersectionality and Water Security conference, University of Leeds
JUL 2024	The Big Decolonising Dialogue Podcast - https://open.spotify.com/show/68RplpH4ICT9b85FFdtgEC?si=30a1cc9ae3ab4746

Figure 5 - Activities of the Water-Wiser Academic Inequalities Working Group

Though we had these external outputs, the most important thing the group did for me was shape my worldview and enlighten me to global inequalities, which not only helped me as a researcher but also as a person. I continue in the following section.

POSITIONALITY AND PERSONAL REFLECTIONS

Positionality statements have been criticised for being a form of neo-colonialism wherein White and/or Western researchers are asserting dominance through the statement of assumed hierarchies or giving lip-service to recognising and undoing bias without being truly reflexive (Gani and Khan 2024). It's also easy to become naval-gazing and self-congratulatory, and to take the process of recognising and undoing social conditioning as part of our own self-actualisation, rather than about addressing inequalities. Nevertheless, I still feel it is beneficial for both writer and reader to include this section. To outline my demographics - I am a 31 year old, queer-identifying, able-bodied, White-British female. I was born and raised in London, UK, in a stable and supportive middle class family. I was privately educated (though I believe it shouldn't exist) from age 12. I do not particularly belong to any religious group though I have a strong interest in Buddhism (Bud-curious?).

The idea of development came about in Truman's inaugural speech in 1949, after the Second World War as countries were starting to gain independence from colonisation (Hickel 2018). The West cunningly shifted our role from being the oppressors to the saviours, sweeping the story of colonialism under the rug to invent the narrative that poor countries are poor just because (Hickel 2018). Parts of the WaSH sector are caught in this way of thinking. It is maddening to me the talks and conferences I've been to during the PhD that still have a rhetoric of 'Let's Save Africa!' (now a favourite satirical quote among the WISERs).

Though I love working in the WaSH sector, it makes me feel a little stuck. One of the biggest learnings of the PhD has been understanding more about where my privilege has come from - the colonial legacies of the British Empire - and how it manifests. Thus, it feels neo-colonial to have funding from the UK Government to add another Western voice to comment on how countries should think and behave towards menstruation. I've questioned my drive to continue to work in this sector. Along with asking if it will ever be possible for me to decolonise my ways of thinking and working, or if I'm doing more harm than good? Learning that I have internalised racism, sexism, homophobia is not something I want to propagate unconsciously through my research or future work.

The best thing about WWAIWG was encouraging each other to read and discuss literature written by researchers of the Majority World. The one we used the most to shape our thinking and action was 'Principles for increasing equity in WASH research: understanding barriers faced by LMIC WASH researchers' by J'Anna-Mare Lue et al. (2023). It showed us how inequalities between researchers play out on multiple levels of the Socio-Ecological Model. We would use it to contemplate what is in our power to change, what isn't, and how we would go about it for each step of the research process. Some of the ways I tried to work against the issues highlighted in their paper was to collaborate with Majority World partners where we discussed and designed the research together based on their priorities. Though there are ways of working such as this to attempt to conduct research in an anti-colonial way, it is not a tick-box exercise. One academic I've met through the group – Doreen Tuhebwe – said decolonisation is something you have to do from the moment you wake up, through each simple act such as crossing the street.

One of my favourite parts of the PhD has been working with project partners at the IFRC and World Vision. What I have found especially significant is to form friendships safe enough to discuss the issue of British colonialism with people from previously colonised countries. It has been transformative for me to able to discuss my position and uncertainty to continue to work in this sector. We agree that to truly decolonise we have to have revolution: to create a global economic system where reparations are given and debts and structural adjustment programmes are cancelled, wherein the development sector (including WaSH) would cease to exist. But, perhaps for now we have to work within the structures that exist and focus on meeting our practical needs, rather than address the strategic. It was this thinking, and encouragement from my project partners, that gave me the reassurance I needed to apply for a job with Médecins Sans Frontières (MSF) in their WaSH team. Part of positionality is considering your motivations to do something. I acknowledge the elements of white saviourism I possess. But also I wouldn't want to be in this line of work if I did not enjoy it. I want to continue work in the WaSH and humanitarian sector because I find it interesting, and it gives the opportunity to live in new places and work with people from different cultures and backgrounds. Accordingly, in January 2025 I was accepted to work as a WatSan technician with MSF. I pledge to continue to try and work in an anti-colonial way for the rest of my career in WaSH.

2.8 REFERENCES

Adams, S. 2019. The Responsibility to Protect and the Fate of the Rohingya. *Global Responsibility to Protect.* **11**(4), pp.435-450. Available from: https://doi.org/10.1163/1875984X-01104005

Ahmed, B., Touhidul Islam, M., Sammonds, P., Arfanul Alam, S. M. R., Shaheenur Alam, M., Chakma, A., Durrat, F., & Hoque Patwary, O. 2022. Sustainable Rohingya Repatriation in Myanmar. In Nasir Uddin (Ed.), The Rohingya Crisis: Human Rights Issues, Policy Concerns and Burden Sharing (1 ed., pp. 301-333). Sage Publications.

Akins, H. 2018. The Two Faces of Democratization in Myanmar: A Case Study of the Rohingya and Burmese Nationalism. *Journal of Muslim Minority Affairs*. **38**(2), pp.229–245. Available from: https://doi.org/10.1080/13602004.2018.1475619

Alam, J. 2020. The Status and Rights of the Rohingya as Refugees under International Refugee Law: Challenges for a Durable Solution. *Journal of Immigrant & Refugee Studies*. **19**(2), pp.128–141. Available from: https://doi.org/10.1080/15562948.2020.1746872

Ansar, A., Md. Khaled, A.F. 2021. From solidarity to resistance: host communities' evolving response to the Rohingya refugees in Bangladesh. *Int J Humanitarian Action.* **6**(16). Available from: https://doi.org/10.1186/s41018-021-00104-9

Beauchamp, M.R., Crawford, K.L., Jackson, B. 2019. Social cognitive theory and physical activity: Mechanisms of behavior change, critique, and legacy. *Psychology of Sport and Exercise*. **42**, pp.110-117. Available from: https://doi.org/10.1016/j.psychsport.2018.11.009.

Belle, S.V., Westhorp, G., Marchal B. Stevens, K., Rogers, P., Levine, C., Punton, M. 2021. Realist evaluation. [Online]. Accessed 21 December 2024. Available from: https://www.betterevaluation.org/methods-approaches/approaches/realist-evaluation

Contzen, N., Mosler, H. 2012. METHODOLOGICAL FACT SHEET 1: The Risks, Attitudes, Norms, Abilities, and Self-regulation (RANAS) approach to systematic behavior change. *EAWAG Aquatic Research*. [Online] Accessed 26 July 2023. Available at https://www.susana.org/_resources/documents/default/3-2397-22-1451899856.pdf

Corstange, D. 2018. The Syrian conflict and public opinion among Syrians in Lebanon. *British Journal of Middle Eastern Studies*. **46**(1), pp.178–200. Available from: https://doi.org/10.1080/13530194.2017.1403307

Cousin, G. 2005. Case Study Research. *Journal of Geography in Higher Education*. **29**(3), pp.421–427. Available from: https://doi.org/10.1080/03098260500290967

Dagher, S. 2019. Assad or We Burn the Country: How One Family's Lust for Power Destroyed Syria. Hachette UK: Political Science.

Danermark B., EkströM M., Jakobsen L., and Karlsson J.C. 1997. Generalization, scientific inference and models for an explanatory social science in Danermark Berth (Eds.) Explaining Society: Critical realism in the social sciences, Ablingdon, Oxon: Routledge.

Davidhizar, R. 1983. Critique of the health-belief model. *Journal of Advanced Nursing*. **8,** pp.467-472. Available from: https://doi.org/10.1111/j.1365-2648.1983.tb00473.x

Eisenhardt, K.M. 1989. Building Theories from Case Study Research. *Academy of Management Review*. **14**(4). Available from: https://doi.org/10.5465/amr.1989.4308385

Ford, R.S. 2019. The Syrian civil war a new stage, but is it the final one? Middle East Institute, Washington USA. Policy paper.

Gani, J.K. and Khan, R.M. 2024. Positionality statements as a function of Coloniality: Interrogating reflexive methodologies. *International Studies Quarterly*. **68**(2).

Gerring, J. 2004. What Is a Case Study and What Is It Good for? *The American Political Science Review*. **98**(2), pp.341–354. Available from: http://www.jstor.org/stable/4145316

Greenhalgh, J., & Manzano, A. 2021. Understanding 'context' in realist evaluation and synthesis. *International Journal of Social Research Methodology*. **25**(5), pp.583–595. Available from: ttps://doi.org/10.1080/13645579.2021.1918484

Hickel, Jason. 2018. The Divide. London, England: Windmill Books.

Holliday, J. 2013. The Assad regime. *Institute for the Study of War.* JSTOR**. 8**(11).

Hossain, M.P. 2021. Stages of the Rohingya Genocide: A Theoretical and Empirical Study. *Holocaust and Genocide Studies.* **35**(2), pp.211–234. Available from: https://doi.org/10.1093/hgs/dcab033

House, S. 2019. Strengthening the humanity in humanitarian action in the work of the WASH sector in the Rohingya response. Gender, GBV and inclusion audit of the work of the WASH sector and capacity development assessment SUMMARY REPORT.

Hughes, G. A. 2014. Syria and the perils of proxy warfare. *Small Wars & Insurgencies*. **25**(3), pp.522–538. Available from: https://doi.org/10.1080/09592318.2014.913542

Hwalla N. , Jomaa L. , Hachem F. , Kharroubi S., Hamadeh R. , Nasreddine L., Naja F. 2021. Promoting Sustainable and Healthy Diets to Mitigate Food Insecurity Amidst Economic and Health Crises in Lebanon. *Frontiers in Nutrition.* **8.**

Janmyr, M. 2017. UNHCR and the Syrian refugee response: negotiating status and registration in Lebanon. The *International Journal of Human Rights.* **22**(3), pp.393–419. Available from: https://doi.org/10.1080/13642987.2017.1371140

Kamal, A.S.M.M., Ahmed, B. Tasnim, S. Sammonds, P. 2022. Assessing rainfall-induced landslide risk in a humanitarian context: The Kutupalong Rohingya Camp in Cox's Bazar, Bangladesh. *Natural Hazards Research*. **2**(3)

Karnieli, A., Shtein, A. Panov, N., Weisbrod, N., Tal, A. 2019. "Was Drought Really the Trigger Behind the Syrian Civil War in 2011?" *Water*. **11**(8): p.1564. Available from: https://doi.org/10.3390/w11081564

Khaled, A.F.M. 2021. Do No Harm in refugee humanitarian aid: the case of the Rohingya humanitarian response. *Int J Humanitarian Action.* **6**(7). Available from: https://doi.org/10.1186/s41018-021-00093-9

Kheireddine, B.J., Soares, A.M., Rodrigues, R.G. Understanding (in)tolerance between Hosts and Refugees in Lebanon. 2021. *Journal of Refugee Studies*. **34**(1), pp.397–421. Available from: https://doi.org/10.1093/jrs/feaa056

Kœnig, G. 2009. Realistic Evaluation and Case Studies: Stretching the Potential. *Evaluation*. **15**(1), pp.9–30. Available from: https://doi.org/10.1177/1356389008097869

Kurbis, N. 2019. Proof and Falsity: A Logical Investigation. Cambridge University Press.

Lee, R. 2021. Myanmar's Arakan Rohingya Salvation Army (ARSA): An Analysis of a New Muslim Militant Group and its Strategic Communications. *Perspectives on Terrorism*. **15**(6), pp.61–75. Available from: https://www.jstor.org/stable/27090916

Leider, J. P. 2018. History and Victimhood: Engaging with Rohingya Issues. *Insight Turkey*. **20**(1), pp.99–118. Available from: http://www.jstor.org/stable/26301070

Lemire, S., Kwako, A., Nielsen, S. B., Christie, C. A., Donaldson, S. I., & Leeuw, F. L. 2020. What is this thing called a mechanism? Findings from a review of realist evaluations. In J. Schmitt (Ed.), Causal Mechanisms in Program Evaluation. *New Directions for Evaluation*. **167**. pp.73–86.

Lue J.M., Bah S., Grant K. 2023. Principles for increasing equity in WASH research: understanding barriers faced by LMIC WASH researchers. *BMJ Global Health*. **8**(4). Available from: DOI: 10.1136/bmjgh-2022-010990.

Malik, A. Awadallah, B. 2013. The Economics of the Arab Spring, *World Development.* **45**.

Mallick, A. H. 2020. Rohingya Refugee Repatriation from Bangladesh: A Far Cry from Reality. Journal of *Asian Security and International Affairs*. **7**(2), pp.202-226. Available from: https://doi.org/10.1177/2347797020938983

Islam, M.S. and Hossain, M.A., 2019. Sustainable Livelihood Adaptation of Rohingya within the Camp Area: A Case Study on Kutupalong Refugee Camp. *Faculty of Social Science Comillla University*. **2**(1), p.23.

Meyer, S. B., & Lunnay, B. 2013. The Application of Abductive and Retroductive Inference for the Design and Analysis of Theory-Driven Sociological Research. *Sociological Research Online.* **18**(1), pp.86-96. Available: https://doi.org/10.5153/sro.2819

Milton A.H., Rahman M., Hussain S., Jindal C., Choudhury S., Akter S., Ferdousi S., Mouly T.A., Hall J., Efird J.T. 2017. Trapped in Statelessness: Rohingya Refugees in Bangladesh. *International Journal of Environmental Research and Public Health.* **14**(8), p.942. Available from: https://doi.org/10.3390/ijerph14080942

Mohajan, H. 2018. History of Rakhine State and the Origin of the Rohingya Muslims. *The Indonesian Journal of Southeast Asian Studies*. **2**(1), pp.19-46.

Mosler, H.-J.,Contzen, N. 2016. Systematic behavior change in water, sanitation and hygiene. A practical guide using the RANAS approach. Version 1.1. Dübendorf, Switzerland: Eawag.

Mukumbang, F.C., Van Belle, S., Marchal, B. 2017. An exploration of group-based HIV/AIDS treatment and care models in Sub-Saharan Africa using a realist evaluation (Intervention-Context-Actor-Mechanism-Outcome) heuristic tool: a systematic review. *Implementation Sci.* **12**(107). Available from: https://doi.org/10.1186/s13012-017-0638-0

Neumann, P. J. 2013. The Gendered Burden of Development in Nicaragua*. Gender & Society*. **27**(6), pp.799–820.

Nielsen, K., Miraglia, M. 2017. What works for whom in which circumstances? On the need to move beyond the 'what works?' question in organizational intervention research. *Human Relations*. **70**(1), pp.40-62. Available from: https://doi.org/10.1177/0018726716670226

Nuruzzaman, M. 2023. Bangladesh and the Rohingya Crisis: The Need for a Long-Term Strategy. *The Washington Quarterly.* **46**(3), pp.65–79. Available from: https://doi.org/10.1080/0163660X.2023.2260595

Pacheco-Vega, R. 2022. On making explicit your contribution to the larger literature and bodies of knowledge by using a case study in a particular region. [Online]. Available at. http://www.raulpacheco.org/2022/04/on-making-explicit-your-contribution-to-the-larger-literature-and-bodies-of-knowledge-by-using-a-case-study-in-a-particular-region/. Accessed 8 Nov 2024.

Pawson, R., Tilley, N. 2004. Realist Evaluation. [Online]. Available at : https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=e092393652456869d7ccf6fa57b5a5a4d2d9e10a [Accessed 6 Nov 2024].

Pawson, R., Tilley, N. 1997. An introduction to Realist Evaluation in Evaluation for the 21st Century: A Handbook. Chapter 29. Sage Publications.

Porter, S. 2015. The uncritical realism of realist evaluation. *Evaluation.* **21**(1), pp.65-82. Available from: https://doi.org/10.1177/1356389014566134

RANAS. 2022. Publications. [Online]. Accessed 22 July 2025. Available from: https://ranas.ch/ranas-publications/

Salter, K.L., Kothari, A. 2014.Using realist evaluation to open the black box of knowledge translation: a state-of-the-art review. *Implementation Sci*. **9**, p.115. Available: https://doi.org/10.1186/s13012-014-0115-y

Scholz, R.W., Titje, O. 2002. Embedded Case Study Methods: Integrating Quantitative and Qualitative Knowledge. Sage Publications. California, USA.

Seawright, J., Gerring, J. 2008. Case Selection Techniques in Case Study Research: A Menu of Qualitative and Quantitative Options. *Political Research Quarterly*. **61**(2), pp.294-308. Available from: https://doi.org/10.1177/1065912907313077

Shamieh, L., Szenes, Z. 2015. The Rise of Islamic State of Iraq and Syria (ISIS). *Academic and Applied Research in Military and Public Management Science.* **14**(4), pp. 363–378. Available from: https://doi.org/10.32565/aarms.2015.4.10

Simmons, H. 2014. Case Study Research: In-Depth Understanding in Context. Chapter 22. The *Oxford Handbook of Qualitative Research.* Oxford University Press. Available from: https://doi.org/10.1093/oxfordhb/9780199811755.001.0001

Stokke, K. Kyaw, N.N. 2024. Revolutionary resistance against full autocratization. Actors and strategies of resistance after the 2021 military coup in Myanmar. *Political Geography.* **108.**

Sontag, S. 1980. Susan Sontag: Syberberg’s ‘Hitler’. The New York Review of Books. [Online]. Accessed 19 January 2025. Available from : http://www.syberberg.de/Syberberg4_2010/Susan-Sontag-Syberbergs-Hitler-engl.html

Tellis, W. 1997. Introduction to Case Study. *The Qualitative Report.* **3**(2).

UNHRC. 2023. Syria situation. [Online]. Available from : https://reporting.unhcr.org/operational/situations/syria-situation#:~:text=In%20its%20thirteenth%20year%2C%20the,forcibly%20displaced%20across%20the%20region. Accessed 7 Nov 2024.

UNHCR. 2024. Lebanon. [Online]. Available at: https://reporting.unhcr.org/operational/operations/lebanon#:~:text=The%20Government%20of%20Lebanon%20estimates,by%20the%20end%20of%202022. Accessed 7 Nov 2024.

Waisbich, L.T., Roychoudhury, S., Haug, S. 2021. Beyond the single story: ‘Global South’ polyphonies, *Third World Quarterly*. 42(9), pp.2086-2095. Available from: DOI: 10.1080/01436597.2021.1948832

Wandhe, P. 2024. Unleashing the Magic: The Power of Storytelling in Academics. [Online]. Accessed 21 December 2024. Available at SSRN: https://ssrn.com/abstract=4727196 or http://dx.doi.org/10.2139/ssrn.4727196

Woodside, A.G., Wilson, E.J. 2003. "Case study research methods for theory building." *Journal of business & industrial marketing*. **18**(6/7), pp.493-508.

Yin, Robert K. (2003). Case study research, design and methods (3rd ed., vol. 5). Thousand Oaks: Sage.

Yin, R. 2009. Chapter Eight: How to do better case studies. *The SAGE Handbook of Applied Social Research Methods.* SAGE. ISBN 1412950317, 9781412950312.

Zreik, M. 2024. The Syrian Refugee Crisis and Lebanon's Economic Landscape. Palgrave Macmillan Cham. ISBN 978-3-031-68470-8

Zuber, M., Moussa, S.S. 2018. Arab spring as a background of civil war in Syria. *International conference knowledge-based organization*. 24.

CHAPTER III

CENTRING PARTICIPANT EXPERIENCE: A REALIST EVALUATION OF A MENSTRUATOR-FRIENDLY FACILITY DESIGN PROJECT IN A REFUGEE SETTLEMENT, LEBANON

This chapter presents the paper 'Centring participant experience: a realist evaluation of a menstruator-friendly facility design project in a refugee settlement, Lebanon' published in BMC Women's Health March 2024. It focuses on how practitioners can work to meet the practical needs of menstruators through their considerate consultation within WaSH facility design.

3.1 ABSTRACT

Menstrual health in humanitarian settings is a neglected but important topic. Its taboo nature presents difficulties for participants in menstrual health projects in these challenging settings. Their experiences may be concealed or overlooked in projects that are typically outcome focused. Realist Evaluation is a useful method to unearth and explore the hidden mechanisms and their causes, which lead to positive or negative participant experience. The authors have applied this approach to a robust humanitarian menstrual health project to explore how to centre the emotional wellbeing of participants at all stages: prior to, during, and post-participation. The project studied was led by the International Federation of Red Cross and Red Crescent Societies who piloted their adaptable manual for menstruator–friendly water, sanitation and hygiene facility design. It was conducted by the Lebanese Red Cross in an informal tented settlement hosting Syrian refugees in Qaa, Lebanon. The authors collected interview and focus group data on the processes within the project from nine project staff and 16 settlement inhabitants. They used a realist process of theory development, testing, and consolidation to understand how and under what circumstances the project inputs affected participants' wellbeing. The contextual factors and mechanisms promoting participant experience comprised individual (choices influencing and experience during participation), interpersonal (group dynamics and the role of non-menstruators), and organisational (expertise and knowledge, relationship to participants and cultural differences) factors. The research uses a case study from a renowned humanitarian organisation who provided a well-delivered project in a conducive environment to explore the mechanisms and contexts that can promote wider learning and refine understanding and programming in this under-researched and -theorised space. Specifically, it informs which contextual factors must be present within a menstrual health project to ensure participant satisfaction whilst efficiently delivering well-designed menstruator-friendly WaSH facilities.

3.2 RESEARCHERS' REFLEXIVITY AND POSITIONALITY STATEMENT

The lead author is a white-British, middle-class, privately educated, able-bodied female not belonging to a particular religious group. She has a Masters in Civil and Environmental Engineering and is in the final year of her PhD – both at the University of Leeds, UK. She recognises that much of her privilege to be funded

and able to conduct research in the international sphere stems from benefitting from the colonial legacies of the British Empire. Her supervisors are Dr Paul Hutchings (white British male), Dr Katy Roelich (white British female), and Dr Mahua Das (Indian female). Her project partners are Alexandra Machado (white Spanish female), Debora Bonucci (white Italian female), and Farah Salem (Lebanese female). This work is focused on Syrian refugees living in an informal tented settlement in Lebanon. The lead author does not speak Arabic, is not Muslim and is at low risk of ever becoming displaced. Thus, there are many cultural gaps between herself and the subjects of the research, leading to opportunities for bias and misunderstandings to arise. One way of attempting to bridge these gaps was to work closely with Farah Salem, a native Arabic speaking Lebanese Social Systems WaSH Officer at the Lebanese Red Cross, who had a pre-existing relationship with the study subjects. Farah oversaw Focus Group Discussions with the study subjects, facilitated Key Informant Interviews with project staff, and was part of a continuous dialogue with the lead author to inform on the project and its context. Debora and Alexandra were also project implementers from the British and International Federation of Red Cross and Red Crescent societies respectively. Though embedded researchers bring a deeper understanding of context and the programmatic dimensions at play, this undoubtedly leaves room for bias in the shaping of the paper and interpretation of results. For this reason, the lead author oversaw the development, testing, and refining of the programme theories, as she was able to provide an outsider perspective and detached interpretation. Nevertheless, the staff gave both critical and praising commentary to the project to give a balanced appraisal.

3.3 BACKGROUND

To be inclusive of gender diverse persons Hennegan et al.'s (2021) definition of menstrual health for policy, practice, and research defines those who have the ability to menstruate as 'menstruators' and those who do not as 'non-menstruators'. A significant shift in collective language will pose challenges. In the UK Dahlen (2021) writes how gender-neutral terminology in medical literature faced backlash in fear of the erasure of women's needs. Different cultures have different views on gender identity meaning some languages may not offer gender-neutral terms or be able to translate new terms from one language to another. Thus, identifying menstruators and non-menstruators across different humanitarian settings may result in people being left out. To avoid this researchers and practitioners can use gender-additive language where both gendered and gender-neutral language is used e.g. 'women, girls, and menstruators' as is demonstrated in a UK National Health Service Trust guide to 'Gender Inclusive Language In Perinatal Services' (Green and Riddington 2020). In this paper, we use the term menstruator, however quotes from interviews and the literature may still use gendered binary terms.

Poor access to menstrual health - comprising education, materials, water, sanitation and hygiene (WaSH) facilities, disposal methods, healthcare, a supportive environment, and the choice to participate in daily activities - is a global issue (Hennegan et al. 2021). Menstruation is documented internationally as a stigmatised and taboo topic meaning conversations around the subject are often either wrongly informed, minimal or non-existent (Gordon 2019). In the absence of a clear and open debate, WaSH services may not consider menstrual health, and fail to deliver menstruator-friendly, culturally appropriate WaSH facilities

(Sommer et al. 2013). A lack of or inappropriate solutions may cause shame, stress, exhaustion, fear, embarrassment, stigma, loss of dignity, and Gender-Based Violence (GBV); since Menstrual Hygiene Management (MHM) requires privacy, menstruators often choose to use WaSH facilities at night, leaving them susceptible to attack and sexual assault (House 2019). These issues are exacerbated in humanitarian settings due to overcrowding, decreased lack of facilities and materials, and safety issues (Sommer et al. 2017). The UNHCR (2023) estimates that 110 million people (1.4% of the global population) are currently forcibly displaced – of these 29 million are menstruators. Therefore, MHM in humanitarian settings is a significant challenge that needs to be addressed urgently.

Current menstrual health guidance from NGOs advocates for the consultation of menstruators on their needs before implementing a menstrual health project (Sahin 2015; Sommer et al. 2017). Additionally, in humanitarianism general opinion is that humanitarian action is 'best developed with and for affected people' (World Humanitarian Summit Secretariat 2015, p. 13). By shaping projects around local sociocultural, economic and political situations, listening to people's needs and utilising local knowledge, skills and resources, results are set up to be more appropriate and thus more sustainable (Mubita et al. 2017). However, there is limited empirical evidence on the efficacy of participatory approaches in menstrual health projects, the impact on the lives of participants, and uncertainty about the extent to which they are implemented in practice (VanLeeuwen and Torondel 2018).

Even when participatory approaches are implemented, a 2020 UNHCR study found many barriers to internally displaced menstruators' participation including preoccupation with meeting safety and survival needs, GBV, consultation fatigue, and a negative reaction from non-menstruators (Anderson 2020). When menstruators are able and willing to participate, gender-related development projects have historically overburdened them through adding to their triple role (childcare, labour, community work), disturbing power relations, or being extractive, (Moser 1989). Accordingly, the UNHCR (2020) study also found that 'participation is not always empowering for [displaced] women and girls' and that participatory interventions 'can unintentionally disempower [them] and reinforce the dominance of men'. In the context of menstrual health projects, menstruators may be dissuaded from taking part due to the stigmatised and taboo nature of the topic. If they are involved, they may be asked personal and potentially triggering questions. Following participation, they may face backlash from family or community members (Anderson 2020).

It is a well-documented need for participation to be respectful, non-coercive, non-intrusive, and aiming to mitigate unplanned negative outcomes, wherein the project respects the rights, needs, and perspectives of the individuals it aims to serve (Williams 2004). The global literature on participatory research approaches emphasises the need to involve individuals affected by the project in the design, implementation, and evaluation processes to ensure the intervention is ethical, culturally sensitive, and addresses the needs of the population (Israel et al. 1998; Minkler and Wallerstein 2008; Lewin 1946). In terms of accountability to affected populations, the Sphere Standards underscore the importance of

communication, participation, and feedback mechanisms in humanitarian response (Sphere Association, 2018). The Humanitarian Accountability Partnership's Framework provides indicators for ensuring accountability in humanitarian actions, stressing the need for the participation of affected populations in decision-making processes (HAP International, 2010). The authors used these principles to theorise how to achieve a universally positive participatory experience wherein the benefits of participation are balanced with the burden. In this way, the authors reason that a project's success is not solely measured by its outcomes but also by the thoughtful process through which those outcomes are achieved. Thus, the aim of this study was to look at how practitioners can centre the experiences of menstruators at all stages - pre- during and post-participation - of menstrual health projects in humanitarian settings.

There are varying degrees of participation, illustrated by Arnstein's (1969) ladder of citizen participation wherein each rung represents increasing levels of agency and power, from one – manipulation - to eight – citizen control. In the project studied in this paper, the level of participation was midway at number four – consultation – where participants' opinion was invited through multiple rounds of Focus Group Discussions (FGDs) with iterative feedback on facility designs. The International Federation of Red Cross and Red Crescent Societies' (IFRC) project was to pilot a menstruator-friendly WaSH facility design manual (2022) that can be adapted to geographical and cultural requirements and rapidly deployed in humanitarian contexts. This is to be used alongside their guideline for consulting the community on their menstrual needs (2019), with the manual providing appropriate options based on their responses. Please see the references for an online link to both of these.

3.4 METHODS

RESEARCH AIM, FRAMING AND APPROACH

The aim of the research was to answer the question: How can practitioners centre participant experience at all stages of menstrual heath projects in humanitarian settings? The authors do this by using a Realist Evaluation to unearth the hidden causal forces (or mechanisms) that promote positive - or avoid negative - experiences for participants at each stage of a menstrual health project, which may be concealed or overlooked when implementing projects that are purely outcome-focused. Realist Evaluation is an established analytical approach based on the notion that interventions have different outcomes depending on how their inputs interact with the context in which it takes place (Pawson & Tilley 1997; Wong et al., 2016). It asks how and why interventions work, for whom, and in what circumstances by understanding the Context-Mechanism-Outcomes (CMO) configurations at play. This allows insights into the contextual factors that are conducive to menstrual health projects when implementing or scaling up elsewhere. The authors developed interview questions for nine project staff and FGDs with 16 Syrian inhabitants of an informal tented settlement in Lebanon to explore theories around how projects such as these can promote a positive participant experience. The Socio-Ecological Model - a framework that can be used to understand how interventions work within different interacting systems in relation to the individual - provided a useful

framing for designing questions targeted at the different levels to understand their influence on the individual, the project, and each other (Kilanowski, 2017).

STUDY POPULATION AND SETTING

The study was on a long-term informal tented settlement in Qaa, Northeastern Lebanon, hosting 50 Syrian refugees. Qaa is a hard to reach border area with over 100 informal tented settlements, where access for international humanitarian actors has long been a challenge. The Lebanese Red Cross (LRC) has managed to develop a very cohesive and positive relationship with the Syrian communities. This specific site was chosen due to the number of menstruators who would be able to take part, good road access, having built rapport with the community previously, and them being regarded as receptive to a menstrual health project. Data included Key Informant Interviews (KIIs) with at least one staff member from each of the four organisations involved in the project: LRC, British Red Cross (BRC), IFRC, and ARUP who worked as the design engineers. The LRC recruited settlement inhabitants to partake in five FGDs through community meeting. All menstruators (total 13) were included within four FGDs; no-one refused to take part. Their age range was between 18 and 42. Eleven were married, one widowed and one unmarried. Only three adult non-menstruators took part in the final FGD as the rest had work commitments. They were all in their 30s and married. All participants were cisgender. This information is summarised in *Table 8*.

Table 8 - Number of interviewees and focus group discussion participants

Participant	Session type	Group no.	#Participants	TOTAL
LRC Social Systems WaSH officer	KII	N/A	1	9
LRC Technical Systems WaSH officer	KII	N/A	1	
LRC field staff	KII	N/A	3	
ARUP WaSH consultant	KII	N/A	1	
ARUP structural engineer	KII	N/A	1	
BRC project manager	KII	N/A	1	
IFRC project manager	KII	N/A	1	
Menstruator settlement inhabitant	FGD	1	4	13
Menstruator settlement inhabitant	FGD	2	3	
Menstruator settlement inhabitant	FGD	3	3	
Menstruator settlement inhabitant	FGD	4	3	
Non-menstruator settlement inhabitant	FGD	N/A	3	3

PROCEDURE

Though the intervention studied in this paper was a project, Realist Evaluations call for the development of programme theories, thus the authors refer to them as such. The first step was to develop Initial Programme Theories (IPTs) at different levels of the Socio-Ecological Model: individual, community, and

organisational. These were drawn from understandings from the literature, project document review, and preliminary conversations with Red IFRC project managers. These IPTs aimed to explain why a project produces certain outcomes based on the interactions between the resources put into the project and the specific context. To test the IPTs, the authors developed a qualitative semi-structured interview protocol for KIIs with project staff and a proforma for settlement inhabitants. This approach to testing IPTs was similar to but not the same as the teacher-learner cycle wherein IPTs are placed before respondents for them to confirm, deny, or refine the theory (Manzano, 2016). By asking tailored questions, respondents were able to give more detailed and nuanced responses.

Due to the unstable political situation and risks associated with travel, the lead author undertook KIIs online via Microsoft Teams, using its live transcription tool. She had experience conducting KIIs with schoolteachers in India on menstrual health as part of her Master's degree, and with water service providers in Cambodia where she worked as a WaSH consultant for 1.5 years. The KII and FGD questions were reviewed by the lead author's three academic supervisors, who have a wealth of experience in this type of data collection, and the LRC's Social Systems WaSH Officer, who was able to confirm the guide's contextual relevance and appropriateness. All four mentioned are co-authors to this paper. The FGDs with settlement inhabitants were conducted under the lead author's instruction by the WaSH officer with responses recorded on a proforma. The WaSH officer had taken part in all available training courses from the LRC. Rapport was created between the lead author and the WaSH officer with coordination calls before and after the FGDs. The one-page instruction document outlined the target participants, how the groups were to be split, logistics of filling out the proforma, contact information, and ethical procedures. These included direction for participants to read (or have read to them) the Explanatory Statement provided and to sign the consent form, for the FGD facilitator(s) to sign a confidentiality form, and instruction on how to conduct sensitive FGDs as outlined in the University of Leeds ethical review. The questions for FGDs were written in English by the lead author. These were translated into and conducted in Arabic by the Social Systems WaSH Officer (fluent in English, native Arabic). She then back translated them into English. All KIIs apart from with field staff were conducted in English by the lead author. The group field staff KII was lead jointly by the lead author and the Social Systems WaSH Officer in a mixture of English and Arabic. The online KIIs and in-person FGDs took place between February and April 2022. The authors listened to the recordings and edited the transcripts from April to May 2022.

Data were stored and shared in line with the University of Leeds research data management policy (see links: https://library.leeds.ac.uk/info/14062/research-data-management/68/research-data-management-policy; https://dataprotection.leeds.ac.uk/wp-content/uploads/sites/48/2019/05/Information-Management-Guide.pdf). An advisor from the data management team at the University of Leeds warned that putting the data in their public repository would breach compliance with the protocol approved by the research ethics board. All names were removed from data for anonymization. The process for data protection and anonymization was explained to research participants in the Participant Information sheets found in the appendix. KIIs and FGDs were recorded on a Dictaphone. Transcripts were created either by the lead author or a third party. The recordings have since been deleted. None of the information shared by camp inhabitants made them identifiable.

DATA ANALYSIS

Aligning to realist approaches, the authors were retroductive in their data analysis; applying inductive and deductive coding to both KII and FGD data whilst employing the lead author's own reasoning to identify generative causation (Wong et al. 2017). The two types of data were utilised in the same way to identify generative mechanisms. Following Dalkin et al.'s (2015) suggestion to aid clarification between context and mechanism, the mechanisms were broken down in their two constituent parts: 'resource', denoting the input of the project and 'reasoning', denoting how that resource interacts with the context. Thus, 'MCMO' (Mechanism(resource)-Context-Mechanism(reasoning)-Outcome) was used when refining the programme theory (PT). In many cases both KIIs and FGDs were used to code the same MCMO. The authors followed Gilmore et al.'s (2019) approach for their data analysis method. It consisted of the following four steps:

Data preparation. The lead author transcribed KIIs and read the FGD proforma to gain a better contextual understanding. The authors uploaded each KII and FGD as one individual data source on excel. They then created a corresponding Mastersheet for all IPTs in which to align MCMOs as 'evidence' from the KIIs and FGDs.

MCMO Extraction and Elicitation. The lead author went through each data source individually and coded when an observable MCMO was found, which they either added to an existing IPT, or used to create a new PT by placing the quote next to the IPT/PT and associated MCMOs. Once a whole data source was read and coded the authors reviewed data again by refining the MCMOs, their IPT or PT and labelling whether this supported, refuted or lacked evidence to make conclusions on the IPT/PT.

Using MCMOs to Refine PTs. The authors refined the IPTs/PTs continuously throughout data analysis and merged similar IPTs/PTs for simplicity.

Collating Evidence and Refinement Verification. The authors found 20 MCMOs across the data sources. Once coding was complete, the authors collated all MCMOs and their supporting evidence into tables. These were compared with mechanisms found in the literature where relevant (as seen in the results section) and used to consolidate and define nine PTs.

3.5 RESULTS

Through testing and verifying the nine PTs through data collection and analysis the authors consolidated them into one overarching PT:

In a participatory project for menstruator-friendly WaSH facilities in humanitarian settings, the Red Cross demonstrated examples of how to centre participants' experience at different stages when implementing their adaptable manual. Pre-participation they provide MHM education, clearly outline the project, and adapt FGDs around gendered responsibilities. To aid the experience during participation they create a safe space for FGDs, navigate group dynamics, and deliver MHM and FGD training and guidelines to field staff along with encouraging rapport building and bridging cultural gaps. To avoid negative consequences post-participation they negotiate how to incorporate participants' needs into designs, and navigate social dynamics and non-menstruator support. These inputs and resources generate feelings of support, comfort,

safety, trust, and confidence leading to participant satisfaction at most stages of the project alongside the outcome of appropriately designed menstruator-friendly WaSH facilities. The project also gave examples of when participant experience was not centred such as the failure to communicate project limitations resulting in disappointment and a break in trust between participant and staff.

The findings of the retroductive analysis of KII and FGD transcripts demonstrated that a complex interaction of individual, interpersonal, community, and organisational factors influenced participant experience and choice to participate before, during and after participation in the project. Individual-level factors were menstruators' valuing of menstrual health, aided by MHM education and explanations of the project details prior to recruitment. Interpersonal factors consisted of non-menstruator and religious leader support for the project. Community factors were the splitting of demographic groups for FGDs. Organisational factors were cultivating good relationships with participants, minimising cultural gaps, adapting the project around gendered responsibilities, negotiating needs into designs, explaining limitations, and creating safe spaces for FGDs. When certain limitations were not met nor the reason for this communicated, participants were disappointed and disconcerted.

These drivers of participant experience led to the identification of nine mechanisms. These were: feeling informed, autonomous, and prepared (PT1); Valuing MHM (PT2); Feeling included and able to participate (PT3); Feeling familiar and trusting (PT4); Feeling safe (PT5); Feeling comfortable to share and be heard equally (PT6); Adjusting expectations, accepting limitations and feeling respected and accounted for (PT7); Feeling valued, satisfied with outcomes, and confident in the project (PT8); Feeling supported and unthreatened by non-menstruators (PT9). The nine mechanisms are discussed presently, each denoted with a sub-theory of the consolidated programme theory above, explained by relationships to MCMOs. In realist evaluation, researchers often use a combination of informal conversations and observations, document review, literature review, and formal interviews or FGDs, which form and refine the programme theories through retroductive reasoning. For this reason, the PTs presented below are exemplified by supporting quotes from the KIIs and FGDs (italics, no reference) but are sometimes substantiated or substituted with evidence from the literature (upright, with reference).

PRE-PARTICIPATION

<u>PT1 – Informed consent</u>

If the project is well explained to participants beforehand then they can make informed decisions to participate. They are also then prepared to discuss the sensitive topic of menstruation, avoiding surprise or discomfort, which allows them to feel contented enough to continue with the project. Participants agreed that project staff did well to *'explain to us the details of the project',* with one staff member reasoning, '*all this information were part of the mobilization [of] the community'.* Participants reported having no personal issues with taking part, with staff clarifying that *'we're generally received with a good*

attitude towards it, so no one really refused to take part in this project. On the contrary, they were welcomed'.

PT2 – MHM Education

If staff assess individual's level of MHM knowledge and tailor a session on the importance of proper MHM, stigma will be reduced, which may have deterred community members from taking part. Additionally, individuals will understand the health implications of improper MHM. This leads all community members to value the project enough to participate meaning designs are representative of all community members. Moreover, everyone will have an adequate, equal level of MHM knowledge, allowing for greater awareness of options when considering facility design. Participants agreed that '*the project helped us learn about and improve our personal hygiene during menstruation'.* All menstruators chose to take part in the project, demonstrating their valuing or willingness to interact with the topic.

PT3 – Inclusion

If a project works around other duties and demographical barriers to participation such as gendered responsibilities, age, school, religion, disabilities, or different languages, then menstruators feel included and their voices represented. Menstruators' 'triple burden of roles' may be exacerbated in times of displacement, especially within the early stages of an emergency, meaning there is less time and willingness to participate in projects (Moser, 1989; Anderson, 2020). The menstruator roles in this community were typical (cooking, childcare, agricultural work). The LRC were conscious to work around this saying that, '*When we schedule our FGDs… we tend to take everyone's different roles into consideration to try and make it a set date where everyone can participate and we tried to make them shorter because… people have to cook or to clean or to take care of the kids'.* When such a role would interfere with participation, the LRC would mitigate this, explaining that '*if someone has, for example, the baby that they can't leave, then the FGD we moved to their house if they allow us to'.* Participants reported that they were happy for this to happen and that their other responsibilities were not infringed upon nor were they prevented from participating.

DURING PARTICIPATION

PT4 – Training, guidelines, rapport, and cultural gaps

If staff have rapport with the community and are trained and experienced in using IFRC's guidelines to conduct sensitive MHM-related FGDs and bridge cultural differences then only relevant, tactful questions will be asked. Along with feeling comfortable, familiar and trusting, menstruators' time and emotional triggers are minimised. One of the main aspects of the project attributing to the comfortability of participants was the relationship the field staff had with the community. The factors contributing to this were the continual rigorous training they receive on community engagement, the renown of the IFRC, the years spent working together, and the minimal cultural differences between staff and community. Where cultural differences did exist, staff bridged these gaps sensitively. For example, the participants believed there to be no cultural differences regarding beliefs around menstruation, however this was only because

staff worked to not '*make them feel like they are different or that they have a different knowledge'.* This allowed participants to openly discuss MHM without feeling judged or self-conscious. One staff member elucidates further, how the IFRC differs from other organisations in this way:

'It's not the same [as] if [an]other international organization… come to do… the participation because they do not understand the language, they do not understand… so the concept [of the] Red Cross is very different than other organisations… We are before the emergency happen[s], we are dealing [with] them urgently and we are after the emergencies in the community. We have many other organizations coming with the… backpacker. The level of our participation is always much higher because… the volunteers… are community volunteers and they have the same needs of the [community]. So, it's easier for us to understand the participation than [other] organizations... we are very [on] the ground… we have expertise in understanding the communities that perhaps other organisations lack.'

PT5 – Safety

If the setting poses safety concerns to menstruators e.g. outsiders infiltrating the settlement or living in close proximity to one another, staff can create a safe menstruator-only space for FGDs where menstruators feel able and comfortable to discuss personal or sensitive experiences and opinions freely. The UNHCR found that displaced menstruators are 'often preoccupied with meeting safety and survival needs that take time and energy away from participation' (2020, p.8). Contextually, the settlement was already considered to be a '*kind of quiet'* and '*really safe place'* where the *'landowner is friendly and camp is far away from road so deters thieves'*. Additionally, when asked if they feel safe to use facilities at night participants responded '*yes of course'*. Project staff worked to ensure that the FGDs were safe making them '*very small'*, and guaranteeing that '*there is no one that shouldn't be there that's looming around'.* Thus, safety did not pose an issue to their participation and everyone could share freely in the group.

PT6 – Group dynamics

If menstruation is not comfortably discussed between everyone, even if a community is familiar and of the same ethnicity and culture, FGDs can be split by age and sex, with same-sex facilitators, to promote comfort resulting in ease of open discussion where voices are heard equally. Group dynamics influence the ease at which people freely share within FGDs, and thus impact the efficacy of the exercise. This may be due to 'the presence of a domineering and judgemental participant', unfamiliarity or familiarity, and cultural differences (Scheelbeek et al., 2020). Thus, guidance suggests splitting groups by age, ethnicity and gender (Sommer et al. 2017). One staff member explains how it was relevant to *'split the community between males and females to give everyone their complete privacy and… to assign a male volunteer to conduct the FGD with the males, because… it's… a little bit sensitive and a little bit embarrassing and… a topic that it's not generally discussed between men and women together'.* They were also split *'for the comfort of the ease of communication basically between different age groups'.* One staff member expands: '*As comfortable as people may seem around each other, sometimes it might just be something between… a mother and a daughter… where they do not necessarily talk about everything with each other... then that allowed them to have… a space where they could talk among individuals closer to their age, going through*

the same things they're going through.' In this instance the FGDs worked very well as *'most of the people know each other, most of them have been there together in the same space for a while so we didn't really notice any of these tensions. Most of these tensions are found in the larger [informal tented settlements] where… we have newcomers or people who came from different regions who do not necessarily know each other'.*

POST-PARTICIPATION

PT7 – Negotiating limitations

If there are contextual limitations to what is possible in facility design, staff can explain and negotiate participants' needs with them, thus avoiding disappointment and promoting feelings of acceptance and being respected and accounted for. They will understand that their suggestions have not been taken into account for good reason and will not feel unheard or that their participation was futile. Participants are then able to feel satisfied with the delivery of robust and culturally appropriate facilities. Without this, it may damage the trust that project staff worked hard to build. When some design constraints were communicated to participants, they were made to feel '*comfortable in general'* in that they '*had no problems because everything was explained to [them]'.* When limitations are not explained 'harm… occurs when agencies engage with women and girls but do not meet their concerns, particularly if agencies do not set clear expectations when they convene consultations' (Anderson, p.33, 2020). Udoewa (2022) writes that Coloniality is inherent in participatory design, wherein the community members' 'disappointment is greater due to the greater expectations and presencing [a field of co-creation and social warmth] potential of a 'participatory design' process' (p.1). An example here was that although participants attested that field staff explained the project to them well, one shortcoming was its failure to explain its limitations. Within the initial FGDs participants asked for greater access to sanitary pads, however this was outside the project's scope. When it came to the research, the participants explained their disappointment in this need not being met. They elucidated, *'we informed the facilitators that we have a gap in our ability to purchase menstrual hygiene products… but until now, we still haven't been able to fill that gap… sometimes we cannot practice [MHM] because we are not able to purchase menstrual pads'.*

PT8 - Valuing participant input

If the engineers have expert knowledge and experience in the field and they value participants' FGD responses then they will incorporate them well into the designs so that the facilities are adequately designed according to participants' needs as well as technologically sound. Participants are then satisfied with the outcome and their time spent contributing to the project. The UNHCR finds that 'consultation remains a largely passive mode of participation, especially when the persons consulted do not see or hear the outcomes of their time and input' (Anderson, p.33, 2020). In this case, participants were able to clearly see how the engineers took their responses into consideration with the design of the facilities. While the literature and guidance suggest the importance of keeping participant's time to a minimum to avoid consultation fatigue, the international engineers felt the more FGDs there were, the better (Anderson,

2020). Since they were not able to travel to the site, they felt that feedback from the FGDs allowed them to have a greater understanding of the context and could therefore inform designs that are more suitable.

PT9 – Non-menstruator support

If project staff work to understand the social dynamics of the community and ensure that non-menstruators are supportive of the project and of their menstruating family members taking part, then menstruators will feel no repercussive threat in participating and so choose to do so without any negative consequences. This PT is relates to pre-, during, and post-participation as the attitudes and actions of non-menstruators might influence menstruator experience of participation at any stage of the project. We have chosen to put it under post-participation as we discuss the ongoing impact of non-menstruators after the project has finished. The LRC first engaged the Shaweesh (community leader) about the project who in turn encouraged menstruators to take part. Non-menstruators were also supportive of menstruator involvement in the project. Staff said they '*didn't sense any tension between the men and the women'* and that they *'did not face any problems… on the contrary the men were welcoming the idea'.* They said the non-menstruators felt *'the women can take part, should take part; it's interesting, it's good for them to gain the knowledge'.* Another goes on to explain that *'it was a safe space because the community respects the fact that the project was being implemented with women and even the males that were the heads of households did not have any problem with the woman sitting alone with the facilitator'*. Considering post-project impacts, staff asked menstruators *'do you think that the men will be able to leave this facility alone or would they want to try it as well… and everyone was in agreement saying that since this is a female facility they will respect this and they will leave it for the women'.*

In terms of the involvement of non-menstruators themselves, project staff explained that '*the attitude towards that is a little bit, it's not necessarily shameful, but kind of a taboo kind of something that is supposedly just for women "We do not want to be part of this conversation'', etc.'*. They were, however, happy to partake in the project from a practical standpoint, with staff saying they were *'very helpful when it comes to designs through different prototypes'.* They continue, '*when we first put the facility on field the men were there as well, and they were telling us, like, "yeah, this is good, it looks great" etc. but kind of giving us their feedback from the outside'.* This brings about the question for the need to engage non-menstruators in menstrual health projects when the attitudes and actions are '*not in a harmful way'* as demonstrated here, or - when they are a problem - how they can be best engaged. One staff member felt that *'ideally, eventually, hopefully men and boys should be included in these types of projects, but [in] a very sensitive way of doing it because of the cultural considerations and of course, because some of them do not want to be involved'*.

3.6 DISCUSSION

The programme theory examined in this paper explores how the interacting interventions and contextual factors work to produce mechanisms, which lead to positive participant experience leading up to, during, and after participating in a menstrual health project. The authors used current literature on menstruator participant experience in menstrual health and humanitarian projects to guide data analysis and synthesis, which led to the development of a middle range theory in the form of nine programme sub-theories that

explain how this can be achieved in this context. The distinguishing contribution of this research is its identification of the strategies and resources required to ensure menstruator participation is safe and satisfactory.

LOCALISATION OF AID AS AN APPROACH TO CENTRE PARTICIPANTS' EXPERIENCE

The results demonstrate how the project interacted with the organisational and local contexts. The IFRC is a globally renowned, decentralised humanitarian organisation who are able to be present at all stages of an emergency. The field staff of their national teams are generally of a similar culture and language as the communities they work with. These factors allow for great rapport and minimal cultural gaps, which contribute to feelings of ease and trust with the community. The humanitarian sector receives many international workers. This means there is often a dissonance in understanding between international workers (typically from the Minority World) and the communities they serve (typically in the Majority World) (Carpi 2021). Additionally, organisations and actors in the humanitarian sector can be exceptionally transitory and lack relevant experience (Spiegel 2017). Thus, 'a major revision of humanitarian leadership and coordination of humanitarian emergencies is needed that has fewer but more competent and operational actors with a clearer command and control leadership structure' (Spiegel, 2017, p.1). In emergency cases where other external organisations are also required it could be beneficial if the well-established organisations took responsibility for sensitive issues such as menstrual health and the smaller, newer organisations oversaw other elements that require no or minimal contact with the community.

The group being homogenous (Syrian, Muslim, Arabic-speaking) and familiar with one another aided the ease with which participants could communicate during FGDs. It also avoided issues of inclusivity or representation of differing groups. Although there is some stigma and embarrassment around menstruation in this community, it was not enough to prevent people from participating. Non-menstruators did not wish to play an active role in the project, however they supported menstruating family members to take part, posing no issue with them having private FGDs with familiar LRC staff. Non-menstruators can play an important role in either hindering or supporting a menstrual health project, both in terms of menstruator-participation within the project, or access to menstrual health after the project. Non-menstruators and/or cultural dynamics may prevent menstruators from participating in projects in the first place (Karim et al. 2018) or obstruct access to materials, services, or a supportive environment through bullying, financial control or peeping, GBV, or presence within menstruator-only facilities (House, 2019). Thus, LRC staff knew it was important for the project to assess how non-menstruators would react so they could challenge negative attitudes and behaviours if present.

Figure 6 offers an explanatory framework for how these organisational and local contextual factors (top and bottom) interact with the project inputs (left) to catalyse positive feelings and reasoning that lead to the desired outcomes where participant experience is centred.

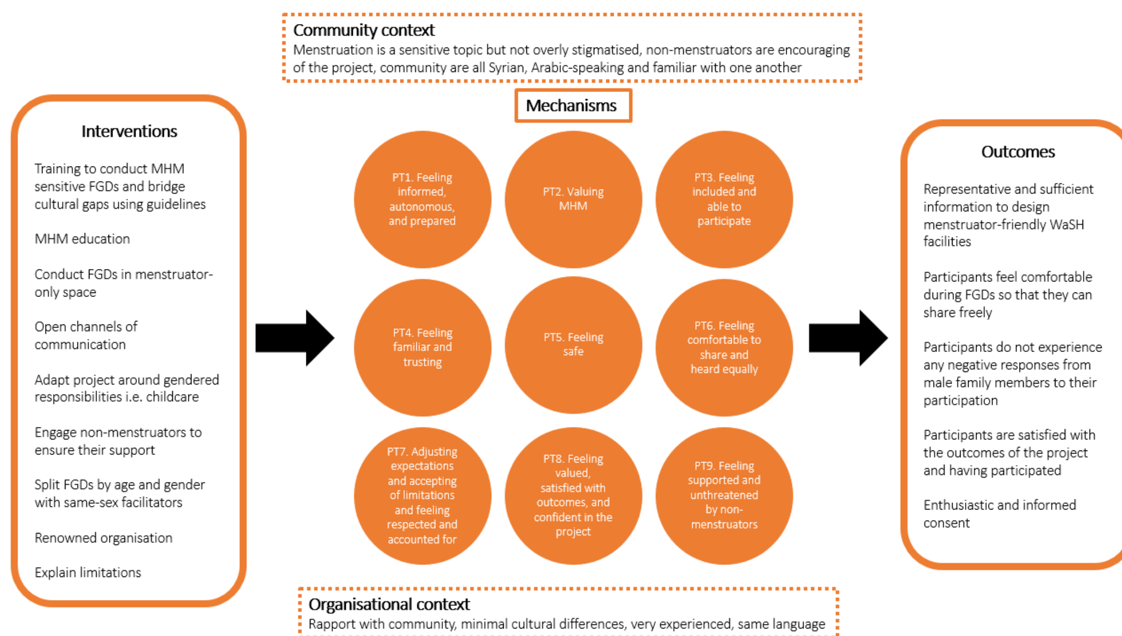


Figure 6 - Context-Mechanism-Outcome Configurations of the refined programme theory

PARTICIPATION AS A METHODOLOGICAL TOOL TO CENTRE PARTICIPANTS' EXPERIENCE

The mechanisms explored in this paper focus on the end-user experience of participation. Here the authors discuss the difficulties of ensuring participation to be a positive and impartial practise when there intrinsically exists a power imbalance between participants and project organisers. Arnstein writes that consultation can be a 'legitimate step toward their full participation', but when 'not combined with other modes of participation, this rung of the ladder is still a sham since it offers no assurance that citizen concerns and ideas will be taken into account' (1969, p.219). However, the authors argue that the level of participation required for a project is entirely dependent on its aims, and that it is sometimes not appropriate or possible for a project to achieve 'citizen control' (the top rung on the ladder). Instead, centring positive participant experience at all stages of the project should be one of the desired outcomes, regardless of the level of participation concerned. One universal standard is gaining the study subjects' voluntary informed assent and consent: 'a process of providing potential study participants… with information about the study (e.g. risks and benefits) and allowing them to decide freely (i.e. without incentive or coercion) if they want to participate' (Vallely et al., 2010 in Brear & Tsotetsi, 2021, p.814). Although Brear & Tsotetsi (2021) state that 'decolonising outcomes will be optimal' if actors implement VIAC procedures, in practice 'power dynamics mean that consent may be neither informed nor voluntary' (p.814). This is due to the challenge of informing participants 'especially in postcolonial and other settings with power inequalities, because of cultural differences and social injustices, including the systematic denial of information, autonomy and rights for people with limited power' (Brear & Tsotetsi, 2021, p.814). An alternative is 'radical participatory design' – that which 'fully includes the community members in all activities of all phases of the design process and in all interpretation, decision-making, and planning between design activities' (Udoewa 2022). This approach could work in this protracted setting as the need

for humanitarianism transforms into the need for development and sustainability. However, since it takes an undefined length of time, it is not possible when a rapid response is required.

This research is useful for practitioners in the humanitarian sector who can put the described contextual factors in place before implementing the described project resources to centre participant experience alongside achieving the project's planned outcomes. It could be beneficial to include such suggestions in an organisation's guidance for community participation. Ultimately, this research can inform strategies for projects of a similar nature to reduce burdens on participants whilst still providing them with appropriate menstrual health facilities. Project staff felt that larger, more experienced organisations with staff who are well integrated into the community are better to conduct projects like these, coinciding with Spiegel (2017) who believes that small, inexperienced humanitarian organisations with transitory international staff is one of the ways the 'humanitarian system is not just broke, but broken' (p.1).

Another intervention that LRC could implement is facilitating access to menstrual hygiene products – a gap raised by the menstruators. Following this project, the LRC began work with the Austrian Red Cross to install vending machines in schools that dispense menstrual products using cards, vouchers, or tokens. Another option could be to facilitate market access and cash programmes, though the efficacy of this is context dependent. In remote areas such as the one studied in this paper, it may not be viable.

3.7 LIMITATIONS

The lead author was not able to collect the data herself in person however as FGDs were overseen by another author from the LRC this gave more autonomy to the organisation and more comfort to participants discussing the topic with familiar staff members. The Realist Evaluation was only conducted in one context as the project was only piloted in one community. With the rollout of the project into other contexts, more evaluations can be undertaken to compare how the differing contextual factors interact with the project strategies. The MCMOs that require further study before conclusions can be made are the need to engage non-menstruators in the project, the influence of having mixed nationalities and cultures within the community, and the different types and stages of an emergency.

There is always a power divide between service providers and service recipients, so the LRC WaSH officer leading data collection could have influenced participants' willingness to freely share their perspective. As discussed in the positionality and reflexivity statement, having embedded researchers from the IFRC, BRC, and LRC may have hindered unbiased information provision and evaluation of the project.

There were only cisgender women in the community meaning that these results may not be generalizable to settings where other gender identities are present. Although the facilities were designed to be inclusive of physical disabilities, everyone in the settlement was able-bodied so this element of the facility could not be tested.

3.8 CONCLUSION

This paper explored the mechanisms and contextual factors necessary for centring participant experience when implementing IFRC's adaptable manual for designing menstruator friendly WaSH facilities in

humanitarian settings. Using the IFRC and LRC's project as an example, the research evaluated how to puts participants' needs first and ensure they face no negative implications of participating in the project, during recruitment, participation itself and after the project has finished. The programme theory developed in this study ascertained causal mechanisms that explain how organisations can work to ensure a positive participatory experience for menstruators: feeling informed, autonomous, and prepared; Valuing MHM; Feeling included and able to participate; Feeling familiar and trusting; Feeling safe; Feeling comfortable to share and heard equally; Adjusting expectations and feeling accepting of limitations as well as respected and accounted for; Feeling valued, satisfied with outcomes, and confident in the project; Feeling supported and unthreatened by non-menstruators. The results enhance understanding of the potential for wider contextual structures and resources to enrich or constrain end-user experience during participation. These were: menstruators' valuing of menstrual health, aided by MHM education and explanations of the project details prior to recruitment, non-menstruator and religious leader support for the project, the splitting of demographic groups for FGDs, cultivating good relationships with participants, minimising cultural gaps, adapting the project around gendered responsibilities, negotiating needs into designs, explaining limitations, and creating safe spaces for FGDs. The research can inform organisational policy design in other humanitarian contexts on how to centre participant experience, wherein participants feel valued, trusting and safe at all stages of the participant process. Future research should test this explanatory framework in other humanitarian settings, which have differing contextual factors.

3.9 ETHICS

The authors gained ethical approval from the University of Leeds, UK, on the 12th January 2022 under the code MEEC 21-008. Informed consent was taken from all study participants via a signed statement. The statement was in English but read aloud to non-English speaking participants in Arabic (their native tongue). They also drew up a Terms of Reference detailing the expectations of the collaboration that was signed by the lead author and a member of the IFRC. The LRC also sent the authors a copy of their anti-coercion consent form for their self-collected data.

3.10 REFERENCES

Anderson, K. 2020. Tearing down the walls: Confronting the barriers to internally displaced women and girls' participation in humanitarian settings. *UNHCR.*

Arnstein, S.R. 1969. A Ladder Of Citizen Participation. *Journal of the American Institute of Planners*. **35**(4), pp. 216-224. Available from: DOI: 10.1080/01944366908977225

Brear, M.R., Tsotetsi, C.T. 2021. '(De)colonising outcomes of community participation – a South African ethnography of 'ethics in practice''. *Qualitative Research*. Available from: https://doi.org/10.1177/14687941211004417

Dahlen S. 2021. Do we need the word 'woman' in healthcare? *Postgrad Med J*. **97**, pp.483–484. Available from: doi:10.1136/postgradmedj-2021-140193

Gilmore, B., McAuliffe, E., Power, J., Vallières, F. 2019. Data Analysis and Synthesis Within a Realist Evaluation: Toward More Transparent Methodological Approaches. *International Journal of Qualitative Methods*. **18**. Available from: https://doi.org/10.1177/1609406919859754

Gordon, A. 2019. Period taboo: Why can't we talk about menstruation? BBC NEWS. [Online]. [Accessed 20 April 2021]. Available from: https://www.bbc.co.uk/news/uk-northern-ireland-47254222

Green H, Riddington A. 2020. Gender Inclusive Language in Perinatal Services: Mission Statement & Rationale. *Bright Sussex Univ Hosp.* [Online]. Accessed 29 January 2024. Available at : https://www.bsuh.nhs.uk/maternity/wp-content/uploads/sites/7/2021/01/Gender-inclusive-language-in-perinatal-services.pdf

HAP International. 2010. The 2010 HAP Standard in Accountability and Quality Management. [Online]. Accessed 29 January 2024. Available at: https://pseataskforce.org/uploads/tools/the2010hapstandardinaccountabilityandqualitymanagement_hapinternational_english.pdf

Hennegan, J., Inga T. Winkler, I.T., Bobel, C., Keiser, D., Hampton, J., Larsson, G., Chandra-Mouli, V., Plesons, M., Mahon, T. 2021. Menstrual health: a definition for policy, practice, and research, Sexual and *Reproductive Health Matters.* **29**(1), pp.31-38.

House, S. 2019. Strengthening the humanity in humanitarian action in the work of the WASH sector in the Rohingya response. Gender, GBV and inclusion audit of the work of the WASH sector and capacity development assessment SUMMARY REPORT.

IFRC. 2019. Addressing menstrual hygiene management (MHM) needs. Guide and Tools for Red Cross and Red Crescent Societies. [Online]. Accessed 17 November 2023. Available at: https://watsanmissionassistant.org/menstrual-hygiene-management/

IFRC. 2022. Inclusive WASH. Menstrual Hygiene Management Friendly and Accessible WASH Facilities for Emergencies Manual for Template Designs. [Online]. Accessed 17 November 2023

https://watsanmissionassistant.org/wp-content/uploads/2022/05/IFRC_MHM-Friendly-Accessible-WASH-Facility-Manual_March2022_WithAppendicies.pdf

Israel, A.B., Schulz, J., Parker, A., Becker, B. 1998. Review of community-based research: assessing partnership approaches to improve public health. *Annual Review of Public Health*. **19**(1), pp.173-202.

Karim, R., Lindberg, L., Wamala, S., & Emmelin, M. 2018. Men's Perceptions of Women's Participation in Development Initiatives in Rural Bangladesh. *American Journal of Men's Health.* pp.398–410. Available from: https://doi.org/10.1177/1557988317735394

Kilanowski, J.F. 2017. Breadth of the Socio-Ecological Model. *Journal of Agromedicine*. **22**(4), pp.295-297. Available from: DOI: 10.1080/1059924X.2017.1358971

Lewin, K. 1946. Action Research and Minority Problems. *Journal of social issues.*

Manzano, A. 2016. The craft of interviewing in realist evaluation. *Evaluation*. **22**(3), pp.342-360. Available from: https://doi.org/10.1177/1356389016638615

Sommer, M., Schmitt, M., Clatworthy, D. 2017. A toolkit for integrating Menstrual Hygiene Management (MHM) into humanitarian response. (First edit). New York: Columbia University, Mailman School of Public Health and International Rescue Committee

Minkler, M. and Wallerstein, N. 2008. Community based participatory research for health: Process to outcomes. 2nd Edition, Jossey Bass, San Francisco.

Moser, C.O.N. 1989. Gender planning in the third world: Meeting practical and strategic gender needs. *World Development.* **17**(11), pp.1799-1825.

Mubita, A. Libati, M. Mulonda, M. 2017. The Importance and Limitations of Participation in Development Projects and Programmes. *European Scientific Journal.* **13**(5). Available from : doi: 10.19044/esj.2017.v13n5p238

Pawson, R., Tilley, N. 1997. An introduction to Realist Evaluation in Evaluation for the 21st Century: A Handbook. Chapter 29. Sage Publications.

Sahin, M. 2015. Guest editorial: Tackling the stigma and gender marginalization related to menstruation via WASH in schools programmes. *Waterlines.* **34**(1), pp.3-6.

Scheelbeek, P.F.D., Hamza, Y.A., Schellenberg, J. 2020. Improving the use of focus group discussions in low income settings. *BMC Med Res Methodol*. **20**, p.287. Available from: https://doi.org/10.1186/s12874-020-01168-8

Sommer, S., Kjellén, M., Pensulo. C. 2013. Girls' and women's unmet needs for menstrual hygiene management (MHM): the interactions between MHM and sanitation systems in low-income countries. *Journal of Water, Sanitation and Hygiene for Development*. **3**(3), pp.283–297.

Sphere Association. 2018. The Sphere Handbook 2018. [Online]. Accessed 29 January 2024. Available at: https://spherestandards.org/handbook-2018/

Spiegel, P.B. 2017. The humanitarian system is not just broke, but broken: recommendations for future humanitarian action. *The Lancet.* Available from: https://doi.org/10.1016/S0140-6736(17)31278-3

Udoewa, V. 2022. An introduction to radical participatory design: Decolonising participatory design processes. *Design Science*. **8**(31). Available from: doi:10.1017/dsj.2022.24

UNHCR. 2023. Refugee data finder. [Online]. Accessed 18 January 2024. Available at: https://www.unhcr.org/refugee-statistics/

Vallely A., Lees S., Shagi C. 2010 How informed is consent in vulnerable populations? Experience using a continuous consent process during the MDP301 vaginal microbicide trial in Mwanza, Tanzania. *BMC Medical Ethics*. **11**(1), p.10.

VanLeeuwen, C. Torondel, B. 2018. Improving menstrual hygiene management in emergency contexts: literature review of current perspectives. *Int J Womens Health*. **10**, pp.169–186.

Williams, G. 2004. “Evaluating participatory development: tyranny, power and (re) politicization”. *Third World Quarterly*. **25**(3), pp.557- 578.

Wong, G., Westhorp, G., Manzano, A., Greenhalgh, J., Jagosh, J. and Greenhalgh, T. 2016. RAMESES II reporting standards for realist evaluations. *BMC medicine.* **14**(1), pp.1-18.

World Humanitarian Summit Secretariat. 2015. World Humanitarian Summit: Global Consultation Geneva, 14-16 October 2015, Final Report. [Online]. Accessed 25 July 2023. Available at: https://reliefweb.int/report/world/world-humanitarian-summit-global-consultation-geneva-14-16-october-2015-final-report

CHAPTER IV

WHAT INFLUENCES NON-MENSTRUATOR ATTITUDES AND BEHAVIOURS TOWARDS MENSTRUATION AMONG ROHINGYA REFUGEES IN BANGLADESH? A QUASI-EXPERIMENTAL, SINGLE-ARM PRE-POST STUDY (NON-RANDOMIZED), USING REPEATED MEASURES FROM THE SAME PARTICIPANTS (N = ~150) BEFORE AND AFTER A MENSTRUAL HEALTH INTERVENTION DELIVERED BY WORLD VISION

This chapter presents the second paper 'What influences non-menstruator attitudes and behaviours towards menstruation among Rohingya refugees in Bangladesh? A quantitative analysis'. It is currently under review at PLOS One after being submitted in August 2024. It begins to address menstruators' strategic needs by trying to understand what influences non-menstruator attitudes and behaviours towards menstruation.

4.1 ABSTRACT

Non-menstruators play an important yet overlooked role in shaping menstrual health. They may be the family budget holders who purchase menstrual materials, receive health information outside the household, or preserve social stigmas. In response, World Vision, supported by UNICEF, implemented a programme to influence non-menstruators among the Rohingya population living in Kutupalong refugee camp, Bangladesh. The intention was to ensure non-menstruators recognise their important role in supporting family members to improve their menstrual health. We evaluated this intervention using a baseline and endline survey of 146 participants based on the Risk-Attitudes-Norms-Ability-Self-regulation (RANAS) approach to behaviour change. Based on the responses, we categorised participants into 'doers' and 'non-doers' of positive behaviours. We then performed multiple linear regression analyses and Analysis of Variance (ANOVA) comparison of means tests to understand how psychosocial and contextual factors influence the population's attitudes and behaviours towards menstruation before and after intervention. The regression analyses showed eight psychosocial and contextual factors that had a significant relationship with the desired behaviours. These were the block they lived in, marital status, already having learnt about menstruation from World Vision, how they were introduced to menstruation, who they discuss menstruation with, family members' reaction, perceptions of their role, and their commitment to assisting family members with their menstrual health. Additionally, the ANOVA comparison of means between doers and non-doers showed doers were more likely to be confident to carry out the behaviour of supporting family members with their menstrual health, perceive their role as important, and discuss menstruation with family. They were also more likely to be married, older, and have first learnt about menstruation from their family. This is the first published study to our knowledge to identify which psychosocial and contextual factors significantly influence positive non-menstruator attitudes and conducive behaviours towards

menstruation and menstruators. Humanitarian organisations can use these factors to improve the design and targeting of behaviour change programmes to improve menstrual health.

4.2 DATA SHARING, FUNDING, AND CONFLICTS OF INTEREST, REPORTING

All names were removed from data, as they were not necessary for data analysis. The research was conducted as part of a fully-funded PhD by the UK's Engineering and Physical Sciences Research Council (EPSRC). They had no role in the design, conduct, analysis or reporting of the trial. There are no conflicts of interest. This manuscript has followed the CONSORT 2025 guideline for reporting randomised trials (Hopewell 2025).

4.3 INTRODUCTION

Only in the last 10 to 15 years have researchers, practitioners, and policy makers started to consider menstrual health as a public health and human rights issue and consequently began to address it as such (Babbar et al. 2022). Even more recently (in 2021) has a definition for menstrual health been developed, expanded and built upon from previous menstrual health dialogue. The definition highlights how it is more than just a 'women's issue' in more ways than one, emphasising the need to expand our understanding of gender beyond the binary in that it is not only cis-gender women who menstruate but also transgender men and other gender diverse persons. Accordingly, we use the terms 'menstruator' to denote those who have the ability to menstruate and 'non-menstruator' for those who do not.

Though inadequate menstrual health is a global issue, it is exacerbated in certain contexts. In the humanitarian sector, for example, it has been a neglected topic with other needs taking precedence (Bhattacharjee 2020). This has resulted in a failure to meet the basic human needs among some of the most marginalised groups in the world. This is due to the stigmatised and secretive nature of menstruation, a disregard for issues perceived to concern only women, and a lack of coordination; since menstrual health falls into multiple coordinated clusters within a humanitarian response, no sector was taking responsibility for it (Sommer et al. 2016). It was not until 2000 when the United Nations Population Fund (UNFPA) recommended that 'dignity kits' with menstrual materials be part of the reproductive health response (Tellier et al. 2020). However, these were often largely insufficient (Rohwerder 2014). Gradually practitioners realised the scope needed to widen beyond the provision of materials, though this remained not very well actioned. Some of those that called for this were Sommer et al. (2016) who published a paper proposing that the response also requires facilities for washing, changing, drying, and disposing of materials alongside supplying menstrual education and practical information. Following this, the Menstrual Hygiene Management (MHM) in Emergencies Toolkit was developed in 2017 and both hardware and software MHM guidelines were written into the 2018 Sphere Standards for humanitarian action. Since then, practitioners applying holistic approaches where they address the root causes of inadequate menstrual health – menstrual taboo – and involve all members of society, has been on an upwards trajectory.

These standards and guidelines have supported interventions that have improved menstrual health alongside reducing menstrual stigma (Hennegan & Montgomery 2016). Since menstruation is often private and taboo, interventions have logically focused only on women, or those who menstruate. However,

researchers and practitioners have come to observe that non-menstruators can be an impediment to progress (Day 2024; Patel et al. 2022). All members of a society can hold misinformed and stigmatised views on menstruation, however the portion of the population who have been excluded are typically the ones to hold more power and influence. To illustrate, non-menstruators can perpetuate negative stigmas and taboos about menstruation that reinforce beliefs and practises that shame and marginalise menstruating individuals. This stigma often leads to secrecy and a lack of open discussion, which in turn means menstrual health issues are not well understood or prioritised. It also endorses misogyny and resultantly upholds gender inequalities.

In the last couple of years, some humanitarian organisations have started to recognise the importance of including non-menstruators in menstrual health programmes, such as Oxfam (elrha 2024b). However, there is little documentation of these approaches nor research into their effectiveness. This means there is a lack of research-based guidance for humanitarian organisations addressing this facet of menstrual health. What is also lacking is an exploration of why these negative or avoidant attitudes and behaviours towards menstruation endure.

To address this, we studied a World Vision and UNICEF behaviour change programme with non-menstruator Rohingya refugees living in Kutupalong camp, Bangladesh, focused on reducing stigma around menstruation and encouraging supportive behaviours towards their menstruating family members. Staff estimated programme uptake to be about 70%, reasons for not joining being other commitments such as work or discomfort with the nature of the programme. We conducted a longitudinal baseline and endline survey of 146 participants using the Risk-Attitudes-Norms-Ability-Self-Regulation (RANAS, 2022) framework, which we analysed using multiple linear regression and ANOVA comparison of means tests. The aim was to understand which contextual and psychosocial factors influence positive attitudes and conducive behaviours towards menstruation among this population. To do this we posed the following research questions: What are the behavioural determinants of possessing positive attitudes and supportive behaviours towards menstruation among non-menstruators in humanitarian settings?

4.4 METHODS

BEHAVIOUR CHANGE APPROACH AND THEORY

The RANAS approach provides a comprehensive framework for understanding what influences behaviours. It is based on empirical evidence and behavioural science theories drawing on psychology and sociology to identify key determinants of behaviour. It works by discovering the 'doers' and 'non-doers' of a behaviour, analysing differences in their psychosocial orientations, and using this to select Behaviour Change Techniques (BCTs), tailored to the specific context and population. The approach - developed in 2012 – has been used to evaluate and develop water, sanitation, and hygiene (WaSH) behaviour change programmes (RANAS 2022) and has been used before in the same setting as the one studied in this paper (Rahamen 2022). The research partners (World Vision and UNICEF) also use this approach in their programming. It is more relevant than other behaviour change frameworks as it is tailored to the population, has proven to effectively change behaviour under local conditions, saves resources due to adapted interventions, and provides an evidence base for further interventions and upscaling (Andrade et al. 2019). Between the

baseline and endline surveys, World Vision implemented their behaviour change programme. The RANAS BCTs are set to target the specific psychosocial factors that hold significance over the target behaviour. The BCTs that World Vision used are as follows:

Table 9 - Behaviour change techniques targeting different psychosocial factors

PSYCHOSOCIAL FACTORS	BEHAVIOUR CHANGE TECHNIQUES
INFORMATION BCTS – RISK FACTORS	
HEALTH KNOWLEDGE	BCT 1 Present facts
	BCT 2 Present scenarios
VULNERABILITY	BCT 3 Inform about and assess personal risk
SEVERITY	BCT 4 Arouse fear
PERSUASIVE BCTS – ATTITUDE FACTORS	
BELIEFS ABOUT COSTS AND BENEFITS	BCT 7 Prompt to talk to others
FEELINGS	BCT 8 Describe feelings about performing and about consequences of the behaviour
NORM BCTS – NORM FACTORS	
OTHERS' BEHAVIOUR	BCT 9 Inform about others' behaviour
PERSONAL IMPORTANCE	BCT 13 Provide a positive group identity
	BCT 14 Prompt identification as role model
INFRASTRUCTURAL, SKILL AND ABILITY BCTS – ABILITY FACTORS	
HOW-TO-DO KNOWLEDGE	BCT 15 Provide instruction
CONFIDENCE IN PERFORMANCE	BCT 17 Demonstrate and model behaviour
	BCT 20 Facilitate resources

STUDY POPULATION AND DESIGN

The Rohingya refugee population living in Bangladesh due to persecution from Myanmar are a patriarchal community. Their social structures – combined with the challenges of living in a refugee camp - impinge on menstruators' menstrual health on multiple levels: materials and ability for washing, changing, drying, and disposing of them, safety, stigmatisation, a supportive environment, and access to education, knowledge, healthcare, and overall health (Pandit et al. 2022). This paper does not intend to criticise or single-out this population but rather recognise that menstruation is stigmatised globally and that non-menstruators can affect menstrual health in any context, though its manifestations vary (Winkler et al., 2024). They provide a good example of a case where the social structures and deep-rooted beliefs about menstruation greatly affect the population's menstrual health. The study included 146 non-menstruators in a UNICEF-run camp within the wider Kutupalong refugee camp, Cox's Bazar, Bangladesh. We carried out a longitudinal study using a survey either side of a World Vision intervention at baseline (April 2023) and endline (March 2024). The participants were the same set of people at baseline and endline; it was a repeated measures before and after study with no control group. The World Vision data collection team conducted face-to-face surveys among all six blocks within the camp. As well as including people from each of the six blocks, World Vision chose the 146 participants to provide a range of ages, marital and parental status, general attitude and behaviours towards menstruation, arrival date in camp, and educational level.

SAMPLING

Since there are no published studies on quantitative evidence for changing menstrual attitudes and behaviours among non-menstruators, we undertook two statistical power calculations based on results from of a paper measuring multiple social norms and beliefs regarding gender based violence (GBV) before and after intervention (Glass et al. 2019). One was for beliefs based on a husband's right to use violence, the other regarded protecting family honour. We felt these studies were applicable as, like ours, they are concentrated on changing male behaviours and attitudes towards menstruators, which is influenced by gender roles, with an aim to improve gender equality. From the data, the following means and the standard deviations were calculated. Using a sample size calculator (Power and Sample Size, 2024), the researchers calculated the required number of participants based on a 2-sample, 1 sided power sample to Power 1- β : 0.80; Type I error rate: 5%; Sampling ratio: 1. The sample sizes were 205 and 53 respectively, the mean of which is 129. Thus, we used a sample size of 150 to provide a small error margin as some surveys may have errors. For the baseline survey only 149 out of the target sample of 150 people were available. For the endline survey 146 were available. They were not replaced with substitutes. Participants were randomly selected from resident lists including a proportionate number of people depending on the number of households within each sub-block.

Table 10 - Sample size calculation using two statistical power calculations

Belief	Baseline/endline	Mean	Standard Deviation	Sample size	Mean
Husband's right to use violence	Baseline	2.56	0.88	205	129
	Endline	2.78	0.91		
Protecting family honour	Baseline	2.53	0.73	53	
	Endline	2.90	0.80		

DATA COLLECTION METHODS AND TRAINING

Nine data collectors gathered quantitative data on a shared Excel spreadsheet using the same survey questions at baseline and endline. Prior to data collection, the lead author met with the World Vision research partners and data collection team to appraise survey questions, discuss the procedure, and communicate the goals and theoretical background of the survey. As a pilot, the lead author conducted the first 10 surveys with one World Vision research partner (an author of this paper) and one member of the data collection team to verify its applicability. From this, we removed some less-relevant questions to reduce participants' time. Data collectors had prior interview experience and rapport with the community. The participants had been briefed about the nature of the survey before participating. The research partners coordinated and monitored the survey procedure throughout the period of data collection.

QUESTIONNAIRES AND MEASURES

The structured, face-to-face survey questions and responses were written in English but conducted in Rohingya – a spoken language without a written form, which is closely related to the Bengali dialect of Chittagong with some accent and pronunciation differences – in which the data collectors are native. The

researchers designed the questionnaire using the psychosocial factors from the RANAS model, alongside contextual and behavioural questions based on literature on non-menstruator Rohingya living in Kutupalong camp. Some questions were closed on Likert scales. Those that were open were retrospectively coded into Likert-like scales. This gave participants more freedom to answer in a way they deemed suitable. As an example, non-menstruators gave responses to the question 'When someone menstruates what do you think of them?' ranging from 'no idea' to 'It's a natural issue for women and during this time family member should support them both mentally and physically'. We then created a scale that fitted the responses from negative, neutral to positive. The survey covered contextual factors, behaviours, health awareness and risk, attitudes, norms, confidence, and commitment. Contextual factors included area of residence within the camp, age, education level of self, father and mother, marital status, parental status, and arrival date in camp.

STATISTICAL ANALYSIS OF DATA

We performed statistical analyses of frequencies, correlations, ANOVAs (Analysis of Variance), and multiple linear regressions in Microsoft Excel 2016 using the 'Regression' and 'ANOVA: Single Factor' plug-ins. For the two regression analyses, the dependent variable – or outcome – was termed 'positive attitudes and supportive behaviours towards menstruation and menstruators'. It was defined by responses to the following three questions: What support do you offer when a family member is menstruating? How do you feel to support your family members during their menstruation? When people menstruate what do you think of them? Responses were put on a Likert scale from 1-5 and the mean was found. The regression analysis then compared this mean score as the dependent variable against (1) contextual factors and (2) psychosocial factors of the RANAS model as the predictors or independent variables. Multiple linear regression is a statistical technique used to analyse the relationship between two or more independent variables and a dependent variable. It determines which factors have the most significant impact on the outcome. Those factors with a correlation of 20% or above with positive menstrual attitudes and conducive behaviours were included in the analysis. See supplementary materials for the factors, which were excluded. Multicollinearity reduces the precision of estimate coefficients, which weakens the statistical power of a regression model. Therefore, because marital status and having children was highly correlated (89%), having children was excluded from the regression analysis.

To further explore which contextual factors are important to consider or alter, the researchers undertook a doer/non-doer analysis of the outcome behaviour following the RANAS approach. The researchers used ANOVA comparison of means to understand which response averages had a significant difference between those who did and did not do the behaviour. The researchers applied another ANOVA test on the baseline and endline results to determine statistically significant differences. Only responses with a p-value $\leq .05$ are shown in Figure 7, Figure 8, and Figure 9. The rest can be found in supplementary material at the end of the manuscript. The scales for each category were binary (Yes/No) apart from age. To make them cohesive, age has been put on a binary scale of 'over/ under the age of 25'. For Figure 8 and Figure 9 the scales were the same as for the multiple linear regression for RANAS psychosocial factors – yet they have all been put on the same scale from 'strongly disagree' to 'strongly agree' to make them visually comparable. The results

are in order of biggest negative to positive difference between doers and non-doers, and between endline and baseline.

ETHICS

Ethical approval was gained from the University of Leeds on the 16th March 2023 under reference code MEEC 22-019. Lead author access to Kutupalong Camp was granted by The Government of Bangladesh's Refugee Relief and Repatriation Commissioner on the 21st March 2023. The lead author provided an explanatory statement, consent, and confidentiality form to the World Vision data collection team. Since Rohingya is a spoken, rather than written language, the data collection team verbally translated it to participants upon recruitment and took verbal consent. There was always more than one data collector present. Recruitment occurred from April 17-30th 2023.

4.5 RESULTS

CHARACTERISTICS OF PARTICIPANTS

Below is the demographical data of study participants at baseline. Religion is excluded as a demographical category as all participants were Muslim. The majority of Rohingya arrived in Bangladesh in 2017 after a massive wave of violence broke out where they resided in Rakhine State, though their persecution started before this in the 1990s. Hence, we categorise the arrival to the camp as before, during and after the 2017 influx. They have been divided into doers and non-doers following the RANAS approach. Non-doers were those who answered negatively to at least one of the following three questions:

- What support do you offer when a family member is menstruating?
- How do you feel to support your family members during their menstruation?
- When people menstruate what do you think of them?

Table 11 - Demographics – baseline doers, non-doers and overall

CATEGORY	DOER	NON-DOER	OVERALL
NUMBER OF PARTICIPANTS			
	106 (71%)	43 (29%)	149 (100%)
BLOCK			
A	6 (6%)	19 (44%)	25 (17%)
B	18 (17%)	6 (14%)	24 (16%)
C	25 (24%)	2 (5%)	28 (19%)
D	18 (17%)	5 (12%)	24 (16%)
E	14 (13%)	8 (19%)	22 (15%)
F	24 (23%)	3 (7%)	27 (18%)
MEAN AGE (YEARS)			
	31	23	29
EDUCATION LEVEL OF RESPONDENT			
ILLITERATE	35 (33%)	15 (35%)	51 (34%)
PRIMARY	54 (51%)	14 (33%)	69 (46%)
SECONDARY	17 (16%)	14 (33%)	31 (21%)
EDUCATION LEVEL OF FATHER			

ILLITERATE	66 (62%)	29 (67%)	94 (63%)
PRIMARY	37 (35%)	11 (26%)	48 (32%)
SECONDARY	3 (3%)	3 (7%)	6 (4%)
EDUCATION LEVEL OF MOTHER			
ILLITERATE	83 (78%)	33 (77%)	116 (78%)
PRIMARY	22 (21%)	10 (23%)	33 (22%)
SECONDARY	1 (1%)	0 (0%)	1 (1%)
MARITAL STATUS			
MARRIED	86 (81%)	15 (35%)	101 (68%)
SINGLE	20 (19%)	28 (65%)	48 (32%)
CHILDREN			
YES	80 (75%)	14 (33%)	94 (63%)
NO	27 (25%)	29 (67%)	55 (37%)
ARRIVAL TO CAMP			
BEFORE 2017 INFLUX	24 (23%)	1 (2%)	25 (17%)
DURING/AFTER 2017 INFLUX	82 (77%)	42 (98%)	124 (83%)

CONTEXTUAL BEHAVIOURAL DETERMINANTS

To answer the first research question, the researchers identified which contextual factors influence positive menstrual attitudes and conducive behaviours through applying a multiple linear regression analysis using self-reported attitudes and behaviours as the outcome and contextual factors as predictors. All study participants from the baseline level were included in the analysis. This model explained 48.3% of the variance in the menstrual attitudes and behaviours. Four factors were significant predictors of having positive menstrual attitudes and conducive behaviours (see these factors highlighted in Table 12). They were: location within the camp (living in Block A [$\beta = -1.127$], living in Block F [$\beta = 1.062$]), being married ($\beta = 1.104$), already having learnt about menstruation from World Vision ($\beta = 0.552$), and having first learnt about menstruation from an Imam or the Quran ($\beta = -1.094$). This means that an increase in positive attitudes and conducive behaviours can be expected if one lives in Block F, is married, or has already learnt about menstruation from World Vision, if all other factors remain the same. And that a decrease in positive attitudes and behaviours can be expected if one lives in Block A, or first learnt about menstruation from the Quran, if all other factors remain the same. The Beta value indicates the percentage change to be expected in the desired behaviour with every 1-point increase of the independent variable. Here we show the percentage increase from respondents who gave a score of zero compared with the top number of the scale. An increase in positive attitudes and conducive behaviours of 106% can be expected for those living in Block F compared to those who do not. These attitudes and behaviours can also be expected to increase by 110% in those who are married, and by 55% in those who have already learnt about menstruation from World Vision. Those living in Block A are expected to have a decrease in positive attitudes and conducive behaviours of 113%, along with a decrease of 109% for those who first learnt about menstruation from an Imam or the Quran. Looking at the contextual factors presents ideas to either target or be aware of within behaviour change interventions. Those factors, which cannot be changed, for example marital status, are more to inform why certain groups may hold certain opinions or perform certain actions. It may indicate areas where different groups need to be targeted in different ways.

Table 12 - Multiple linear regression – contextual factors - Adjusted R^2 = 0.483 N=149, asterisk = p<0.05. All factors are on a Yes/No =1/0 scale apart from age which is on an interval scale*

CONTEXTUAL FACTOR	M(SD)	B	P-VALUE
LIVES IN BLOCK A*	0.17 (0.37)	-1.127	0.0001
LIVES IN BLOCK C	0.18 (0.39)	0.112	0.8001
LIVES IN BLOCK F*	0.18 (0.39)	1.062	0.0003
AGE	29 (9)	-0.001	0.9293
MARITAL STATUS*	0.68 (0.47)	1.104	0.0001
ARRIVED DURING/AFTER 2017 INFLUX	0.83 (0.38)	-1.679	0.1337
ARRIVED BEFORE 2017 INFLUX	0.17 (0.37)	-1.445	0.2198
ALREADY LEARNT ABOUT MENSTRUATION FROM WV*	0.49 (0.50)	0.552	0.0093
LEARNT ABOUT MENSTRUATION AGE 5-10	0.05 (0.23)	-0.313	0.4744
LEARNT ABOUT MENSTRUATION AGE 15-20	0.40 (0.49)	-0.305	0.1537
LEARNT ABOUT MENSTRUATION AGE 21-30	0.21 (0.41)	-0.024	0.9398
FIRST LEARNT ABOUT MENSTRUATION FROM FAMILY	0.39 (0.49)	-0.408	0.1098
FIRST LEARNT ABOUT MENSTRUATION FROM IMAM*	0.04 (0.20)	-1.094	0.0200
FIRST LEARNT ABOUT MENSTRUATION FROM NGO	0.07 (0.25)	-0.252	0.5479

PSYCHOSOCIAL BEHAVIOURAL DETERMINANTS

The researchers used the same method for the psychosocial factors. The model explained 59.5% of the variance in the menstrual attitudes and behaviours. Four factors were significant predictors of having positive menstrual attitudes and conducive behaviours (see the factors highlighted in Table 13). They were: discussing menstruation with no one (β = -0.502), feeling that menstruating family members would feel positive if they supported them during menstruation (β= 0.547), considering their role to be important (β= 0.447), and feeling committed to supporting their family with their menstrual health (β= 0.370). This means that an increase in positive attitudes and conducive behaviours can be expected if any of these four significant factors increases or decreases while all other factors remain the same. So a decrease in positive attitudes and conducive behaviours of 50% can be expected in respondents who do not discuss menstruation with anyone. Positive attitudes and conducive behaviours are expected to increase by 110% in respondents who believe their menstruating family members will feel happy that they support them during menstruation compared to those that do not. An increase of 90% can be expected in respondents who perceive their role in supporting family members with their menstrual health is very important, and by 74% in respondents who feel strongly committed to supporting their family with their menstrual health. Accordingly, if practitioners target these significant psychosocial factors with specific behaviour change interventions, it can be expected that people are more likely to acquire more positive attitudes and conducive behaviours towards menstruation and menstruating family members.

Table 13 - Multiple linear regression – RANAS psychosocial factors - Adjusted R^2 = 0.595, N=149, asterisk = p ≤0.05*

RANAS COMPONENT	FACTOR GROUP	BEHAVIOURAL FACTOR	SCALE	M(SD)	B	P-VALUE
N/A	Behaviours	Discusses menstruation with family	Yes – 1	0.54 (0.50)	0.128	0.5488

		Discusses menstruation with no-one*	No – 0	0.22 (0.42)	-0.502	0.0472
RISK	Knowledge	What is menstruation?	Accurate - 2	1.09 (0.82)	0.135	0.2488
		What is menstrual health and MHM?	Moderate - 1	1.19 (0.90)	0.012	0.9201
		What is the result of poor MHM?	Inaccurate – 0	1.26 (0.80)	0.042	0.7789
	Vulnerability	Is it common is it for women to gain infections due to poor MHM?	Yes – 2 Sometimes – 1 No – 0	1.27 (0.78)	0.099	0.3896
	Severity	How serious is it if women experience GBV or peeping when using shower or toilet facilities?	Very (with explanation or proposed action) – 3	1.82 (1.03)	0.034	0.7277
		How serious is it if women gain infections due to poor MHM?	Very – 2 A bit/serious but	1.89 (1.12)	0.022	0.8216
		How serious is it if women are shamed or teased about their menstruation?	should be kept quiet – 1 No idea – 0	1.74 (1.40)	0.065	0.4072
ATTITUDES	Feelings	How do you think your menstruator family members would feel if you supported them with MHM?*	Good – 2 Neutral – 1 Do not support/no idea – 0	1.76 (0.64)	0.547	0.0001
NORMS	Other's behaviour	Do other non-menstruator community members support their family during their menstruation?	Yes – 2 Sometimes – 1 No – 0	1.43 (0.80)	0.125	0.3226
	Other's disapproval	Do others disapprove if you do not support your family members with their menstruation?	Yes – 2 No one discusses – 1 No – 0	0.73 (0.77)	-0.168	0.1203
	Importance of role	How important do you feel your role is in supporting family members with their menstrual health?*	Very – 2 Moderate -1 Not at all – 0	1.55 (0.83)	0.447	0.0005
		How important do you feel your role is in reducing taboo and stigma surrounding menstruation in the community?		1.06 (0.99)	0.127	0.2745
ABILITY	Confidence	How confident do you feel in your ability to support your family members during menstruation?	Very – 1 Not at all – 0	0.70 (0.46)	0.235	0.3274
SELF-REGULATION	Commitment	How committed are you to continuing to support your family's menstrual health?*	Strongly – 2 I will try – 1 Not at all – 0	1.46 (0.60)	0.370	0.0270

DOER/NON-DOER ANOVA ANALYSIS CONTEXTUAL FACTORS

Figure 7 shows what percentage of people answered 'yes' to the categories within the doer and non-doer groups. The results are in order of biggest positive to negative difference between doers and non-doers. Non-doers were more likely to live in block A and doers in block C and F, coinciding with the regression analysis. They were also more likely to have arrived during the 2017 influx, learnt about menstruation age 5-20, and first learnt about menstruation from friends or the Imam/Quran. Doers were more likely to be age 25 or older, married, have children, have previously learned about menstruation from World Vision and to agree to take part in World Vision's next menstrual health campaign. Doers were more likely to have arrived before the 2017 influx, have first learned about menstruation age 21-30, and first learned from family and NGOs.

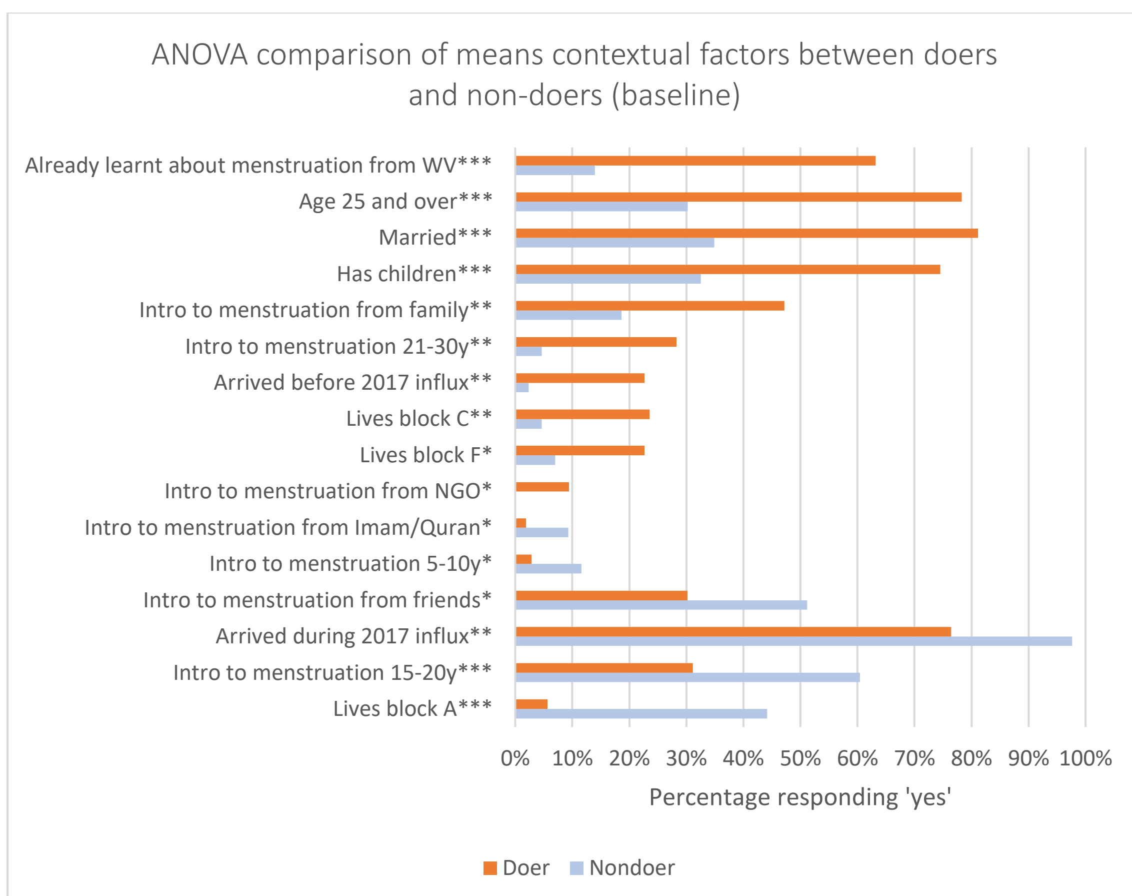


*Figure 7 - ANOVA comparison of means for contextual factors for doers and non-doers - *p≤.05, **p≤.01, ***p≤.001. n = 149*

DOER/NON-DOER ANOVA ANALYSIS PSYCHOSOCIAL FACTORS

The researchers undertook the same method for the psychosocial factors. Again the results are in order of biggest positive to negative difference between doers and non-doers. Doers were more likely to believe that it is a serious matter for menstruators not to participate in normal daily activities, experience GBV or peeping when using WaSH facilities, or gain infections due to poor MHM. Doers were also more likely to believe it was acceptable for menstruators to cook food during menstruation. Doers reported feeling that their role in supporting family with their menstrual health and reducing menstrual stigma in the community was more important than non-doers. Doers were more likely to discuss menstruation with their

family, whereas non-doers were more likely to discuss menstruation with their (non-menstruator) friends or no one at all. As expected, doers gave more accurate descriptions of menstruation, menstrual health, MHM, and the results of poor MHM. Doers also reported feeling more confident and committed to supporting their menstruating family. In terms of perceptions of the actions of other community members, doers believed that other community members also support their family during menstruation. They were also more likely to report that their family members would feel positively if they supported them with their menstrual health. Surprisingly, non-doers were more likely to report that others would disapprove if they did not support their family.

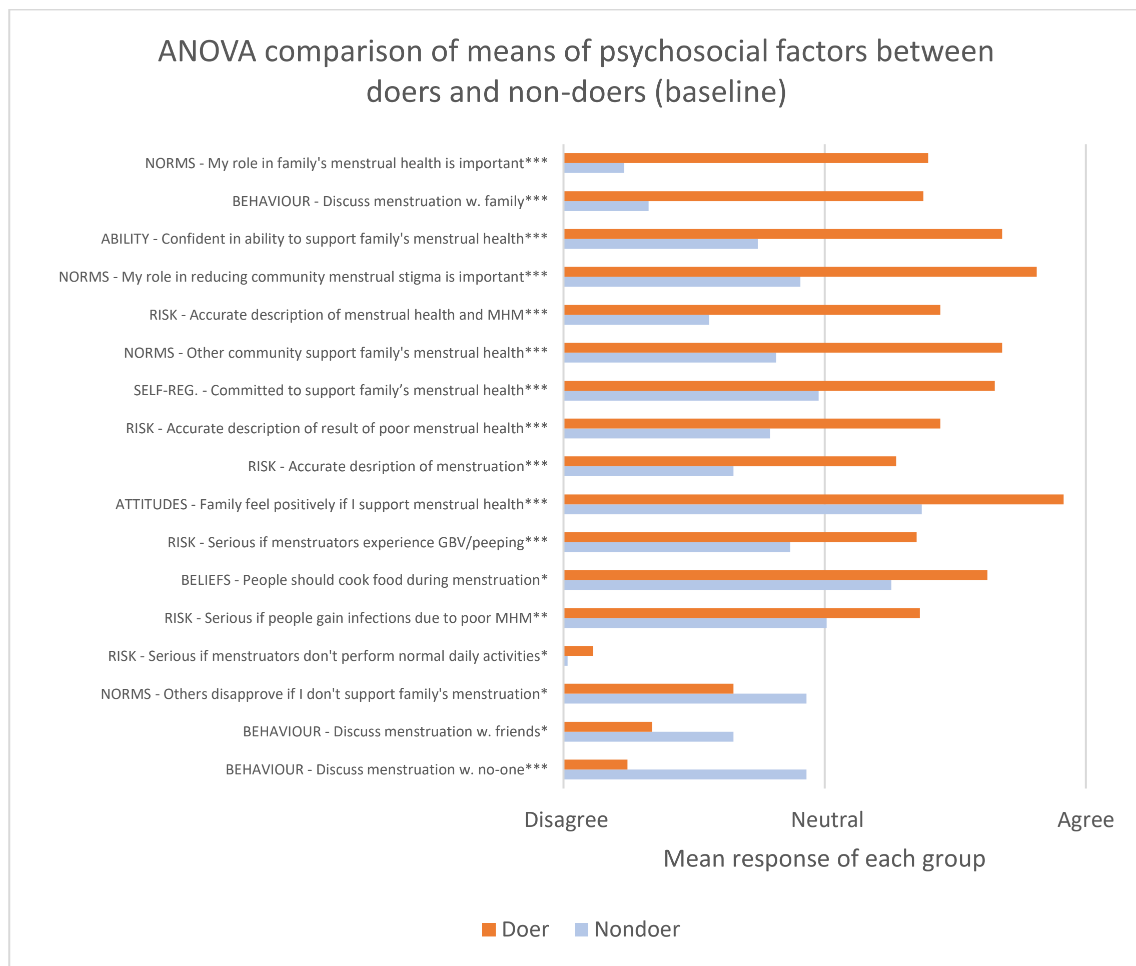


*Figure 8 - ANOVA comparison of means – doer and non-doer - *p≤.05, **p≤.01, ***p≤.001. n = 149*

BASELINE/ENDLINE ANOVA ANALYSIS

To see if non-menstruator Rohingya attitudes and behaviours towards menstruation changed after World Vision's intervention, the researchers undertook another ANOVA comparison of means for the overall survey results at baseline and endline. As shown, 22 out of 28 factors changed significantly from baseline to endline. In terms of the three questions that defined the dependent variable – thinking positively about menstruation, supporting family during menstruation, and feeling good to support with menstruation – all improved significantly. The amount of people who discussed menstruation with no one reduced whereas the amount who discuss menstruation with NGOs increased. Perceptions that it is effortful and time

consuming to support family with menstruation reduced as did beliefs that it was common for menstruators to be shamed about menstruation and gain infections due to poor MHM. Perceptions that family would feel positively if they were to support them with menstruation and that other community members support their family with menstruation also increased. Beliefs that menstruators should cook food, leave the house, and attend religious ceremonies when menstruating also increased at endline level, along with the reporting of menstruators experiencing GBV in WaSH facilities and not partaking in normal daily activities as a serious matter. Participants at endline gave more accurate descriptions of menstruation, menstrual health, MHM, and the results of poor menstrual health. The endline survey also showed an increase in participants feeling their role in supporting family members and reducing menstrual stigma in the community is important. Confidence and commitment to this also increased.

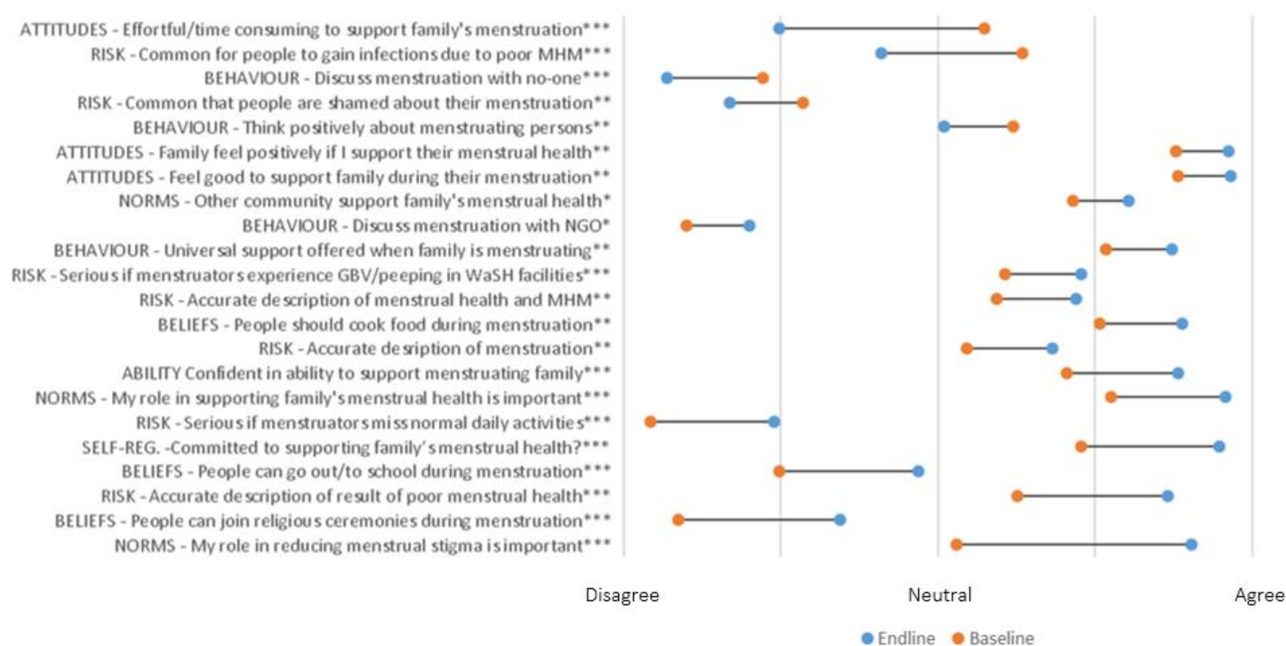


*Figure 9 - ANOVA comparison of means – baseline and endline - *p≤.05, **p≤.01, ***p≤.001. n = 149 at baseline, n= 145 at endline*

4.6 DISCUSSION

It is imperative to engage non-menstruators in menstrual health programmes if there are to be sustained improvements, however practitioners are missing guidance on what factors to address during behaviour change campaigns. We found the influential psychosocial factors to be who participants discussed menstruation with, beliefs about menstruation, the perceived severity of menstrual health issues, family reaction, menstrual knowledge, commitment and confidence. Influential contextual factors included house location, marital status, having children, age, arrival year in camp, previous menstrual education from World Vision, and how and at what age they were introduced to menstruation. ANOVA comparisons showed positive changes in 22 variables from baseline to endline following the intervention. Participants increasingly thought positively about menstruation, supported family members, and felt good about providing support. Discussions with NGO workers increased, while views on upholding customary menstrual norms decreased. Participants at endline perceived less effort in supporting family, noted a decrease in perceived commonality of menstrual health issues, and gave more accurate descriptions of menstrual health. They felt their role in supporting family and reducing menstrual stigma was important, with increased confidence and commitment to these behaviours.

This section unpacks the regression analyses and doer/non-doer comparison of means to understand how the significant psychosocial and contextual factors influence the desired behaviour. It also examines the psychosocial factors that have changed following World Vision's programme as revealed by the baseline/endline analysis. The main factors we were interested in seeing change were the ones that defined doers and the dependent variable: Offering universal support when their family members are menstruating, Feeling positive in supporting family members during their menstruation, and Thinking positively about menstruating persons. All of these showed a significant increase from baseline to endline following the intervention.

CONTEXT

Expectedly, there was a relationship between marital status and the desired behaviour. Those who were married were 110% more likely to have positive attitudes and behaviours towards menstruation. Not only does being married to someone who menstruates give non-menstruators the opportunity to practise the desired behaviour, studies on the way non-menstruators either come to learn or become more sympathetic towards menstruation is if/when they have an intimate relationship with someone who menstruates (Allen et al. 2011; Mahon et al. 2015). This US study showed how non-menstruators reported feeling they had arrived at a place of maturation in their attitudes towards menstruation owed to this empathic, familiar relationship (Allen et al., 2011). Doers were also more likely to have children and be over the age of 25, which coincides with them being married.

In terms of location, those living in block A were much more likely to hold negative views and those living in block C and F more likely to have positive views than in other blocks. This shows that even across the same demographics and programme interventions specific, localised issues can make a measureable difference. When asked why this might be, World Vision staff reasoned that this was likely due to the higher levels of conflict experienced in Block A. When safety and security needs are compromised levels of

participation in programmes such as these diminish (UNHCR, 2020). It is reassuring that those who had already been engaged by World Vision regarding menstruation were more likely to have the desired attitudes and behaviours showing that their previous efforts before the study were having some effect.

Doers were more likely to have arrived before the 2017 influx and non-doers during, meaning doers may have had more opportunity to be exposed to preceding menstrual health programmes. Additionally, repeated exposure to behaviour change programmes is more likely to change behaviour than single dose programmes. We can often think of behaviour as single time prompts, however, we know that repeated exposure to a message can be helpful to initiate habit formation or other behavioural outcomes (Nigg & Long 2012). People who have been in the camps for ~8 years may have heard repeated messages, engaged in participatory approaches, had more exposure to both WV and other programmes. Another point to add here is that behaviour change programmes are not necessarily sustainable in general and any progress we may have seen in the results is not necessarily determined to last. Non-doers were more likely to have learnt about menstruation age 5-20 and from friends or an Imam/Quran, whereas doers were more likely to have first learned about menstruation age 21-30 and from family and NGOs (Allen et al. 2011). This may be that non-doers received uninformed or negative information from friends or an Imam when they were younger, whereas doers may have received more positive or evidence-based explanations from their spouses or World Vision, as is explored in the following paragraphs (Mason et al. 2017).

WHO NON-MENSTRUATORS DISCUSS MENSTRUATION WITH

Both the regression analysis and the doer/non-doer comparison of means showed a relationship between not discussing menstruation with anyone and not demonstrating the desired behaviour. If someone doesn't discuss menstruation with anyone they are unlikely to be able to understand what menstruation is or form sympathetic opinions towards those who experience it. Equally, by harbouring negative or avoidant views towards menstruation, the person may continue not to engage in the subject with anyone, sustaining the cycle. Non-menstruators are frequently either left out of the conversation or choose not to participate in it, perpetuating the notion that menstruation is purely a 'women's issue' as opposed to a human rights issue (Bhattacharjee 2020; Babbar et al. 2022). In this way, the problem remains unaddressed.

Non-doers were also much more likely to speak to non-menstruator friends about menstruation. Although this may seem positive, research shows that when the information non-menstruators receive is from other non-menstruator friends this can become misconstrued with the sharing of false or misunderstood knowledge (Erchull 2020). Conversely, there was a significant difference in doers being more likely to speak to family about menstruation - a desired outcome of the programme. Studies show that non-menstruators start to learn more about menstruation and change their opinions towards it once they start having conversations with their wives or menstruating family members (Shah et al. 2023). The amount of people reporting that they speak to NGOs about menstruation increased significantly from baseline to endline, along with the people speaking to no-one decreasing, which is tautological since the intervention involved them talking to NGOs about menstruation.

BELIEFS

None of the beliefs studied showed a significant relationship with the desired attitudes and behaviours in the regression analysis, however it was found that doers were more likely to believe that menstruators should still cook food whilst they're menstruating. From baseline to endline the number of people believing that menstruators should go out, to school, and to religious ceremonies during menstruation increased. Trying to change a community's customary practises can be paternalistic, elitist and a form of neo-colonialism. There is a balance to be struck between addressing practises that are harmful to a persons' health, for example Female Genital Mutilation and those that are not, for example not touching cattle whilst menstruating. Though some menstrual practises among the Rohingya may affect menstruator health and wellness, for instance not leaving the house whilst menstruating, World Vision has designed their programme in a way for the community to decide how they wish to shape themselves, which may be to adapt around existing practises rather than change culture.

RISK

Doers were much more likely to report thinking it was of serious concern if menstruators gain infections due to poor MHM, experience GBV or peeping when using WaSH facilities, or do not perform normal daily activities due to customary practices. Like many other studies showing that perceptions of disease risk influences behaviour, participants having awareness of the negative effects of poor MHM and grading this as serious may be a motivator for wanting to assist family members to ensure they have the right materials, facilities, and space to manage their periods properly (Aerts et al. 2020). Expectedly, doers were also more likely to be able to give an accurate description of menstruation, menstrual health and MHM, and the results of poor menstrual health. Studies have shown that non-menstruators who receive comprehensive education about menstrual health are more likely to exhibit supportive attitudes and behaviours towards menstruators (Eyring et al. 2023; Hennegan and Montgomery 2016; Shah et al. 2023). These educational programmes aim to dispel myths and taboos associated with menstruation, thereby fostering a more supportive environment. The ability to give an accurate description of each of these elements of menstruation increased from baseline to endline after World Vision's intervention.

Regarding GBV or peeping as a serious matter may indicate a level of awareness and empathy towards the negative, gendered experiences menstruators endure, which may extend to other aspects of menstrual health. To reiterate the official definition of menstrual health, this goes beyond access to materials and facilities to encompass being able to manage ones period in a supportive environment that is safe, private, and comfortable. By having an awareness of the GBV and peeping risk menstruators face when accessing WaSH facilities, they may also realise the impact this has on being able to manage ones period (Sahoo et al. 2015; Caruso et al. 2017; Sommer et al. 2015). Agreeing that it's serious if menstruators experience GBV or peeping or if they're restricted from normal daily activities increased from baseline to endline, however perception of the severity of them gaining infections due to poor MHM did not. Two factors which did not show any significance in the regression or ANOVA analyses but which did have a significant change from baseline to endline was perceiving that it's common for menstruators to (a) gain infections due to poor MHM and (b) be shamed about their menstruation. This may show that the programme has enhanced the perception of how at risk menstruators are to gaining infections, especially in the environment of a refugee

camp, and the regularity to which they face menstrual discrimination (Cook & Bellis 2001). It could even be supposed that non-menstruators were aware of menstrual discrimination beforehand but did not think of it as an issue. Now being more acutely aware of it, they may be more likely to see its prevalence.

ATTITUDES

Both the regression analysis and ANOVA test between doers and non-doers showed the belief that their family would feel positively if they support them during menstruation had a significant influence on having positive attitudes and behaviours. The Theory of Planned Behaviour coined by Icek Ajzen posits that if individuals perceive that changing their behaviour will have positive consequences for their family and friends, they are more likely to have favourable attitudes toward adopting the behaviour (1987). This factor increased from baseline to endline. A factor that showed a significant decrease from baseline to endline, which did not show any significance in the regression and ANOVA analyses, was reporting that supporting family members was effortful and time-consuming. Perhaps by having a greater understanding of what is required of them and putting this into practise, doers were able to see that supporting their family during menstruation is less taxing than what it might be perceived to be by those not carrying out the behaviours. This may also be a factor preventing them from offering such support.

NORMS

Another factor, which showed significance in both analyses, was the individual feeling that their role in supporting their family's menstrual health was important. Again, relating to the Theory of Planned Behaviour, Subjective Norms refer to an individual's perception of social pressure or expectations from others. If an individual perceives their role within their family or community as important and that others expect or support them to engage in certain behaviours, they are more likely to feel motivated to comply with those norms and adopt the behaviour (Azjen, 1991). Though the main aim of the programme was to encourage supportive behaviours within the home, the doer/non-doer analysis also showed that doers felt their role in reducing stigma among the community was important. Both of these factors increased from baseline to endline.

Another factor that also increased was doers perceiving that other non-menstruators in the community were supporting their family during menstruation, which may influence their perception of the social expectations to adopt the behaviour. The presence of non-menstruator role models who actively support menstrual health initiatives can significantly influence other non-menstruators. When community leaders or public figures advocate for menstrual health, it helps normalize the conversation and encourages other non-menstruators to adopt supportive behaviours (Hennegan & Montgomery 2016). For example, this research has shown that religion and Imams are highly influential in this community: when the Imam has a negative view on menstruation, this is echoed in the community and vice versa when the Imam holds positive and supportive views. This research does not intend to criticise Islam in perpetuating negative attitudes but to recognise that religious texts of any kind can be interpreted in such a way among different groups and used to influence the population (Mpofu 2018). In the same way, religion and religious figures

can also influence very positive attitudes towards menstruation and menstruators, as was found in Iroegbu et al.'s (2018) paper on faith-based approaches to break silence and taboos on menstruation.

Non-doers reported feeling that others would disapprove if they did not support their family during menstruation. This did not show any significant change between baseline and endline. The motivation to comply with others' approval or disapproval is an assessment of how important it is to have the approval from important others (Peters et al., 2010). This may show that others' disapproval is not an important psychosocial factor to influence this behaviour in this community.

ABILITY

Doers reported feeling more confident in their ability to support their family during menstruation. Perceived Behavioural Control in the Theory of Planned Behaviour emphasizes the role of self-efficacy in shaping behaviour change. If an individual has high self-efficacy, they are more likely to believe they have the skills, knowledge and resources necessary to carry out the behaviour well (Azjen, 1991). Furthermore, they are more likely to believe their efforts will lead to the desired outcomes. This in turn means they are more likely to set challenging goals for themselves and persist even in the face of obstacles or setbacks. Related to the perception of their own role in the community and others' behaviour, observing others who are similar to oneself successfully performing a behaviour can enhance self-efficacy by providing social proof (Bandura 1994). Confidence in the behaviour of supporting family members with their menstrual health increased from baseline to endline.

SELF-REGULATION

Feeling committed to continuing to support their family's menstrual health showed a significant relationship with the desired behaviour. This relates to the 'self-regulation' aspect of RANAS, which takes into consideration how although behaviour change programmes may seem to be effective initially, over time and without regular prompts, the new behaviour may start to dwindle. There is little research into what sustains non-menstruator engagement in gender-related programmes. In terms of studies on non-menstruator engagement in GBV prevention work there is some evidence to suggest that non-menstruator commitment links to 'tangible feelings of making a difference... opportunities for discussion and reflection about social justice and GBV, and a sense of membership in a supportive community in which there is permission to do "masculinity" differently' (Tolman et al., 2019). Sustaining continued non-menstruator participation is one of the primary global challenges to such programmes (Casey et al., 2013). Commitment to the behaviour increased from baseline to endline. However, World Vision was not implementing any BCTs that addressed this factor so we cannot say the positive changes we have seen in this study will withstand over time.

NULL FINDINGS

Contextual factors which showed no significant relationship with the outcome variable in the regression analysis were age, arrival period in the camp, age they first learnt about menstruation, and if they first learnt about it from family or an NGO. It is surprising that age didn't have an influence on the outcome

variable as marital status and having children did, which typically happen later in life. However, in this community it is common for people to get married and start having families from age 18. Additionally, it could be assumed that younger non-menstruators would have more positive attitudes and behaviours after being exposed it at school, whereas older non-menstruators may have positive attitudes and behaviours after being married for a while and going through the process of having children. This may have meant the regression analysis didn't show age as a significant factor as it is a bad model for picking up non-linear trends. The RANAS psychosocial factors, which showed no significant relationship with the outcome variable in the regression analysis, were whether they discuss menstruation with their family, knowledge about MHM, perceiving gaining infections due to poor MHM as common, perceiving poor menstrual health as something serious, other non-menstruators' behaviours or disapproval, perception of the importance of their role within the community, and confidence in their ability to support their family with menstrual health. The fact that knowledge about MHM didn't have a significant impact on the outcome variable shows that education about a phenomenon is not sufficient to change behaviours (McCluskey & Lovarini 2005). It's important to understand which factors didn't have a significant influence as they can be excluded from future. behaviour change campaigns.

NEXT STEPS

What can be seen in all of these results is an indication of which factors have an influence on having positive attitudes and behaviours towards menstruation. What it lacks is an exploration of how and why. Additionally, the RANAS approach does not provide guidance on how to consider or address contextual factors or allow for an exploration of the null findings. We suggest that what is required next is a Realist Evaluation using qualitative interviews with the participants as it would allow us to unpack the mechanisms generating these changes for each significant factor found in this study (Pawson & Tilly 2004).

4.7 LIMITATIONS AND POSITIONALITY

Working between languages always presents opportunity for meaning to get lost in translation. There may have been instances where the data collectors and/or participants inferred a different meaning from the survey questions than what was meant by the survey creators. Additionally, Likert scales may not be well understood or naturally adopted as a means of measurement. To get around this, the researchers often created a scale retrospectively based on participant responses when the original scales were not followed, which could introduce bias and misclassification.

Due to time restrictions in access to the camp, the lead author was only able to conduct the first 10 surveys alongside the data collectors. This meant she was not available to detect when the survey question may have been misunderstood or to answer any clarifying questions from data collector or participant. The sample size of 149 participants is not generalizable to the one million Rohingya living in Bangladesh. Difficulties with access to the camp, pressing priorities for staff and participants, other programme deadlines, capacity of staff, and emergencies such as camp fires and floods impacted progress.

Other limitations include responder bias and social desirability bias wherein respondents answer questions in a way they think will be viewed favourably by others. There is also limited temporal separation between

baseline and endline for meaningful or sustainable change to have occurred. There is at present a lack of of triangulation with qualitative findings (which will be remedied in our next paper which uses realist evaluation). There is a misclassification or overstated associations by using regression coefficients generated on a Likert scale. Three people left the camp between baseline and endline. This may have affected the data as those who had moved on from the camp may have had a higher economic status for example making it easier for them to leave.

Positionality statements have been criticised as being a form of neo-colonialism wherein White and/or Western researchers are either still asserting dominance through the statement of assumed hierarchies or giving lip-service to recognising and undoing bias without being truly reflexive (Gani & Khan 2024). Nonetheless, we include one in order to provide more clarity on our position for the reader. The lead author is White-British, Middle-Class, and non-religious. She recognises that much of her privilege to be funded and able to conduct research in the international sphere stems from the colonial legacies of the British Empire. She understands that behaviour change programmes can be neo-colonial and that she is limited when comprehending the nuances of the religious and cultural characteristics of the population studied in this paper. The three research partners from UNICEF and World Vision who are authors to this paper are Bangladeshi and have been working closely with the Rohingya population since their arrival to Cox's Bazar in 2017. Though possessing many cultural, religious and linguistic similarities to the Rohingya, which has advised the research, they are still outsiders to this population so will possess their own misunderstandings and biases.

4.8 CONCLUSION

This paper has used a case study in Kutupalong camp with Rohingya refugees to identify psychosocial and contextual factors that are determinants of positive attitudes and behaviours towards menstruation and menstruators among those that do not menstruate. The study offered an example of a strongly patriarchal population living within the challenging environment of a refugee camp. Nonetheless, the programme saw changes in perceptions of menstruation and supportive behaviours among the population. Whether these changes will be sustained is another matter.

This paper suggests which contextual and psychosocial factors are likely the most beneficial to target in a behaviour change campaign to improve menstrual attitudes and behaviours within this context. Through this, many varied barriers to menstrual health that menstruators face in this setting may be reduced and a more supportive environment created. Accordingly, overall health can be improved, dignity protected, and equity between those who do and do not menstruate enhanced.

The same research methods used in this paper can be used to discover factors to be targeted in other populations and contexts. Though the RANAS approach used in this paper provides important insights on the psychosocial factors that influence behaviours towards menstruation, what it lacks is an exploration of how to address contextual factors. Being largely based on quantitative data, it also does not offer a method for unpacking the generative causes for these factors to bring about change. Such a method would be Realist Evaluation, which utilises theorised qualitative interviews with programme stakeholders and participants.

4.9 SUPPLEMENTARY MATERIAL

Factors with a correlation of <20% excluded from contextual regression analysis

a) Lives in Block B, D or E
b) Educational Level of self or mother or father
c) Arrived after 2017 influx
d) Learnt about menstruation age 10-15 or 30+
e) First learnt about menstruation from friends or institution/teacher/book or unsure
f) Learnt more about menstruation from friends or institution/teacher/book or Imam/Quran or NGO or unsure

Factors with a correlation of <20% excluded from psychosocial regression analysis

a) Thinks girls/women should go out/to school or join religious ceremonies or cook food during menstruation
b) Discusses menstruation with friends or NGO or Imam/teacher
c) Acceptable for a non-menstruator to use a 'female' toilet or shower block
d) Common for women to experience GBV or peeping when using WaSH facilities or are shamed or teased about their menstruation or don't participate in normal daily activities as per customary practise
e) Serious if women don't participate in normal daily activities as per customary practise
f) Expensive to buy menstrual materials for family members
g) Very effortful and time consuming to support family members with menstruation

4.10 REFERENCES

Aerts C, Revilla M, Duval L, Paaijmans K, Chandrabose J, et al. 2020. Understanding the role of disease knowledge and risk perception in shaping preventive behavior for selected vector-borne diseases in Guyana. PLOS Neglected Tropical Diseases **14**(4): e0008149

Ajzen I. 1991. The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*. **50**(2), pp.179–211.

Ajzen, I. 1987. Attitudes, Traits, and Actions: Dispositional Prediction of Behavior in Personality and Social Psychology. Editor(s): Leonard Berkowitz, Advances in Experimental Social Psychology. Academic Press. **20**, pp.1-63.

Allen, K. R., Kaestle, C. E., & Goldberg, A. E. 2011. More Than Just a Punctuation Mark: How Boys and Young Men Learn About Menstruation. *Journal of Family Issues*. **32**(2), pp.129-156. Available from: https://doi.org/10.1177/0192513X10371609

Andrade., L. O'Malley, K., Hynds, P. O'Neill, E. O'Dwyer, J. 2019. Assessment of two behavioural models (HBM and RANAS) for predicting health behaviours in response to environmental threats: Surface water flooding as a source of groundwater contamination and subsequent waterborne infection in the Republic of Ireland. Science of The Total Environment. 685, pp. 1019-1029.

Babbar K. Martin J. Ruiz J. Ahmad Parray A. Sommer M. 2022. Menstrual health is a public health and human rights issue. *The Lancet.* 7(1), pp.10-11.

Bandura, A. 1994. Self-efficacy. In V. S. Ramachaudran (Ed.), Encyclopedia of human behavior (Vol. 4, pp. 71-81). New York: Academic Press. (Reprinted in H.Friedman [Ed.], Encyclopedia of mental health. San Diego: Academic Press, 1998).

Bhattacharjee, M. 2020. Menstruation in Emergencies: Developing a Period-Friendly Emergency Response in The Palgrave Handbook of Critical Menstruation Studies. Available from: https://doi.org/10.1007/978-981-15-0614-7

Caruso B.A, Clasen T., Yount K.M., Cooper H.L.F., Hadley C., Haardörfer R. 2017. Assessing Women's Negative Sanitation Experiences and Concerns: The Development of a Novel Sanitation Insecurity Measure. Int J Environ Res Public Health. 14(7), p.755.

Casey E.A., Carlson J., Fraguela-Rios C., Kimball E., Neugut T.B., Tolman R.M., Edleson J.L. 2013. Context, Challenges, and Tensions in Global Efforts to Engage Men in the Prevention of Violence against Women: An Ecological Analysis. *Men Masc*. **16**(2), pp.228-251. Available from: doi: 10.1177/1097184X12472336.

Cook, P.A., Bellis, M.A. 2001. Knowing the risk: relationships between risk behaviour and health knowledge. Public Health. 115(1), pp. 54-61.

Day, I. 2024. Menstruation, Human Rights and the Patriarchy: How International Human Rights Law Puts Menstruating People at Risk. *Harvard Human Rights Journal*. **37**.

Elrha. 2024. Menstrual Hygiene Management: What have we learned and how far have we come? [Online]. Accessed 24 July 2025. Available from: https://www.elrha.org/news-blogs/menstrual-hygiene-management-what-have-we-learned-and-how-far-have-we-come

Erchull, M. 2020. “You Will Find Out When the Time Is Right”: Boys, Men, and Menstruation in The Palgrave Handbook of Critical Menstruation Studies. Available from: https://doi.org/10.1007/978-981-15-0614-7

Eyring, J.B., Crandall, A. & Magnusson, B.M. 2023. A Modified Menstrual Attitudes Scale: Heteronormative Attitudes, Sexism, and Attitudes Toward Menstruation in Male and Female Adults. *Arch Sex Behav*. **52**, pp.1535–1547 Available from: https://doi.org/10.1007/s10508-023-02565-y

Gani, J.K., Khan, R.M., 2024. Positionality statements as a function of Coloniality: Interrogating reflexive methodologies. *International Studies Quarterly.* **68**(2).

Glass N, Perrin N, Marsh M, Clough A, Desgroppes A, Kaburu F, Ross B, Read-Hamilton S. 2019. Effectiveness of the Communities Care programme on change in social norms associated with gender-based violence (GBV) with residents in intervention compared with control districts in Mogadishu, Somalia. *BMJ Open*. **9**(3). Available from: doi: 10.1136/bmjopen-2018-023819.

Hennegan J., Montgomery P. 2016. Do Menstrual Hygiene Management Interventions Improve Education and Psychosocial Outcomes for Women and Girls in Low and Middle Income Countries? A Systematic Review. *PLoS ONE*. **11**(2). Available from: https://doi.org/10.1371/journal.pone.0146985

Hopewell S., Chan A.W., Collins .G.S., Hróbjartsson A., Moher D., Schulz K.F. et al. 2025. CONSORT 2025 Statement: updated guideline for reporting randomised trials. BMJ. 388:e081123

Iroegbu, D.I. Adamu, V.E., Ekhator, J., Ojike, A.N., Oyama L.E., Eze C.C. 2018. Faith-based approach to improve menstrual hygiene management (MHM): challenges and successes. TRANSFORMATION TOWARDS SUSTAINABLE AND RESILIENT WASH SERVICES, 41st WEDC International Conference, Egerton University, Nakuru, Kenya, 2018.

Mahon, T., Tripathy, A. Singh, N. 2015. “Putting the Men into Menstruation: The Role of Men and Boys in Community Menstrual Hygiene Management.” Waterlines. 34(1), pp. 7–14.

Mason, L., Sivakami, M., Thakur, H. et al. 2017. ‘We do not know’: a qualitative study exploring boys perceptions of menstruation in India. Reprod Health. **14**(174).

McCluskey, A., Lovarini, M. 2005. Providing education on evidence-based practice improved knowledge but did not change behaviour: a before and after study. BMC Med Educ. 5(40). Available from: https://doi.org/10.1186/1472-6920-5-40

Mpofu, E. 2018. How Religion Frames Health Norms: A Structural Theory Approach. Religions, 9(4), p. 119.

Nigg, C.R. Long, C.R. 2012. A systematic review of single health behavior change interventions vs. multiple health behavior change interventions among older adults, Translational Behavioral Medicine. **2**(2), pp. 163–179.

Pandit K., Hasan M.J., Islam T., Rakib T.M. 2022. Constraints and current practices of menstrual hygiene among Rohingya adolescent girls. *Heliyon*. **8**(5). Available from: doi: 10.1016/j.heliyon.2022.e09465.

Patel, K., Panda, N., Sahoo, K.C., Saxena, S., Chouhan, N.S., Singh, P., Ghosh, U. and Panda, B., 2022. A systematic review of menstrual hygiene management (MHM) during humanitarian crises and/or emergencies in low-and middle-income countries. *Frontiers in Public Health*. **10**.

Pawson, R. Tilley, N. 2004. Realist Evaluation. [Online]. Available from : https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=e092393652456869d7ccf6fa57b5a5a4d2d9e10a. Accessed 5 December 2024.

Peters R.M., Templin T.N. 2010. Theory of planned behavior, self-care motivation, and blood pressure self-care. *Res Theory Nurs Pract.* **24**(3), pp.172-86. Available from: doi: 10.1891/1541-6577.24.3.172.

Power and Sample size. 2024. [Online] Available from: http://powerandsamplesize.com/Calculators/Compare-2-Means/2-Sample-1-Sided. [Accessed 12 August 2024].

Rahaman, K.S., Ramos, S., Harter, M., Mosler, J.H. 2022. Psychosocial factors influencing handwashing behaviour and the design of behaviour change interventions for the Rohingya camps in Bangladesh. *Journal of Water, Sanitation and Hygiene for Development.* **12** (10), pp.671–682. Available from: https://doi.org/10.2166/washdev.2022.167

RANAS Ltd. 2022. The RANAS approach to systematic behavior change. Methodological Fact Sheet 1. Zürich, Switzerland.

RANAS. 2022. Publications. [Online]. Accessed 22 July 2025. Available from: https://ranas.ch/ranas-publications/

Rohwerder, B. 2014. Non-food items (NFIs) and the needs of women and girls in emergencies. [Online] Accessed 21 December 2024. Available from : https://assets.publishing.service.gov.uk/media/57a089a6e5274a27b20001cf/hdq1107.pdf

Sahoo K.C., Hulland K.R., Caruso B.A., Swain R., Freeman M.C., Panigrahi P., Dreibelbis R. 2015. Sanitation-related psychosocial stress: A grounded theory study of women across the life-course in Odisha, India. Soc Sci Med. 13, pp. 80-9

Shah S.F., Punjani N.S., Rizvi S.N., Sheikh S.S., Jan R. 2023. Knowledge, Attitudes, and Practices Regarding Menstrual Hygiene among Girls in Ghizer, Gilgit, Pakistan. *International Journal of Environmental Research and Public Health.* **20**(14), p.6424. Available from: https://doi.org/10.3390/ijerph20146424

Sommer, M., Ferron, S., Cavill, S., & House, S. 2015. Violence, gender and WASH: spurring action on a complex, under-documented and sensitive topic. Environment & Urbanization, 27(1), pp. 105-116.

Sommer, M., Schmitt, M., Clatworthy, D. 2017. A toolkit for integrating Menstrual Hygiene Management (MHM) into humanitarian response. (First edit). New York: Columbia University, Mailman School of Public Health and International Rescue Committee.

Sommer, M., Schmitt, M.L. Clatworthy, D., Bramucci, G. Wheeler, E. Ratnayake, R.. 2016. "What Is the Scope for Addressing Menstrual Hygiene Management in Complex Humanitarian Emergencies? A Global Review." *Waterlines, Practical Action Publishing.* **35**(3), pp. 245–64. Available from: https://doi.org/10.3362/1756-3488.2016.024.

Sphere Project. 2018. Sphere Handbook. [Online] Accessed 21 December 2024. Available from: https://spherestandards.org/handbook-2018/

Tellier M., Farley, A. Jahangir, A., Nakalema, S. Nalunga, D.,Tellier, S. 2020. Chapter 45. Practice Note: Menstrual Health Management in Humanitarian Settings In The Palgrave Handbook of Critical Menstruation Studies.

Tolman, R.M., Casey, E.A., Allen, C.T., Carlson, J., Leek, C., Storer, H. L. 2019. A Global Exploratory Analysis of Men Participating in Gender-Based Violence Prevention. *Journal of Interpersonal Violence*. **34**(16), pp.3438-3465. Available from: https://doi.org/10.1177/0886260516670181

UNHCR. 2020. Tearing down the walls: Confronting the barriers to internally displaced women and girls' participation in humanitarian settings. [Online]. Available at https://www.unhcr.org/uk/media/tearing-down-walls-confronting-barriers-internally-displaced-women-and-girls-participation. Accessed 20 Apr 2021.

Winkler I.T., Lhaki P., Baumann S.E. 2024. Its manifestations may vary, but menstrual stigma is universal. *Women's Health*. **20**.

CHAPTER V

INFLUENCING NON-MENSTRUATOR ATTITUDES AND BEHAVIOURS TOWARDS MENSTRUAL HEALTH AMONG ROHINGYA REFUGEES IN BANGLADESH. A REALIST EVALUATION

____

This chapter presents the culmination of each stage of the second realist evaluation within the Bangladesh case study. It draws on learnings from the quantitative analysis from the previous chapter as well as testing initial programme theories based on KIIs with programme staff from World Vision and UNICEF on what they suspected the mechanisms of change within the programme to be. This can be found as supplementary material within the appendices titled 'Initial programme theories from realist interviews with humanitarian actors engaging Rohingya non-menstruators in menstrual health'. This chapter addresses menstruators' strategic needs through testing theories around how the programme influences non-menstruator attitudes and behaviours towards menstruation based on contextual factors. The paper is titled 'Influencing non-menstruator attitudes and behaviours towards menstrual health among Rohingya refugees in Bangladesh. A realist evaluation'. It has been invited to review and resubmit to PLOS Water in January 2025.

5.1 ABSTRACT

Men, boys, and those that do not menstruate can have a significant influence on menstrual health, especially in patriarchal societies and challenging contexts, like refugee camps. Yet they are often neglected from the conversation. This study applies a realist evaluation to a programme aiming to instil positive attitudes regarding menstruation and encourage supportive behaviours towards menstruators among Rohingya non-menstruators in a refugee camp in Bangladesh. The evaluation consists of Key Informant Interviews with nine programme staff, base- and endline survey data with 146 non-menstruators, and 20 in-depth realist interviews with a selection of survey participants. The theories within the evaluation are framed on different levels of the Socio-Ecological Model. On the individual level, we found that it is necessary to aid non-menstruators in understanding and becoming empathetic towards the health risks of poor menstrual hygiene management, recognising their familial responsibilities, and gaining confidence within the role of supporting their family members with menstrual health. On the interpersonal level, a big motivator for adopting supportive behaviours was perceiving their family to be happy, healthy, and appreciative of their help. On the community level, religious framing - especially delivered by the Imam – was effective in influencing viewpoints and removing misconceptions. A motivator on this level was the notion of bettering the whole community. Interestingly, negative reactions from neighbours did not have much influence. We also found it was crucial to create a safe space for everyone to feel comfortable to share and learn together in. Lastly, the organisational level showed the importance of fostering a trustworthy relationship with World Vision, the organisation initiating the programme, and the community menstrual health facilitators. This paper demonstrates the first published study to show the central

contextual factors to establish and mechanisms to seek when engaging non-menstruators in menstrual health programmes to influence attitudes and foster supportive behaviours.

5.2 INTRODUCTION

The critical role men, boys, and those that do not menstruate play in menstrual health has largely been ignored (Erchull 2020). This is especially problematic in humanitarian settings where patriarchal structures are more strictly enforced and access to menstrual health is compromised (Olusola & Ojo 2016). Not only is it essential for them to dispel myths and taboos, they can offer physical and emotional support to their menstruating friends and family, have an influence on menstrual-related policy and decision-making, and promote gender equality through challenging gender norms within a shared responsibility (Mahon 2015). Though menstrual health guidelines for humanitarian responses now recognise the crucial yet overlooked role that non-menstruators play in each populations' relationship to menstrual health, it remains largely unaddressed due to lack of perceived importance, resources, and 'how to' guidance (Evans, 2019).

The Rohingya refugee community living in Bangladesh offers us an example of where the role of non-menstruators in menstrual health access is starkly important. Pandit et al. (2022) found that non-supportive environments, cultural beliefs and practises, stigma, 'peeping toms', a lack of privacy, and fear of sexual violence were hindering access to menstrual health in the camp. The Rohingya are a patriarchal community (Zakaria et al. 2025). Some ways this manifests is non-menstruators controlling finances and being responsible for receiving messaging such as hygiene promotion to report to the household (Toma et al. 2018). Since menstrual health does not often concern Rohingya non-menstruators, menstrual materials and essential health information are not provided to the family (Pandit et al. 2022). Additionally, Rohingya cultural norms, which restrict menstruator mobility and interaction with non-menstruators outside the family, 'significantly limit their chances to access many of the available services' (Islam and Habib 2024).

What is missing is documentation and research into what approaches have been used to engage non-menstruators and why they may or may not be working in different contexts. What does exist is research on engaging non-menstruators in other gender-related programmes. We draw on this to understand and frame our findings. What is known from this literature is the importance of working within the population's ideals of masculinity and pre-existing social systems (Lowe et al. 2022). Through this, programmes have shown that non-menstruators can become advocates for their children, partners, and other family members for gender- and taboo-related social issues (Siu 2017). Not only this; their new behaviours also challenge misconceptions and foster community responsibility among other non-menstruators in advocating for the rights, health, and safety of those who menstruate (Carmody 2014). In such a manner, the ways in which non-menstruators can be included as an integral part of advancing gender equity are demonstrated.

We present the first published study to give empirical evidence on how non-menstruators can become promoters of menstrual health, a vital aspect of gender equity. We do this through applying a realist evaluation to a World Vision (WV) and UNICEF menstrual health programme engaging Rohingya non-menstruators living in Bangladesh. The intention is to help them become familiar with and active in removing barriers to menstrual health for their family members and wider community. We aim to

understand the causal forces that lead to these changes and how to achieve them based on the context in which the programme transpires.

5.3 METHODS

RESEARCH AIM, FRAMING, AND APPROACH

Realist evaluation offers a comprehensive approach for exploring how and why a programme works in a given context by unearthing the hidden generative causes that lead to change (Greenhalgh 2021; Pawson & Tilley 2004). We apply such an approach by developing and testing programme theories to uncover the mechanisms that occur among non-menstruators in response to how the programme inputs interact with the contextual factors of the refugee camp to answer the research question: what are the mechanisms that improve attitudes and behaviours towards menstruation among non-menstruators in humanitarian settings? We use the Socio-Ecological Model as a framework to understand how interventions work within different interacting systems in relation to the individual (Kilanowski 2017). We use this as a framework to form programme theories based on the individual, interpersonal, community, and organisational levels to understand how non-menstruator attitudes and behaviours towards menstruation are influenced.

STUDY SETTING AND PROGRAMME

The study was on the Rohingya population living in Kutupalong refugee camp, Cox's Bazar, Bangladesh. The camp hosts one million Rohingya; two thirds of the entire population who fled neighbouring Myanmar due to persecution by the Burmese military. Whilst the persecution began in the 1970s, the biggest offence and resultant exodus happened in 2016-17. We chose this site as it offers a suitable yet uncommon example of a humanitarian organisation engaging non-menstruators in menstrual health where the role of non-menstruators in blocking or facilitating access to menstrual health is starkly apparent. World Vision's main approach was to work with the community to select two menstruators and non-menstruators (two older and two younger) from each sub-block who possessed positive attitudes and behaviours towards menstruation. World Vision then coached them to become advocates for menstrual health among their section of the community to act as 'Menstrual Health (MH) Facilitators'. Staff estimated programme uptake to be about 70%, reasons for not joining being other commitments such as work or discomfort with the nature of the programme.

DATA COLLECTION

The first step in the realist evaluation was to develop Initial Programme Theories (IPTs) (detailed in the supplementary material) based on Key Informant Interviews (KIIs) with all nine World Vision and UNICEF staff working on the programme. Interview questions were based on the results from a previous realist evaluation conducted by the lead author and her supervisors in Lebanon (Hales et al. 2024). We then carried out a quantitative baseline and endline survey with 146 non-menstruators using the Risk-Attitudes-Norms-Ability-Self-regulation (RANAS) approach to behaviour change to discover which psychosocial and contextual factors were determinants of possessing positive attitudes and behaviours towards menstruation among non-menstruators. RANAS was chosen due to its extended application in WaSH practise and research and its combination of multiple tested theories from various behaviour change

programmes. This rationale and survey data is published in a separate paper titled 'What influences non-menstruator attitudes and behaviours towards menstruation among Rohingya refugees in Bangladesh? A quantitative analysis' (Hales et al. 2024). RANAS is a behaviour change model that has been used to study hygiene behaviours in different contexts, though it has not yet been used to study menstrual behaviours (Slekiene and Mosler 2021; Chidziwisano et al. 2020; Chidziwisano et al. 2019). Its constituent parts cover individual-level factors across the following domains: Risk perceptions (how individuals perceive health risks), Attitudes (beliefs about the outcomes of the behaviour), Norms (social influences on behaviour), Abilities (self-efficacy and perceived control over performing the behaviour), and Self-regulation (strategies for planning, monitoring, and maintaining behaviour). As part of this approach, we divided participants into 'doers' and 'non-doers' of the behaviours/attitudes based on the support provided to family, feelings towards carrying out the support, and feelings towards menstruation in general. To test the IPTs and unpack the significant factors highlighted in the quantitative analysis, we developed realist interview questions for 20 non-menstruators from the 146 survey participants to refine which mechanisms transpired during the programme and why. We selected a sample size of 20 as this would allow for 10 doers and 10 non-doers from each of our demographic criteria - taken from Pandit et al. (2022) - found in Table 14. These 20 participants were selected in March 2024 following the base- and endline survey. There was a refusal rate of 35% of people who were no longer living in the camp. New people were selected having the same demographic profile to replace them. This may have affected the selection as those who had moved on from the camp may have had a higher economic status for example making it easier for them to leave. The questions were reviewed by World Vision staff during a training session. We return to the RANAS approach in the discussion as a way of interpreting programme theories, largely related to the individual level. Table 14 demonstrates how interviewees were selected based on the following breakdown of demographics:

Table 14 - Demographics of the 20 non-menstruator Rohingya interviewees

NO.	DOER/ NON-DOER	BLOCK	AGE	MARITAL STATUS	EDUCATIONAL LEVEL	NUMBER OF CHILDREN	ARRIVAL IN CAMP
1	Doer	D	22	Single	Illiterate	0	2017
2		D	17		Primary Level	0	2017
3		F	18		Primary Level	0	2017
4		C	27		Primary Level	0	2017
5		C	18		Secondary Level	0	2017
6		D	34	Married	Illiterate	4	2017
7		B	22		Illiterate	2	2017
8		B	23		Primary Level	2	2017
9		F	46		Primary Level	4	Before 2017
10		F	36		Primary Level	4	2017
11	Non-doer	B	24	Single	Illiterate	0	2017
12		C	16		Primary Level	0	2017
13		A	17		Secondary Level	0	2017
14		E	21		Secondary Level	0	2017
15		A	49	Married	Illiterate	7	2017
16		F	29		Illiterate	2	2017
17		A	40		Illiterate	9	2017
18		E	23		Primary Level	0	2017
19		C	24		Primary Level	2	2017
20		E	38		Secondary Level	3	2017

PROCEDURE

The initial KIIs with programme staff and part of the baseline survey were undertaken by the lead author during visits to the camp and an extended stay in the surrounding area in April 2023. However, due to security concerns related to the Bangladesh national election in January 2024, the lead author was unable to re-enter the camp for the endline survey or interviews with non-menstruators. Instead, she conducted a two-hour in-person training with eight World Vision field staff, overseen by one programme manager (and co-author to this paper). The training explained the findings of the quantitative RANAS study, the IPTs, how to conduct realist interviews, and the interview questions. Staff wrote responses to the questions directly onto a laptop in English, translating on the spot, overseen by a programme manager. Each interview was 30 minutes in length and conducted in one of World Vision's private offices. The lead author was able to check the transcribed interviews with the data collectors, check for any misunderstandings, and provide feedback. The lead author deleted any names on the transcripts. The interview questions were reviewed by the lead author's three senior academic supervisors, PH, KR and MD, and World Vision's hygiene promotion and gender equality and social inclusion coordinator, ZS, who was able to confirm the guide's contextual relevance and appropriateness. All four are co-authors to this paper. The interview questions were written in English by the lead author, which were verbally translated into Rohingya by the data collectors, with responses given verbally in Rohingya and then translated and written into English by the data collectors. Data collectors conducted the 20 interviews with survey participants in March 2024. The baseline and endline survey were conducted in April 2023 and March 2024 respectively.

DATA ANALYSIS AND INTERPRETATION

The lead author uploaded the 20 interview transcripts into NVivo 14. She coded transcripts into themes and subthemes related to programme inputs, context, mechanisms, and outcomes. She then summarised all text within the subthemes, keeping quotes that related directly to or gave evidence of generative causation to demonstrate in the results section. These were discussed and checked with the other authors. The authors chose to break mechanisms down into 'resource' – project inputs – and 'reasoning' – how participants respond to the resource giving way to mechanism(resource)-context-mechanism (reasoning)-outcomes (MCMO) configurations following Dalkin et al. (2015). The lead author used this to categorise these summaries into 20 MCMO configurations. She proceeded to organise and condense into nine MCMO configurations based on overlaps and similarities, overseen by the other authors. These informed the refinement of the programme theories. The authors were largely retroductive in their analysis of the transcripts, meaning they identified 'hidden causal forces that lie behind identified patterns or changes in those patterns' (Wong et al. 2017). This was done through searching for indicators of feelings that motivated non-menstruators to think or act in a certain way due to programme inputs interacting with contextual factors. They were also inductive, driven by categories and theories that had emerged from the IPTs and RANAS approach. The authors interpreted theories on the lower levels of the Socio-Ecological Model e.g. Individual largely from the RANAS approach as it provides a comprehensive framework for understanding what influences an individual's behaviours based on established psychological and

sociological theories. For the higher levels e.g. Organisational, theories were based on the IPTs from KIIs with programme staff. A depiction of this is found in *Figure 10* in the Discussion section.

REFLEXIVITY STATEMENT

The lead author is White-British, Middle-Class, and non-religious. She recognises that much of her privilege to be funded and able to conduct research in the international sphere stems from the colonial legacies of the British Empire. She understands that behaviour change programmes can be neo-colonial and that she is limited when comprehending the nuances of the religious and cultural characteristics of the population studied in this paper. She is aware that global research, especially in the fields of WaSH and humanitarianism is dominated by Western voices, and so welcomes others to challenge what has been said and provide their feedback and opinions. The three research partners from UNICEF and World Vision who are authors to this paper are Bangladeshi and have been working closely with the Rohingya population since their arrival to Cox's Bazar in 2017. Though possessing many cultural, religious and, linguistic similarities to the Rohingya, which has advised the research, they are still outsiders to this population so will possess their own misunderstandings and biases. Thus, the work will contain the subconscious biases of all authors.

ETHICS

Ethical approval was gained from the University of Leeds on the 16th March 2023 under reference code MEEC 22-019. Lead author access to Kutupalong Camp was granted by The Government of Bangladesh's Refugee Relief and Repatriation Commissioner on the 21st March 2023. The lead author provided an explanatory statement, consent, and confidentiality form to the World Vision data collection team. Quotes were allowed to be taken verbatim and published. Since Rohingya is a spoken, rather than written language, the data collection team verbally translated it to participants upon recruitment and took verbal consent, witnessed by two World Vision staff. For participants under the age of 18, informed consent was obtained from the parent/guardian in this same way. All data collected also adhered to World Vision and UNICEF's ethical practice and code of conduct, as illustrated in a Terms of Reference (ToR) written between the parties. There was always more than one data collector present. Recruitment occurred from April 17-30th 2023.

5.4 RESULTS

Here we outline the refined programme theories from the Realist Evaluation. The nine theories are categorised using four levels of the Socio-Ecological Model: Individual, Interpersonal, Community, and Organisational. Quotes from participants are labelled as 'doer' or 'non-doer' from how they originally responded to survey questions at baseline.

INDIVIDUAL

1. Understanding and becoming empathetic to health risks

One of the biggest factors people were motivated by to support their family with their menstrual health was their newfound knowledge and awareness of the risks to health associated with poor menstrual hygiene management (MHM), especially within the camp context. This also allowed them to understand the critical role they as individuals can play in preventing health risks. Humanitarian contexts provide a unique opportunity for populations to be the subject of programmes, which they would not have encountered had they continued to live in their home country. As this person illustrates, menstrual health and hygiene was not something they were aware of prior to their arrival in Bangladesh, as was the case for most other interviewees:

> *After my marriage… I know about menstruation… but… I [did] not have any idea about Menstrual Hygiene or health. But after [I] came [to] Bangladesh from Myanmar… from meeting organize by… World Vision/MHM facilitator I now [have] knowledge on MH… Meeting and discussion about MHM influenced me about menstruation because… facilitator share example, experience about Menstruation… which I can understand more... After getting influenced from meeting discussion I support my family female member with nutritious food, make sure availability of MHM kit, household level heavy work… my attitude was changed about MHM compared to before but it's not by pressure… only because MH meeting discussion touch my heart I realize importance [of] knowledge… Before… I think it's not [a] matter [of] male concern… I behave… rudely because I did not [understand] menstruation knowledge and their needs… But right now I know why my role is crucial for my family… Risk factor about poor MHM… help me to change [my] view about menstruation… and [give] help to my family member during menstruation.* **Non-doer**

Being aware of the health risks and physical and mental symptoms people can experience during their period allowed non-menstruators to become empathetic to the menstruator experience, which acted as a motivator, as another person articulates:

> *I feel so bad about the negative experiences women face with menstruation. Because this time is a very important time for girls/women… Of course I want to change that.* ***Doer***

The outcomes of understanding the health risks are many. One which staff deemed important that was explored when developing the IPTs was the purchasing of materials. The responses showed that if non-menstruators can understand the importance appropriate materials play in their family's menstrual health

and become used to handling them through the programme, then they will be motivated and more comfortable to buy them for their families:

> *If [MHM kit] distribution [stops] I will buy reusable cloth. They need to wash, dry and preserve it safely… I know the risk factor if my family female member did not follow MHM practice it will lead [to] itching, germ, infection.* ***Non-doer***

SUMMARY BOX 1 – UNDERSTANDING AND EMPATHY TO RISK

PROGRAMME THEORY	IF the intervention demonstrates the risk poor MHM has to menstruators' mental and physical health – especially within the camp context - THEN they will become cognisant and empathetic of the threat to health, negative symptoms of menstruation, and the role they can play in improving this, leading them to support their family with their menstrual health.
CONTEXT	Non-menstruators were largely unaware of the risks poor menstrual health has to their family members, which is exacerbated living in a humanitarian context.
MECHANISM	World Vision implemented information sessions hosted by themselves and trained community MH facilitators using discussions and examples (resource) which helped non-menstruators understand and become empathetic to the health risks associated with poor MH (reasoning).
OUTCOME	Non-menstruators act to support their family in MHM

2. Recognising responsibility

Many non-menstruators reported realising it was their duty to support menstruating family members and the importance of this role through World Vision's intervention. There was also a recognition and appreciation of the role their menstruating spouses play in supporting the family, which added to the feeling of needing to parallel their inputs. One person illustrates:

> *Previously my mother was feel sick in menstruation time but that time I have no knowledge on importance of support to women in menstruation time. After the participation in MH activity with World Vision then I understand about necessity of male support and how is their expectation… I was influenced by WV session and trying to support my mother… and I got a well feedback... According to our special care… my mother feel very healthy physically and mentally.* ***Doer***

Others talk about how it's the duty of all non-menstruators to support their families in this way:

> *I do not feel ashamed to help my mother and sister during menstruation. It is my responsibility and duty. My family is happy. Every man should perform his duties during menstruation. It is obligatory to do that… It has been so much better for my family and the committee to learn [from] World Vision. Some of my habits have changed, and those who have bad habits need to sit together and discuss MHM in detail.* ***Doer***

Another talks about their lifelong commitment to supporting their family in this way which they sees as protecting their family's rights:

> *For as long as I live, I support my family. I believe that by doing so, I am protecting my wife's and daughter's rights.* ***Non-doer***

Others spoke of the appreciation of the role the female head of household plays in the family to influence them to take care of her during menstruation:

> *My wife is the maker in our family and she is more committed to care [for] every family member. In menstruation time she feels sick… This time she expects special care from us. According to her expectation, I am committed to support her for happiness and good health.* ***Non-doer***

Another ponders how their family relies on him and that if they did not support them, there wouldn't be anyone else to:

> *I feel commitment about MHM because… If I do not support, whom will support my family member?* ***Non-doer***

SUMMARY BOX 2 – RECOGNISING RESPONSIBILITY

PROGRAMME THEORY	IF the intervention demonstrates the role non-menstruators can play in the family unit to support their dignity and rights, THEN they will see it as their responsibility to support them in a way no one else can.
CONTEXT	Due to the secrecy of menstruation, non-menstruators were not aware of the role they could play in supporting their menstruating family members. Typically, menstruators work to care for the family rather than non-menstruators.
MECHANISM	The MH activities, which demonstrated examples of how non-menstruators could support their menstruating family members both with MHM and with household tasks (resource), helped non-menstruators discover a sense of duty in their role (reasoning). Recognition of how hard menstruators work to support the family was also an influencing contextual factor.
OUTCOME	Non-menstruators play their role in the family to ensure their physical and mental health.

3. Gaining confidence in role of supporting family with menstrual health

Most people reported that the MH sessions increased their confidence in their ability to pass on helpful information and perform supportive tasks for their family members:

> *WV volunteer increase my self-ability to support my family during menstruation. They develop my confidence level [in] how to support my family. They discuss about the benefit of male engagement with positive approach.* ***Non-doer***

Others reported that their confidence also comes from family and friends and suggest other ways to increase confidence:

> *My confidence about MHM comes from family, friends, and meetings with various organizations. It would have been better to show pictures of the current practice of having sessions with MHM related male to increase confidence.* ***Doer***

Not only is know-how important in increasing confidence, but also having the resources available to ensure their families can perform good MHM:

> *World Vision supplying pure water for community and improving sanitation system for our better health. Water is very essential to maintain our personal hygiene and family hygiene. [With] the availability of water, our women clean her menstruation cloths.* ***Doer***

SUMMARY BOX 3 – CONFIDENCE

PROGRAMME THEORY	IF non-menstruators gain how-to knowledge, experience, encouragement from staff, peers and family, and having materials and water available to allow family to perform MHM, THEN they will become more confident to perform the supportive tasks. Other inputs that non-menstruators claimed gave them the confidence to support their family was empathy, becoming aware of responsibilities, information from books and pictures, and group discussion.
CONTEXT	Non-menstruators are not aware or practised in the activities necessary to support their family during menstruation.
MECHANISM	World Vision provides training and demonstration sessions (resource) which increases non-menstruator confidence in their ability to support their family (reasoning). WV also provides WaSH facilities so that menstruators are actually able to carry out proper MHM (resource).
OUTCOME	Non-menstruators practise the behaviours of supporting their family with continual gained confidence.

INTERPERSONAL

4. Reaction from family

Many reported a positive reaction from family members such as seeing them happy, peaceful, comfortable, and relaxed. They also witnessed their family benefitting from the support and showing gratitude, all of which acted as encouragement for continuing the behaviours. Following are a selection of quotes to illustrate:

> *They feel pleasure to me. My mother appreciates me when I helped my wife during menstruation. When I support my wife she looks at me and smiles. Then I realised that she liked my help.* ***Non-doer***

> *My family female member share gratitude and honour to me that I support them during menstruation period… I always feel proud to make their menstruation easy.*
>
> *If I support my family during menstruation I feel proud and my family member appreciate my approach about menstruation support… I support my family member [to] stay healthy and safe, which make them much more confident [with] MHM. Also they encourage me about MHM support commitment.* ***Non-doer***

Some talk about how it's sometimes not possible to talk about menstruation with all family members and how attitudes and reactions change over time:

> *My mother she is not feel comfort to discuss with me regarding menstruation. She feels shame to talk with me. I am not comfort to talk with her. It's a major barrier for me and my mother. If World Vision Volunteers able to work on the issue, break the taboo from society, it will be very helpful [for the] community… Rohingya women… feel very shame to talk [about] her personal issue with male person. For [this] reason we… need [to] special take care of her health… When I support…my family member during menstruation time then [they] are encouraging me. Once upon a time if males are support to his wife then others people are discouraging me but now they are change their thinking now they are appreciating me.* ***Non-doer***

SUMMARY BOX 4 – REACTION FROM FAMILY

PROGRAMME THEORY	IF the family show they are happy and comfortable with the help they're given THEN non-menstruators will feel proud, altruistic, and happy to see their family healthy and therefore be encouraged to continue the support.
CONTEXT	Most menstruators appreciate the support from their non-menstruating family members, though some still feel shy or are impacted by stigmas which are hard to overcome so do not engage.
MECHANISM	If WV is able to break taboos with all genders (resource) menstruators may show encouragement to their non-menstruating family, creating a sense of pride and inspiration to continue to support them (reasoning). Additionally, if non-menstruators are able to see how their support is benefitting their family's wellbeing they are encouraged to continue (reasoning).
OUTCOME	Non-menstruators continue to support their menstruating family members. Their family feel supported and appreciative.

COMMUNITY

5. **Removing misconceptions through religious thought**

In this setting, there were many misconceptions and aversions to menstruation such that it was a '*curse from Satan',* a disease, or only a '*female issue'*. Since the community is devoutly Muslim, if the Imam is able

to explain that menstruation is natural, necessary for reproduction, or 'God-gifted' it helps to remove misconceptions and help people see that it is something positive that concerns the wellbeing and longevity of the family and community. One person illustrates the issue of menstruation being perceived as only a female concern:

> *Sometimes [there are] problems there, example: social superstition. Male are not interested… about MHM. Their thinking is that it is only for female issues. We [community members] are trying to change them by World vision staff or volunteer… Earlier many people took it badly, but now all women share all issues with their responsible person, so now I think a lot has changed.* ***Non-doer***

Another explains how they can understand menstruation from the idea of Creation:

> *Since creation, women have been made like this by Allah, I can understand from there. My self-confidence is coming through reading, seeing and hearing directly.* ***Doer***

Therefore, community members feel that:

> *It is better to have a meeting with the Imam and the Majhi (community camp leader) at camp level to increase commitment regarding menstruation.* ***Doer***

Another community member goes on to explain a little further:

> *The program activity work for every community people. Every[one] engage in this meeting and gather their knowledge and misconception will [be] removed… We have had a lot of cooperation... I feel good [about] initiative WV to create a MHM male facilitator who have to work [with] community… to support their family members. They… engage community people and removed misconception in MH… WV Volunteer and MHM male facilitator helps us to change our opinion. They are always arrange meeting together in MH activity and be aware of our community people. When I realized it was given by Allah, my opinion changed and I strive to support our family members…our ideas/things have changed.* ***Doer***

One person even feels that it is because it is a gift from Allah this is more reason that menstruators should have a positive menstrual experience where they are able to stay hygienic and free from being teased or shamed:

> *If negative experience faced by female I feel bad for it because menstruation is [a] god-gifted and natural matter so female should need to stay neat and clean during menstruation time so during this time [if] anyone teases or shames any female it should not [be] acceptable.* ***Non-doer***

SUMMARY BOX 5 – REMOVING MISCONCEPTIONS THROUGH RELIGIOUS THOUGHT

PROGRAMME THEORY	IF the intervention is able to remove misconceptions that menstruation is a natural phenomenon free from superstition or evil but a gift from God THEN non-menstruators will see it not just as a women's issue but something important that the community needs to support altogether.

CONTEXT	There is stigma, misconceptions, taboo, and beliefs that menstruation is only a women's issue. The community is Muslim and the Imam has a lot of influence.
MECHANISM	Through speaking with the Imam or explanations that menstruation is a natural and God-gifted issue (resource) non-menstruators are able to change their perceptions and see it as something important to everyone and even sacred (reasoning).
OUTCOME	Non-menstruators have a more positive outlook on menstruation and view it as a reason to help and protect menstruators from negative experiences.

6. Bettering whole community

The non-menstruators recognise that not only is it important that their menstrual knowledge can be used to inform their menstruating family members, but also to influence other non-menstruators living in the camp, for the overall health of the community. Additionally, some give an appreciation that World Vision works to better the health and wellbeing of the community, which encourages them to do the same as evident here:

> *I like to work for the good of the nation, no doubt it is a very good work, so I do it. People should understand the benefits and losses well… when I know that it will be good for us, since then my interest to do this work has increased a lot… Our society is not well aware of MHM, I have more learned [from] World vision and motivated by MHM issues, I have [become] more committed for change my community… World Vision has done so much for our community and has been able to inform us about menstruation. Their good advice helps us stay healthy all the time, so I am spontaneously working with MHM on my own accord.* ***Doer***

Others speak on the knock-on effect of their messages being passed on from their family members to other menstruators:

> *I want to participant in World Vision activities for my better learning about MH. After the session we should share the message with our family members, neighbours, and friends how they give an opportunity to change their attitude and opinion about menstruation... Once upon a time I had no knowledge on menstruation but when I started to participate with WV activities… I gain knowledge on hygiene management and increase my self-ability to disseminate the message with others… I feel very comfort to talk or discuss with my wife and friends about MH. My wife she also very comfort to share her challenges about menstruation. If [I] share this message with my wife, then my wife also shares this information with other women. Me and friends are same age; as [a] result we openly discuss regarding the issue... I aware to friends to support his wife and other family member in menstruation time.* ***Doer***

One participant puts it nicely that to see positive change in their family and the community they have to start by changing themself:

> *If I change myself, my family will change. Besides, others will learn from me.* ***Doer***

Others talk about how important the influence of non-menstruator family members have been to them in changing their opinions about menstruation:

> *I was influenced by my elder brother-in-law to change my attitude. From my childhood, I observed my brother-in-law… supporting my sister in household activities and take her special care during menstruation time… When I was adolescent that time I saw my father was helped my mother in household activities and he took her special care when she feels sick. My father is my real influencer to change my opinions and thoughts about menstruation.* ***Doer***

Another point people made was the feeling that everyone in the society should learn about menstruation whether unmarried or married as it is a cultural norm for everyone to get married at eventually.

> *I feel comfortable to talk about MHM with my male friend especially whom are unmarried because they need known for their further married life wife support cause Rohingya camp wife are defended on husband, so husband should provide full support and assistance to his wife.* ***Non-doer***

Lastly, one person makes the point that by seeing all WV staff working together respectfully, the community are influenced to work together:

> *They work together with manner, which influence community people to work together.* ***Doer***

SUMMARY BOX 6 – BETTERING WHOLE COMMUNITY

PROGRAMME THEORY	IF the intervention and World Vision focuses on everyone working towards the greater good of the community as a whole, THEN non-menstruators will appreciate their role in influencing other community members and be prepared to support their family even before starting one.
CONTEXT	The Rohingya are living in a camp in close proximity to one another where there is a sense of community. It is typical for everyone to get married and have children.
MECHANISM	By demonstrating the benefits of good menstrual health and seeing World Vision staff work together for the good of the community (resource) non-menstruators reason that all community members should work together to better the community as a whole (reasoning)
OUTCOME	Non-menstruators take it upon themselves to disseminate menstrual knowledge to other community members.

7. Creating a safe space

Participants felt World Vision did well to create safe spaces that encouraged people to attend and share freely:

> *They respect our culture. They didn't force any community people to attend their activities. They conduct their meeting at safe place like household… They know about all the community peoples… They visit the household and try to find out the household, which is safe for conducting a meeting…*

> *Safety issues didn't prevent me from attending activities. I think people show interest to attending their activities because they creates a safe place where everyone can share their challenges and opinion.* ***Doer***

Most people said they were most comfortable to talk with family, friends, neighbours, and people of the same age group, which was respected when splitting the sessions.

> *I feel more comfortable to discuss menstruation related topic with the people of my same age. Because I can… share everything to them without any hesitation. When an old age people talk with me about menstruation, I feel shy.* ***Doer***

It seemed that interviewees had different interpretations of what is meant by a safe space. This person feels that by everyone becoming used to discussing menstruation together a safe space is created:

> *WV/facilitator create a suitable safe environment for MHM, that's why community talked about MHM. It was tough [to] create a safe environment for MH discussion because first time people are laughed, feel shy about discuss this issue. WV address it is for public health issue concern. By regular household visit they tell us it is very needful topic for us that's why right now I feel more comfortable safe environment was created for MH meeting and discussion… Not safety issue prevent because right now we discuss MHM as like regular discussion and attitude.* ***Non-doer***

Most participants mentioned how it was necessary to split sessions by age and especially by sex. Many people reported wanting to be split into groups with the same-aged people and those they were familiar with. Since many of the Rohingya follow Sharia Law – it is necessary for males and females to be separate during these meetings. They valued that WV respected their culture by having meetings segregated in this way as summarised in one participant's statement:

> *According to the religious views, women and men are [not] working together but World Vision staffs are working equally for effective communication in block level. Regarding the policy staffs/Volunteers are able to get easy access to open discussion with their same gender. For this opportunity volunteers… easily find out the challenges and take appropriate initiative to mitigate the challenges… Volunteer inviting me to participate in session with my same gender and same age group. As a result, every participant is freely express their opinions and thoughts regarding menstruation… I never feel any kind of challenges to attend in session.* ***Doer***

As an additional note, some appreciated seeing World Vision staff of different genders working together and even postulated this might be something of benefit they'd like the community to work towards:

> *They respect us a lot, they do what we want. But men and woman working together is not tolerated in our society. We are slowly trying to get out of it… We love it when World Vision girls and boys work together, we also want to work together. No one will accept it so easily. Society has to change slowly.* ***Non-doer***

SUMMARY BOX 7 – CREATING A SAFE SPACE

PROGRAMME THEORY	IF the meetings are organised in a convenient time, location, split by age group and gender, with friends and neighbours THEN everyone feels respected, and comfortable to attend, discuss, and share freely.
CONTEXT	Living in the camp poses some safety issues. Sharia Law means sexes should be segregated. The majority are most comfortable to talk with family, friends, neighbours, and people of the same age group and sex.
MECHANISM	World Vision creates a safe space by picking a secure household location, segregating groups by sex, age, and neighbours (resource), which makes participants feel safe, comfortable, and respected (reasoning).
OUTCOME	Everyone is able to share freely. The relationship with World Vision is preserved by having their culture respected. Ideas about different genders working together is contemplated.

8. Reactions from neighbours

Many described having a strong emotional response to any negative actions community members might take towards their menstruating family members. Some even described how they would rectify such acts:

> *If our sisters or wives are facing any kind negative experience from our… community person, we feel very sad and angry to the person… First time we give a space to him for his self-correction. It he does not change his behaviour we need to take a strong decision against him, as well as we need to establish [an] act for his punishment.* **Doer**

Some describe their neighbours' reaction being a barrier to them supporting their family with their menstruation:

> *Surrounding community thinking about MHM is barrier for support my family for menstruation. Some people said like "You are male person why you are support your female member regarding menstruation? Also why you need to know about menstruation? It's embarrassing!"* **Non-doer**

Whereas others are encouraged by their neighbours:

> *When I support to my wife in menstruation time all my family members are encourage me. When other person is seeing that, they also encourage me for this great work.* **Doer**

And some are able to take it as an opportunity to educate those with negative attitudes:

> *I found barrier like surrounding people sometime tease me like why you support your family female member why you need to support but instant I replay with proper explanation and share my knowledge about MHM and why it [is] needed.* **Non-doer**

SUMMARY BOX 8 – REACTION FROM NEIGHBOURS

PROGRAMME THEORY	IF the intervention encourages a sense of integrity and justice among non-menstruators THEN when community members shame or tease menstruators for menstruating or

	non-menstruators for supporting and discussing menstruation, they will stand up to them and help them understand why it's important.
CONTEXT	Some neighbours have a negative response to those who menstruate or non-menstruators who try and talk about menstruation.
MECHANISM	If non-menstruators are provided with a strong sense of why it's important and necessary to discuss menstruation and support or defend menstruators (resource), integrity and justice are instilled (reasoning).
OUTCOME	Non-menstruators stand up to neighbours who are shaming people about menstruation or talking about menstruation and try to demonstrate why it's important to discuss openly.

ORGANISATIONAL

9. Relationship with World Vision/MH facilitators

Participants had many positive things to say about World Vision. The first is about how they took time to respectfully invite non-menstruators to participate in the campaign:

> *WV never showing disrespect to our community beliefs and social norms. When WV staffs/Volunteers… invite us to participate with a session they calling us Bhai (brother) and show proper respect to every participant… Before conducting the session World Vision Volunteers/staffs… visit our household and invite us with proper respect. Before the starting of session, they giving thanks for the participation. They give equal respect for every participant.* ***Doer***

Coming from different cultural backgrounds, the community touched on the importance of respecting their culture in particular:

> *World Vision every staffs and volunteers are showing mutual respect to every participant. They never disrespect to our culture, social norms and religious norms… World Vision showing equal respect and ensure dignity to participants… World Vision Staffs and Volunteers never pressure to change our attitude and opinions. They respect our opinion and attitude.* ***Non-doer***

Others talk about how World Vision understands the right the community has to choose what is best for them:

> *I do not feel any pressure to attending with WV. They never forced us to change my behaviour. They always motivated us how to change our habit. How we support each and other, how we utilize the facility. They influence us about the benefit and hinder of good/bad practice. Community has right to choose the best things which is appropriate for her/his family wellbeing.* ***Doer***

Some talked about how they are given enough time to ponder the new information at their leisure:

> *No pressure from the program. They… take time to learn MH activities. We also contemplate in our own time about MH activity how to help and maintain this.* ***Doer***

One more discusses how World Vision are reliably present whenever the community needs it:

> *They do not force us in any way, they work for our good, there any time support for us.* ***Doer***

The majority of people asked for the frequency of meeting to increase so that they can gain more knowledge, which in turn improves attitudes towards menstruation:

> *If world vision volunteer and staff conduct meeting regularly may we gain more knowledge about menstruation, which improve my opinion towards menstruation.* ***Non-doer***

Many requested that this be done through individual meetings at the household level:

> *Hygiene promotion volunteers visited the household one or two times per week. When they visit household, they inspired us about supporting the family during menstruation.* ***Non-doer***

Additionally, a few described how the frequency of meetings not only bolsters their confidence in knowledge but also their relationship to World Vision:

> *Since we are less educated person it is better if you… arrange more training and meetings… They (World Vision/MH volunteers)… share their knowledge about MH activities, which is good for us. They… always influenced us to participate [in] their regular activity… They are visit our household in regular and support to us when I faced problem. It helps to maintain good relation… Through you teaching more, we have learned more menstruation and have a clear understanding of things.* ***Doer***

Lastly, one person also notes that their good relationship with World Vision has improved their relationship with their family:

> *I have developed a much better relationship with World Vision since I started doing so many MHM sessions. This has led to a much deeper relationship with my family and wife. It has benefited me a thousand fold.* ***Doer***

SUMMARY BOX 9 – RELATIONSHIP WITH WORLD VISION AND MH FACILITATORS

PROGRAMME THEORY	If World Vision/MH volunteers meet with the community regularly to encourage, respect culture, not force them come to sessions, and have a good, familiar relationship where they perceived to be working towards the greater good of the community, THEN non-menstruators are able to participate in regular sessions, contemplate mentality changes in their own time, and absorb lessons.
CONTEXT	WV staff and the Rohingya come from similar, yet different cultural backgrounds. They have been working with the community since the start of the main influx in 2017. There is a natural power hierarchy between NGO and participant that World Vision recognises and doesn't abuse.
MECHANISM	World Vision works to respect and understand culture and act in an encouraging way which doesn't force or impose views, wherein the community are left to change or ponder the lessons in their own way and time with regular check ins (resource) meaning participants are happy to take part and take the teachings seriously (reasoning).

OUTCOME	Non-menstruators are able to participate and take World Vision's lessons on board whilst their relationship with WV continues to grow.

These programme theories are summarised in Figure 1, which depicts the nine MCMOs found in the evaluation, with contextual factors being split into 'community' and 'organisational'.

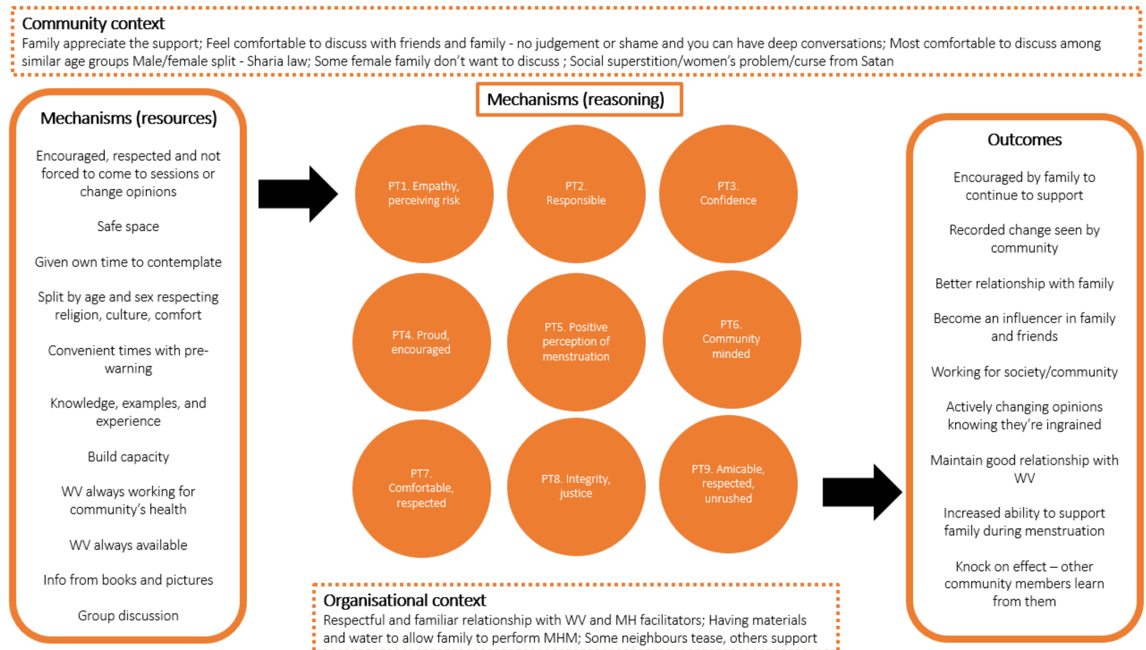


Figure 10 - Summary of refined programme theories within context-mechanism-outcome configurations

Figure 11 illustrates how the IPTs and RANAS analysis relate to the refined programme theories. As seen, RANAS brought in more theories related individual characteristics yet the KIIs with programme staff showed the importance of organisational factors. This demonstrates the benefit of using multiple sources of data and the value of using the Socio-Ecological Model as a framework.

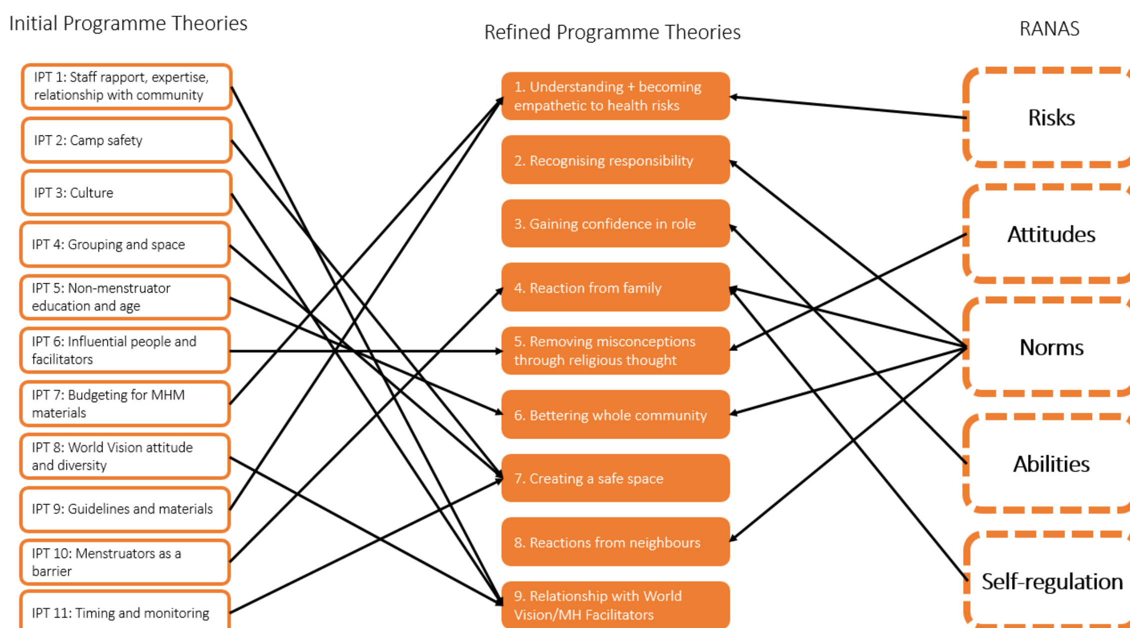


Figure 11 - How initial programme theories and RANAS elements relate to and inform refined programme theories

5.5 DISCUSSION

The refined programme theories are categorised into four levels of the Socio-Ecological Model, which will structure the discussion. On the individual level, the mechanisms related to understanding and becoming empathetic to health risks, recognising responsibility, and gaining confidence in the role. On the interpersonal level, reaction from family was a motivator for continuing the supportive behaviours. At the community level mechanisms related to removing misconceptions, focusing on bettering the whole community, creating a safe space, and reactions from neighbours. And on the organisational level the important factor was the relationship with World Vision.

Since there is no literature on the mechanisms associated with engaging non-menstruators in menstrual health, each PT is compared with literature from other, gender equity-related programmes such as engaging non-menstruators in intimate partner violence, and reproductive health. Though there are many studies where RANAS has been used in WaSH and WaSH behaviour change studies, we chose to use gender equity programmes as we reasoned that the potential changes in behaviour were more closely related to gender dynamics than WaSH. We also reference findings from the RANAS analysis and IPTs.

INDIVIDUAL

At the individual level, the important mechanisms we saw were a gain in knowledge, confidence, and a sense of responsibility. Though each programme theory was delineated into nine separate categories, many of them were overlapping and interrelating. For example, an increase in knowledge created an awareness of responsibilities, and a gain in confidence gave the assurance to accept and carry them out. Here we unpack those factors in relation to their corresponding RANAS components: Risk, Norms, and Ability.

A key component of the RANAS model suggests perception of risk as a motivator for behaviour change (RANAS Ltd 2022). This is evident in this study as most of the 20 interviewed reported becoming aware of the health risks as a large driver for adopting the supportive behaviours. With RANAS it is usually the perception of the health risk to one's self. However, in this case it was the health risk to one's family demonstrating an element of empathy – a key psychological mechanism linked to attitudes and norms - to be driving the change. This is similar to a realist review on intimate partner violence (IPV) intervention programmes where developing empathy for their partners was also an important mechanism for changing behaviours. They explain 'provision of knowledge alone is not enough. The process is more complex: Something needs to change internally within a participant (the mechanism) for that knowledge to result in a shift in beliefs or attitudes, acceptance of responsibility, or feelings of empathy' (Velonis et al. 2020).

A Norm factor in the RANAS approach is an individual's perception of their role in carrying out the behaviour. Many of the 20 interviewees reported feeling a sense of duty within the family to protect them from becoming ill and supporting them mentally and physically. There was also recognition that their menstruator family members work hard to support the family most of the time, demonstrating a desire to mirror their inputs. For some of the mechanisms, there wasn't necessarily a resource component but rather causal forces that happened organically based on the 'pre-existing context of action and related mechanisms that may be operating within it' (de Souza 2013). As per the methodological discussion introduced by Pawson and Manzano-Santaella (2012), de Souza (2013) adds that 'duties/responsibilities relate primarily to the roles and accompanying responsibilities and expectations that are assigned to individuals within a pre-existing social system'. For example, in this programme, there were varied components to the desired behaviours: supporting menstruators with household tasks if they are experiencing debilitating symptoms, providing MHM guidance, giving emotional support and understanding, and more widely undoing menstrual stigma within the community. However, in the RANAS analysis, many reported feeling a sense of duty to support their family, but not necessarily for reducing menstrual stigma in the community. In this way, organisations can work with pre-existing ideas around a population's sense of duty and responsibility to understand which tasks they may adopt more naturally and which need attention.

Another aspect of RANAS is Ability; the confidence one has to carry out and maintain a behaviour. The non-menstruators reported feeling confident largely due to their increased knowledge and being able to pass on that knowledge. Though hearing examples and stories from World Vision and the MH facilitators was reported to be effective, what they felt was lacking was story books with images to explain in detail the many varied ways in which they could support their family/improve menstrual health in the community. World Vision staff suggested that this could be co-created with the community and distributed throughout the camps entirety. World Vision has done this before in other projects, an example being a feasibility study of a menstrual health behaviour change intervention for women and girls with intellectual disabilities and their caregivers for Vanuatu's humanitarian responses (Wilbur et al. 2024).

Confidence may not only refer to their knowledge and ability to share accurate and helpful information but also their confidence to discuss a topic which may cause embarrassment, as described in the 2010 study looking at a UK-wide initiative raising parents' confidence and ability to talk about sex and relationships with their children (Kesterton & Coleman 2010). The confidence parents gained through the study not only encouraged and allowed them to initiate and provide useful and in-depth conversations with their children, it also gave the children comfort and confidence in their parents in knowing that they could revisit the conversation and ask follow up questions later. In another study looking at male involvement in a programme to reduce child maltreatment and gender-based violence, fathers became 'key figures and role models who built their self-confidence' as described by their daughters (Siu 2017).

To summarise, at the individual level we found that increased knowledge, confidence, and a sense of responsibility—shaped by perceptions of health risks, empathy, and pre-existing social roles—motivated behaviour change, with individuals more readily adopting supportive actions that aligned with their duties, while confidence in both discussing and supporting menstrual health practices grew through knowledge-sharing and role-modelling.

INTERPERSONAL

The reaction from family members was a big motivator for acting out the behaviours; both through the words of encouragement their family gave as well as seeing their physical and emotional wellbeing improve first-hand. A study looking at the role of non-menstruators in community MHM in India, found similar results with one participant observing how with their support, 'my family are safe, healthy and above all can exercise their reproductive health rights merrily without any conjecture of apprehension or stigma in their heart' (Mahon et al 2015). However, in our study, a positive reaction from menstruators was not always found, as predicted in the IPTs developed from interviews with programme staff. Participants reported that some family members – mainly their mothers - would refuse to discuss menstruation with them. This is an example of how some of the mechanisms were not triggered in response to the resources offered by the programme but relate more to the characteristics and social dynamics of the participants and community. For example, those with children who are caregivers may have more knowledge of menstruation by virtue of their role. This raises questions on how we conceptualise context. To address this, Greenhalgh and Manzano's developed the paper 'Understanding 'context' in realist evaluation and synthesis' (2021). They identified two key ways realist evaluators conceptualised context: (1) as observable features (space, place, people, things) that triggered or blocked the intervention and (2) the relational and dynamic features that shape the mechanisms through which the intervention works (Greenhalgh & Manzano 2021). A greater differentiation allows evaluators to distinguish what is what exactly is leading to the mechanism and to what extent, be it inputs, context, or a combination.

There are many instances in development work where only one sex is engaged in changing behaviours, which poses limitations (Chant and Gutmann, 2002, p.275; Chant 1995). For example, menstruators are often targeted in nutritional training schemes. However, if non-menstruators are excluded from the training, they may not understand the need for a new diet and refuse to change their habits, rendering the programme futile (Wallace 1991 in Chant 2000). As for WaSH programmes, Caruso et al. (2024) conducted

a systematic re-review of WASH trials to assess women's engagement in intervention delivery and research activities. All interventions were classified as either gender unequal or gender unaware according to the World Health Organization Gender Responsiveness Assessment Scale, which they stated indicate exploitative engagement. Though gender dynamics are relevant in this study in that it may be easier for non-menstruators to influence change than menstruators, without the other group being engaged in the programme, the same logistical point stands that changes may be constrained. This reinstates the importance of all community members being engaged simultaneously for collective change and lasting impact.

The non-menstruators perhaps understood this, as instead of being dissuaded they asked World Vision for help on how to combat the deeply ingrained cultural stigmas among their menstruating family members. Programme staff understood that progress would be slow due cultural stigmas limiting the outcomes of interventions, but were hopeful and encouraged by observing that small changes that had already occurred. For these reasons, Airhihenbuwa et al. (2013) argue that 'public health and health behavior intervention should focus more on culture than behavior to achieve meaningful and sustainable change resulting in positive health outcomes'. If these changes are too slow and the same mechanism needs to be achieved, some other input may be required to give this sense of encouragement and demonstration of the health benefits of the family members to non-menstruators.

COMMUNITY

Having worked with them since the beginning of the influx in 2017, World Vision staff have a good understanding of what motivates the Rohingya. Being a devout Muslim community, World Vision understood that messaging from the Imam was very powerful, both in instilling positive and negative perspectives on menstruation. Harnessing the important and influential role of faith leaders in religious communities has been utilised in many behaviour change campaigns, including improvements in vaccination coverage among displaced Rohingya in Bangladesh (Jalloh et al. 2019). World Vision runs another programme addressing the low usage of contraceptives among the population. Religion is a significant obstacle that hinders menstruators from using contraceptives. According to respondents in a study by Islam and Habib (2024), 'not having the desired children is deemed as a sinful act and goes against the teachings of Islam'; to 'reject what is perceived as a gift from Allah [God] is considered a sin and would displease Allah'. Additionally, menstruators 'perceive themselves as vessels responsible for the growth of the Islamic population in the world' especially if they are in good health and capable of making provisions (Islam & Habib 2024). This and other studies also found that 'Rohingya women often obey their husbands' commands in matters of contraception, fearing repercussions such as intimate partner violence or the threat of ending marital relations' (Schuler 2011). Thus, World Vision shaped their messaging to both parents to convey Allah's wish for families to concentrate on the lives that already exist and to take good care of the mothers' and child's health, which may be compromised by having more children, especially in the context of the camp. The population then became much happier to use contraceptives. Having

messaging such as this come directly from the Imam can be more effective. Accordingly, organisations can work with the Imams to promote messaging which advances the health and wellbeing of the population.

Many of the 20 interviewees spoke about how they were proud not only to be able to support their families, but also to spread messaging and lead an example to other members of the community. Some even spoke about how their own older non-menstruator family members were an inspiration to them when observing them give support to their menstruating family. One study on males in violent prevention research found that 'men who take action to stop incidences of violence not only help lessen negative outcomes, their behaviour also challenges misconceptions… and fosters a sense of community responsibility for violence prevention' (Carmody 2014). This point again looks at the pre-existing social system as a causal mechanism, rather than inputs from the programme alone. Jagosh et al. (2015) speak about how programme inputs may eventually turn into contextual factors over time, which lead on to other mechanisms as a 'ripple effect'. With discussing and supporting family with menstrual health becoming commonplace among non-menstruators, it becomes the norm, allowing other non-menstruators to follow suit naturally.

Safety has been documented as a key factor that may prevent people from participating in humanitarian programmes (Anderson, 2020). Within the IPTs, staff also had observed that conflict impedes programme attendance. Non-menstruators recognised that World Vision worked to provide a safe and comfortable space for people to attend including splitting members by age and sex, as per preference. Non-menstruators spoke not only about how it was a safe space free from threat of violence but how the space allowed everyone to share and ask questions without judgement or shame. It was interesting to see how some participants felt they wanted to replicate the gender dynamics of male and female World Vision staff working together when this goes against Sharia Law. The UNHCR (2020) study also found that issues related to gender relations are hard to address when similar imbalances are 'embedded and reproduced within social norms, the humanitarian system, and national and international institutions of power'. Perhaps by seeing menstruators in World Vision take a leading or equal role to non-menstruators, ideas about gendered roles may transform in the community.

Though the 'Norms' element of the RANAS model suggests a negative reaction from neighbours could be a deterrent from adopting new behaviours, most participants seemed to remain steadfast in their belief that it is the neighbours who need to change their perspective if not aligned with the campaign. One realist evaluation looking at the prevention of intimate partner violence discussed how the men in the study were able to change their behaviour because there were 'acceptable alternatives to the dominant masculinity' where they could make behavioural changes but still meet 'masculine ideals' (Lowe et al. 2022). This may apply here where – though changing the typical role of masculinity wherein menstruation is not discussed or helping out with household tasks that may be typically for women – they are adopting a new role of being supporter to their family members, which still may be considered masculine. If the programme was conducted in a community where the reaction of neighbours and friends was a big influencing factor, an intervention to address this would have to be implemented. Additionally, ideas of masculinity should be understood and used to tailor interventions.

ORGANISATIONAL

All participants spoke extensively on how their relationship with World Vision and the MH facilitators was a big factor in creating a comfortable and equal space in which they felt respected, not forced to change their opinions, and given time to contemplate the new information. Similarly, in Hennegan et al.'s (2024) study on the influence of menstrual health on adolescent girls' health and education outcomes, researchers found that participants would become more honest and give more detailed answers the more familiar and comfortable they became with the researchers. All non-menstruators said the frequency of meetings is a key input to help them gain confidence and commitment to their supporting roles. They also said this would help uphold the relationship they have with World Vision.

Behaviour change campaigns can easily become neo-colonial, often promoting a homogenized set of behaviours that align with globalized norms, leading to the erosion of cultural diversity. What UNICEF and World Vision aimed to do here was to provide the community with information on improving menstrual health, but for them to shape what this looks like for themselves. This was maintained by having MH facilitators who are part of the community themselves. Community Change Champions have been used in development programmes as an effective, decentralised, and community-led way of improving a population's behaviours (Wilkinson et al. 2024). Studies have found that positive ratings of champions' performance were significantly correlated with the success and validity of programmes and that selecting suitable champions is likely to influence positive results of such community health programmes (Aoun et al. 2017). Having the community select MH facilitators who they respected and had influential power meant that programmes were more likely to influence behaviour.

LIMITATIONS

A limitation previously outlined is that the lead author wasn't able to re-enter the camp on her second visit for the rest of the data collection. Though this posed challenges for relaying how to conduct realist interviews to programme staff, it gave more autonomy to data collectors who knew exceptionally more about the context and population. Thus, the data may have been richer in this sense. Another drawback to this however, is that interviewees may have been exaggerating their claims and answering what they thought World Vision colleagues wanted to hear about their programme whereas they may have answered more honestly to the lead author as an outsider. Other limitations include small sample sizes. Only 9 staff were interviewed during the development of the IPTs (though this was all of them working on the programme), and 20 people from the community, in one context, one time, and only working with one organisation, thus conclusions may be limited . There are also biases in the reporting from participants, in the reporting from methods, and from sampling frames. Difficulties with access to the camp, pressing priorities for staff and participants, other programme deadlines, capacity of staff, and emergencies such as camp fires and floods impacted the ability to do more iterations of theory refinement.

5.6 CONCLUSION

Recent guidance illustrates the importance of engaging non-menstruators in humanitarian programmes to reduce barriers to menstrual health in these settings. Though some humanitarian organisations have begun

to include this in their programmes, there remains a paucity of literature on why and how these programmes are meant to work. Drawing on realist approaches, this study addresses this knowledge gap and articulates key causal mechanisms of shifting attitudes and behaviours towards menstruation using a World Vision programme as an exemplar. These findings contribute important data-driven and theory supported insights that are critical to advancing the engagement of non-menstruators in menstrual health in humanitarian settings. The study's refined programme theories, framed within the Socio-Ecological Model, reveal multiple levels of influence. On the individual level we have seen how it's crucial to help non-menstruators understand and become empathetic towards the health risks, recognise their responsibility within the family, and gain confidence in their ability to share knowledge and carry out the supportive tasks. On the interpersonal level, perceiving their family to be happy, healthy, and appreciative as a result of their support is a big motivator for non-menstruators to continue the behaviours. At the community level, it was evident that messaging from the Imam was well received to change perceptions and remove misconceptions. The notion of working to better the whole community was a big motivator. It was also important to create a safe space for non-menstruators to feel comfortable to learn and share in. Any negative reactions of neighbours did not seem to have much influence, with the non-menstruators possessing a strong sense of integrity. Lastly, the organisational level showed the importance of cultivating a trustworthy relationship with World Vision. The study underscores the importance of culturally sensitive approaches and the role of community members and leaders, such as Imams, in disseminating positive messages about menstrual health. By fostering a supportive environment and leveraging existing social structures, organisations can more effectively engage non-menstruators to promote menstrual health, ultimately contributing to the community's overall health and wellbeing and promoting gender equity.

5.7 REFERENCES

Airhihenbuwa C.O., Ford C.L., Iwelunmor J.I. 2013. Why Culture Matters in Health Interventions: Lessons From HIV/AIDS Stigma and NCDs. Health Education & Behavior. 41(1), pp.78-84.

Anderson, K. 2020. Tearing down the walls: Confronting the barriers to internally displaced women and girls' participation in humanitarian settings. UNHCR.

Aoun S., Sainsbury K., Mullan B., Shahid S. 2017. "Champion" behavior in a community obesity reduction program: Feedback from peers. *Journal of Health Psychology.* **22**(2), pp.148-157. Available from: doi:10.1177/1359105315596372

Carmody, M., Salter, M., Presterudstuen, G-H. 2014. Less to Lose and More to Gain? Men and Boys Violence Prevention Research Project: Final Report. Retrieved from: http://www.women.nsw.gov.au/__data/assets/file/0019/300619/PDF_2_Final_Report_Men_and_Boys.pdf

Caruso, B.A., Ballard, A.M., Sobolik, J. et al. 2024. Systematic re-review of WASH trials to assess women's engagement in intervention delivery and research activities. Nat Water. 2, pp. 827–836.

Chant, S., Gutmann, M. 2002. C. 'Men-streaming' gender? Questions for gender and development policy in the twenty-first century. *Progress in Development Studies.* **2**(4), pp.269–282.

Chant, S. 1995. 'Policy approaches to women and gender in developing countries: an overview', paper prepared for the Commonwealth Secretariat, Commonwealth Youth Programme Planning Meeting, Maidstone, Kent.

Chant, S. 2000. From 'Woman-Blind' to 'Man-Kind' Should Men Have More Space in Gender and Development? *IDS Bulletin*. **31**(2).

Chidziwisano, K., Slekiene, J., Kumwenda, S., Mosler, H.-J., Morse, T. 2019. Toward complementary food hygiene practices among child caregivers in rural Malawi. *American Journal of Tropical Medicine and Hygiene*. **101**(2), pp.294-303. Available from: doi:10.4269/ajtmh.18-0639.

Dalkin, S.M., Greenhalgh, J., Jones, D. 2015. What's in a mechanism? Development of a key concept in realist evaluation. *Implementation Sci*. **10**(49). Available from : https://doi.org/10.1186/s13012-015-0237-x

de Souza, D.E. 2013. Elaborating the Context-Mechanism-Outcome configuration (CMOc) in realist evaluation: A critical realist perspective. *Evaluation*. **19**(2), pp. 141-154. Available from: https://doi.org/10.1177/1356389013485194

Erchull M.J. 2020. "You Will Find Out When the Time Is Right": Boys, Men, and Menstruation. In: Bobel C., Winkler I.T., Fahs B., Hasson K.A., Kissling E.A., Roberts TA. (eds) The Palgrave Handbook of Critical Menstruation Studies. Palgrave Macmillan, Singapore. https://doi.org/10.1007/978-981-15-0614-7_31

Evans, W. 2019. 'the role of men in menstrual hygiene management interventions in emergencies' by William Godfrey Evans, (Master of Science, Loughborough University, November 2019).

Greenhalgh, J., Manzano, A. 2021. Understanding 'context' in realist evaluation and synthesis. *International Journal of Social Research Methodology.* **25**(5), pp.583–595. Available from: https://doi.org/10.1080/13645579.2021.1918484

Hales, G. Hutchings, P. Roelich, K. Das, M. Akram, N. Begum, S. Sultana, Z. 2024. What influences non-menstruator attitudes and behaviours towards menstruation among Rohingya refugees in Bangladesh? A quantitative analysis. Pre-print. medRXiv. Available from: https://doi.org/10.1101/2024.09.17.24313147

Hales, G., Hutchings, P., Roelich, K. et al. 2024. Centring participant experience: a realist evaluation of a menstruator-friendly facility design project in a refugee settlement, Lebanon. BMC Women's Health 24, 170.

Hennegan J., Hasan M.T., Jabbar A. 2024. Protocol for the Adolescent Menstrual Experiences and Health Cohort (AMEHC) Study in Khulna, Bangladesh: A Prospective cohort to quantify the influence of menstrual health on adolescent girls' health and education outcomes. *BMJ Open*. **14**. Available from: doi: 10.1136/bmjopen-2023-079451

Islam, M., Habib, S.E. 2024. "I do not want my marriage to end": a qualitative investigation of the sociocultural factors influencing contraceptive use among married Rohingya women residing in refugee camps in Bangladesh. *Reprod Health.* **21**(32). Available from: https://doi.org/10.1186/s12978-024-01763-8

Jagosh, J., Bush, P.L., Salsberg, J. 2015. A realist evaluation of community-based participatory research: partnership synergy, trust building and related ripple effects. *BMC Public Health*. **15**, p.725. Available from: https://doi.org/10.1186/s12889-015-1949-1

Jalloh M.F., Bennett S.D., Alam D., Kouta P., Lourenço D., Alamgir M., Feldstein L.R., Ehlman D.C., Abad N., Kapil N., Vandenent M., Conklin L., Wolff B. 2019. Rapid behavioral assessment of barriers and opportunities to improve vaccination coverage among displaced Rohingyas in Bangladesh. Vaccine. **37**(6), pp.833-838.

Kesterton, D., Coleman, L. 2010. Speakeasy: a UK-wide initiative raising parents' confidence and ability to talk about sex and relationships with their children. *Sex Education*. **10**(4), pp.437–448. Available from: https://doi.org/10.1080/14681811.2010.515100

Kilanowski, J. F. 2017. Breadth of the Socio-Ecological Model. *Journal of Agromedicine.* **22**(4), pp. 295–297. Available from: https://doi.org/10.1080/1059924X.2017.1358971

Lowe H., Dobbin J., Kiss L., Mak J., Mannell J., Watson D. 2022. Mechanisms for the prevention of adolescent intimate partner violence: A realist review of interventions in low- and middle-income countries. *PLOS Glob Public Health*. **2**(11). Available from: https://doi.org/10.1371/journal.pgph.0001230

Mahon, T., Tripathy, A. Singh, N. 2015. "Putting the Men into Menstruation: The Role of Men and Boys in Community Menstrual Hygiene Management." *Waterlines*. **34**(1), pp. 7–14.

Olusola, A.I., & Ojo, M.Y. 2016. Patriarchal Ideologies on Women's Menstrual Cycle: an Infringement on the Rights of Women. International journal of humanities and social sciences, **1**, pp. 117-130.

Pandit K., Hasan M.J., Islam T., Rakib T.M. 2022. Constraints and current practices of menstrual hygiene among Rohingya adolescent girls. *Heliyon.* **8**(5). Available from: doi: 10.1016/j.heliyon.2022.e09465.

Pawson, R. Tilley, N. 2004. Realist Evaluation. [Online]. Available from: https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=e092393652456869d7ccf6fa57b5a5a4d2d9e10a. Accessed 5 December 2024.

Pawson, R., Manzano-Santaella, A. 2012. A realist diagnostic workshop. *Evaluation*. **18**(2), pp.176-191. Available from: https://doi.org/10.1177/1356389012440912

RANAS Ltd. 2022. The RANAS approach to systematic behavior change. Methodological Fact Sheet 1. Zürich, Switzerland.

Schuler S.R., Rottach E., Mukiri P. 2011. Gender norms and family planning decision-making in Tanzania: a qualitative study. *J Public Health Africa.* 2011. **2**(2), pp.102–7.

Siu, G.E., Wight, D., Seeley, J. 2017. Men's Involvement in a Parenting Programme to Reduce Child Maltreatment and Gender-Based Violence: Formative Evaluation in Uganda. *Eur J Dev Res.* **29**, pp.1017–1037. Available from: https://doi.org/10.1057/s41287-017-0103-6

Slekiene, J. Mosler, H.-J. 2021. Does poor mental health change the influence of interventions on handwashing in a vulnerable population of rural Malawi? The key role of emotions. *Journal of Water, Sanitation and Hygiene for Development*. **11**(3), pp.350–361. Available from: doi.org/10.2166/washdev.2020.107.

Toma I., Chowdhury M., Laiju M., Gora N., Padamada N., Novales C. 2018. Rohingya refugee response gender analysis: recognizing and responding to gender inequalities. Joint Agency Research Report. Available from : https://oxfamilibrary.openrepository.com/bitstream/handle/10546/620528/rr-rohingya-refugee-response-gender-analysis-010818-en.pdf?sequence=1.

Velonis, A.J., Mahabir, D.F., Maddox, R., O'Campo, P. 2020. Still Looking for Mechanisms: A Realist Review of Batterer Intervention Programs. *Trauma, Violence, & Abuse*. ***21***(4), pp.741-753. Available from: https://doi.org/10.1177/1524838018791285

Wilbur J., Crow C.L., Poilapa R., Morrison C. 2024. Feasibility study of a menstrual health behaviour change intervention for women and girls with intellectual disabilities and their caregivers for Vanuatu's humanitarian responses. PLOS Glob Public Health **4**(1): e0002244

Wilkinson K., Berry V., Lloyd J., Marks G., Lang I. 2024. Understanding Knowledge Mobilisation between Community Champions and Parents: Evidence from a Community-Based Programme to Support Parents with Young Children. Children (Basel). **11**(8), p901. Available from: doi: 10.3390/children11080901.

Wong G., Westhorp G., Manzano A., Greenhalgh J., Jagosh J., Greenhalgh T. 2016. RAMESES II reporting standards for realist evaluations. *BMC Med*. **14**(1), pp.1–18. Available from: https://www.ramesesproject.org/media/RAMESES_II_Retroduction.pdf

Zakaria, M., Islam, M. A., Islam, M. K., Mostafa, M. R., Begum, A., & Hasan, K. M. 2025. Patriarchal dominance and relationship: couple communication's mediating effect on sexual and reproductive health outcomes among Rohingya refugee women. Journal of Communication in Healthcare, 1–12.

CHAPTER VI

DISCUSSION

The previous four chapters of this thesis present two case studies comprising my doctoral research exploring ways of addressing menstruators' practical and strategic menstrual health needs through involving both people that do and do not menstruate in humanitarian programmes. The first case study looks at how inputs from a programme consulting menstruators in facility design work with contextual factors to ensure a positive participant experience during a menstruator-friendly facility design project. The second looks at how the inputs of a programme to engage non-menstruators in menstrual health work with contextual factors to help influence attitudes and behaviours towards menstruation. The following table summarises the collection of papers, their individual contributions, and their publication status.

Table 15 - Chapter, topic, contribution and paper status

Study topic	Contribution	Publication status
A realist evaluation of a menstruator-friendly wash facility design project to understand how to centre participant experience in a refugee settlement (case study 1)	The first research to identify the mechanisms leading to a positive participant experience based on programme inputs and contextual factors of a menstruator-friendly WaSH facility design project	Published in BMC Women's Health 9th March 2024 Presented in Chapter III
A statistical analysis of survey data from a programme engaging non-menstruators to assess what influences attitudes and behaviours towards menstruation (case study 2)	The first research to identify the psychosocial and contextual determinants of attitudes and behaviours towards menstruation among non-menstruators	Submitted to PLOS ONE 22nd August 2024 – under review Presented in Chapter IV
A realist evaluation that creates and tests theories to explore the generative mechanisms that lead to positive changes in attitudes and behaviours towards menstruation by non-menstruators (case study 2)	The first research to uncover the mechanisms of change of non-menstruators attitudes and behaviours towards menstruation	Invited to review and resubmit to PLOS Water January 2025 Presented in Chapter V

While the previous chapters are dedicated to the findings of each study, in this section I synthesise the findings and take a cross-comparison of the two case studies to discover wider insights that answer the

overarching research questions. I also state the thesis' overall contributions and implications. I include again the thesis aim, objectives and research questions for reference:

Aim: *To address menstruators' practical and strategic menstrual health needs in humanitarian programmes by understanding how to involve people that do and do not menstruate in a contextually cognisant way.*

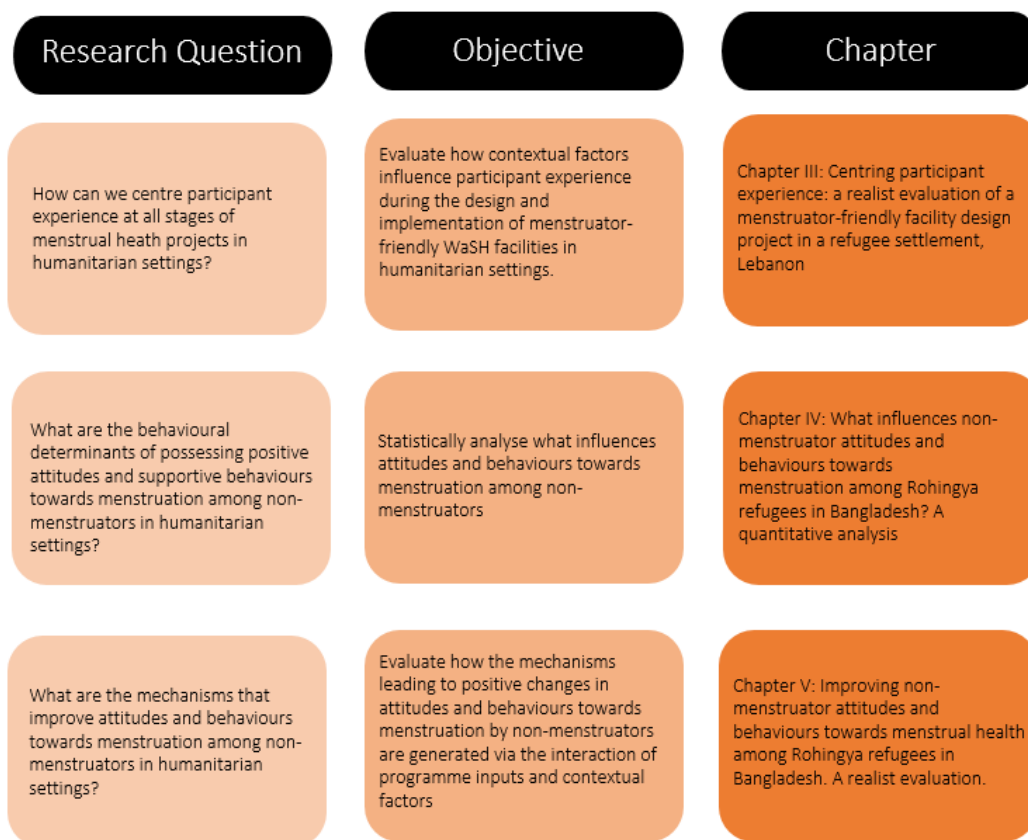


Figure 12 - Research questions, objectives, and their corresponding chapters of the thesis

6.1 COMPARATIVE AND EMPIRICAL CONTRIBUTIONS

This section summarises the contributions from each of the empirical papers. I feel it's necessary to restate here that the main idea behind realist evaluation is that programme outcomes using the same inputs differ depending on the context in which it takes place. What realist evaluation then aims to identify is (1) the mechanisms of change which are necessary to achieve the desired outcomes and (2) the contextual factors necessary for those mechanisms to be fired. Once we have these insights, we can shape other contexts to emulate those that are able to fire the appropriate mechanisms for such a programme. Thus, the findings of realist evaluations are both context-specific yet widely applicable to a range of different contexts. If it's the case that a contextual factor cannot be altered to emulate the ones found in the evaluation, programme implementers can get creative in discovering other ways to try and fire the same mechanisms using different contextual factors.

CONTRIBUTIONS PAPER 1

Though there is some useful humanitarian guidance for consulting menstruators on their needs within menstrual health programmes that emphasises participant comfort and safety, what is missing is evidence

of how these inputs transpire in practise due to varying contextual factors. Without considering context, programme inputs may not materialise in the intended way. Since our relationship to menstruation is vastly differing among cultures and contexts, one suggested input may be necessary for one context, irrelevant for another, and even damaging in the next.

The first paper demonstrates which mechanisms and contextual factors are necessary to ensure a positive participant experience when implementing a menstruator-friendly WaSH facility design programme in a refugee settlement. The results enhanced understanding of the potential for wider contextual structures and resources to enrich or constrain end-user experience during participation. These contextual factors to cultivate were based around different levels of the Socio-Ecological Model. On the individual level was menstruators' valuing of menstrual health, aided by MHM education and explanations of the project details prior to recruitment. On the interpersonal level was non-menstruator and religious leader support for the project. On the community level was splitting demographic groups for FGDs, creating safe spaces for FGDs, and adapting the project around gendered responsibilities. And on the organisational level was cultivating good relationships with participants, minimising cultural gaps, negotiating needs into designs, and explaining limitations. This led to mechanisms related to feelings of being informed, autonomous, and prepared, valuing MHM, inclusion, trust, and safety. Participants felt comfortable sharing, adjusted to limitations, and felt respected, valued, and satisfied with outcomes. They gained confidence in the project and felt supported and unthreatened by non-menstruators. This provides empirical evidence to inform guidance on how best to engage menstruators in menstrual health projects and programmes based on cultivating the right environment for ensuring a positive participant experience. If guidance can instruct humanitarian actors to aim for sparking the mechanisms I've outlined by establishing the contextual factors I've defined, humanitarian actors can assure menstruators' wellbeing before, during, and after participation within programmes.

One aspect found in the literature, which contributes largely to menstruators' experience of participating in menstrual health programmes and subsequently access to menstrual health, is the attitudes and actions of non-menstruators. Although setting out to explore this in this first case study, it was found that the settlement's non-menstruators were largely supportive of the project and their family's participation in it, and so the intervention was not specifically designed to address their role. Consequently, theories surrounding this aspect could not be tested. This gave way to the second case study, which aimed at exploring non-menstruator attitudes and behaviours towards menstruation in a context where the actions of non-menstruators and social dynamics of the society greatly influenced menstruator's access to menstrual health requirements.

CONTRIBUTIONS PAPER 2

Though there have been global studies documenting non-menstruator attitudes towards menstruation, there has not been research into what external factors are influencing this (Allen et al. 2011; Chang et al. 2012; Wong et al. 2013; Mason et al. 2017). The second paper provides the first published of its kind; a regression and ANOVA comparison of means statistical analysis to discern the contextual and psychosocial determinants of attitudes and behaviours towards menstruation and menstruators among Rohingya non-

menstruators. The influential psychosocial factors included who participants discussed menstruation with, beliefs about menstruation, the perceived severity of menstrual health issues, family reaction, menstrual knowledge, commitment, and confidence. Influential contextual factors included house location, marital status, having children, age, arrival year in camp, previous menstrual education from World Vision, and how and at what age they were introduced to menstruation. The RANAS approach is designed to statistically analyse which psychosocial factors are important for changing behaviours within a specific community. Therefore, my primary contribution here is that my findings can inform the most significant factors to consider when designing and implementing a behaviour change programme based on attitudes and behaviours towards menstruation among Rohingya non-menstruators. The study also demonstrated positive changes in 22 variables from baseline to endline following World Vision's intervention. What was then necessary was to explore the mechanisms of change that led to these improvements, and the contextual factors that influenced them.

CONTRIBUTIONS PAPER 3

Humanitarian guidance recognises the importance of engaging non-menstruators in menstrual health. However, contextualised how-to guidance is missing. In the third and final paper of the thesis, I deployed a realist evaluation to the programme to ascertain how the programme works to improve attitudes and behaviours towards menstruation among non-menstruators based on how the programme inputs were interacting with contextual factors. The results demonstrated how it is crucial to help non-menstruators understand and become empathetic towards the health risks, recognise their responsibility, and gain confidence in their ability to share knowledge and carry out the supportive tasks. It also demonstrated that perceiving their family to be happy, healthy, and appreciative as a result of their support is a big motivator. Messaging from the Imam was well received to change perceptions and remove misconceptions. The notion of working to better the whole community was a big influence but negative reactions from neighbours did not have much impact. It was also important to create a safe space for non-menstruators to feel comfortable to learn and share in. Lastly, the study highlighted the importance of cultivating a trustworthy relationship with World Vision. This research is the first published of its kind to inform humanitarian practitioners what is necessary to improve attitudes and behaviours towards menstruation among non-menstruators, with a contextual basis. What I would hope for is to inform humanitarian guidance on engaging non-menstruators in menstrual health (which is near non-existent), to provide demonstrable ways of triggering the mechanisms I've discovered through cultivating the contextual factors I've outlined.

6.2 CASE STUDY COMPARISONS

The two case studies in Lebanon and Bangladesh highlighted the contextual factors necessary for engaging menstruators and non-menstruators in menstrual health programmes in refugee camps, respectively. In this section, I compare the inputs of the two case studies to understand how they influence programme mechanisms and outcomes based on differing contextual factors.

In Lebanon, having the importance of the project explained to participants beforehand was used to mobilise the community in choosing to participate. Similarly in the Bangladesh case study, it was the

recognition of responsibility that motivated non-menstruators to join the programme and start supporting their family in their menstrual health. Since the population in the settlement in Lebanon was very small, it is easy to efficiently disseminate messages to the community altogether, focused on giving them information about the programme and mobilising commitment. This was effective in that all menstruators in the settlement chose to participate. Message dissemination is more of a challenge when you have hundreds of thousands of people to reach. In this way, the programme in Bangladesh was less prescribed, with staff estimating uptake to be at about 70%. Smaller refugee camps tend to foster higher levels of participant involvement and community engagement compared to larger camps due to interpersonal connections with programme staff and a sense of community ownership which larger camps often lack (Anderson 2020). This requires organisations within larger camps to work harder to foster community support and methods of message dissemination.

In both case studies, menstrual health education was imperative. In Lebanon, it helped individuals improve their hygiene practises, understand the necessity of participation in the project, and ensure all participants had the same level of knowledge before contributing to the design of facilities. In Bangladesh, menstrual health education was one of the largest drivers for non-menstruators to understand and become empathetic to the unpleasant symptoms and health risks menstruators may face. Before arriving in Bangladesh, many non-menstruators said they had no knowledge about menstruation, whereas the Syrians in the Lebanese case study had a base level understanding. Other research highlights the importance of assessing the level of knowledge already present in the community and adjusting education plans accordingly to avoid redundancy and wasted time and resources (Hashemi 2018).

Within both case studies it was mentioned how the organisations would fit meetings around participants' schedules and host them in convenient locations. In the case of menstruators in Lebanon, it would be in their houses if they needed to be there to look after young children and in the case of non-menstruators in Bangladesh it would be next to their place of work. This ensured that all people could be included irrespective of gendered responsibilities. Since the Lebanese settlement is small, with people working on the surrounding land, no-one had the excuse of distances being too far to attend FGDs. In the Rohingya camp, one reason for lack of attendance was the meeting place being too far from their workplace. World Vision mitigated this by offering meetings at people's houses, or closer to places of work. Other research has documented long distances to meeting places as being a barrier for their attendance (Vatasoiu 2015).

One of the most impactful contextual factors in both cases studies was the relationship with programme staff. Both had been working with the community for many years and had similar languages and cultures. Where cultural factors differed – especially in relation to menstrual health – both organisations worked to bridge these gaps and demonstrate understanding, not wishing to impose on or try to coerce or force participants to change ways of thinking. All staff received rigorous training on menstrual health and engaging with the community. Other research agrees that 'only a closer and more direct engagement between refugees and those deployed to assist them, can lead to the kinds of trusting relationships which… facilitate participatory work' (Kaiser 2004, p.199).

Another important factor was creating a safe space – both in terms of emotional as well as physical safety - wherein everyone could learn and share together equally. When a topic is as stigmatised, embarrassing, or triggering as menstrual health and its associated implications can be, instilling comfort in participants is compulsory. Since the settlement in Lebanon was small, with everyone being familiar with one another, no one reported feeling physically unsafe. In Kutupalong camp, on the other hand, it was reported that threats to safety sometimes prevented people from participating in meetings, as is a common for people living in refugee camps generally (Anderson 2020). Thus, it was an important contextual factor to address in case study two but not one.

In terms of ensuring comfort within the meetings themselves, both organisations worked with existing group dynamics, and split groups according to age, sex, and familiarity. Again, since the settlement in Lebanon did not contain many people this was relatively straightforward. In the case of Bangladesh, this necessitated a little more planning. With the menstruators in Lebanon, everyone was already comfortable to discuss menstruation together. As for the non-menstruators in Bangladesh, this was something that took time and getting used to, with one participant mentioning how the space began to feel safer over time as everyone became accustomed to discussing menstruation and their personal stories. These feelings of safety and comfort were necessary for participants to explore unchartered territory together and even have their ideas of gender norms questioned, which can be unsettling. Research on a male health programme worked to make 'men feel safe and comfortable by valuing and validating their lived experiences and worldviews, while still creating a platform to build new skills and increased confidence to confront gender norms or expectations' (Lefkowich 2017, p.1520). Without having a feeling of security, it is harder for participants to step out of their comfort zones, which discussing menstruation often necessitates.

Negotiating limitations was important for the programme in Lebanon since menstruators were stating their needs for programme staff and engineers to listen to and incorporate into facilities. Though the type of programme was different in Bangladesh, some participants did make requests such as increasing meeting frequency, creating visual aids for capacity building, and asking for advice on how to talk to family members who did not want to engage in the topic. In the Lebanese case study, they have more autonomy to be able to communicate disappointments when needs are not met since the LRC is frequently onsite and directly approachable. Since the Rohingya camp is so large, if they have complaints, they have more structured feedback mechanisms to adhere to. UNHCR (2017) finds that when feedback mechanisms are utilised 'it is very rare that a response is altered based on the feedback collected', leading individuals to feel unheard (p.4). They have since identified 10 steps to guide responders when setting up feedback mechanisms making it 'simpler, more consistent and better coordinated' (UNHCR 2017, p.4).

In the Bangladesh case study, the need for valuing participant input did not arise like it did in Lebanon. Though the Lebanese case study was largely run by the Lebanese Red Cross, the programme also employed British engineers from ARUP. This meant there were multiple levels of communication where participants' needs may have been lost or misunderstood. Therefore, ARUP felt that the more FGDs there were the better so that they could fully grasp what participants needed in their facility design. This led to the

development of the programme theory of the need for external staff to demonstrate appreciation for participants' inputs both through putting in the effort to truly understand participants' needs (by demanding frequent communication) and also to ensure the translation into incorporating their words into the facility's design. With the Rohingya refugees, only World Vision staff who had been working with them from the beginning of the influx in 2017 were communicating with them, where no misunderstandings of culture or context were reported in the data. Thus, there was not an urgent need to demonstrate if participants' inputs were understood as it was largely a given. In contexts where this is necessary UNHCR (2017) advise to 'demonstrate you've listened: proactively explain the changes you've made and why certain actions sometimes cannot be taken' (p.16). In this way, participants won't be left to question 'Did they really listen to me?' (UNHCR 2017, p.4).

As the thesis has demonstrated, non-menstruators can act as a barrier to menstruator participation in humanitarian programmes. This was not an issue in the Lebanese case study, with non-menstruators actively encouraging their family members to participate. Though with different gender dynamics, familial support was also essential in the Bangladesh case study. It was important for non-menstruators to have their family members be encouraging and supportive of their involvement with menstrual health and for non-menstruators to see the physical and mental health improvements of their family to embolden them to continue. Additionally, some noticed how their personal relationships improved and became closer through the programme. A Vietnamese study on preventing GBV similarly found that 'men needed support to remove their 'masks', and gain confidence to present themselves as 'new men', not only in their family, but also in public' (Hoang 2013, p.93). This again demonstrates how behaviour change rarely just occurs on the individual level but requires input from interpersonal relationships or other contextual factors. In terms of the reaction from the rest of the community, the Rohingya non-menstruators weren't affected by negative reactions, having developed integrity and being adamant that all non-menstruators had to change their attitudes for the whole of the community to improve their health and wellbeing.

In both case studies, the 'Shaweesh' or 'Mahji' (community leaders) and Imam (in the case of Bangladesh) played an important role in encouraging people to take part in the programmes. In Bangladesh, receiving messaging from the Imam was also key in influencing attitudes towards menstruation. This is a common tool for behaviour change as in many societies 'religious leaders play an influential role in the construction of gender norms' (Boyer et al. 2022, p.1). A study in Uganda found that 'if leaders offered a more progressive religious interpretation of gender roles… violence would reduce' (Boyer et al. 2022, p.1). This is not to say the power of religion and religious leaders should be exploited as has been common in colonial development work, wherein the religion of external American or European groups has been used to control populations (Manji & O'Coill 2002). Rather, existing religious leaders of the population can be collaborated with to create appropriate messaging together.

Undoubtedly, one of the largest contextual differences between the two case studies was non-menstruator support, or lack thereof, which was one of the drivers leading me to utilise two case studies instead of one. In Lebanon, the non-menstruators, although not wishing to be involved themselves, were supportive of the project and encouraged their family members to take part by themselves. With the Rohingya, we have seen

that cultural practises prevent menstruators from participating in menstrual health programmes and non-menstruators are averse to discussing the subject at all. Along the same vein, a key resource that differed between the two case studies was that the IFRC already had some guidance on how to engage their participants (menstruators), whereas World Vision (engaging non-menstruators) had none. This again demonstrates how excluded non-menstruators have been from menstrual health conversations, and the necessity of the research within this thesis.

6.3 PRACTICAL IMPLICATIONS

Returning to the table in the first chapter summarising the current guidance documents for involving menstruators and non-menstruators in menstrual health programmes, I compare my findings to demonstrate whether it supports, contradicts or nuances it, based on differing themes.

6.3.1 Menstruators within guidance

Table 16 - Comparing thesis results with guidance on consulting menstruators in menstrual health programmes from Table 4

THEME	GUIDANCE SUMMARY	SUGGESTION FOR IMPROVING GUIDANCE
PARTICIPATION AND CONSULTATION	Consult diverse menstruators on the design and management of facilities to ensure they are safe, private, accessible, and culturally appropriate, while conducting regular gender-separated consultations and involving all in participatory planning for inclusive and effective programmes.	Consult menstruators on WaSH facility design by considering the contextual factors and causal mechanisms promoting participant experience comprising of individual (choices influencing and experience during participation), interpersonal (group dynamics and the role of non-menstruators), and organisational (expertise and knowledge, relationship to participants and cultural differences) factors. The regularity of sessions is good for building familiarity and rapport with programme staff. Gender segregation is generally advised but depends on the community's wants and needs.
FEEDBACK MECHANISMS	Set up feedback and complaint mechanisms disaggregated data by sex, age, disability for community input and to monitor programmes.	See the appendices for justifications for end-user consultation that demonstrates how the community can be given a sense of autonomy by being able to give feedback whenever they need rather than at set points ascribed by programme staff. This is aided by a friendly relationship with staff and their frequent presence within the settlement.
MATERIALS	Develop and distribute culturally appropriate Dignity Kits and hygiene materials by consulting menstruators, prioritizing safety, empowerment, and local production while ensuring feedback-driven design, replenishment planning, and inclusive resource distribution	Meet needs if they're stated or communicate why they can't be met if it's not possible. Else the community feel ignored and trust with programme staff is dampened.
STAFF TRAINING	Adapt strategies continuously; brief staff on protection and sensitive issues. Provide hands-on training.	Ensure staff are capable and professional, demonstrating to end-users their competency and increasing confidence. There is a need for staff to develop a trustworthy and familiar rapport with end-users to make the stigmatised topic of menstruation more comfortable to discuss together, and for participants to be able to open up about private needs.
STAFF GENDER	Use all menstruator team when consulting menstruators.	This is contextually dependent – the community should be understood or consulted on what they require.
SAFE SPACES	Establish private, secure consultation spaces using standardized guidelines to support survivor care, address safety needs, and provide a supportive environment for menstruators, especially in emergency settings.	Not only a safe space but a space that is accessible to all and at the necessary times. It is important to arrange meetings at a time and location that work around people's gendered needs i.e. if someone has a baby who can't be left alone, the FGDs could be held at the parent's house. It is also important to understand group dynamics and split the FGDs between people who feel comfortable and would be willing to share freely with one another.
MESSAGING	Develop culturally sensitive messaging and integrate MHM into WASH, education, and health plans.	MHM education is necessary as it enables menstruators to understand more about their menstrual needs and choices, and the importance of this and therefore be in a better position to choose to be involved and give informed feedback for the design of facilities. Other programme theories spoke of the importance of bridging cultural gaps to ensure comfort and promote trust with programme staff.
COMFORT	Important that menstruators know they are free to refuse any questions stop interview at any time without any negative impact for them or their families. Do not try to involve them if they do not feel comfortable.	Ensure participants are autonomous, informed, and have the power to choose whether they participate and to what degree. It also takes programme staff to be in tune with the participants to be able to pick up on if they're feeling uncomfortable and would rather stop.
COMMUNITY OR RELIGIOUS LEADER	Not mentioned.	The need or value of gaining endorsement from the religious or community leader to encourage or permit menstruators to participate in programmes.
NEGOTIATING NEEDS	Not mentioned.	The need for engineers to negotiate end-users inputs into the facility designs; this demonstrates to them that their inputs were valuable and they've been listened to. When a need cannot be incorporated for limits in design or resources, say, this needs to be communicated to participants so they understand why their inputs haven't been realised.
NON-MENSTRUATORS	Not mentioned.	The need to involve or consider non-menstruators, the importance of which is the basis of the second part of the thesis.

6.3.2 NON-MENSTRUATORS WITHIN GUIDANCE

Table 17 - Comparing thesis results with guidance on engaging non-menstruators in menstrual health from Table 5

THEME	GUIDANCE SUMMARY	SUGGESTION FOR IMPROVING GUIDANCE
STATEMENT OF INCLUDING NON-MENSTRUATORS	Emphasize that menstruation is a concern for everyone by engaging non-menstruators in GBV prevention, deconstructing gender norms, and mobilizing communities to improve MHM inclusively.	There is a need to understand gender constructs and frame changes within those so that non-menstruators do not fear their masculinity is being threatened.
HIGHLIGHTING THE ISSUE	Non-menstruators, often in key roles as first responders or intermediaries, can unintentionally act as barriers to menstruators accessing MHM materials, due to a lack of understanding or awareness about menstruation and its needs.	It is great to see that in some guidance examples of why it's necessary to engage non-menstruators (at multiple levels) in menstrual health is given so that practitioners can understand and be motivated to implement such programmes themselves. I have highlighted many others in the thesis such as undoing menstrual stigma, giving space and time for menstruators to manage their period properly, and being able to share health information.
INDIVIDUAL	Not mentioned	The guidance misses a focus on the mechanisms of change on the individual level, which I found to be aiding non-menstruators in understanding and becoming empathetic towards the health risks of poor menstrual hygiene management, recognising their familial responsibilities, and gaining confidence within the role.
INTERPERSONAL	Not mentioned.	A big motivator for adopting supportive behaviours was perceiving their family to be happy, healthy, and appreciative thanks to their help.
COMMUNITY - GENDER SEGREGATION DURING CONSULTATION	Conduct same sex consultations and address cultural concerns on gender mixing	Although for the Rohingya it was relevant to have same sex consultations, it depends on the community at question. They need to be understood or consulted on their preferences. What the guidance misses here is the need to create safe spaces where everyone feels the ability to share and learn in comfortably both in terms of finding a suitable and convenient location and segregating meetings by who people are comfortable with perhaps age and/or neighbourhoods. This should be discussed with the community.
COMMUNITY - COMMUNITY LEADERS	Involve non-menstruators, including teachers, traditional, and religious leaders, in MHM discussions to build knowledge and engage community leaders to foster widespread support.	Utilising the community or religious leaders is a very effective way of changing attitudes and behaviours. Since the Rohingya are devoutly Muslim, framing menstruation from the angle of its role in Creation and continuing life was effectual in building positive attitudes towards it. The community needs to have menstruator and non-menstruator menstrual health facilitators of different ages so that the community can choose who they feel comfortable talking with.
COMMUNITY – BETTERING THE WHOLE COMMUNITY	Not mentioned.	A big motivator on this level was instilling a desire of bettering the whole community together.
ORGANISATIONAL - STAFF	Train both menstruator and non-menstruator staff in MHM, tailoring depth based on roles, with separate training when needed. Involve non-menstruators in planning and implementation but limit their direct involvement in consultations and sensitive discussions.	Some of the guidance here is contradictory i.e. it states non-menstruator staff should not be involved in menstrual health programmes focused on menstruators, whereas others say in some cases they can be. One makes the key point here that the community should be consulted – or understood – first to see what is culturally appropriate for them. There is a need for staff to bridge cultural gaps and build rapport with the community in order for menstruation to be discussed comfortably, especially among different genders.

6.4 THEORETICAL CONTRIBUTIONS

GENDER THEORIES

My main theoretical contributions relate to gender theory. Moser's theory of women's practical and strategic needs helped me to consider addressing menstrual health in a more holistic or even revolutionary way. Though the theory has been applied to many sectors, including WaSH, it had not been applied to menstrual health, again demonstrating the disregard for menstruators' health. The theory allowed me to see the additional, wider barriers to menstrual health and to understand it from a place of gender inequity. It also gave me more perspective to understand the challenges in meeting practical needs when strategic needs aren't considered. This combined with the framing of the Socio-Ecological Model allowed me to establish programme theories on multiple interacting levels, which address both practical needs that can be met (to a degree) within our existing structures and strategic needs, which attempt to revolutionise our relationship with menstruation.

One way of meeting menstruator's practical needs is through participatory programmes. Though advocating for participation is valid, when we bring in Moser's (1989) theory of the triple burden of roles menstruators face (reproductive, productive, and community labour), the degree to which they should or want to be included in participatory activities can be questioned. Taking from these theories on participation and gender, I explored the balancing act between giving participants autonomy and decision-making power over facility designs, whilst limiting burdens or unwanted negative outcomes. Searching for the middle ground between these theories allowed me to look deeply into the negative effects participation can bring and consider the ways practitioners can shape participation to be minimally burdensome. To find this balance it was necessary to understand menstruators' feelings and reasoning at each stage of the project cycle, hence the employment of realist evaluation. For the first case study, each programme theory I developed is a way of aiming to find a balance between these two concepts. Through this theoretical approach, I demonstrate how practitioners can centre not just the needs of the menstruator, but their emotional state through the process of participating. Ultimately, this reduces the burden on menstruators whilst attaining better menstrual health.

To address strategic menstrual health needs we need to understand our constructs of gender. Understanding specific constructs of masculinity within a community demonstrates how it can be utilised to shape behaviour change techniques. Other studies found that to encourage men to reduce intimate partner violence or discuss sexual health with their children, programmes had to first understand what gendered constructs existed in that society to enable males to alter behaviours but still feel as though they were performing their gendered role (Siu 2017; Carmody 2014). What these programmes exemplify is that practitioners can adjust the ideas of masculinity in terms of behaviours, but not have participants become less intertwined from masculinity itself. Some of the most influential mechanisms of change I uncovered were based on perceiving the risk to menstruators' health and realising the responsibility of preventing this as protector of the family, a typically masculine role. This was done by reframing typically feminine roles like discussing or being concerned with menstruation and performing household duties. Additionally, since menstruation is frequently used to 'other' menstruators from the 'norm' (those who do not menstruate),

exploring masculinity as a blockage to neutral or positive perceptions of menstruation was paramount (De Beauvoir 2014). Stigma is robust and so are our constructs of gender. With the two being so intertwined, the lens of masculinity allowed me to see the point from where we can influence people socialised as men. When designing and implementing the programme for other contexts, ideals of masculinity and its roles should be understood and utilised.

REALIST EVALUATION AND RANAS

Realist evaluations encourage a mix of both qualitative and quantitative analyses. Starting with statistical analyses of quantitative survey data, I was able to pinpoint significant contextual and psychosocial factors that influence non-menstruator attitudes, which led to the development of interview questions. These realist methods have previously been deployed to address taboo and stigmatised topics such as alcoholism, HIV/AIDS, and contraception, chiefly by understanding individual's sentiments towards them (Mukumbang 2017). Accordingly, since menstruation is such a taboo topic (especially among non-menstruators), it was an appropriate method to use for understanding perceptions of menstruation and gain insights into how this taboo may be overcome. One such mechanism to override menstrual taboo was the encouragement non-menstruators received from their menstruating family members. However, when family members did not wish to discuss menstruation themselves, this mechanism could not be attained. This exemplifies the limitations programmes may face and the power of stigma to impede progress. When a mechanism like this is difficult to or cannot be attained, the programme can be adjusted such as the individual gaining encouragement from an external community member, for example.

The theoretical framing for the second case study was the RANAS approach to behaviour change. It has been largely deployed in the public health and WaSH sectors, yet it has only been used in one study on menstrual health (Rautanen et al. 2024), and one in a displaced persons camp (Rahaman et al. 2022). Since the campaign was about changing behaviours to benefit others rather than the individual, the approach had to focus on empathy, understanding another's experience, and driving action for another's wellbeing rather than their own. Another unique aspect my application of RANAS considered was the strongly ingrained social stigmas and cultural norms that are not present with behaviour change programmes involved in choosing to collect water from an arsenic-free well, for example (Inauen & Mosler 2013). Not only did behaviours have to change, attitudes towards menstruation had to change first.

Since RANAS has a strong focus on unpacking the individual's psychosocial reasoning based on established social and psychological theories, it proved beneficial in understanding how their attitudes and behaviours towards menstruation are formed such as through their social constructs of stigma and gender. However, as RANAS solely considers the feelings, attitudes, and perceptions of the individual, there is a disregard for the wider context and the influence this has on them and the programme. Realist evaluation, on the other hand, is based on an understanding that programmes do not just transpire on the individual level. Accordingly, by framing the evaluation on the Socio-Ecological Model, I was able to identify a much broader range of contextual factors than if I had used RANAS in isolation. As a result, I demonstrate that RANAS could benefit from a wider focus on context, specifically at the community and organisational levels, which is lacking yet essential to consider in humanitarian settings.

To come back to the research gap, what was missing from global guidance both for consulting menstruators and engaging non-menstruators was the level of contextualisation necessary to create appropriate responses. Through this combination of methods, I was able to uncover contextual factors to have in place for programme inputs to transpire in a way that leads to anticipated outcomes, based on grounded behaviour change theories at multiple levels of influence. By testing these theories in real world scenarios, I can suggest practical recommendations for humanitarians based on empirical evidence. Granted the conclusions are only based on data from two case studies, thus more extensive research would help to solidify the findings.

6.5 REFLECTIONS ON METHODS

The main methodological approach in the thesis was realist evaluation. Since healthcare is universal, insights from realist evaluations in one context can be applied globally. Thus, realist evaluation has been very useful in upscaling and delivering health programmes to a broad range of contexts around the world. With the growing number of protracted humanitarian crises, the need for scalable programmes with clear guidance is becoming more necessary. As with its application to the global health sector, realist evaluation offers a method of creating widely applicable guidance irrespective of contextual variations. It is also ideal for a programme such as the one in Bangladesh wherein it could be tested on one section of the camp with the idea of scaling up for the same population within the rest of the 33 camps.

In the first case study, I was interested in the experience and emotional wellbeing of menstruators during the project cycle. Realist evaluation is based on understanding the reasoning or rationale among participants in relation to programme inputs and contextual factors. Unlike other evaluation tools, realist evaluation allows the evaluator to unpack the 'black box' between inputs and outcomes, targeting the feelings, perceptions, and reactions participants have to interventions (Salter & Kothari 2014). Thus, it allowed me to uncover feelings and reactions, which may have been hidden to programme implementers, especially considering the secretive nature of menstruation. For the second case study I needed to discover the factors which lead to changes in perceptions and behaviours around menstruation of non-menstruators. With menstruation being taboo in this community and intertwined with gender roles and relations, these mechanisms were complex and interwoven. On top of the challenges of addressing a taboo topic, gathering data from people living in humanitarian settings may prove difficult due to their trauma, preoccupations, or cultural differences with programme staff. Since data was largely collected by programme staff – who have a pre-existing, trustworthy, and amicable relationship with participants (a key contextual factor that arose within the evaluations themselves) – these issues were avoided. This factor - alongside applying a realist evaluation - provided the tools required to unearth and understand the programme's mechanisms despite these barriers.

Although providing many advantages, there were also some challenges of applying realist evaluations in humanitarian settings. It calls for an iterative process where theories may be tested multiple times with numerous forms of data collected throughout the programme to bring new and refined insights. Though I managed this to an extent, difficulties with access to the camp, pressing priorities for staff and participants,

other programme deadlines, capacity of staff, and emergencies such as camp fires and floods impacted the ability to do more iterations of theory refinement. Although both case studies involved protracted crises, humanitarian settings are often in flux. For example, some people moved on to other locations meaning they weren't included for both surveys. Even more had moved on when it came to conducting the realist interviews, making it difficult to locate people to fulfil each demographical category. Lastly, since there have not been many realist evaluations conducted within humanitarian settings or on the topic of menstruation, there weren't any pre-existing theories for me to build upon, meaning I had to create my own drawn from existing development and gender theories.

For collecting the data, there was a balance to be struck between meaningful collaboration and retaining a critical distance. Much of the data was collected and translated by the IFRC and World Vision project partners. Though this brings many benefits (greater contextual understanding, comfort of participants, greater autonomy to practitioners) it also brought about some limitations. For example, the FGD data I received back from Lebanon was not as detailed as I expected. If I had been there, I would have pushed for more in depth answers and asked follow up questions. For the survey data in Bangladesh, I sensed that there were moments where respondents may not have fully understood the question. Additionally, there were instances where either the data collectors, respondents, or perhaps both, ignored the Likert scales I had provided and gave their own responses. Although time consuming it did not affect the data as I was able to reshape the scales to fit their responses. Additionally, it gave more autonomy to respondents and perhaps became more appropriate and comprehensible for them.

As is common when attempting to bridge the gap between academia and practise, programme implementers are not necessarily familiar with academic methods and theories. Thus, the biggest challenge in terms of data collection was training the data collectors on conducting realist interviews. This was due to my being unable to re-enter the camp because of tightened security measures around the January 2024 election. Though it was a beneficial experience both for myself and (I hope) the data collectors, we were limited to a two hour training session. Although much of the data I received was very informative, revealing many different mechanisms and allowing me to test and refine theories, I again observed moments where I would have pushed the respondents for more detailed answers to get to the crux of certain mechanisms. In terms of language, though the project partners were very articulate in English and able to clarify data with unclear translations, certain feelings or rationale of respondents may have been lost in translation.

As discussed in the limitations sections of each paper, data was from programme officers and managers, or data from participants but collected by the programme staff. Both programmes are demonstrated as exemplar to the expected standard, with minimal criticism. This may be due to bias and motivations of the interviewees to want to paint the programme in a good light, and for programme participants to say what they believe programme officers want to hear. As researchers, we're made to feel that everything we publish and present is a success story. However, it is often where we fail and make mistakes that we learn the most. When research is conducted, perceived as a 'failed' effort, and subsequently not published, we cannot learn from it, and the same mistakes are made again. This speaks to the colonial ways in which research is conduced wherein we test theories, interventions, or programmes in the country of study

(largely in the Majority World) in order to improve knowledge generated from largely Minority World countries. If interventions do not lead to desired results – and are therefore likely not to be accepted by journals - there are rarely repercussions for Minority World researchers (Haelewaters 2021). This leaves the brunt of wasted time, resources, and disappointment, on the research partners and participants of the countries of study (Sindall & Barrington 2023).

Many of the reasons projects led by Minority World researchers conducted in the Majority World fail is due to inappropriate research methods, misunderstandings, ignorance of the context, and the wrong research questions being asked (Mallory 2022). This can be mitigated through participatory research methods and equitable partnerships. In this way, research is contextually relevant and misunderstandings are minimised. Though this research was collaborative with the in-country IFRC, World Vision, and UNICEF teams, it wasn't co-created with the research participants themselves.

The PhD process is one that is meant to turn you from a student into an academic. This means I've had the space to try and fail. With my new understandings of participatory research and anti-colonial ways of working, I would have made the research more participatory from the beginning. What I've found, which Lue et al. (2023) also write about in their brilliant paper on increasing equity in WaSH research is that time constraints and structures get in the way of truly participatory work. Fearful of running out of funding time, I took a lot of the decision making on myself rather than consulting with project partners. Now at the end of my PhD training I am more efficient as a researcher and will be able to be more organised with my planning and allow more space for participatory methods in future research projects.

To finalise my PhD I came back to Bangladesh to disseminate the research results alongside the World Vision and UNICEF partners. This involved two WaSH sector presentations with 40 and 55 attendees respectively in Cox's Bazar, a presentation at the International Centre for Diarrheal Disease Research, Bangladesh (icddr,b) in Dhaka, and a presentation at the Anahat for Change Foundation in Kolkata, India. I received positive feedback with attendees saying they would consider engaging non-menstruators within their menstrual health programmes, something that none of them were currently doing. World Vision are also applying the RANAS approach and realist evaluation to other behaviour change programmes like latrine cleaning and hand washing. The UNICEF lead and new head of World Vision also said they would like to collaborate on similar research topics in the future.

6.6 WIDER INSIGHTS: DEVELOPMENT TO HUMANITARIAN SECTOR

With the emergence of the humanitarian-development nexus in response to humanitarian crises becoming increasingly protracted, I took the opportunity to bring the wealth of insights from the development sector, such as debates around participation, behaviour change, or the implementation of holistic menstrual health programmes, to the humanitarian. For example, Hennegan et al.'s (2021) definition of menstrual health helped me understand that within humanitarianism, practitioners are often only targeting a few aspects of menstrual health – practical needs like facilities and materials - rather than taking a holistic approach to consider the enabling environment – or strategic needs. Additionally, the development sector has seen studies demonstrating the benefits of engaging non-menstruators in menstrual health, which I've taken inspiration from (Mahon et al. 2015). I also applied the theory of participatory development to

humanitarianism, which states that development should be a bottom-up process wherein participants actively participate in the planning, decision-making, and implementation of projects and programmes (Nelson & Wright 1995).

Spiegel (2017) feels that the humanitarian system is 'not just broke, but broken' (p.1). He writes that the 'existing humanitarian system was created for a different time and is no longer fit for purpose'. The advice he gives for improving humanitarianism is based on structuring it as the development sector e.g. 'integrate affected persons into national health systems by addressing the humanitarian-development nexus'. To elaborate I draw some examples of the ways I've suggested humanitarian contexts can be shaped to mirror that of development contexts as an attempt to appease Spiegel's (2017) demand of making interventions 'efficient, effective, and sustainable' (p.6). Spiegel stresses the need for larger organisations with a high capacity for managing complex situations that can be operationalised in a decentralised way to promote the localisation of programmes and services. Mirroring development programmes, protracted crises give organisations the opportunity to develop a strong relationship with the community, often living in close proximity to them with high levels of interaction, which can lead to strong, trusting relationships. As the two case studies in this thesis have demonstrated, this is necessary to be able to address topics as sensitive, personal, and multifaceted as menstrual health. Unlike most development programmes, refugee camps can be highly volatile places, meaning people are often too preoccupied with meeting safety needs to participate in programmes. Thus, creating safe and accessible spaces needs to be addressed first for programmes to take place. Dissimilar to communities where development programmes take place, camps are often made up of a mixture of people and cultures. This means organisations have to understand group dynamics to ensure people are comfortable with one another within meetings and discussions. Additionally, communities in development programmes – typically longstanding and familiar with one another - may already have a sense of comradery and be motivated to improve the community together, which is unlikely to be present in newer refugee populations. As a last point, the refugees' culture will be different to the host community's meaning humanitarian workers have to overcome cultural barriers, and be sensitive and empathetic to their previous life in and journey from their home country. As humanitarian practitioners work to create stable environments mirroring that of development settings, behaviour change and participatory programmes become more relevant and effectual in these contexts (Konyndyk & Worden 2019).

Another learning is the criticism of participation as paternalistic or colonial, the need for communities to lead themselves, and the limits of the amount of power that can be given to the community; the act of 'giving power' is an oxymoron in itself. Without these lessons from participation in development, humanitarian actors may continue to make the same mistakes the development sector has seen. Humanitarianism is based on 'humanity, neutrality, impartiality and independence', however, with the emergence of 'new wars' i.e. those based on identity politics, political control, between states or non-state networks that are financed through predatory means that seek the continuation of violence, and more complex emergencies, humanitarianism had to transform (Kaldor 2013; Schenkenberg van Mierop 2015). Moving away from neutrality and impartiality, Fox (2001) feels it is an 'overt politicisation of aid in which agencies themselves use relief as a tool to achieve wider political goals' (p.275). One of these goals is the

spread of neo-liberal political-economics (Sozer, 2019). Therefore, new humanitarianism can be seen as a tool of neo-colonialism. An aim within the humanitarian-development is not just to relieve acute suffering but also to consider the longevity of programmes based on an understanding that crises often become protracted with displaced persons living in camps for years or even decades (UNHCR, 2024). Since wider political goals aim to spread Western ideals, it's explicable that humanitarian organisations (largely with headquarters in Western countries) desire to impart Eurocentric ways of thinking and being within their programmes too. Though a challenge to extrapolate myself from Western thinking, I attempted to move away from this through collaborations with in-country teams.

6.7 LIMITATIONS

There are some limitations to the research, largely as a result of working in unpredictable settings across cultures and languages. Others concern time constraints and my own capacity as an individual researcher.

Realist evaluation is strengthened when applied to multiple contexts so that direct comparisons can be made. Since the two case studies deployed different kinds of programmes there are limits on what can be compared. Realist evaluations are iterative and could continue forever as you develop your theories to be as close to reality as possible. I could have conducted more iterations and collected more data over time to continue refining the theories. Additionally, behaviour change campaigns often face a reversion of results over time. The timeframe of the PhD meant I was unable to test this. In terms of scope, the evaluation in the Lebanese case study was initially broader with more specific programme theories at the organisational level. After some deliberation, I decided to cut them out, as there were too many and decided it was better not to lose focus by delving deeply into organisational structures. In the Lebanese case study, there were not any people with disabilities, unaccompanied, or (visible) gender diverse persons to consider within consultations.

Working in humanitarian contexts poses its challenges. Primarily there was my inability to travel to Lebanon and to access the camp for the second time for reasons beyond my control. To spend time in the country of study is invaluable in gaining contextual understandings. This is something I lost by not being able to go to Lebanon and having a limited amount of time within the Rohingya camp. With political turmoil, floods, and fires in the camps my project partners were often preoccupied and hassling them with my research project suddenly seemed insignificant. This put delays on the research and their inputs ended up being smaller than I would have wanted.

Though in reality it takes 100 people to complete a PhD, and I've tried to be collaborative in the process, I am only one person so many of the perspectives are my own, which leaves room for bias and misunderstandings, especially since the populations studied were very different to my own, as covered in my positionality statement.

6.8 FUTURE RESEARCH

In terms of an application of my research, it would be great to see humanitarian organisations take the mechanisms explored in both case studies and apply them to another location. This would require them to alter the contextual factors so that the same mechanisms can be fired. What would be more beneficial is if

one programme were to engage menstruators and non-menstruators at the same time using this guidance to see how employing both simultaneously might bring up different mechanisms. It would also be good to see researchers using the same methodological approaches from the start in different locations to see what other programme theories arise. These can be compared to see patterns in which mechanisms and contextual factors keep recurring in different locations, which provides us with more evidence on what is likely to be the most important in all global contexts.

As stated in the limitations, behaviour change campaigns can often backslide, therefore another study visiting the same site in a couple of years would be beneficial to see how sustainable the results were. The intervention was designed in a way that the community would continue to encourage each other to address poor menstrual health attitudes with the prospect of that becoming the 'norm', which could be considered a new contextual factor. If this were the case perhaps we would not see a backslide but a spread of positive attitudes and behaviours among camp members. An additional outcome to measure could be a study wherein one group of non-menstruators are engaged and the other is not to measure the differences seen for the menstruators among the two groups.

Though the aim of the research was to address menstruators' practical and strategic menstrual health needs in humanitarian settings, I was only able to look at a few aspects on the individual and interpersonal levels. There are other levels, which were beyond the scope of the research, which are necessary to address if we are to meet the strategic needs such as the policies and institutional structures related to menstrual health. Research into this would involve evaluating the impacts of policies and institutional structures aimed at reducing menstrual inequity such as menstrual leave.

Though I am pleased to see a growing body of research aiming to meet menstruators' practical menstrual health needs, I hope that more researchers will turn their attention to the wider structures affecting menstrual health and address their strategic needs too.

6.9 REFERENCES

Allen, K. R., Kaestle, C. E., Goldberg, A. E. 2011. More Than Just a Punctuation Mark: How Boys and Young Men Learn About Menstruation. *Journal of Family Issues*. **32**(2), pp.129-156. Available from: https://doi.org/10.1177/0192513X10371609

Anderson, K. 2020. Tearing down the walls: Confronting the barriers to internally displaced women and girls' participation in humanitarian settings. *UNHCR.*

Arnstein, S.R. 1969. A Ladder Of Citizen Participation. *Journal of the American Institute of Planners*. **35**(4), pp.216-224. Available from: DOI: 10.1080/01944366908977225

C. Boyer, E. Levy Paluck, J. Annan, T. Nevatia, J. Cooper, J. Namubiru, L. Heise, R. Lehrer. 2022. Religious leaders can motivate men to cede power and reduce intimate partner violence: Experimental evidence from Uganda, *Proc. Natl. Acad. Sci. U.S.A.* **119** (31). Available from: https://doi.org/10.1073/pnas.2200262119.

Carmody, M., Salter, M., & Presterudstuen, G.-H. 2014. Less to Lose and More to Gain? Men and Boys Violence Prevention Research Project: Final Report. Retrieved from http://www.women.nsw.gov.au/__data/assets/file/0019/300619/PDF_2_Final_Report_Men_and_Boys.pdf

Chang, Y.-T., Hayter, M. and Lin, M.-L. 2012. Pubescent male students' attitudes towards menstruation in Taiwan: implications for reproductive health education and school nursing practice. *Journal of Clinical Nursing*. **21**, pp. 513-521. Available from: https://doi.org/10.1111/j.1365-2702.2011.03700.x

De Beauvoir, S., 2014. The second sex. In Classic and Contemporary Readings in Sociology pp. 118-123. Routledge.

Haelewaters D., Hofmann T.A., Romero-Olivares A.L. 2021. Ten simple rules for Global North researchers to stop perpetuating helicopter research in the Global South. *PLoS Comput Biol.* **17**(8). Available from: https://doi.org/10.1371/journal.pcbi.1009277

Hashemi, M. Kohan, S. Abdishahshahani, M. 2018.Reproductive health self-care for female students: Educational needs assessment. Isfahan University of Medical Sciences. *Journal of Education and Health Promotion*. **9**(1), p.17. Available from: DOI: 10.4103/jehp.jehp_378_19

Hennegan J., Winkler I.T., Bobel C., Keiser D., Hampton J., Larsson G., Chandra-Mouli V., Plesons M., Mahon T. 2021. Menstrual health: a definition for policy, practice, and research. *Sex Reprod Health Matters*. **29**(1). Available from: doi: 10.1080/26410397.2021.1911618.

Hickel, J. 2014. The 'girl effect': liberalism, empowerment and the contradictions of development. *Third World Quarterly*. **35**(8), pp.1355-1373.

Hickel, J. 2017. Roundtable: Does microfinance empower or impoverish? [Online]. [01 April 2021]. Available from: https://www.youtube.com/watch?v=U_lgCLmvRQo&t=1519s

Hoang, T.A., Quach, T.T., Tran, T.T. 2013. 'Because I am a man, I should be gentle to my wife and my children': positive masculinity to stop gender-based violence in a coastal district in Vietnam. Gender & Development, **21**(1), pp.81–96. Available from: https://doi.org/10.1080/13552074.2013.767511

Inauen J., Mosler H.J. 2013. Developing and testing theory-based and evidence-based interventions to promote switching to arsenic-safe wells in Bangladesh. Journal of Health Psychology. **19**(12), pp.1483-1498.

Jagosh, J. 2020. Retroductive theorizing in Pawson and Tilley's applied scientific realism. *Journal of Critical Realism.* **19**(2), pp.121–130. Available from: https://doi.org/10.1080/14767430.2020.1723301

Kaiser, T. 2004. Participation or Consultation? Reflections on a 'Beneficiary Based' Evaluation of UNHCR's Programme for Sierra Leonean and Liberian Refugees in Guinea, June–July 2000. *Journal of Refugee Studies.* Oxford University Press. 17(2).

Kaldor, M. 2012. New and Old Wars: Organized Violence in a Global Era. Cambridge: Polity.

Konyndyk, J., Worden, R. 2019. People-Driven Response: Power and Participation in Humanitarian Action. *Center for Global Development.*

Lefkowich M., Richardson N., Robertson S. 2017. "If We Want to Get Men in, Then We Need to Ask Men What They Want": Pathways to Effective Health Programing for Men. *American Journal of Men's Health*. **11**(5), pp.1512-1524. Available from: doi:10.1177/1557988315617825

Lue J- M., Bah S., Grant K. 2023. Principles for increasing equity in WASH research: understanding barriers faced by LMIC WASH researchers. *BMJ Global Health.* **8**. Available from: doi:10.1136/ bmjgh-2022-010990

Mahon, T., Tripathy, A., Singh, N. 2015. Putting the men into menstruation: The role of men and boys in community menstrual hygiene management. *Waterlines*. **34**(1), pp.7-14.

Mallory A., Parker A., Hutchings P., Sakrabani R. 2022. Why Agricultural Tools Work in Theory But Aren't Adopted in Practice: A Grounded Theory Approach to ICT in Ghana and Kenya. *Air, Soil and Water Research.* **15**. Available from: doi:10.1177/11786221221092782

Manji, F. O'Coill, C. 2002. The missionary position: NGOs and development in Africa. *International Affairs.* **78**(3), pp.567–584. Available from: https://doi.org/10.1111/1468-2346.00267

Mason, L., Sivakami, M., Thakur, H. 2017. 'We do not know': a qualitative study exploring boys perceptions of menstruation in India. *Reprod Health*. **14**(174). Available from: https://doi.org/10.1186/s12978-017-0435-x

Moser, C. 1989. Gender Planning in the Third World: Meeting Practical and Strategic Gender Needs. *World Development.* **17**(11).

Mukumbang, F.C., Van Belle, S., Marchal, B. 2017. An exploration of group-based HIV/AIDS treatment and care models in Sub-Saharan Africa using a realist evaluation (Intervention-Context-Actor-Mechanism-Outcome) heuristic tool: a systematic review. *Implementation Sci.* **12**(107). Available from: https://doi.org/10.1186/s13012-017-0638-0

Phillips, D.C. 1987. Philosophy, science, and social inquiry: Contemporary methodological controversies in social science and related applied fields of research. Oxford: Pergamon Press.

Rahaman, K.S., Ramos, S., Harter, M. Mosler, H.J. 2022. Determination of psychosocial factors of drinking chlorinated water to design behavior change interventions in Rohingya camps in Bangladesh. *The American Journal of Tropical Medicine and Hygiene*. **106**(4), p.1126.

Rautanen, S.L., White, P. and Dishwa, K., 2024. In Search of Dignified Menstruation in Western Nepal. *Menstruation in Nepal: Dignity Without Danger.* Routledge.

Salter, K.L., Kothari, A. 2014. Using realist evaluation to open the black box of knowledge translation: a state-of-the-art review. *Implementation Sci.* **9**(115). Available from: https://doi.org/10.1186/s13012-014-0115-y

Schenkenberg van Mierop E. 2015. Coming clean on neutrality and independence: The need to assess the application of humanitarian principles. International Review of the Red Cross. **97**(897-898), pp.295-318. Available from: doi:10.1017/S181638311500065X

Sindall, R.C. Barrington, D.J. Shaylor, E. 2023. Learning From and Preventing Failure in WASH, Frontiers of Sanitation: Innovations and Insights 21, The Sanitation Learning Hub, Brighton: Institute of Development Studies. Available from: DOI: 10.19088/SLH.2022.025

Siu, G.E., Wight, D., Seeley, J. 2017. Men's Involvement in a Parenting Programme to Reduce Child Maltreatment and Gender-Based Violence: Formative Evaluation in Uganda. *Eur J Dev Res.* **29**, pp.1017–1037. Available from: https://doi.org/10.1057/s41287-017-0103-6

Spiegel, P.B. 2017. The humanitarian system is not just broke, but broken: recommendations for future humanitarian action. *The Lancet*. **0**(0).

UNHCR 2017. Feedback mechanisms in the former Yugoslav republic of Macedonia. [online]. Available at: https://www.unhcr.org/innovation/wp-content/uploads/2017/02/unhcr_fyr_macedonia_feedback_casestudy-1.pdf. Accessed 19 nov 2024.

UNHCR. 2020. Refugee Camps. [Online]. Accessed 21 December 2024. Available from: https://www.unrefugees.org/refugee-facts/camps/

Vatasoiu, S., Carlsen, M., Romanski, J. 2015. Optimizing the Size and Location of Short-Term Refugee Camps in Syria. [Online]. Available at: https://www.dam.brown.edu/siam/2015/Syrian_Refugee_Camps.pdf. Accessed 19 Nov 2024.

Wong, W.C., Li, M.K., Chan, W.Y.V., Choi, Y.Y., Fong, C.H.S., Lam, K.W.K., Sham, W.C., So, P.P., Wong, K., Yeung, K.H. and Yeung, T.Y. 2013. A cross-sectional study of the beliefs and attitudes towards menstruation of Chinese undergraduate males and females in Hong Kong. *J Clin Nurs.* **22**, pp. 3320-3327. Available from: https://doi.org/10.1111/jocn.12462

CHAPTER VII

CONCLUSION

Current guidance tells us practitioners need to engage menstruators and non-menstruators in menstrual health if both menstruators' practical and strategic needs are to be addressed. The first aims to meet menstrual health needs within the structures that already exist, wherein menstrual health only concerns those that menstruate. The second aims to revolutionise the existing structures to create an environment where menstrual health is of everyone's concern, on the path to gender equity. What is missing is an exploration of how this can be done in a way that is contextually cognisant. The aim of this thesis was to deliver empirical research that demonstrates how to engage both menstruators and non-menstruators based on what works, for whom, and under what circumstances. The results can guide humanitarian organisations on what mechanisms to seek and which contextual factors to cultivate when engaging either menstruators or non-menstruators.

Firstly, to look at menstruators' practical needs, I conducted a realist evaluation looking into how to centre participant experience during menstrual health programmes. Though there exists some guidance on the types of questions to ask and some practical advice such as splitting the focus groups by age, direction on the wider elements is missing. This gap means participation is often discouraged with unpleasant experiences before, during, or after participation. What I was unable to explore in this case study was the role of non-menstruators and how they may act as barrier to menstrual health services.

We know that non-menstruators play a vital role in facilitating or blocking access to menstrual health – both to physical facilities and materials, and also through the environment that is created. Non-menstruators are more likely to harbour negative or avoidant views towards menstruation and perpetuate stigmas and taboos. These views have been documented in a small number of studies from different global regions. What has been under-researched is what influences these attitudes. In a second case study, to address menstruators' strategic needs, I conducted the first published study to document psychosocial and contextual determinants of behaviours and attitudes towards menstruation among non-menstruators. After establishing this information, what was required next was to explore how to target these influential factors. Though guidance has started to tell us the importance of engaging non-menstruators, they have not demonstrated how.

I applied another Realist Evaluation to the second case study, taking learnings from the first and the results of the behavioural determinant analysis. This allowed me to explore the important mechanisms to improve non-menstruator attitudes and behaviours towards menstruation and the contextual factors to have in place to fire them.

Each stage of the research can be used to advance current guidance on menstrual health programming. One of the most important aspects that was emphasized in both case studies was the importance of localisation, connection with programme staff, and the ability to overcome cultural gaps. There are wider calls for the humanitarian system to be re-thought and this is one of the major demands.

Realist evaluation was a useful approach to be able to go beyond what is provided in current guidance – which suggests the same inputs irrespective of context – to investigate the root mechanisms practitioners should be trying to generate in menstrual health programmes, with respect to the role of context. The RANAS approach provided a comprehensive theoretical framing for investigating the determinants of non-menstruator attitudes and behaviours, though this largely only allowed me to look at psychosocial factors on the individual level. Employing the Socio-Ecological Model was beneficial as Realist Evaluation requires the evaluator to look at multiple spheres of influence in relation to the individual. Hence, I collected data focused on the individual, interpersonal, community, and organisational levels. Realist evaluation also calls for mixed methods, therefore I collected both quantitative and qualitative data. For the second case study this allowed me to first discover the important psychosocial and contextual factors in relation to non-menstruator perceptions of menstrual health using quantitative data, which I then used as a basis for the realist interviews using qualitative data.

To be able to consistently meet menstruators' practical needs we need to also address their strategic needs. If practitioners are to truly revolutionise menstrual health in humanitarian responses they need to primarily put those who menstruate in the centre of programmes in the design of the facilities and resources they need to manage their period with safety and dignity. Equally, practitioners need to address the environment in which menstruators have their periods and reduce stigma and barriers of access to MHM facilities and healthcare. The only way to do this is by ensuring non-menstruators are also engaged in the right ways. This thesis provides rigorous, holistic, and contextually cognisant ways that humanitarian organisations can do both of these things.

The sexes are provided with different physiological traits. This may mean gender equality cannot be attained. But what the global community can move towards is gender equity. This is also impossible to attain if we do not revolutionise the way we think about and act towards menstruation and menstruating individuals. The biggest barrier to menstrual health is its taboo and stigma. Though held by all, we need those who typically hold more power in society (the ones who do not menstruate) to break the stigma to become advocates of menstrual health. The best way of breaking through the stigma is by shifting the focus on menstruation to be on its importance to bring life into the world, and the risk it brings to menstruators' health and wellbeing when not managed properly.

Though this thesis is based on places and people from the Middle East and Asia, I take this opportunity to reiterate that this is a global issue. One that cannot be solved with individualised thinking or archaic gender constructs. May we collectively move towards a more human rights focused, equitable society wherein menstruation is merely a physiological process that doesn't hamper our everyday lives any more than it has to.

APPENDICES

APPENDIX A – SUPPLEMENTARY MATERIAL FOR CHAPTER 3: JUSTIFICATIONS FOR END-USER CONSULTATION IN MENSTRUAL HEALTH PROJECTS IN HUMANITARIAN SETTINGS, WITH CORRESPONDING QUOTES

Table 18 – Justifications for end-user consultation in menstrual health projects in humanitarian settings, with corresponding quotes

THEME	RATIONALE	QUOTE (PARTICIPANTS)	QUOTE (PROJECT STAFF)	QUOTE (LITERATURE)
STAFF-PARTICIPANT RELATIONS	Keeping the community informed and showing respect on an equal platform	Happy that our opinions were taken into consideration. We are comfortable in general and we had no problems because everything was explained to us.	We can't let them feel that there is a big gap and we are different from them.	Taking a rights-based approach, engineers will be able to see underserved communities as "actors in their own development instead of viewing them as victims" (Byars et al., 2009, p. 2714) who are waiting to be saved by foreigners. (Mazzurco and Jesiek, 2017).
	To create trust between management and the community	Yes [we're comfortable to speak with the facilitators].	Building trust, building rapport… Normally we do not face this gap because we respect [them].	Maintaining equitable relationships that ensure an appropriate distribution of contributions of money, energy, and time amongst all people involved in a project is often associated with higher levels of trust (Mazzurco and Jesiek, 2017, p.5).
	To understand cultural identities and views of the community	No cultural differences exist between us. They understood our needs.	We needed to really understand the context and even if you get any information that is not going to affect directly your design, it helps you to be on the right mind-set… so I do not think any information is not useful.	Local organisations "play an integral role in facilitating communication and a common language and understanding between the parties based on their deeper knowledge of the local culture" (Chisolm et al., 2014).
	Field staff experience	N/A	[Field staff] actually benefited from… this participation with the community. This is something that goes unnoticed sometimes so they're happy that they were able to take part in this.	Field workers are under-paid, under-valued, over-worked, and under-appreciated (Heyns, 1996)
PRACTICALITIES	To communicate MH education	The project helped us learn about and improve our personal hygiene during menstruation	We are supposed to teach them to give them the information that are presented in the guidelines… in the way that they can understand it.	Key Assessment Area: Knowledge Gaps (Sommer et al. 2017).
	To organise Operation and Maintenance (O&M)	N/A	Feedback off them… it's [not] only on the design, it's in the maintenance… Because we are constructing a communal latrine, you have a lot of questions on the maintenance as well that you need to do… to know that it is going to be maintained by the community.	Improved utilisation and maintenance of facilities and services (Uphoff, 1986, pp. 425-426).
	To create culturally and personally appropriate menstruator-friendly WaSH facilities	Yes it was very good that we were consulted… the facilities are good and they provide privacy and it has safety.	Any design… would need to be tested by users for us to get… feedback… because without… we're still in a preliminary stage because… they are the people that are going to be using that facility… and they can pinpoint things that… the designer does not have in mind or… pay attention to	Understanding local MHM practices is essential for integrating MHM effectively into the emergency response (Sommer et al. 2017).

PARTICIPANT FEELINGS	To give autonomy to community	N/A	For them to know that it's not only during formal communication that they can point something out.	Participation is critical to forming resilient subjectivities as part of neoliberal government. As O'Malley (2010, p.488) notes, this involves "a complex of scientifically grounded techniques of the self, necessary to optimize autonomous subjects in an age of high uncertainty (Ilcan and Rygiel, 2015).
	To give a sense of ownership, leading to sustainability	N/A	If you construct something that is not owned by the community… it can affect… the maintenance and… how they will clean up… Nobody will use it if you do not talk to them	Involvement of community members in every stage of a project leads to a greater sense of community ownership, which is directly linked with the long-term sustainability of solutions (Mazzurco and Jesiek, 2017, p.3).
	To give sense of security/add to camp safety	'Yes [we feel safe in the camp]'	Our presence is not just at these times, it's throughout the whole… project, even if we just pop by… to say hi and make sure that everything is OK… there is a good thing to see us present all the time. I think it does help in the overall outcome.	'Participation can also reinforce the security of affected populations' (Fsnnetwork 2000, p.54)

REFERENCES

Byars, P., Woodrow, M., Antizar-Ladislao, B., 2009. Integrated method in international development for water solutions using the rights-based approach. *Water Science and Technology*. **60**(10), pp.2713-2720.

Mazzurco, A. and Jesiek, B.K., 2017. Five guiding principles to enhance community participation in humanitarian engineering projects. Journal of Humanitarian Engineering, **5**(2).

Chisolm, R., Gall, E.T., Read, L. Salas, F.R., 2014. Lessons from a student-led development project in Peru: Aligning technical and educational perspectives. International Journal for Service Learning in Engineering, Humanitarian Engineering and Social Entrepreneurship, pp.525-539.

Heyns, S., 1996. Organisational capacity-building, and the'quick and dirty'consultant. *Development in Practice*, pp.54-57.

Sommer, M., Schmitt, M., Clatworthy, D. 2017. A toolkit for integrating Menstrual Hygiene Management (MHM) into humanitarian response. (First edit). New York: Columbia University, Mailman School of Public Health and International Rescue Committee

Uphoff, N.T., 1986. Getting the process right: improving irrigation water management with farmer organization and participation (p. 135). Ithaca, NY, USA: Cornell University. (Ilcan and Rygiel, 2015).

Fsnnetwork. 2000. Chapter 2. Factors Affecting. Participation in Humanitarian Responses. [Online]. Available at: https://www.fsnnetwork.org/sites/default/files/mp_gb_chapitre2_0.pdf

Accessed 4 December 2024.

APPENDIX B - INITIAL PROGRAMME THEORIES FROM REALIST INTERVIEWS WITH HUMANITARIAN ACTORS ENGAGING ROHINGYA NON-MENSTRUATORS IN MENSTRUAL HEALTH

This appendix presents supplementary material for the third paper in the thesis. It is one of the first stages of the realist evaluation process, which is the development of initial programme theories. It begins to address menstruators' strategic needs by trying to understand how programmes can produce mechanisms of change in the attitudes and behaviours of non-menstruators towards menstruation.

ABSTRACT

Menstrual health has been a neglected topic in the humanitarian response. Over the years those working in this field have come to realise it requires a holistic approach to address not only the provision of materials and facilities but also the unsupportive environment. One such area that needs attention is the inclusion of men, boys and people that do not menstruate to reduce stigma and create an environment where menstrual needs can be met and menstruators feel supported. This paper studies a World Vision and UNICEF programme engaging Rohingya non-menstruators in a refugee camp in Bangladesh. It deploys the first stage of a realist evaluation: creating initial programme theories (IPTs) from interviews with programme staff that hypothesise why and how their programme might work, for whom and due to which contextual factors. The results demonstrate 10 IPTs on different levels of the socio-ecological model, containing context-mechanism-outcome configurations within them. On the individual level, mechanisms related to comprehension of menstrual health and becoming familiar with menstrual materials. On the interpersonal level mechanisms related to normalising discussion of menstruation across genders. On the community level mechanisms related to feeling safe, changing perceptions, and recognising responsibility. And on the organisational level, mechanisms related to feeling trusting, respected, understood, included, autonomous and unrushed. These IPTs are only the first step in the realist evaluation. Though they may be able to provide some guidance on the contextual factors and programme inputs necessary to instil positive changes in non-menstruator attitudes and behaviours towards menstruation, it is subsequently required for them to be tested through realist interviews with the participants themselves.

POSITIONALITY STATEMENT

This is to acknowledge that the lead author is aware of her unique privilege to be able to conduct research in the global sphere and add her voice to global academic knowledge. She is not a part of the population she comments on meaning there is room for misunderstandings and bias. The Rohingya are a highly persecuted and villainised community. This paper does not wish to comment on their attitudes and behaviours in an accusatory way but rather to explore how the population's perceptions and actions towards menstruation could take a different shape given the opportunity.

INTRODUCTION

Menstrual health refers not merely to the absence of disease but access to information, menstrual materials, appropriate water, sanitation and hygiene (WaSH) facilities and disposal methods, healthcare, a positive environment, and the choice to participate in everyday activities (Hennegan et al., 2021). It is also important to note that not only cis-gender women but gender diverse persons such as transgender men may menstruate, hence we use the terms 'menstruator' and 'non-menstruator' throughout. Menstruation is a globally stigmatised topic meaning adequate access to these elements of menstrual health often go unaddressed. The situation is worse in humanitarian settings where privacy, safety, and access to WaSH facilities, information, and materials are compromised. It wasn't until the 2000s that humanitarian actors started to consider menstrual health in the humanitarian response, supplying families with hygiene kits including sanitary towels, soap, and underwear. However, this was rarely sufficient. In Gaza, for example, hygiene kits only contained four sanitary pads for a whole family - not even enough for one person to manage their period for one cycle (anecdotal knowledge). Even more recently in 2016 did the humanitarian sector begin to think of menstrual health more holistically, recognising that it also requires facilities for washing, changing, drying, and disposing of materials as well as providing menstrual education and practical information. This manifested into the MHM in Emergencies Toolkit in 2017, and software and hardware MHM guidelines within the 2018 Sphere Standards for humanitarian action.

The underlying issue here is that menstruation is a stigmatised topic. What needs to happen now is to tackle our negative perceptions of menstruation in order to create a supportive environment wherein menstrual issues are not secondary, and those that menstruate are not treated differently for a natural phenomenon that happens to their bodies. Since it is largely cis-gender women who menstruate, and because menstruation is often made secretive, it is usually only they who are engaged in menstrual health programmes where stigma and shame are addressed. However, non-menstruators play a significant role in limiting menstrual health at different levels, especially in male-dominated societies. This may be through negative or avoidant attitudes such as that menstruation is shameful, dirty, or not to be discussed especially by non-menstruators; the spread of misconceptions and imposing cultural practises; controlling household finances that neglect menstrual materials; a lack of emotional and practical support; oversights in menstrual needs in WaSH facility design; and neglecting institutional policies that promote menstrual health (Mahon 2015).

A demonstrative example of this is among the Rohingya refugee population living in Cox's Bazar Bangladesh, where the population's menstrual health is far from adequate. Pandit et al. (2022) found that only 29% of adolescent menstruators had knowledge of menstruation before entering menarche. Only 8% had a 'Good' and 12% a 'Basic' understanding. Nearly a third (32%) used homemade pads or unabsorbent underwear and over half (53%) disposed of materials inside the toilet, open spaces or water sources. This was due to not only limited WaSH and disposal facilities but also a lack of privacy, confined and crowded spaces and non-supportive environments. They found that 73% were not satisfied with the privacy of facilities for washing, changing and disposing of menstrual materials as they were shared with non-menstruators. The unsupportive environment was influenced by cultural beliefs, stigma, cultural norms, 'peeping toms' and fear of sexual violence. Cultural practises found in Pandit et al.'s (2022) study included:

menstruators not attending religious activities, eating animal protein and produce, drinking water, sleeping in the same area as and eating with family members, nor touching cattle at the time of menstruation. Other cultural practises found within this research and elsewhere were not leaving the home nor washing with soap while menstruating (Pathfinder 2022).

Development projects wherein only menstruators are engaged in changing perceptions or actions often create further issues as they are not able to exercise new behaviours or exercise rights learned through the programme (Chant, 1995). To avoid this, all members of a society must be mobilised simultaneously (Chant and Gutmann 2002). Following this thought, World Vision, supported by UNICEF, have instigated a behaviour change campaign to engage non-menstruators in menstrual health dialogue to reduce stigma and ensure physical and mental support for their menstruating relatives, support them in household chores, encourage them to take nutritious meals and relay messaging on menstrual hygiene management (MHM). The programme is community-led, wherein they self-mobilise using 'iconic' persons who have positive attitudes and supportive behaviours towards menstruation and menstruators as a way of encouraging the rest of the community to follow suit without imposing or forcing them to act or think in a certain way. Commenting on another's cultural practises may demonstrate colonial or paternalistic thinking. Additionally, the Rohingya are already a villainised group and this paper does not wish to speak negatively of them. The Rohingya are a devout Islamic community. Though many cultural practises are tied up with religious thinking, the 'Rohingya community holds a more conservative perspective that deviates from the actual teachings of Islam' (Islam and Habib 2024). The programme studied in this paper and the messaging wishes to present alternative options of menstrual practises, to shed light on which cultural practises may be damaging to menstruators' wellbeing, such as not washing with soap or missing school, and therefore allow the population to make informed choices.

Academic literature and existing guidance on menstrual health acknowledge the need to include non-menstruators in menstrual health dialogue (Columbia University and International Rescue Committee, 2017; Save the Children, 2012; Sphere Association, 2018; WaterAid, 2015). However, there is limited guidance on methods or resources to direct interventions. Realist evaluation is a theory-driven method that evaluates what works, for whom, and in what circumstances. It works to uncover the underlying generative mechanisms that occur due to specific contextual factors that interact with the programme's inputs. It operates at a mid-range theory level, bridging the gap between abstract theories and concrete observations (Kislov et al., 2019). The first step is to develop initial programme theories (IPTs). These are usually based on prior research, knowledge, experience, and expectations about how the intervention should transpire (Flynn et al. 2020).

It is the first step in the process before they are tested with further data collection; usually a mix of qualitative and quantitative data looking at outcomes, and confirming and editing suggested mechanisms with programme participants.

Since attitudes and behaviours towards menstruation are deeply cultural and social, realist evaluation will allow us to acutely scrutinise which contextual factors are important for working with the programmes inputs to spark change. The authors developed these IPTs from programme documents, observations, relevant literature, and interviews with eight World Vision and one UNICEF programme staff working in Kutupalong Camp, Bangladesh. In this way, the research theorises effective inputs and necessary contextual factors organisations can employ and shape to encourage positive attitudes and actions regarding menstruation. The next steps of the research will gather more evidence based on quantitative data analysis and to test the IPTs through qualitative realist interviews with non-menstruators living in the camp.

METHODS

STUDY POPULATION AND SETTING

The study consisted of Key Informant Interviews (KIIs) with eight World Vision and one UNICEF staff member working in Kutupalong refugee camp. These eight staff made up the WaSH team in Cox's Bazar main office. UNICEF manages one third of the 34 camps within Kutupalong. They are in charge of deciding which programmes to run, whilst implementing organisations like World Vision carry them out, thus we also interviewed the UNICEF programme lead.

The camp hosts approximatively one million Rohingya refugees in Cox's Bazar, Southeast Bangladesh. The Rohingya are a stateless Muslim ethnic minority group residing in Rakhine state. They have been persecuted for decades with the first fleeing to bordering Bangladesh in 1978 (Mohajan 2018). Their largest exodus began in 2016/17 when a massive wave of violence against them broke out forcing two thirds of their population to flee the country (UNHCR, 2024).

THE PROGRAMME

Since 2023, World Vision has begun to engage non-menstruators in menstrual health dialogue. They have done this by organising small community meetings usually at the household level where they explain the physiology of menstruation, MHM, and the results of poor menstrual health. With the community, they have also selected MH facilitators – two menstruators and two non-menstruators in each sub-block who have positive attitudes and behaviours towards menstruation to organise meetings to spread messages and change perceptions about menstruation. They do this through story-telling, demonstrations of how to support ones menstruating family members, and open discussion. World Vision have also employed other influential members of the community like the Imam (religious leader) to promote supportive behaviours among non-menstruators.

PROCEDURE

The authors undertook a literature review on engaging non-menstruators in menstrual health to gain insights into how the programme might work. Based on this they developed questions for KIIs with project staff involved in the menstrual health programme. The lead researcher undertook KIIs in April 2023 at the World Vision Cox's Bazar Town and Kutupalong Camp offices. The research was explained to participants prior to interview with verbal consent given for use of their data. All interviews were overseen by World

Vision's Technical and Hygiene Promotion Coordinator Zahida Sultana (an author to this paper) who helped with verbal translations from Bengali to English for the lead researcher when necessary.

ETHICS

The authors gained ethical approval from the University of Leeds, UK, on the 16th March 2023 under the code MEEC 22-019. The researchers also drew up a Terms of Reference detailing the expectations of the collaboration that was agreed upon by World Vision and themselves.

DATA ANALYSIS

Realist evaluation requires the identification of 'context', 'mechanisms' and 'outcomes' in order to apply retroductive reasoning to identify the generative causation that occurs between the interaction of resources and contextual factors that trigger the mechanisms that result in the programmes outcomes (Wong et al. 2017). Retroduction allows the researcher to 'discern relations and connections that are not otherwise evident or obvious' in order to formulate new ideas, consider what might happen in a different context and to 'see something else', (Meyer & Lunnay 2013; Danermark et al. 1997). Mechanisms were broken down into 'resource' – project inputs – and 'reasoning' – how participants respond to the resource giving way to mechanism(resource)-context-mechanism(reasoning)-outcomes (MCMO) configurations (Dalkin et al., 2015).

The authors uploaded interview transcripts into NVivo 14. They coded transcripts into themes and subthemes. They then summarised and condensed all text within their subthemes, keeping quotes that related directly to MCMOs and/or gave evidence of generative causation. They then categorised these summaries into MCMOs. Next, they organised and condensed them into 10 MCMO configurations, which informed the development of IPTs. All relevant quotes were kept with associated IPTs as demonstrated in the results.

RESULTS

JUSTIFICATION FOR PROGRAMME

The Rohingya are a male dominated population where the non-menstruator heads of household have more decision-making power, influence, and control of finances than their menstruator family members. It is also normally non-menstruators to collect information and messages from outside the house from camp management. Thus they are a large influencing force when it comes to informing or educating their family members about health issues e.g. when to go to the hospital for menstrual related diseases. Before introducing the Initial Programme Theories, the following quotes are provided in the table to summarise why staff feel it is necessary to engage non-menstruators in menstrual health dialogue:

REASON	QUOTE
ASSISTING WITH HEALTH-RELATED DECISIONS	*Mainly the male members are decision maker of any family. If the decision maker or the influential person know about this issue or anything, it will help them to take any decision, if they need, about this MHM or the reproductive health or any disease also which related with this.*

MENTAL SUPPORT AND ENCOURAGING THE CONSUMPTION OF NUTRITIOUS FOOD	*Because they have to know for providing the mental support to their female members and also the nutritious food, as they are influential and to some extent are the decision-maker of the family.*
PERMITTING THEM TO PARTICIPATE IN DAILY ACTIVITIES	*We have to engage the men and male members in MHM also so that they can understand the importance and they can influence and they can - they will - they could permit their female members to act in these kind of activities and things.*
RESPECT	*So that male members can understand the importance and they can assist their female members and they can encourage and respect them.*
DIGNITY, PRIVACY, GENDER BASED VIOLENCE	*In terms of my dignity, in terms of my privacy, in terms of my gender-based violence, all of these things, without supporting the men and boys, we cannot be performing well.*

INITIAL PROGRAMME THEORIES

The data presented below are largely quotes from formal KIIs, occasionally with messaging from the literature to substantiate them where necessary. Iterative theory building through field notes, programme document review, observations and interviewing led to the consolidation of 10 IPTs. Following is the assemblage of ongoing components that arose across all data sources. The IPTs are organised into four levels of the Socio-Ecological Model: Individual, Interpersonal, Community, and Organisational. The Socio-Ecological Model provides a comprehensive way of categorising elements of a programme, recognising that context, mechanisms, outcomes, and programme inputs work on different levels. The IPTs concern mechanisms associated with the choice to participate and engage in the first instance, changing attitudes and behaviours, and the practise of the new behaviours.

INDIVIDUAL

IPT 1: Education (general and menstrual)

Staff described how the Rohingya had limited access to formal education. Some felt that this contributed to their lack of awareness or avoidance of menstruation reasoning they '*reject [the programme]… because there is only 2% educated people that lives at camp'*. They explain that younger camp inhabitants who have had more access to education are less shy and more open to discussing menstruation:

> *When we work with the adolescent boys… who are now studying, not in an institutional level, some people study privately, like, they study the curriculum in their household. So they already know [about menstruation]. They mentioned that they already know from their book and something. So youth people are not much feel shy about this, to discuss about this. But the older people… actually think that it's not a matter of discussion.*

Another staff member agrees about the older population's resistance to talking about menstruation, speaking from the perspective of the older community members:

> *'why we [older persons] have to know about this and why we have to [be] involved in these MHM issues… it's important for the women and girls. It's about a private issue. Why we have to know about this and this?'*

Although it's true that '*When they did not know about this, how they can provide any help or how they can understand it's an important issue?*' Some staff argue that '*the barrier is not education*' and that more programme inputs are required to change people's attitudes and perceptions:

> *I think only education will not work. I think they have to be engaged… that's why I… a little bit disagree with the messaging… So, I am giving you messages from last 40 years, nothing happened. Why? Because of that, I got the message, but I am not participating. I got the message. I am not interested to perform. So that's why UNICEF… and UNICEF partners is not doing - no more dissemination. No more messaging. It is for practice. It is for involvement, engagement. So, that's why we are now focussed on the mobilisation people as actors… So, we are facilitating processes…where the process will help the people [to] act…*

As another point, one staff member discusses how it isn't necessarily our level of education that shapes our opinions, and how people are intelligent in many different ways. They give the example that someone can have a high level of institutional education, and a lot of mobility, which allows them to interact with people and ideas outside of their immediate community but think very conservatively. On the other hand, they say there can be people with low formal education and not leave the home but have very progressive ways of thinking:

> *[People are intelligent in] different ways, so many different ways. So we cannot say… 'only… get education'. Education is very much strong, needed, I should say, but if one people is education [sic] and another people is not educated in institutional… you can see the differences between the two groups… Another thing you can see are people's mobility. So, I have the mobility here and there, everywhere, and I have the access to information. What is my thinking? Then another [person] is less motivation [sic]… I am going only [to] my community, and then I have less information. What is the differences between the thinking also? …And then I found that people [who] have all access to information, people [who] have all access to mobility… [have] conservative thinking. But, my mum or… those who were inside the home… they are thinking very, very high things. So…then why? …Why I am thinking this way, why you are not thinking this way?*

Initial Programme Theory: *IF formal education and education on menstruation are not all that's required for having or gaining positive views and actions towards menstruation, THEN World Vision can work to understand Rohingya non-menstruators' ways of thinking to implement targeted Behaviour Change*

Techniques alongside knowledge sharing on menstruation AND THUS non-menstruators will become open to and accepting of the new knowledge and learn from the educatory programmes.

IPT 2: Buying MHM materials

As mentioned previously, the non-menstruator heads of household control the family's finances. With the invisibility and discomfort in discussing menstruation, this becomes an issue when menstrual products, painkillers, or healthcare are not budgeted for. The staff also told us that it's difficult to get non-menstruators to budget for certain items when NGOs have historically been providing them for free. One staff member describes their experiences of discussing with non-menstruators how they can become more autonomous over their budgets for menstrual products:

> *I am preparing my health issue in terms of budget, okay. Okay, I am budgeted, but how much you think for MHM issue for your home expenditure? …We found very less amount, and even that they did not think that they need the budget… It costs. We are saying that you have no money, but you are thinking that you need money. Okay, you do not allocate by yourself, but I allocate it for you. That means we are allocating, but I like to know that, did you think for it that you need money for this? I like to see that they are thinking that if I not get you the subsidy, how can you do?*

One way of getting the non-menstruators to get used to, think to budget for, and even purchase menstrual products themselves is by staff asking them to physically handle the materials. One staff member told us:

> *But the very interesting thing is that… I gifted some materials, meeting materials, to the men group in front of all to see that this is [a] gift for you. You please bring in front of all, in front of market even, not hide, for your girls and then for your daughters and for your wives. This was another indicator I did that I found very successful, that they brought it for their families, women and daughters.*

Initial Programme Theory: SINCE menstruation is not discussed and WV distributes menstrual materials, non-menstruators – who control the family's finances - do not budget for them. IF World Vision get non-menstruators to hold menstrual materials, explain their importance for menstrual health, how to budget for them and where to buy them THEN non-menstruators will become accustomed to budgeting for and buying menstrual materials as part of their familial duties, without relying on World Vision for distribution.

INTERPERSONAL

IPT 3: Menstruators as a barrier

Although the purpose of the programme is for non-menstruators to develop supportive attitudes and behaviours towards menstruation, some menstruators wish to follow cultural practises themselves, making it challenging for non-menstruators to request they act differently to how they're comfortable. To reiterate, this paper is not saying all menstruators should go to the Mosque on their period in order for the community to be deemed 'progressive'. The Mosque is a sacred space and cleanliness is very important in Islam. For

instance, one should not touch the Qur'an if their hands are dirty. Therefore, if someone feels they are not able to manage their period properly or wash themselves, they may not wish to enter the Mosque at this time. If the programme can help the community see that if someone is able to manage their period properly and be clean in the Mosque then they are able to enter, as many other practicing Muslims do globally.

> *Women believing that during menstruation, I should not go mosque. So how can - without changing my thinking, how can I ask my husband to do it? I cannot do it.*

Another aspect is if the menstruators are shy to discuss menstruation with their partners, which prevents the progress of the programme:

> *When the mother female in their family, when any female raise any needs or requirements, they did not raise to their male members, because they've been shy and facing any problem about the reproductive health or any issues. They did not raise to their male members, because the male members did not consider it a normal issue or something.*

<u>Initial Programme Theory: IF the programme engages both menstruators and non-menstruators explaining that to improve MH they need to be able to talk to each other about it THEN both will be prepared to start the conversation with each other without surprises AND THUS be more comfortable to work together to continue the conversation.</u>

COMMUNITY

IPT 4: Safe space

A UNHCR study found that participation is low among displaced persons living in camps when safety and survival needs are pressing (Anderson 2020). This is the case in Kutupalong, as one staff member explains:

> *[I do not] feel that the camp area is now safe, because sometimes the gangs from the community conflict with each other, and many different issues raise. One experience… they faced an issue [of] conflict. They are starting conflict to each other… After third hour, one colleague send some law enforcement… like police to them, and they rescued them from the blocks. Now for that reason, sometimes people do not want to come to attend sometimes activities or something.*

In order to mitigate safety issues, World Vision holds sessions in individual's households, allowing participants to feel at ease and avoid interruption:

> *We conduct the session in their household… I think now, still now it's safe. We conduct session and activity with the community. We do not face any problem or harassment.*

Another way of maintaining safety is to have discussions with influential community members like the Imam (religious leader) so they can address such issues and allow World Vision to continue with their work:

Block leaders like chairmen and members… We inform them. We also inform the influential members like Imam and our community leaders. Through this process, we try to maintain the safety and issues so that they can feel safe and we can work on.

In terms of feeling safe and comfortable within the meetings themselves, as menstruation is such a stigmatised topic within this community, people feel shyer to discuss it in open spaces or with people they do not know well. Thus, World Vision can organise meetings in a private space and between neighbours and friends:

We gathered those men and boys who actually stay or whose household is nearby or neighbours there and they know each other. They gather and they want to listen about this. But when we do not do any kind of mass type of activities, mass gathering because they feel shy and they thought that it's not any matters which we have to discuss in open place or in front of others who we did not know actually.

Initial Programme Theory: IF World Vision can create meetings in safe spaces e.g. at their household and between neighbours and inform influential members of the camp about safety issues which is reported to camp management THEN participants feel safe, comfortable, and willing to attend free from harassment AND THUS meeting attendance improves.

IPT 5: Influential people and facilitators

World Vision's decision to have the community select an influential person from their block with 'positive' attitudes and behaviours towards menstruators and then for World Vision to train them as facilitators is based on two factors. The first is the need to move away from neo-colonial patterns of development and humanitarian programmes, which can be paternalistic when one group dictates to another how to think and behave. The aim is for the community to define and move towards their own ways of improving attitudes and behaviours towards menstruation. Secondarily World Vision have found that the Rohingya respond better to someone from their community acting by example rather than messaging from the organisation:

For any other organisation, obviously, my suggestion will be that if they want to engage men and boys in their project, obviously they have to identify the influential members who can engage the men and boys easily.

So when the community, especially the most best leader accepts this type of - expresses his experience like this, that time they accept it more, rather than us, when we said anything. Rather than our information, they liked his way of thinking and way of work.

The Rohingya are largely devout Muslims and the Imam is very influential. This works well to mobilise the community when he has a positive attitude towards menstruation:

I saw in some [sub-blocks] where we involved the religious leader, who are the imam, our mosque leader, when they talked about this, community people, especially the male members, accept it normally.

When we engage some male member, adult male, actually, and some religious leaders who are working for actually the influential members of the community, and sometimes some religious leaders also express their knowledge, and practise what they practise in their house: Sometimes they express their good practises when their wives and daughters are menstruating, in what they do. At that time, we feel that we can encourage them more to disseminate this type of knowledge among the community.

It works in the opposite way when the Imam or influential person is negative about menstruation:

There is a religious taboo, a stigma, associated with the MHM. So, this is mainly leading by the male religious leaders in the mosques – Imam.

When any people are more positive, if he is positive about this, and also if he is also an influential member of community, he's actually the asset for this project, and he can involve more people. But when one influential or community influential member is negative about this is, it also affects the project, because we have to face this. We'll struggle to involve him first, and it will take more time, and we'll have to spend more time to make him positive.

Initial Programme Theory: IF non-menstruators choose influential people in the community, whose capacity is built by World Vision and they demonstrate positive attitudes and behaviours towards menstruation and menstruators THEN non-menstruators become empathetic to their own menstruating family members, feel a sense of responsibility and duty to follow suit AND THUS begin to support their family during menstruation. When the influential person is negative about menstruation, WV staff have to work to engage them and encourage their positive attitudes and behaviours.

ORGANISATIONAL

IPT 6: Staff rapport, expertise, and relationship with the community

As previously stated, menstruation is a stigmatised topic and one that Rohingya non-menstruators are shy to discuss at all. What may aid their willingness and comfort to engage in the topic with World Vision staff is their renown and familiarity with the community, as the following quote describes:

World Vision… worked from first place in Rohingya community, so it's a very known organisation to Rohingya community; a very known organisation. World Vision working 30 years already, past 30 years at Kutupalong, so very popular.

Aside from World Vision's experience and expertise they are also able to build rapport with the community, sharing similar language and values as one staff member describes:

As World Vision previously worked in the emergency situation, so they have that much capacity to respond in emergency. Obviously for the MHM project, World Vision staff's capacity is… very good, I think so. They have that much capacity to build rapport with the community, boys, and males, and boys, and girls, and females to both, and also the values which actually World Vision staff carries, which also helps them to communicate with the community.

Although staff may have built good rapport and familiarity with the community, a shortcoming of the humanitarian system is that staff contracts are often very short (less than a year) which not only creates job insecurity and hinders project progress but also the relationships with the people they aim to serve (Oloo, 2018).

When staff get the contract for one month or three months, it also hampered the work mode a little. Although we have the one-year contract for the work or the project with our donors, but sometimes staff get contract for the one-month or three months. That time, both issues impact in the work. A third thing, if we get more time, obviously, we can do more work for the community and we can work [on] detail.

Initial Programme Theory: IF staff have been working with the Rohingya for an extended period, are part of a renowned organisation and work on building rapport with participants THEN participants will feel trusting and familiar AND THUS be willing to participate in the programme. Programme inputs may be hampered by high staff turnover and short programme contracts, however.

IPT 7: Culture

Not only is it important for World Vision to understand and respect Rohingya culture to cultivate rapport and trust but also in order to comprehend their current thinking about menstruation to tailor the programme in a way they'll respond well to:

My learning is… if I want to engage men and boys, first I have to understand their thinking about the MHM, first. After that, I have to plan how we can work, and what type of work we have to do, which stakeholder I have to focus more, and which stakeholder I have to engage more first.

So we had to take the action based on the context, based on the people's pulse. We have to read the people's pulse, and then also interest of people and the sustainability and the climate, all the environment. All of these things we consider when we take this initiative.

But if we can understand their issues, and understand their knowledge levels, and the practice and the culture too, that will not be an issue to implement any kind of project.

They appreciate the importance of not forcing or imposing their beliefs on the community but working with them based on where their current thinking is:

Actually through our activities, we did not force them to do, but rather then we actually [alert] them about the good practice and impacts. It's not like that we are forcing them or we are imposing any of our thoughts to them. We are actually influence them to do the good practice… It's not like that we are imposing.

No, we just ensure their thoughts and stand with their thoughts. We try to improve their thoughts, not force.

Initial Programme Theory: IF World Vision works to bridge cultural gaps and understand and respect Rohingya culture rather than impose or enforce any beliefs THEN the community will feel understood and unperturbed AND THUS be happy to participate in the programme and develop their thinking in their own way and time.

IPT 8: World Vision attitude and diversity

A 2020 report by UNHCR writes that 'gender equality starts within the humanitarian system itself' saying that it is unrealistic to promote gender equalising practises if the organisation enacting the programme cannot model it themselves (Anderson 2020). Thus, the authors were keen to discover whether World Vision staff considered their roles within the organisation and the attitudes towards menstruation to be equally positive amongst genders. All staff attested that there is no discrimination between genders or religions, that everyone has an equal voice:

We help each other, and as we are both male and female who work together, we did not feel that they are more power or we are not. That kind of practice we just did not have. Another thing is, we are working like siblings, as we are called ***bhai*** *(brother) and* ***apu*** *(sister).*

They also discuss the importance of having female/male representation at all levels within the organisation:

The proportion of male and female also affects the works, because sometimes based on the community, we have to involve our female staff for specific work, and male member work the specific work as needed, the proportion of male and female. Obviously, in World Vision, I saw from up to bottom, they're considering the female participation. Also, in the sector level, they also try to participate proportionately male and female.

In terms of the general attitudes towards menstruation staff explained*:*

All the staffs are concerned in a same way for MH. Maybe they have differences in their responsibilities but all trying their best to serve the MH project outcome.

They also discuss the importance of World Vision's diversity in helping them be able to communicate with and understand others:

Diversity also helps us to think about the people, how we can communicate with others. Sometimes when in one team, in a diverse age group also in the team, that we also learn

how we can communicate with the different age group people like community, as community have the diverse population.

Initial Programme Theory: IF World Vision demonstrate their comfort discussing menstruation amongst genders and religions and equal roles within the organisation THEN non-menstruators will reason that it is normal and respectful to discuss menstruation in this way and for people of different religions and genders to perform equal roles AND THUS non-menstruators will consider gender equal behaviours and discuss menstruation amongst all genders.

IPT 9: Guidelines and materials

Since engaging non-menstruators in menstrual health programmes in humanitarianism is a relatively recent endeavour that World Vision has started working on in the last one or two years, there is limited guidance and resources available:

With men and boys, yes, we just have fairly short guidelines actually in behaviour change approach, just one activity, actually. Another is a draft for male and boys' engagement, as the focus work for the male and boys' engagement is not so old, like, not that we are working. We have worked with the male and boys in MHM but not more focused from the last year. Yes, from the last year or one and a half years, we are working more focused, and we are trying our best to do that as it is not a very old issue.

As they cannot rely wholly on this limited guidance, some staff suggest having to develop appropriate materials themselves. To do this staff have to understand the Rohingya's needs so they can contextualise methods of communication and engagement:

Especially if I want to reach the… men and boys, maybe our way of communication, we can use the media, and textbooks, and the newspapers. But you know that they do not have much literacy, especially the adult men and boys, so that we have to think about that, how much we can [address] them through the verbal communication. So we are working with them through especially the different kind of meetings, the gatherings, so that we can deliver the information to them. It's also one kind of contextualisation.

One method a staff member suggests is the use of flip charts and drawings to understand how the Rohingya feel through the programme, instead of writing and reading:

Already I talked with my team members how can we develop materials like a flip chart… It will be a drawing by our community people… who will say that we have to assist our female members when they are menstruating, what they think about this, what comes to their mind about to just [listen to this]. They can draw… After that, we can decide which drawing we can put in our flip chart, which is more effective because what they think. Sometimes we just make some cartoons and many things, which we have, again, we have to discuss, and we have to give them details, information, what the picture is.

But, when they draw this picture… it will be more understandable for them… Maybe we'll do, but it will take time, and I'll talk with UNICEF also about this. First… I want to draft some pictures from the community, what they're thinking about this, what they think about the nutritious food, providing nutritious food, what kind of picture they have in their mind. After that, I will talk with UNICEF, as we do not have much materials, and also more focused and detailed guidelines.

<u>Initial Programme Theory: SINCE there do not exist many guidelines or materials on engaging non-menstruators on menstruation, World Vision can ask non-menstruators to draw depictions of supportive roles of non-menstruators to develop illustrative demonstrations THEN communication between staff and participant is enhanced AND THUS staff can continue to tailor the programme to aid participant understanding and reasoning.</u>

IPT 10: Timing and monitoring

Behaviour change is not a tick box exercise that can be rushed but rather a process that occurs over an extended period of time. By handing over responsibility to the community for engaging, enacting, and monitoring without time constraints, they are able to mobilise themselves and continually revolutionise their perspectives throughout the whole community. One staff member pictures that:

During menstruation, my brother will take care of me, and then my brother will teach other brothers that you also have to do it. So we are mobilising to engage and involve and then act, not only involve and then for one short game. They will continue to act as a change maker among the women and among the men and boys that this is our issue. This is not only a women issue.

They explain how they have already started to see small indicators of success and that even though progress may be slow it is steady and promising:

Slowly running. We are speedy, but we are not running. We have no rush. That's why my indicator of success is very small. Like this, we are talking in front of men… It is a very good indicator for me, because of that - the context here did not allow to talk, even. So now, I am talking not only you - I am talking with the men, with this issue, and in front of all. [Eye contact] is doing, no? So that's why my indicator is a small but a strong, this power.

Another way UNICEF and World Vision ensure the programme is community led and participatory is having them monitor their own progress as otherwise if:

I am planning. I am implementing, I am evaluating all these things, and then I am claiming that this is participatory. No, this is not participatory.

With this too the community works on its own time schedule:

Then, regarding the timing, we did not say that you have to do it by this week. We have to do it today. Their plan by themselves that every month, one time, we'll do it. Time is dependent, their interest depends on their availability

Through the creation of community WaSH committees the Rohingya are able to monitor themselves and feedback to World Vision and UNICEF, calling for support where they may need it:

So then, they are supporting themselves. If they need our support, they are calling [for] that, okay, come on here… This report we are even using for proposals also. We are using for donor reporting, also… It is absolutely from the community are saying 'we are doing it, we are not doing it, we have this'. Then by this report, they are also giving us feedback [like] 'for this reason, we cannot do it'.

Initial Programme Theory: IF the community to carries out the programme in its own time led and monitored by the community THEN non-menstruators and facilitators do not feel pressure and can develop their approach in a relaxed, autonomous and sustainable way AND THUS even though change is slow it continues over time with small indicators of success.

DISCUSSION

The results demonstrate the programme inputs initiated by World Vision and UNICEF, the community and organisational contextual factors and the speculated generative causations – or mechanisms – that result in the outcomes. There are mechanisms associated with the choice to engage, changing behaviours, and practising new behaviours. The mechanisms that appear to be necessary to influence non-menstruators to participate in the programme are feeling trusting and familiar by programme staff, feeling physically safe enough to attend meetings, feeling culturally understood and thus unperturbed by the approaches and comfortable with a sense of responsibility being engaged alongside neighbours. The mechanisms necessary for the behaviour change itself are understanding – and becoming empathic to - the implications of poor MHM through education, feeling pressure or responsibility from influential community members, becoming familiar with handling and budgeting for MHM materials, menstrual dialogue being normalised by staff, and further understanding and feeling included through drawing and visual activities. In practise, the mechanisms required for behaviours to be enacted are all family members feeling prepared, unresisting and unsurprised to begin the dialogue and for the non-menstruators to feel unpressured, relaxed, and autonomous to lead the programme in their own time. Since there is not much literature on engaging non-menstruators in menstrual health in these settings, we position our IPTs within other related programmes such as sexual and reproductive health.

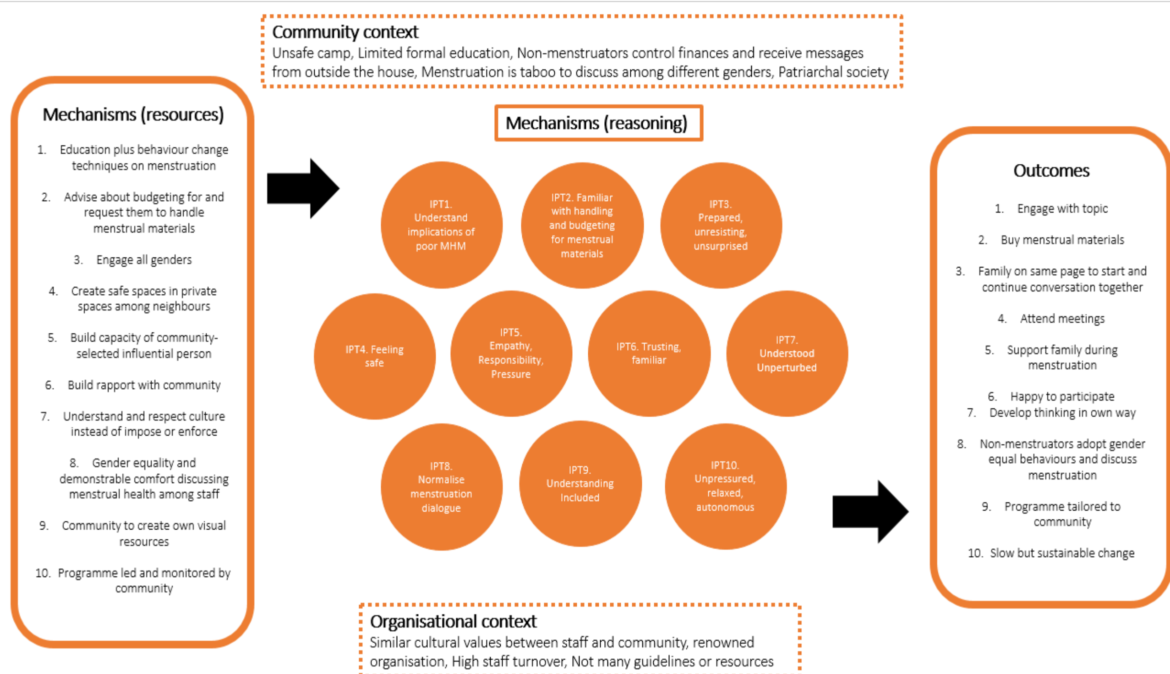


Figure 13 - summary of initial programme theories within context-mechanism-outcome configurations

IPT 1: EDUCATION (GENERAL AND MENSTRUAL)

One point of disagreement between staff was the influence of education on non-menstruators' attitudes towards menstruation, with some observing that younger, more educated non-menstruators were less shy and more open to discussing menstruation than their older community members who hadn't received formal education. One staff member, however, felt that education and message dissemination could not work on its own to change attitudes or behaviours. The difference in factors apparent here would be the timing in which the lessons are given, with older community members being subject to social and cultural norms for a longer period of time. Although education is an important component in influencing behaviour change, it is often insufficient on its own. Some other elements that contend with education are the emotions, beliefs (whether cultural, social or personal) and psychological factors of the individual, habitual behaviours that operate on a subconscious level, and cognitive biases (McCluskey & Lovarini 2005). Thus, behaviour change techniques are needed to work alongside education.

IPT 2: BUYING MHM MATERIALS

Though other articles mention the 'importance of men being involved in promoting menstrual products' accessibility', the authors could not find any articles relating to non-menstruators budgeting for or buying menstrual materials for their families (Holst et al. 2022). To compare to a related experience, we looked at barriers to condom use among Rohingya non-menstruators. One of the main barriers was feeling embarrassed and shy. The article recommended that health workers could reduce the stigma attached to buying condoms and that the 'process of obtaining condoms should be improved and made to cause less embarrassment' (Islam et al. 2022).

IPT 3: MENSTRUATORS AS A BARRIER

The Rohingya are a conservative community, where Islamic laws are misconstrued and tied up with culture. One study found that menstruators generally do not 'open up about their menstrual problems and STDs as they think it is not appropriate in their religion' (Jannat et al. 2023). Additionally 'they are not allowed to take medications for it because to take medication they have to discuss it with the doctors, which they consider a cultural shame'. Therefore, menstruators need to change their views too if the programme is going to be effective. An example of how this dynamic can work constructively is given here: 'I had various health complications after my pregnancy, especially severe menstrual problems. Keeping this in mind, I requested my husband to use contraception and stop taking the child further… he understood my situation and accepted my request. Now, I am living a healthy and happy life with my husband and children' (Jannat et al. 2023).

IPT 4: SAFE SPACE

When we speak about safety, we refer to both physical and mental safety. For mental or emotional safety, a scoping review on the barriers and facilitators for the sexual and reproductive health and rights of young people in refugee contexts found that a lack of confidentiality is a barrier and suggest the provision of a safe space to host meetings in (Tirado et al. 2020). A realist evaluation on enhancing compassionate healthcare Found that 'the safe space (Mechanism [resource]) allows vulnerability (Mechanism [response]), an important first step towards trust (outcome)' (Maben et al. 2021).

As for physical safety, international aid agencies and the UNHCR recognize that the 'psychological distress that accompanies mass displacement' and threats to safety 'can be debilitating and thus a barrier to accessing services' (Rasmussen and Annan 2009; Sphere project 2004). In one study on a refugee camp in Darfur, they found that age had an effect on safety concerns, with older residents reporting less stress than younger residents (Rasmussen and Annan 2009). They also found significance in those with debilitating injuries being statically more concerned by safety issues than those without. This was increased between those living in peripheral blocks compared with those living in the centre. This is a good demonstration of realist thinking in how programmes need to take into consideration for whom their inputs are working for; if meetings were to be hosted in the centre of the camp, those with injuries living more peripherally may not attend due to increased safety concerns.

IPT 5: INFLUENTIAL PEOPLE AND MH FACILITATORS

Udoewa (2022) argues that Coloniality is inherent in participatory design and thus organisations should employ 'radical participation' wherein the community have autonomy over the design and direction of programmes in order to be truly participatory. In this way UNICEF and World Vision felt it to be of utmost importance for the behaviour change campaign to be participatory in every aspect, from planning, interpretation, decision-making and monitoring. Using MH facilitors – who work similarly to 'change champions' - is one of the main ways World Vision aims to create attitude changes within the population. Community champions of change are often more effective than humanitarian workers in supplying messaging to the community. They understand the cultural norms, values, and social dynamics, which allows them to tailor messaging in a way that resonates. They may also be more likely to be trusted by their

peers, and have similar life experiences, which leads to greater acceptance of the messages being delivered. They are also consistently present, allowing for continued dialogue.

IPT 6: STAFF RAPPORT, EXPERTISE, AND RELATIONSHIP WITH THE COMMUNITY

The relationship between humanitarian actor and refugee is a strange one wherein there is an unavoidable power dynamic between the 'helper' and those that rely on them for their survival (Harrel-Bond 2022). Building rapport with participants is crucial for humanitarian workers to implement successful programmes, begging questions on the reasons behind cultivating good relationships. In Myanmar, decades of state repression prevented the Rohingya from participating in political life, as well as 'fragmenting and eroding the community-level institutions that underpin trust, enable collective problem-solving and foster social cohesion' (Lough et al. 2021). Because of this, strengthening their role in decision-making has faced significant challenges. For instance, conventional approaches to communication with communities deployed at the start of the response struggled to find success (Buchanan-Smith and Islam, 2018). Now that 'programme teams have had time to learn lessons, streamline programming and build rapport with the people they serve; and refugees themselves are more familiar with their surroundings and with their new communities' they are more able to participate in programmes in a meaningful way (Lough et al. 2021). With this improved trust, rapport, and communication, interventions can be culturally sensitive and contextually appropriate.

IPT 7: CULTURE

Religion deeply influences culture. The Rohingya have many cultural practises that are shaped by religious thought. However, in the essential teachings of the Qur'an, many of these practises are based on interpretations or messaging which was significant when the Qur'an was first written in 600 CE, but are not necessarily today. For example, since cleanliness is imperative for prayer, if Mosques did not have appropriate WaSH facilities, or people did not have MHM materials, which reliably prevent leaks, it would be better for people that menstruate to remain at home. In areas where there are menstruator-friendly WaSH facilities and access to good quality materials, many Muslim menstruators choose to go to Mosque whilst menstruating. The same goes for touching the Qur'an with dirty hands; if menstruators were unable to access water and soap it makes sense to advise them not to touch the Qur'an whilst managing their period. In this way, World Vision can work with the Imams to rethink cultural practises, which may be outdated and unnecessary. During the interviews, it was evident that the programme did not wish to impose on culture or force any ways of thinking or acting. Instead, it was to reframe cultural practises, which may be perceived to be grounded in Islamic rules to show there is no basis. In this way, menstruators have more freedom to choose which actions may be better for their overall health and wellbeing without feeling they are going against the teachings of the Qur'an.

IPT 8: WORLD VISION ATTITUDE AND DIVERSITY

Gender asymmetries can be replicated and reproduced in humanitarian structures and by humanitarian actors (Anderson 2020). Conversely, refugees are often portrayed as 'passive or problematic subjects who need to be rescued, protected, assisted, activated, controlled and reformed through humanitarian

interventions' – negative stereotypes of femininity – while humanitarian actors are 'positioned as rational administrators and progressive agents of social transformation' – stereotypes of masculinity (Olivius 2015, p.270). Olivius (2015) thus argues that 'gender equality is used to sustain power asymmetries in refugee situations and to reproduce global hierarchies' (p.270). She goes on to say that 'the promotion of gender equality in refugee situations is constructed as something that is done *for* refugees *by* humanitarian aid organizations' (p.272). Though this may be ring true in this dynamic too, UNICEF and World Vision are conscientious not to force, coerce or impose their beliefs on the community. For example, meetings will always be gender segregated with same-sex facilitators and staff addressing the groups. If the Rohingya happen to see World Vision staff working together and discussing menstruation between different sexes maybe their perceptions of what is acceptable may change. But this is not done though force.

IPT 9: GUIDELINES AND MATERIALS

The Rohingya language is a spoken one, meaning rates of illiteracy among the population are high. As an alternative to written knowledge and behaviour change communication, World Vision has used visual and pictorial aids to explain menstruation and menstrual behaviours. For MHM and menstruator behaviours with menstruation, World Vision have already developed books, which depict stories that explain how to manage ones period in different ways. These books were developed by and for the community. They suggest to follow the same method for engaging non-menstruators. This would not only be to develop materials which can be distributed throughout the camps, but to also to understand their level of understanding or things they may wish to communicate but are unable to verbally, for shyness or lack of the right words. Additionally, one study on the role of pictures to aid health communication found that they can 'markedly increase attention to and recall of health education information' (Houts et al. 2006).

IPT 10: TIMING AND MONITORING

Though impossible to move away from the structure of humanitarian organisations as givers of aid, and camp dwellers as the receivers, work can be done to address these structures to give more autonomy to programme participants. Project staff were ardent about the need for the programme to be community-led from planning, interpretation, decision-making and monitoring. Project staff were also cognizant of the fact that behaviour change campaigns take time, and that though indicators of success may be small, they are happening. One observation was the ability for menstruator staff to address Rohingya non-menstruators and discuss menstruation comfortably together. In this way, not only does the programme give more control into the hands of the community to help shape their relationship to menstruation in a way that is comfortable, it allows those changes to be more sustainable.

CONCLUSION

The Rohingya are a patriarchal society wherein the role of non-menstruators to impede or improve menstrual health is evident. The first hurdle is for non-menstruators to understand the role they play in what many deem as a female issue. This is done through staff ensuring they understand Rohingya culture so they can assess the right ways of engaging with them, as well as creating familiarity, hosting meetings alongside their neighbours to encourage a sense of responsibility, and addressing physical safety barriers

that may dissuade meeting attendance. For change in behaviour, the suggested mechanisms are understanding and becoming empathetic to menstruating family members, pressure and responsibility, becoming familiar with menstrual materials, normalising talking about menstruation, and comprehension and feeling included. Once these mechanisms are fired, the community also needs to feel prepared to start and continue open communication and support together and for non-menstruators to feel autonomous and relaxed to continue the process.

Empirical evidence on how to effectively engage non-menstruators in menstrual health dialogue in humanitarian settings is limited. This paper presents an explorative retroductive analysis into the resources and generative causation required to encourage positive attitudes and behaviours towards menstruation in male Rohingya refugees. It can help to inform programme design in other humanitarian settings with similar contextual factors in place, with the assumption that similar mechanisms will be produced. The second part of this research will be to test the 10 IPTs though realist interviews with non-menstruators living in the camp to confirm, refine, or refute them.

REFERENCES

Anderson K. 2020. Tearing down the walls: Confronting the barriers to internally displaced women and girls' participation in humanitarian settings. *UNHCR.* [Online]. Available at https://www.unhcr.org/uk/media/tearing-down-walls-confronting-barriers-internally-displaced-women-and-girls-participation. [Accessed 20 Apr 2024].

Buchanan-Smith, M. Islam, S. 2018. Real-time evaluation of communicating with communities coordination: the Rohingya response. London: CDAC Network Available from: www.cdacnetwork.org/contentAsset/raw-data/c5147815-fc4a-4b69-9361-f296456d4c0e/attachedFile).

Chant, S. 1995. 'Policy approaches to women and gender in developing countries: an overview', paper prepared for the Commonwealth Secretariat, Commonwealth Youth Programme Planning Meeting, Maidstone, Kent.

Chant, S. Gutmann, M.C. 2000. Mainstreaming men into gender and development: debates, reflections, and experiences. Oxford: Oxfam.

Dalkin, S.M., Greenhalgh, J., Jones, D. 2015. What's in a mechanism? Development of a key concept in realist evaluation. *Implementation Sci.* **10**(49). 2015. Available from: https://doi.org/10.1186/s13012-015-0237-x

Danermark B., EkströM M., Jakobsen L., Karlsson J.C. 1997. Generalization, scientific inference and models for an explanatory social science in Danermark Berth (Eds.) *Explaining Society: Critical realism in the social sciences*. Ablingdon, Oxon: Routledge.

Flynn, R., Schick-Makaroff, K., Levay, A., Greenhalgh, J. 2020. Developing an Initial Program Theory to Explain How Patient-Reported Outcomes Are Used in Health Care Settings: Methodological Process and Lessons Learned. *International Journal of Qualitative Methods.* **19**. Available from: https://doi.org/10.1177/1609406920916299

Harrel-Bond, B. 2022. Can humanitarian work with refugees be humane? Forced Displacement and NGOs in Asia and the Pacific. Routledge. eBook ISBN 9781003145233. First Edition.

Hennegan J., Winkler I.T., Bobel C., Keiser D., Hampton J., Larsson G., Chandra-Mouli V., Plesons M., Mahon T. 2021. Menstrual health: a definition for policy, practice, and research. *Sex Reprod Health Matters*. **29**(1). Available from: doi: 10.1080/26410397.2021.1911618.

Holst, A.S., Jacques-Aviñó, C., Berenguera, A. 2022. Experiences of menstrual inequity and menstrual health among women and people who menstruate in the Barcelona area (Spain): a qualitative study. *Reprod Health.* **19**(45). Available from: https://doi.org/10.1186/s12978-022-01354-5

Houts, P.S. Doak, C.C. Doak, L.G. Loscalzo, M.J. 2006. The role of pictures in improving health communication: A review of research on attention, comprehension, recall, and adherence. *Patient Education and Counseling.* 61(2), pp.173-190. Available from: https://doi.org/10.1016/j.pec.2005.05.00

Islam, M., Habib, S.E. 2024. "I do not want my marriage to end": a qualitative investigation of the sociocultural factors influencing contraceptive use among married Rohingya women residing in refugee camps in Bangladesh. *Reprod Health* **21**(32). Available from: https://doi.org/10.1186/s12978-024-01763-8

Islam, M.M., Rahman, M.M. and Khan, M.N. 2022. Barriers to male condom use in Rohingya refugee camps in Bangladesh: A qualitative study. *The Lancet Regional Health-Southeast Asia*. 2.

Jannat, S., Sifat, R.I. Khisa, M. 2023. Sexual and Reproductive Health Conditions of Women: Insights from Rohingya Refugee Women in Bangladesh. *Sex Res Soc Policy.* **20**, pp.855–868. Available from: https://doi.org/10.1007/s13178-022-00758-z

Kislov, R., Pope, C., Martin, G.P. 2019. Harnessing the power of theorising in implementation science. *Implementation Sci* 14(103) Available from: https://doi.org/10.1186/s13012-019-0957-4

Lough, O., A. Spencer, D. Coyle, M.A. Jainul, and H. Barua. 2021. Participation and Inclusion in the Rohingya Refugee Response in Cox's Bazar, Bangladesh. "We Never Speak First". [Online]. Available at : https://www.researchgate.net/profile/Mohammed-Abdullah-Jainul/publication/355807989_Participation_and_inclusion_in_the_Rohingya_refugee_response_in_Cox's_Bazar_Bangladesh_'We_never_speak_first'/links/617fa1daeef53e51e1137b69/Participation-and-inclusion-in-the-Rohingya-refugee-response-in-Coxs-Bazar-Bangladesh-We-never-speak-first.pdf [Accessed 1 Nov 2024].

Maben, J., Taylor, C., Reynolds, E. 2021. Realist evaluation of Schwartz rounds® for enhancing the delivery of compassionate healthcare: understanding how they work, for whom, and in what contexts. *BMC Health Serv Res.* **21**(709) Available from: https://doi.org/10.1186/s12913-021-06483-4

Mahon, T., Tripathy, A., Singh, N. 2015. Putting the men into menstruation: the role of men and boys in community menstrual hygiene management. *Waterlines*. **34**(1), pp.7–14. Available from: http://www.jstor.org/stable/24688187

McCluskey, A., Lovarini, M. 2005. Providing education on evidence-based practice improved knowledge but did not change behaviour: a before and after study. *BMC Med Educ*. **5**(40). Available from: https://doi.org/10.1186/1472-6920-5-40

Meyer, S.B., Lunnay, B. 2013. The Application of Abductive and Retroductive Inference for the Design and Analysis of Theory-Driven Sociological Research. *Sociological Research Online*. **18**(1), pp.86-96. Available from: https://doi.org/10.5153/sro.2819

Mohajan, H. 2018. "The Rohingya Muslims in Myanmar Are Victim of Genocide!" *ABC Journal of Advanced Research*, pp 59–72. Available from: https://doi.org/10.18034/abcjar.v7i2.82.

Olivius, E. 2015. Constructing Humanitarian Selves and Refugee Others: Gender equality and the global governance of refugees. *International Feminist Journal of Politics*. **18**(2), pp.270–290. Available from: Https://doi.org/10.1080/14616742.2015.1094245

Oloo, L.O. 2018. Influence of Short-term Employment Contracts on Employee Performance in Humanitarian Non-governmental Organizations in Nairobi County. Masters of Science in Human Resource Management, School of Business. University of Nairobi.

Pandit K., Hasan M.J., Islam T., Rakib T.M. 2022. Constraints and current practices of menstrual hygiene among Rohingya adolescent girls. Heliyon. 8(5). Available from: doi: 10.1016/j.heliyon.2022.e09465.

Pathfinder. 2022. Improving Menstrual Hygiene Management for Rohingya Adolescent Girls in Cox's Bazar, Bangladesh [Online]. Accessed 21 December 2024. Available from: https://www.pathfinder.org/wp-content/uploads/2022/04/PI-BD_MHM-Rohingya_2022-04-25.pdf.

Rasmussen, A. Annan, J. 2010. Predicting Stress Related to Basic Needs and Safety in Darfur Refugee Camps: A Structural and Social Ecological Analysis, Journal of Refugee Studies. **23**(1), pp. 23–40. Available from: https://doi.org/10.1093/jrs/fep044

Save the Children, 2012. Menstrual Hygiene Management: Operational Guidelines. Toronto, Canada.

Sommer, M., Schmitt, M., Caltworthy, D. 2017. A toolkit for integrating Menstrual Hygiene Management (MHM) into humanitarian response. 1st ed. New York: Columbia University, Mailman School of Public Health and International Rescue Committee

Sphere Project. 2004. Humanitarian Charter and Minimum Standards in Disaster Response. Geneva: United Nations

SPHERE. 2018. The Sphere Handbook: Humanitarian charter and minimum standards in humanitarian response. 4th ed. Geneva, Switzerland: Practical Action Publishing.

Tirado V., Chu J., Hanson C., Ekström A.M., Kågesten A. 2020. Barriers and facilitators for the sexual and reproductive health and rights of young people in refugee contexts globally: A scoping review. *PLoS ONE* **15**(7). Available from: https://doi.org/10.1371/journal.pone.0236316

Udoewa V. 2022. An introduction to radical participatory design: decolonising participatory design processes. *Design Science.* **8**(e31). Available from: doi:10.1017/dsj.2022.24

UNHCR. 2024. Rohingya Refugee Crisis Explained. [Online]. Available from: https://www.unrefugees.org/news/rohingya-refugee-crisis-explained/#:~:text=In%20August%202017%2C%20armed%20attacks,homes%20in%20Myanmar's%20Rakhine%20State [Accessed 1 Nov 2024].

Wateraid. 2019. Hygiene behaviour change. What we do [Online]. Available from: https://www.wateraid.org/mw/hygiene-behaviour-change [Accessed 1 Nov 2024].

Wong, G., Westhorp, G., Manzano, A., Greenhalgh, J., Jagosh, J. and Greenhalgh, T. 2016. RAMESES II reporting standards for realist evaluations. BMC medicine, **14**(1), pp.1-18.

APPENDIX C – ETHICAL CLEARANCE FOR LEBANON CASE STUDY

Dear Georgia

MEEC 21-008 - What does gender inclusion for Menstrual Health services in humanitarian settings look like post-2030?

NB: All approvals/comments are subject to compliance with current University of Leeds and UK Government advice regarding the Covid-19 pandemic.

I am pleased to inform you that the above research ethics application has been reviewed by the School of Engineering and Physical Sciences Faculty Research Ethics Committee and on behalf of the Chair, I can confirm a conditional favourable ethical opinion based on the documentation received at date of this email and *subject to the following condition/s which must be fulfilled prior to the study commencing:*

1. **Section(s) C18 –** You tick both YES and NO. I assume you mean no risk, as you give no further information. But if you mean yes, please give details of risk. Please clarify.
2. **Section(s) C22 -** As there is an intention to publish, good practice in journal publishing supports the anonymised data underpinning the published works being shared via a unique persistent digital identifier (DOI), received when the data is deposited in a trusted repository (see attached form for further information). Please confirm which deposit route and update the ethics form accordingly.
3. **Section(s) C23 -** You did not tick 'conference'. As part of your PhD will you want to present this work anywhere? Response required.
4. **Section(s) C26 -** Since the Red Cross are conducting the interviews, how do you ensure they do not 'control your data'? Response required
5. **Section(s) C27 -** EPSRC funded research requires researchers to *meet EPSRC grant compliance* requirements incl to have a Data Management Plan (DMP) as part of their in-project documentation. This will support activity to deposit data in a trusted data repository eg the Institutional Data Repository. Further advice and assistance is available at researchdataenquiries@leeds.ac.uk. Please ensure this is compliant.

The study documentation must be amended where required to meet the above conditions and submitted for file and possible future audit.

Once you have addressed the conditions and submitted for file/future audit, you may commence the study and further confirmation of approval is not provided.

Please note, failure to comply with the above conditions will be considered a breach of ethics approval and may result in disciplinary action.

Please retain this email as evidence of conditional approval in your study file.

Please notify the committee if you intend to make any amendments to the original research as submitted and approved to date. This includes recruitment methodology; all changes must receive ethical approval prior to implementation. Please see https://ris.leeds.ac.uk/research-ethics-and-integrity/applying-for-an-amendment/ or contact the Research Ethics & Governance Administrator for further information on epsesearchethics@leeds.ac.uk if required.

Ethics approval does not infer you have the right of access to any member of staff or student or documents and the premises of the University of Leeds. Nor does it imply any right of access to the premises of any other organisation, including clinical areas. The committee takes no responsibility for you gaining access to staff, students and/or premises prior to, during or following your research activities.

Please note: You are expected to keep a record of all your approved documentation, as well as documents such as sample consent forms, risk assessments and other documents relating to the study. This should be kept in your study file, which should be readily available for audit purposes. You will be given a two week notice period if your project is to be audited.

It is our policy to remind everyone that it is your responsibility to comply with Health and Safety, Data Protection and any other legal and/or professional guidelines there may be.

I hope the study goes well.

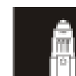
Best regards
Sou Chung
On behalf of JAMES YOUNG, CHAIR EPS

Activate Windows
Go to Settings to activate Windows.

~~~~~~

Sou Sit Chung, Research Ethics Administrator, The Secretariat, University of Leeds, LS2 9NL, s.chung@leeds.ac.uk
Please note my working hours are Monday to Friday 9am – 12.30pm
~~~~~~

APPENDIX D – ETHICAL CLEARANCE FOR BANGLADESH CASE STUDY



UNIVERSITY OF LEEDS

The Secretariat
University of Leeds
Leeds, LS2 9JT
Email: AHCresearchethics@leeds.ac.uk

Thu 16/03/2023

Dear Georgia

MEEC 22-019 - Engaging non-menstruators in menstrual health projects in humanitarian settings.

NB: All approvals/comments are subject to compliance with current University of Leeds and UK Government advice regarding the Covid-19 pandemic.

I am pleased to inform you that the above research ethics application has been reviewed by the Faculty of Engineering and Physical Sciences Faculty Committee and on behalf of the Chair, I can confirm a favourable ethical opinion based on the documentation received at date of this email.

Please retain this email as evidence of approval in your study file.

Please notify the committee if you intend to make any amendments to the original research as submitted and approved to date. This includes recruitment methodology; all changes must receive ethical approval prior to implementation. Please see https://ris.leeds.ac.uk/research-ethics-and-integrity/applying-for-an-amendment/ or contact the Research Ethics Administrator for further information epsresearchethics@leeds.ac.uk if required.

Ethics approval does not infer you have the right of access to any member of staff or student or documents and the premises of the University of Leeds. Nor does it imply any right of access to the premises of any other organisation, including clinical areas. The committee takes no responsibility for you gaining access to staff, students and/or premises prior to, during or following your research activities.

Please note: You are expected to keep a record of all your approved documentation, as well as documents such as sample consent forms, risk assessments and other documents relating to the study. This should be kept in your study file, which should be readily available for audit purposes. You will be given a two week notice period if your project is to be audited.

It is our policy to remind everyone that it is your responsibility to comply with Health and Safety, Data Protection, and any other legal and/or professional guidelines there may be.

I hope the study goes well.

Best wishes
Rachel Prinn
On behalf of Virginia Pensabene, CHAIR, EPS FREC

Rachel Prinn 16/03/2023

APPENDIX E – EXPLANATORY STATEMENT, CONSENT, AND CONFIDENTIALITY FORM

Explanatory statement

February 2024

Title: *Engaging non-menstruators in Menstrual Health in Kutupalong refugee camp, Bangladesh*

My name is Georgia Hales and I am a PhD Student in the Department of Civil Engineering at The University of Leeds, UK. I have been invited to work with World Vision on this project. You are invited to take part in this study, as a continuation of the project you are a part of. Please read this Explanatory Statement in full before making a decision on whether to take part. Please be as honest as possible with your answers so that we can find the most useful solutions. There is no 'wrong' answer and there will be no repercussions to your responses. All responses will be anonymised with each participant being assigned a number 1-150.

Why I am asking you to be a participant? We want to evaluate the efficacy of the World Vision project that engages men and boys in menstrual health.

Benefits. The project aims to improve the health of the women living in your community.

What does the study involve? The study involves an initial 30-minute survey with 150 people conducted by World Vision staff. After the World Vision project you will take part in another 30-minute survey. Out of this, 24 people will be selected to do an individual 30-minute interview with a translator and myself from World Vision.

Inconvenience/discomfort. There are no risks associated with participating in this. You may find the time taken to complete the interview to be an inconvenience and you may feel uncomfortable with some of the questions, which you do not have to answer if you do not want to.

Payment. There is no payment provided for participating in this study.

Can I withdraw from the research? Being in this study is voluntary and you are under no obligation to participate. If you do participate, you may withdraw your information up to the time the data is anonymised for analysis (30th August 2023). The World Vision staff will have my contact details.

Confidentiality. Your comments will be treated in complete confidence. This means that I will not use your name, or that of anyone you mention, in any discussions of the research or in any reports that come out of the project. I will also remove or disguise information, which might identify you. You can request to see the University's 'Privacy Notice for Research'.

Storage of data. Data collected will be stored in accordance with University of Leeds regulations, kept on University premises. A report of the study will be submitted for publication and in a presentation and/or report to World Vision, but individual participants will not be identifiable in either.

Use of data for other purposes. Your confidential data will not be used for purposes other than this study and in reports to World Vision.

Results

If you would like to contact the researchers about any aspect of this study, please contact the Chief Investigator:	If you have a complaint concerning the manner in which this research is being conducted, please contact:
Georgia Hales, PhD student School of Civil Engineering Faculty of Engineering University of Leeds UK LS2 9JT **Email:** cn14gih@leeds.ac.uk **UK:** +447804694093	Maths and Physical Sciences and Engineering Ethics Committee University of Leeds Leeds UK LS2 9JT **Email:** researchethics@leeds.ac.uk

Thank you,

Georgia Hales

Consent and Confidentiality Form

Title: *Engaging non-menstruators in Menstrual Health in Kutupalong refugee camp, Bangladesh*

NOTE: This form is to protect and safeguard you. This consent form will remain with the University of Leeds researcher for their records.

I agree to take part in the University of Leeds research project specified above. I have had the project explained to me, and I have read the Explanatory Statement, which I keep for my records. I understand that agreeing to take part means that:

I agree to take part in a two-part survey and potentially an interview: Yes ☐

No ☐

and

I understand that my participation is voluntary, that I can choose not to participate in part or all of the project, and that I can withdraw at any stage of the interview without being penalised or disadvantaged in any way.

and

I understand that any data that the researcher extracts from the interview for use in reports or published findings will not, under any circumstances, contain names or identifying characteristics.

and

I understand that any information I provide is confidential, and that no information that could lead to the identification of any individual will be disclosed in any reports on the project, or to any other party.

and

I understand that data from the interview will be kept in a secure storage and accessible to the researcher.

and

I will not disclose any information about any participants or what they have said in the study to other people without their consent

and

I testify that I have not been coerced i.e. persuaded to do anything by force or threats throughout the project.

Participant's name:____________________________

Signature/finger print:______________________

Date:________________________

APPENDIX F – EXAMPLE OF CODING QUOTES DURING PROGRAMME THEORY DEVELOPMENT

Theme	Subtheme	Quotes	Summary Programme Theory
Will they buy pads if WV stop supplying?	Yes because it's important No/it will be difficult because not enough money or courage Providing materials has built relationship with the community	World Vision after while distribution MHM kit but if they stop distribution we need to buy it from market but they need to ensure MHM kit/soft cloth using, though if distribution stop but it will not hamper their commitment to use MHM kit also… if distribution off I will buy reusable cloth they need to wash, dry and preserve it safely. Because I knows the risk factor if my family female member did not follow MHM practice it will lead itching, germ, infection to them. If Ngo will stop sanitary pad or cloths, then I will buy sanitary pad or cloth for my family. Previous I have poor knowledge on menstruation health and hygiene. Now I have a strong knowledge on importance of sanitary pad. For health safety we should buy menstruation kits for our female family member. I do not have the courage to buy. It will take 400-500 rupees to buy. where can i get money Now thanks for the wherewithal. During menstruation time our women need medicine support but we could not get good medicine support from camp hospital. For the reason we bring this medicine from nearest market but we have not enough money to buying this medicine. In Menstruation women have need to provide extra nutrition food for her better health but I could not provide this food support to my wife. World vison provide black under garments (Word of mouth-Kala Kaour) for women if world vision colorful under garments that will be helpful for our women. I need support from world vison how we increase our knowledge level on use of MHM materials. They provide us mhm materials like reusable cloths. It helps to build relationship with community people.	Majority said yes because it's important, necessary, they now have knowledge of the risk factor that it will lead to poor menstrual health, and they are committed. Others said they do not have enough money or courage to buy and therefore it will be difficult for them to manage their periods and might lead to poor MHM. Also do not have enough money and access to medicine. WV providing materials has helped to build relationship with community. Others said they do not have enough money or courage to buy and therefore it will be difficult for them to manage their periods and might lead to MHM. Also do not have enough money and access to medicine. WV providing materials has helped to build relationship with community
WV respecting culture	Choice to come to sessions / being invited	No one forced me to come to the World Vision monthly program. I join the session at my own pleasure. For example, to learn about MHM Before conducting the session World Vision Volunteers/staffs are visit our household and invited us with proper respect. Before the starting of session, they giving thanks for the participation. They give equal respect for every participant. Before the session WV responsible volunteer inviting me to participate in session with my same gender and same age group. As a result, every participant is freely express their opinions and thoughts regarding menstruation.	People are encouraged, respected and not forced to come to the sessions and make sure it's in a safe space. They visit the household level first to ask encourage people to attend.
	Respect culture	have a good relationship with world vision. They respect me and encourage me to attend mhm meetings. They treat us respectfully… World Vision male and female volunteers works together but they respect our religious thought. Female can work with wear her comfortable dress. I have a good relationship with world vision. They respect us and invite in their regular activities. I have relationship with world vision as a community people… They conduct their meeting by showing respect to our culture. They arrange their session at safe place. World Vision understand and respect community culture during implementation of MH activities in camp… World Vision Create flexible environment for work because it ensures community welfare about MHM. But if MH activity discussion remain gender friendly like- Men to men discussion, Women to Women discussion which is friendly to [our] culture it will be appreciable. It's matter knowledge their awareness people and discussing about MHM with step by step. So i think program respectful to culture and belief. Like example- World vision conduct meeting frequently 8-10 person once so firstly they make a situation of MHM friendly so after regular discussion now days it was normal matter at block, that's why i thinks it respect both culture. As a beneficiary I have not face this kind of experience. I always seeing that World Vision showing equal respect to all participants. They never disrespect to our religious belief and social norms. They respect us a lot, they do what we want. In our society, some prejudices that we are trying to overcome. They do not force us in any way, they work for our good, so we are happy to help them WV never showing disrespect to our community beliefs and social norms. When WV staffs/Volunteers are invite us to participate with a session they calling us Bhai (brother) and show proper respect to every participant… Before conducting the session World Vision Volunteers/staffs are visit our household and invited us with proper respect. Before the starting of session, they giving thanks for the participation. They give equal respect for every participant.	WV respects their culture, opinions and attitudes – equal respect to each participant – main example is conducting gender-segregated sessions

		They respect us a lot, they do what we want. But men and woman working together is not tolerated in our society, We are slowly trying to get out of it World Vision always showing equal respect to all participants and beneficiary. World Vison never disrespect to our religious belief and community norms. They playing as an advisor and they give motivation to adopt good behavioral practice regarding the WASH… World Vision never give any kind of pressure to change my attitude and opinion regarding menstruation. World vision staffs are motivated us to practicing good behavior regarding personal and community hygiene. They respect to our opinion and thoughts. World Vison every staffs and volunteers are showing mutual respect to every participant. They never disrespect to our culture, social norms and religious norms… World Vision showing equal respect and ensure dignity to participants… World Vision Staffs and Volunteers never pressure to change our attitude and opinions. They respect our opinion and attitude.	
	No force	No. Their activities did not force me to change my attitudes and opinion towards mhm. They conduct meeting in our free time. I did not feel pressure from the programme to change my attitudes and opinions towards menstrual health management. They teach me very softly. My attitude was changed about MHM compare to before but it's not by pressure just only because MH meeting discussion touch his heart he realizes importance MH knowledge. Word Vision Staffs and HP Volunteers never give any pressure to change our attitude and opinion. Always they are giving motivation to change our habit and attitude. I do not feel any pressure to attending with WV. They never forced us to change my behavior. They always motivated us how to change our habit. How we support each and other, how we utilize the facility. They influence us about the benefit and hinder of good/bad practice. Community has right to choose the best things which is appropriate for her/his family wellbeing. No pressure from the program. they are take time to learn MH activities. We also contemplate in our own time about MH activity how to help and maintain this. World Vision never give any kind of pressure to change my attitude and opinion regarding menstruation. World vision staffs are motivated us to practicing good behavior regarding personal and community hygiene. They respect to our opinion and thoughts	WV doesn't force or coerce them to change their opinions, just encourage and motivate
	Safe space for meetings in own time and given time for contemplation	No. Their activities did not force me to change my attitudes and opinion towards mhm. They conduct meeting in our free time. I am influenced by World Vision because I was busy person most of time due for my livelihood work that's why I could not regularly participated, engaged or self-plan for MHM activity but WVB volunteer & MHM facilitator influence me to participate in MHM related activity while I was free since last 1 year I only attends more 3 times about MHM related discussion all of them was organize by World Vision. WVB capacity build up me right now I have knowledge on MHM that's why I feels influenced towards to participate MH activity. Yes .They respects our culture. They did not force any community people to attend their activities. Ex: They conduct their meeting at safe place like household. So that female can attend their session very easily. They conduct meetings in safe place as meetings held in household at sub-block level. Female can with comfortable dress like Burqa. They conduct their meeting by showing respect to our culture. They arrange their session at safe place. They show respect our culture when they work with us. They create comfort zone during conducted session. They discussed with us mannerly. They are understanding and respect our believes. they are work together with us in MH activity. For example, WV arrange meeting together separately male and female in different activity. Also provide MHM kits in community women in space place. No male is can't come in this place. This is the good initiative or example for our community. No pressure from the program. they are take time to learn MH activities. We also contemplate in our own time about MH activity how to help and maintain this.	The ensure a safe space for meetings like household and arrange in their own time people can wear comfortable dress like Burqa. Can take their own time to contemplate changes
Commitment	How to increase commitment	If community meeting frequency increase than I will get more understanding and feel confident about MHM also like me more male people from community will get more understanding and confidence about MHM Knowledge. I feel confident [in] Menstrual health & hygiene management but if anything need for more confidence about MHM for myself as well community male member that need increase Community Level MHM meeting, discussion, Listening Recording audio, Mass media projector video awareness raising session conduction, Printing book on MHM and explain it in HH level will increase Commitment on MHM. Seeing that women are more vulnerable during menstruation increases my commitment. It is better to have a meeting with the Imam and the majhi at camp level to increase commitment regarding menstruation.	There were many reasons for feeling commitment among them were: for the benefit of the health and wellbeing of their female family members recognising that their female heads of household always work to support the good of the family and empathy to the suffering they undergo when menstruating. Other reasons were a sense of responsibility, being encouraged by
	Reason for commitment – good for female family health	I committed to support my family. Because I think it's good for our mother and sister. World vision's meeting and session helps me to make me more committed regarding mhm. I committed to support my family during menstruation. I think it's good. I should support to my mother for her best knowledge and practice in menstruation time. I am committed to support my mother in HH activities for her relax and well health.	

		During menstruation time our female family member never move from the household. For the reason I should help her in household activities for her wellness and peace. My wife is the maker in our family and she is more committed to care every family member. In menstruation time she feels sick than general time. This time she expects special care from us. According to her expectation I am committed to support her for happiness and good health.	their family to keep supporting, knowing that it will influence other community members to support their familities and for the general good of the community. They describe the influence World Vision's sessions to increase their knowledge on MHM has increased commitment. Lastly they give suggestions for how to improve commitment further in the community through increasing confidence in knowledge: organize different sessions, community meeting frequency increase, increase Community Level MHM meeting, discussion, Listening Recording audio, Mass media projector video awareness raising session conduction, Printing book on MHM and explain it in HH level, if we do at least 2 sessions a week, Arranged more training and meeting in separately in our community people (male /female), meeting with the Imam and the majhi at camp level.
	WV influence on commitment	This program engages different age and types of people from Rohingya community. This program including individual beneficiary because this organization have great moto to increase Community Hygiene knowledge and influence to committed to support his family member in menstruation time. Regarding the session, we gain knowledge and share this knowledge with my family and friends for community women health and hygiene… Above 6 years' world vison working in this area regarding the WASH. We are willingly participating in World Vision meeting and session. They trying to increase our ability and commitment to maintain personal hygiene and community hygiene.	
	Reason for commitment – responsibility	I committed to support my family during menstruation. I think it's my responsibility.	
	Reason for commitment – empathy	I feel commitment about observe the situation of my family female member like my sister or anyone from my household face difficulties during menstruation I feel committed to support during MHM because she is a part of my family that's why if she facing challenges I feels bad for it.	
	Reason for commitment – family encouragement	If I support my family during menstruation I feel proud and my family member appreciate my approach about menstruation support, if I support my family member stay healthy and safe which make them much more confident [with] MHM also they encourage me about MHM support commitment	
	Reason for commitment – it will encourage other people to support	I feel commitment about MHM because if I support my family after seeing my support my family member during menstruation other's nearest people will also support their family it make me confident & committed to MHM. If I do not support whom will support my family member?	
	Reason for commitment – knowledge	When I arrived in Camp, I did not know much about MHM before arrival. Now I [feel] committed to support my family… during this time. Different knowledge sharing programme helps me to [feel] committed.	
	Reason for commitment – good of community	I like to work for the good of the nation, no doubt it is a very good work, so I do it, people should understand the benefits and losses well… when I know that it will be good for us, since then my interest to do this work has increased a lot… Our society is not well aware of MHM,I have more learned to World vision and motivated by MHM issues, I have [become] more committed for change my community… World Vision has done so much for our community and has been able to inform us about menstruation. Their good advice helps us stay healthy all the time. So I am spontaneously working with MHM on my own accord	
Confidence	Confidence in empathy?	When they are menstruating they feel difficulties. They can't work easily like their daily activities. I always feel more confident to help my family members when they are menstruating.	The main reason for gaining confidence was through the information and knowledge they've gained through the sessions conducted with WV and the volunteers. Other reasons were due to empathy (tenuous?), becoming aware of responsibilities, from books or pictures, from experience directly, from group discussion, from friends/family, and from having the materials and water to allow family to perform MHM. Suggestions to increase confidence were: community meeting frequency increase, increase Community Level MHM meeting, discussion, Listening Recording audio, Mass media projector video awareness raising session conduction, Printing book on MHM and explain it in HH level. Need made
	Confidence from becoming aware of responsibilities	Making me aware of my responsibilities towards my family during menstruation will increase my confidence	
	Confidence from reading seeing hearing	Since creation, women have been made like this by Allah, I can understand from there. My self-confidence is coming through reading, seeing and hearing directly.	
	Confidence from family/friends	My confidence about MHM comes from family, friends and meetings with various organizations. It would have been better to show pictures of the current practice of having sessions with MHM related Male to increase confidence.	
	Confidence from having materials and water	World Vision supplying pure water for community and improving sanitation system for our better help. Water is very essential to maintain our personal hygiene and family hygiene. For the available of water our women clean her menstruation cloths… Materials would be very much useful for women health safety in menstruation time. But WV MHM session/meeting would be most useful to develop our knowledge level and change our attitude regarding the menstruation... Through to the session male members are increasing their self-ability to supporting female family members during menstruation time. [Confidence] I collect MHM Cloth from distribution point for my wife. How to she maintains her personal hygiene in menstruation time. I also help her to bring water for household activity and bring nutrition food and medicine from market for her better health.	
	Confidence from information sessions – ability confidence in how-to knowledge	My confidence is coming from WV's MHM sessions & Various organization meetings. It will increase my confidence if I can give details about MHM. WV volunteer increase my self-ability to support my family during menstruation. They develop my confidence level how to support my family. They discuss about the benefit of male engagement with positive approach. understating about MHM is not good because I always not stays at household in camp that's why I feel I know fewer about MHM. But after getting knowledge from MHM facilitator group and WV volunteer I know how to help my family member… to support my family Female member during menstruation time. this supportive This helped me to understand and feel confident about my ability to support family.	

<table>
<tr><td rowspan="2"></td><td></td><td>They give us MHM materials, they conduct meeting with and they give us knowledge about poor menstrual health, which made me more confident to support my family.

MHM meeting at sub block… I get knowledge about MHM I thinks it's my resources about understand and feel more confident because after getting knowledge from MH meeting and discussion I shares knowledge with my family every time like- for my daughter-in law I convey MHM related message [to] my wife, also discussed MH related support issue with my wife. This knowledge makes me more confident about my supporting role about MHM.</td><td rowspan="2">meeting more organize like if their book/materials where Male support female example share with proper message step by step, need to understand more details and more information in MH activities if possible, If theirs volunteer visit house and give knowledge, training, Mass gatherings through awareness sessions, Increase the number of regular sessions. show pictures of the current practice of having sessions with MHM related Male, more details for understand in MH activity, volunteers continue their session and meetings with any books or photo.</td></tr>
<tr><td>Suggestions for ways to increase confidence</td><td>If community meeting frequency increase than I will get more understanding and feel confident about MHM also like me more male people from community will get more understand and confident about MHM Knowledge. I feel confident Menstrual health & hygiene management but if anything need for more confident about MHM for myself as well community male member that need increase Community Level MHM meeting, discussion, Listening Recording audio, Mass media projector video awareness raising session conduction, Printing book on MHM and explain it in HH level will increase Commitment on MHM.

Materials would be very much useful for women health safety in menstruation time. But WV MHM session/meeting would be most useful to develop our knowledge level and change our attitude regarding the menstruation... Through to the session male members are increasing their self-ability to supporting female family members during menstruation time… We want to gain more knowledge from WV regarding MHM. If WV will conduct more session with us on MHM that will be helpful to increase our knowledge and self-ability.

My confidence about MHM comes from family, friends and meetings with various organizations. It would have been better to show pictures of the current practice of having sessions with MHM related Male to increase confidence.</td></tr>
<tr><td rowspan="4">Engaging different demographics</td><td>Everyone needs to learn because everyone has female family or will be married at some point</td><td>As per my observation program work with all category community people because it's the topic which need for everyone, because If I knows I can teach my family. So also like unmarried person need to know because he has sister/female family member or he will have married after a time so if he got knowledge about MHM it will help him to support his future wife.</td><td rowspan="4">It's important that WV engages all types of community member as everyone has female family – even if they're not yet married they will be one day so need to learn. Some people take it badly but if they have enough knowledge they will understand. The community is committed to convincing them for the greater good of the whole community.</td></tr>
<tr><td>Some engage well some do not</td><td>There are different groups that work well, many people do not like it, but if they understand it well, they take it well. We will try to convince them

There are different groups that work well, World vision working with all categories people, some people not supported for financial issues, Because there minimum time out of home for financial purpose</td></tr>
<tr><td>WV engages all types of people</td><td>They engage different group of people like married, unmarried, young and old people. They try to share knowledge in different group of people.</td></tr>
<tr><td>Effective to engage whole community</td><td>World Vision has worked for different types of people and age group this is very helpful approach for better understanding for all. Some time I am not available at camp for working purpose. During my absence my father and others male family member will help to my mother during menstruation time. if WV hasn't discussed or share the message with different age group then they do not understand the situation</td></tr>
<tr><td rowspan="3">Male-female WV staff working together</td><td>Changed perceptions/ inspire about female role / good to work together</td><td>at World Vision Male and Female work together. both Male and female staff or volunteer at World Vision work equally. Such as like Hygiene female volunteer role at my Block. But at block level I observe different overview such as if any female work at outdoor level in community do not take it as a good overview because at Myanmar Female are not engage with external Work they only engage with HH level work so basis on that community did not appreciate it… Regarding influence to see World Vision staff work equally, I also accepted with community perception on Female can't work in outdoor activity but Also now in Rohingyaa camp compare with they lived before Myanmar scenario was different i feel here is more comfortable and working environment for female outdoor activity that's why i agree that female can do equal work as like male.

They respect us a lot, they do what we want. But men and woman working together is not tolerated in our society, We are slowly trying to get out of it… We love it when World Vision girls and boys work together, we also want to work together, no one will accept it so easily, Society has to change slowly… I feel very well, By this I am leading my society towards progress. It's great when girls and boys work together. There are many females who are afraid of boys. Then female was made to work there.</td><td rowspan="3">There's a mix of feelings. Most respect and admire that WV male and female staff together. Some say it's not allowed under Shariah law others say it's something they like and want to work towards.

They like that the sessions are split by male and female and say that WV respect their religion and culture a lot.</td></tr>
<tr><td>But they also respect religion</td><td>World Vision male and female volunteers works together but they respect our religious thought. Female can work with wear her comfortable dress.</td></tr>
<tr><td>Good that male talk with male and female with female.

They are respectful, dignity</td><td>I see that at World Vision Male and Female work together. both Male and female staff or volunteer at World Vision work equally. It influences me like i think it's because Female staff will Easily communicate & support female community individual and male will easily communicate & support male community individual.

According to the religious views Women and Men are working together but World Vision staffs are working equally for effective communication in block level. Regarding the policy staffs/Volunteers are able to get easy access to open discussion with their same gender. For this opportunity volunteers are easily find out the challenges and take appropriate initiative to mitigate the challenges… Before the session WV responsible volunteer inviting me to participate in session with my same gender and same age group. As a result, every participant is freely express their opinions and thoughts regarding menstruation… We are participating same age group and same gender in a session. As result I never feel any kind of challenges to attend in session.</td></tr>
</table>

		Meeting with female to female and male to male may increase community engagement which helps gain knowledge about why we have to support our family.	
	Most people were very positive about liking seeing male and female staff working together saying that it was inspiring and motivating	When we are seeing World Vision staffs are working equally in our camp area we feel very happy to see this both. Because when male and female both are working in same area then they able to easy communicate with their same gender then they easily mitigate the challenges or social barriers. Yes I see WV staff (male/female) working together equally in context. They are also motivating us but I want to work together on this issue… I love seeing Male and Female working together on menstruation. I am seeing World Vison Male/Female staffs are working equally for community and it's playing a vital role for community wellbeing. When Male and female staffs are working in a block together then they are able to open discuss about MH with same gender without shame.	
Empathy	Empathy to menstruation in general	My attitude was changed about MHM compare to before but it's not by pressure just only because MH meeting discussion touch my heart I realize importance [of] MH knowledge. I feel so bad about the negative experiences women face with menstruation. Because this time is a very important time for girls/women… Of course I want to change that. Because if I change myself, my family will change. Besides, others will learn from me.	Empathy towards the negative experiences of menstruation is a motivator to supporting the family.
	Cultural customary practises	If negative experience faced by female I feel bad but if anyone said to female during menstruation that she can't go outside/ can't play I think it was okay because during this time female need rest and isolation regarding she is impure/dirty/sick. But regarding restriction people need to explain it calm and cool way to female member. you can resist female member movement during menstruation period verbally if she feels bad or not obey you command no need to impose you restriction to her.	'Restrictions' are normal but you can't enforce them if it's making her feel bad
	Empathy re teasing/negative treatment	If negative experience faced by female I feel bad for it because Menstruation is god gifted and natural matter so female should need to stay neat and clean during menstruation time so during this time anyone teased or shamed any female it should not [be] acceptable. I feel very bad. But I did not see. If something like this happens we all work together to solve it. If our sisters or wives are facing any kind negative experience from our same community person we feel very sad and angry to the person… First time we give a space to him for his self-correction. It he does not change his behaviour we need to take a strong deaccession against him, as well as we need to establish Act for his punishment.	Feel bad to see women teased or shamed about menstruation so will take punishment to any perpetrators of this. Most people said they would feel bad/sad if they heard or witnessed their female family members being shamed or teased about their menstruation Community want to work together to solve it.
Environment of sessions	Safe space and easy to access like HH or marketplace	They respects our culture. They did not force any community people to attend their activities. Ex: They conduct their meeting at safe place like household. So that female can attend their session very easily…They know about the all community peoples. They also know who are good. They visit the household and try to find out the household which is safe for conducting a meeting. Their safety issues did not prevent me from attending activities. I think people show interest to attending their activities. Because they creates a safe place where everyone can share their challenges and opinion. They conduct meetings in safe place as meetings held in household at sub-block level. Female can with comfortable dress like burka… When I see they conduct meeting at safe place, I feel interest to attend the meeting. They conduct their meeting by showing respect to our culture. They arrange their session at safe place… World Vision's staff and volunteers visit the block regularly. They also communicate with beneficiaries. They find the safe place after discuss with community… I feel safe to attending their activities… They did not force me to attending the activists. Some time they conduct meeting at market level. I can attend the market level activists very easily. WV/facilitator create a suitable safe environment for MHM that's why community talked about MHM. it was tough [to] create a safe environment for MH discussion because first time people are laughed, feel shy about discuss this issue, WV address it is for public health issue concern by Regular HH visit they tell us it is very needful topic for us that's why right now he feels more comfortable safe environment was created for MH meeting and discussion… Not Safety issue prevent because right now we discuss MHM as like regular discussion & attitude. it's rare you faced it as safety issue while discussing about MHM. No Safety issue I notice yet regarding MH discussion due for regular meeting and discussion MHM now day's normal fact. Community encourage MHM discussion and meeting. Regular discussion makes safe environment for MH discussion. They inform us in advance for the meeting or training and we all arrange the safe place together and talk about MH. Due to the safety issues I did not faced any difficulties or challenges to attending their activities. Everyone have access to share her/his opinion in session or meeting. Without fear we sharing our challenges with WV and staffs/Volunteers and they strongly mitigate the challenges. WV/ the facilitators created safe environment to attend meeting and talk about MH like they conduct meeting in a place where boys are restricted… It's influence me to attending activities.	WV works with community to create a safe space in HH level split by age and sex where everyone feels comfortable to share freely and dignity is protected. The safety is created as well by everyone becoming comfortable to discuss with everyone. No safety issues and feel safe to share It's OK for neighbours to overhear if there's a session at HH level

	Flexible with timings for convenience	They are informing us in advance for the meeting and we all arrange the place together and talk about MH so that no one in inconvenienced.	They are flexible with timings so it's convenient for everyone and have enough warning in advance.
	Feel most comfortable with friends, neighbours and family and same age – easy to talk and have open discussion	He feel comfortable to talk about MHM with his male friend, Sister-in law and whom he has good relationship he feels comfortable to talk about MHM. because whom he discussed about MH are so much close to him and they do not take as a displeasure he can talk openly to them. feel very comfort to talk or discuss with my wife and friends about MH. My wife she also very comfort to share her challenges about Menstruation. If share this message with my wife, then my wife also shares this information with others women. Me and friends are same age as result we openly discuss regarding the issue. With friends and family. Since much can be said with them deeply. My best friend. Because he won't shame me and I won't shame her. At first I feel comfort to discuss with my wife about menstruation. Secondly I feel comfort to discuss with my others family members like my Sister and sister-in-law. I am very much concern about my family women health. I also feel comfort to discuss with my same age friends. When I discuss with my friends I do not feel any kind of shame. I feel most comfortable to talk/discuss with my wife and Friends without shame. Because we can't talk/discuss with our mother on Menstruation for the social barrier and lack of well understand regarding Menstruation. I attending MH activities in WVI as result I gain knowledge and share this knowledge with my wife and wife share this message with my mother. I feel more comfortable to discuss menstruation related topic with the people of my same age. Because I can be share everything to them without any hesitation. When an old age people talk with me about menstruation I feel shy. . I feel very comfort to discuss with my family members and friends regarding MHM. sometime our family members are feel shame to discuss regarding Menstruation but it's very emergency issue for the reason when our females are facing challenges then they should share with us for better her feelings. On the other hands we are feel very comfort to talk with our male friends. Because we are same age and sometimes we are facing same difficulties. For the reason we are friendly talking about menstruation health and hygiene.	Most people feel most comfortable with friends and family because there's no judgement or shame and you can have deep conversations. People feel most comfortable to discuss with people of the same age meaning groups are split in this way.
	Male/male and female/female and same age sessions	When World Vision conduct a session or meeting regarding MH they ensure same gender participants. How nobody can't feel any hesitation to share her/his opinion and challenges. They showing equal respect to each and others. No barriers. meeting together looks bad in the eyes of Sariah, so it is better to meet separately… They are understanding and respect our believes. they are work together with us in MH activity. For example, WV arrange meeting together separately male and female in different activity. Also provide MHM kits in community women in space place. No male is can't come in this place. This is the good initiative or example for our community. We are participating same age group and same gender in a session. As result I never feel any kind of challenges to attend in session.	Due to Sharia law males and females should have sessions separately which is respected and observed by WV.
Inputs to improve MH knowledge, attitudes, behaviours Inputs	Frequency of meetings	If world vision volunteer and staff conduct meeting regularly may we gain more knowledge about menstruation which improve my opinion towards menstruation. Hygiene promotion volunteers visited the household one or two times per week. When they visit household, they inspired us about supporting the family during menstruation. if community meeting frequency increase than i will get more understanding and feel confident about MHM also like me more male people from community will get more understand and confident about MHM Knowledge… I feel confident Menstrual health & hygiene management but if anything need for more confident about MHM for myself as well community male member that need increase Community Level MHM meeting, discussion, Listening Recording audio, Mass media projector video awareness rising session conduction, Printing book on MHM and explain it in HH level will increase Commitment on MHM Since we are less educated person it is better if you give us or arrange more training and meetings… I feel committed to work this situation to face problem our family members in menstruation. Arranged more training and meeting in separately in our community people (male /female). I'll attend all program in MH activity from WV. When I know details in MH activity I'll let every community separately in community level… They are share their knowledge about MH activities, which is good for us. They are always influenced us to participate their regular activity… They are visit our HH in regular and support to us when I faced problem. It helps to maintain good relation… Through you teaching more, we have learned more menstruation and have a clear understanding of things. Also WV volunteer improve our knowledge in MH activity to regularly meeting and discuss when female is menstruating times they feel difficulties and need to support their family members especially her husband.	The majority of people said increasing the frequency of meetings would increase knowledge and therefore improve opinions towards menstruation. That it would be good both for them personally and for the rest of the community. They also mentioned how it also helps to maintain a good relationship with WV. Specifically they mention frequent visits at the household level to be beneficial.
	Iterative to fill gaps	They conduct most of the time meeting about MHM again and again if anyone has been found gap knowledge on MHM they tried to covered him by MHM session… MHM facilitator group was formed at Block level they support to spreading MHM related message to community all aged, gender community people.	
	Time to learn at own pace, there any time to support, for free	Staff and WV volunteer always give us time to trained our capacity in MH and how to support our family members. It could be better if you could show us something like picture or others. it's very help to our community… No pressure from the program. they are take time to learn MH activities. We also contemplate in our own time about MH activity how to help and maintain this.	World Vision give them time to train, learn and contemplate in their own time.

	WV always there to support	They do not force us in any way, they work for our good, there any time support for us.	
	Provide for free	No one forces me to come to MHM sessions, I go to get knowledge myself, it's mine. A very important thing, I would learn about this if I was paid for it. Thanks to World Vision for teaching us this for free.	
Reasons NM want to support – mechanisms?	Gift from Allah	WV Volunteer and MHM male facilitator helps us to change our opinion. They are always arrange meeting together in MH activity and be aware of our community people. When I realized it was given by Allah, my opinion changed and I strive to support our family members… always encourage me and I support our family members when she menstruating. because this is god gifted issue. Since she faced critical situation during menstruation she need to support all kinds of regular activity.	World Vision helped people to see that menstruation is a god gifted issue (rather than a curse by satan as others have stated), which means they will support the family and society in their health. NM feel they need to support their family as they know its important for their mental and physical wellbeing. They are aware that she needs help with XYZ, especially within the camp setting. We should help because they do not feel good physically during menstruation, Because they're family and it's their 'critical' time Because if she is sick I wont feel good. I feel good and peaceful to support her. And other community will get motivation from me and support their family as well. There's no one else to support them if I do not, For family health and wellbeing, Wife and daughter's rights
	Health mental and physical	During menstruation time women are feeling very anxiety and sickness. If we are supporting to our female family member during menstruation time, then they feel very happy and peace. I think we should help our family during menstruation. Because that time they feel sick like headache, stomach pain, and back pain. As a human being we should help our mother, daughter during this critical time.	
	Feeling she needs help	I feel she needs all kinds of help like collect water, heavy work, buying medicine in hospital of our family member during menstruation. Earlier we did not understand good and bad about menstruation, now we understand that we need to help them, Specially camp area is very critical, Our small supports help them a lot.	
	Family	According to general concept, our family is part of our life. For that i help my family during their critical time. I feel I should… help my female family member during menstruation because she is my part of family if she stays malnourished/Sick I could not feel good, if I provide support during menstruation time I feel very good and peace also if I support my family after seeing my support others of community will get motivation from me they will support their family as well	
	Makes me feel good	I feel peace to support family during menstruation I always tried to support his family member because… if I do not support my family then who will support?	
	Women's rights	For as long as I live, I support my family. I believe that by doing so, I am protecting my wife's and daughter's rights.	
Influence – mechanism?	Influence to participate and learn by WV and volunteers	Had no idea about menstruation. I came to know about menstruation after attending the meeting. Since then my influence increased. In every sub-block there are some male and female MH facilitators. They disseminate the knowledge about menstrual health management to community people. I also learned and influenced from them. I influenced by World Vision because I was busy person most of time due for my livelihood work that's why I could not regularly participated, engaged or self-plan for MHM activity but WVB volunteer & MHM facilitator influence me to participate in MHM related activity while i was free since last 1 year he only attends more 3 times about MHM related discussion all of them was organize by World Vision. WVB capacity build up me right now he has knowledge on MHM that's why I feel influenced towards to participate MH activity. Meeting and discussion about MHM influence me about menstruation because in meeting facilitator share example, experience about Menstruation, Menstrual health, Menstrual hygiene organize by World Vision and facilitate by MHM facilitator which I can understand more easily so basis on that I think I was most influenced by MHM during meeting in sub block level. After getting influence from meeting discussion I support my family female member with nutritious food, make sure availability of MHM kit, HH level heavy work. WV staff and MH Facilitators are influenced me how I gain my knowledge, improve our practice and support to our female family member in menstruation time. They are share their knowledge about MH activities, which is good for us. They are always influenced us to participate their regular activity.	Things that have influenced a mentality shift: coming to know about menstruation after attending meetings, knowledge from the faciliitators, being encouraged to take part in free time, build capacity, sharing examples and experiences. They give appreciation that World Vision has done a lot for the community. This influences them to learn, engage and then support their families.
	Appreciation to WV working for the community – helps to inform community and stay healthy	Too much influenced. World Vision has done so much for our community and has been able to inform us about menstruation. Their good advice helps us stay healthy all the time. Too much influenced. When we first came to the camp there was no doctor, no master, no one even to teach us. World Vision has done so much for our community and has been able to inform us about menstruation. Thanks to World Vision for that.	
Feelings	Proud	if I support my family during menstruation I feel proud and my family member appreciate my approach about menstruation support, if I support my family member stay healthy and safe which make them much more confident MHM also they encourage me about MHM support commitment.	A few people said that they feel pride to learn about MH from WV and the facilitators and also when his family members appreciate

		My family female member share gratitude and honour to me that he supports them during menstruation period… I always feel proud to make their menstruation easy	the approach and making their menstruation easier.
Reaction from family	Appreciative and encouraging	The response to our support with Menstrual Health encourages me to continue. Because through this my family will be better When I support my mother during this time, she feels very happy to me. It helps me to continue the my attitudes. They feel pleasure to me. My mother appreciates me when I helped my wife during menstruation. When I support my wife she looks at me and smiles. Then I realised that she liked my help. During menstruation time women are feeling very anxiety and sickness. If we are supporting to our female family member during menstruation time, then they feel very happy and peace… When I support to my wife in menstruation time all my family members are encourage me. When other person is seeing that they also encourage me for this great work.	Most people talked about how their family members were appreciative, happy, comfortable, showing gratitiude and even encouraging of this behaviour – this helped people continue with their positive attitudes. Some said that their family did not want to talk about this and asks WV what we must do to overcome this. The fact that they're happy and healthy is also an encouraging factor. Some female family do not want to discuss with the males so they suggest female staff to meet directly with females to give messages.
	Comfortable and happy	the WV MH activity, I feel I should support to my wife during menstruation for her better health and relax. she feels very comfort when I support her in HH activities. I do not feel ashamed to help my mother and sister during menstruation. It is my responsibility and duty. My family is happy. Every man should perform his duties during menstruation. It is obligatory to do that… It has been so much better for my family and the committee to learn about World Vision. Some of my habits have changed, and those who have bad habits need to sit together and discuss MHM in detail. Previous my mother was feel sick in menstruation time but that time I have no knowledge on importance of support to women in menstruation time. After the participation in MH activity with world vision then I understand about necessity of male support and how is their expectation from male during menstruation time. I was influenced by WV session and trying to support my mother in menstruation time and I got a well feedback from my mother. According to our special care in menstruation time my mother feel very healthy physically and mentally… I feel very comfort to talk or discuss with my wife and friends about MH. My wife she also very comfort to share her challenges about Menstruation. If share this message with my wife, then my wife also shares this information with others women. Me and friends are same age as result we openly discuss regarding the issue… In my adolescent time I am only introduce with the word but I had no… concrete knowledge on MH. But regarding the WV activities I gain a concreate knowledge on Menstruation Hygiene and support for women. If I help to my mother in menstruation time she feels very peace and healthy… I should support to my mother for her best knowledge and practice in menstruation time. I am committed to support my mother in HH activities for her relax and well health… when I support to my wife/family then she feels very happy. When people are seeing I support to my wife in HH activities the people are encourage me.	
	Some bad reaction but times are changing	My mother she is not feel comfort to discuss with me regarding menstruation. She feels shame to talk with me. I am not comfort to talk with her it's a major barrier for me and my mother. If World Vision Volunteers able to working on the issue, break the taboo from society it will be very helpful community… You already find out that Rohingya women are feel very shame to talk her personal issue with male person. For the reason we have need special take care of her health… When I support to my family member during menstruation time then family members are encouraging me. Once upon a time if males are support to his wife then others people are discouraging me but now they are change their thinking now they are appreciating me.	
Outcomes	Recorded change	It has been so much better for my family and the committee to learn about World Vision. Some of my habits have changed, and those who have bad habits need to sit together and discuss MHM in detail.	
	Better relationship with family	I have developed a much better relationship with World Vision since I started doing so many MHM sessions. This has led to a much deeper relationship with my family and wife. It has benefited me a thousand fold.	
	Become an influencer in family and friends	I am not World Vision responsible volunteer but I also playing as a roll of influencer in family and friends regarding MH.	
	Working for society/community	I have learned a lot from World Vision, And my interest is greatly increased, So I work for my society	
	Encourage messages in family	yes always encourage me and I support our family members when she menstruating. I always encourage my family members this is not a disease. It is regular process to your body safe and healthy.	
Mentality change	The programme has changed peoples opinion and mentality	It has to overcome the whole mental thought… If World Vision makes a new program about menstruation, we will have more opinion changes… You, your volunteer and MHM facilitator group member work together our ideas have changed There are different groups that work well, many people do not like it, but if they understand it well, they take it well. We will try We try to convince them… If facing any kinds of issue WV staff, WV volunteer and MHM facilitator group member work together our ideas/things have changed. Before we learned from community menstruation is a disease. But after the engage with WV activity (session, meeting and household visit) we learned menstruation not a disease it's a very natural process for women health. First time we could not support to our female family members in menstruation time. After the WV engagement work I change my attitude and I support to our family member for their better health and mental peace… when I have spending free time in camp that time I want to participant in World Vision Active for my better learning about MH. After the session we should share the message with our family members, neighbors and friends how they give an opportunity to change their attitude and opinion about menstruation… Most of Rohingya male they are feels very shame to discuss about Menstruation with their Female family person. They did not feel comfort to talk. Due to issue we should mitigate the barrier if World Vision have been continuing MH activities in field level it will be helpful to change community opinion and attitude regarding menstruation.	The programme has worked to change people's opinion seeing it as a woman's issue or having social superstition to seeing it as a gift from Allah and removing misconceptions. Some say they are actively trying to change their opinions – this alludes to how ingrained mentalities are sometimes difficult to change and we need to actively try to do this.

	NM actively trying to change opinions	I did not face any barrier to support my family with menstruation. World vision staff and volunteer conduct meetings and they told us why we have to support our family. I heard from them and try to change my opinion regarding menstruation.	
	Realising the reality of what menstruators experience	WV volunteers conduct meeting with us. This influence us to change the attitude towards menstruation… When they conducted knowledge sharing meetings i feel the realistic scenario what actually women during this time. After that my opinion was changed regarding menstruation.	
	By changing my mentality others will change too	By changing habits lightly… Did my confidence increase after learning about MHM help change my opinion?... Of course I want to change that. Because if I change myself, my family will change. Besides, others will learn from me.	
	Removing misconceptions – gift from allah	the program activity work for every community people. Every community people engage in this meeting and gather their knowledge and misconception will [be] removed… We have had a lot of cooperation through them. I feel good initiative WV to create a MHM male facilitator who have to work community people especially male to support their family members. They are engage community people and removed misconception in MH in our community women who… faced menstruation… WV Volunteer and MHM male facilitator helps us to change our opinion. They are always arrange meeting together in MH activity and be aware of our community people. When I realized it was given by Allah, my opinion changed and I strive to support our family members… If facing any kinds of issue WV staff, WV volunteer and MHM facilitator group member work together our ideas/things have changed.	
	Social superstition/ womens problem	Sometimes create problems there, Example:-Social superstition. Male are not interested for about MHM, their thinking is that it is only for female issues. we are trying to change them by World vision staff or Volunteer… Earlier many people took it badly, but now all women share all issues with their responsible person, so now I think a lot has changed	
	Inputs to change mentality	Materials would be very much useful for women health safety in menstruation time. But WV MHM session/meeting would be most useful to develop our knowledge level and change our attitude regarding the menstruation. Regarding the MHM session our women are learning about the proper use of sanitary cloths. Through to the session male members are increasing their self-ability to supporting female family members during menstruation time.	
Reaction from neighbours	Teasing and questioning – how to react to that	Surroundings community thinking about MHM is barrier for support my family for menstruation. Some of people Said like "You are male person why you are support your female member regarding Menstruation also why you need to know about menstruation it's embarrassing!" I found barrier like surroundings people some time tease me like why you support your family female member why you need to support but instant I replay with proper explanation and share my knowledge about MHM and why it [is] needed.	Some neighbours tease and question why they have to support their menstruating family members, whereas other neighours are encouraging of it. Some have integrity and say that even if some neighbours are teasing or have a problem with it we have to help them to understand
	Encouraging	When I support to my wife in menstruation time all my family members are encourage me. When other person is seeing that they also encourage me for this great work.	
Relationship to MH facilitators		I feel good about MHM facilitator's because due for them right now community people are well orientated about MHM so MHM become regular discussion in community. I feel very comfort to discuss with Male MH facilitators for well understanding. But most of Rohingya people are feel very safe and comfort to discuss with same gender facilitators regarding MHM. In every sub-blocks world vision volunteers select male and female MH facilitators. They disseminate the knowledge about menstrual health management. They teach us very kindly. Good relation like as my family members. I do work with volunteer, MHM male Facilitator group members and support they are faced any problem in community level… They are visit our HH in regular and support to us when I faced problem. It helps to maintain good relation… We have had a lot of cooperation through them. I feel good initiative WV to create a MHM male facilitator who have to work community people especially male to support their family members. They are engage community people and removed misconception in MH in our community women who are faced menstruate.	They like the MH facilitators especially that male talk with male and female with female. They say they are treated kindly and work for human welfare. They feel comfortable to discuss easily and even feel like a family member.
Relationship with WV		I have a very good relationship with World Vision. Because it allows me to attend the MHM session again and again, it keeps me in mind. This can be called a good relationship… World Vision respects and honours us male/female separately while conducting MHM sessions. For example, whenever there is a MHM session, the MHM Facilitator gives priority to me. World vision staff and volunteer respect the community people for that they have good relationship with community. Community people show interest their activities as well as mhm activities… Relationship like as a community people. World vision's volunteer talk with us very kindly… Their regular activities like meetings and they provide some necessary materials like paddle bin. It's helps to build up a strong relationship with community people… They respects our culture. They did not force any community people to attend their activities. Ex: They conduct their meeting at safe place like household. So that female can attend their session very easily… World vision selected some male and female MH facilitators at block level. They shared knowledge with their neighbours and friends. I think they work for our community's better health… They know about the all community peoples. They also know who are good. They visit the household and try to find out the household which is safe for conducting a meeting. have a good relationship with world vision. They respect me and encourage me to attend mhm meetings… They treat us respectfully… My son was worked with world vision as a hygiene promotion volunteer. After that a strong relationship was build… They conduct meetings in safe place as meetings held in household at sub-block level. Female can with comfortable dress like "borka" (it's a traditional dress which use by Muslim religious women).	*Havent been through properly but overall idea is - Good, respectful relationship with World Vision.

		I have a good relationship with world vision. They respect us and invite in their regular activities… I have relationship with world vision as a community people… They provide us mhm materials like reusable cloths. It's helps to build relationship with community people. World Vision Volunteer and MHM facilitator has good motivate to change the community view about MHM so he can get support getting knowledge from WVB if he has good relationship from WVB volunteer/MHM Facilitator… with World Vision I have a good relationship because WV volunteer regularly came to their HH. WV always influence by meeting, discussing about MHM… regarding MHM knowledge I got only from them so I think MHM is very necessary for my family also other so I think what topic they discussed and spreading awareness it's very important that's his relationship with WVB is good and its influence my MH activity… Knowledge sharing and spreading awareness about MHM help him to maintain good relationship with them. I have very good relationship with WV. I am frequently participating with WV program… I am not World Vision responsible volunteer but I also plying as a roll of influencer in family and friends regarding MH… World Vision supporting us regarding WASH. They are trying to improve our Water, sanitation and hygiene behavior and self-ability. We are benefited to increase our knowledge level how our community leading a healthy and risk free life as well as Menstruation. like as our brothers… Volunteer work well in community level in MH issue for our community. World Vision staff, they are doing this for our good, I learned bad or good about MHM from them… We do not have any problems; World Vision has support if faced with problems… Too much influenced. World Vision has done so much for our community and has been able to inform us about menstruation. Thanks to World Vision for that… Good relation like as my family members. MHM male Facilitator group members and support they are faced any problem in community level… They are visit our HH in regular and support to us when I faced problem. It helps to maintain good relation. Word Vision working this area above 2 years. Every staff, Hygiene Volunteers and MH Facilitators very know to us and they trying to develop our community health and hygiene regarding WASH… World Vision is working in our block regarding the WASH. They are improving our Facility and sharing hygiene knowledge on community better health and hygiene management. Once upon a time I had no knowledge on menstruation but when I started to participate with WV activities regarding the activities I gain knowledge on hygiene management and increase my self-ability to disseminate the message with others. WV build relationship with community people, if they work like this outcome will be good… Relationship like as a community people… They gives MHM materials which help them to build relationship with community people. > Good relation like as my family members. I do work with volunteer, MHM male Facilitator group members and support they are faced any problem in community level… They are visit our HH in regular and support to us when I faced problem. It helps to maintain good relation. The relationship like our family members. I do work with volunteer and support they faced problem in community level… They are regularly meet and visit our HH. It helps to maintain good relationship. Too much influenced. World Vision has done so much for our community and has been able to inform us about menstruation. Their good advice helps us stay healthy all the time… The relationship like our family members. I do work with volunteer and support they faced problem in community level… They are regularly meet and visit our HH. It helps to maintain good relationship. I know on MH with 4 to 5 years, I learned some things earlier from my friends, After I learned World Vision, World vision work for our good, So I like world vision and support him, Now I support my family and society as well Good. I have developed a much better relationship with World Vision since he started doing so many MHM sessions. This has led to a much deeper relationship with my family and wife. It has benefited me a thousand fold… I have a much better relationship with World Vision. I learned a lot from World Vision about menstruation. we have a good relationship with World Vision staffs and volunteers. I am frequently participating with sessions and other activities… World Vision Staff and volunteers are invited us to participate with session and meeting. They are also visit our household and sharing good hygiene knowledge with our child and other adult member for our health and wellbeing… World Vision supplying pure water, providing sanitation facilities and distributing menstruation cloth for our female. They also trying to improve our attitude and practice regarding hygiene management regarding hygiene activity and community engagement programme. Above 6 years' world vison working in this area regarding the WASH. We are willingly participating in World Vision meeting and session. They trying to increase our ability and commitment to maintain personal hygiene and community hygiene… I am a member of Latrine User Group at Block E, Camp 8E. As a latrine user group member we face any barrier regarding the sanitation I need to talk with WVI Staff and volunteer for mitigate this issues… I have a very good relation with WVI because World Vison support us regarding the WASH. World Vision trying to increase our knowledge and self-ability for good Hygiene practice as well as MH. WVI Vision staff/Volunteers are visit our household, provide sanitation facilities and distribute NFI regarding the WASH.	

		World Vision has done so much for our community and has been able to inform us about menstruation. Their good advice helps us stay healthy all the time. So I am spontaneously working with MHM on my own accord… Good relation like as my family members. I do work with volunteer, MHM male Facilitator group members and support they are faced any problem in community level… They are visit our HH in regular and support to us when I faced problem. It helps to maintain good relation.	
Responsibilities		Making me aware of my responsibilities towards my family during menstruation will increase my confidence I committed to support my family during menstruation. I think it's my responsibility. He feel comfortable to talk about MHM with his male friend especially whom are unmarried because they need known for their further married life wife support cause rohingyaa camp wife are defended on husband, so husband should provide full support and assistance to his wife. I feel commitment about MHM because if I support my family after seeing my support my family member during menstruation other's nearest people will also support their family it make me confident & committed to MHM. if i did not support whom will support my family member…I think my knowledge improve prior time i did not know about MHM, my family practice it also he tries to spread message to other's at community. Before time he thinks it's not matter Male concern also he behaves with menstrual-period time female member rudely because he did not felt menstruation knowledge and their need, about their food. But right now he knows why he role is crucial for his family. **Previous my mother was feel sick in menstruation time but that time I have no knowledge on importance of support to women in menstruation time. After the participation in MH activity with world vision then I understand about necessity of male support and how is their expectation from male during menstruation time. I was influenced by WV session and trying to support my mother in menstruation time and I got a well feedback from my mother. According to our special care in menstruation time my mother feel very healthy physically and mentally.** I did not face any barrier to support my family with menstruation. Because different programme conduct meeting where knowledge about menstrual health and It's our responsibility to help my family during this time… I think should support my family during menstruation. Because these time women feel sick, so I need to support my family. As I am learning about MHM myself, I must help my family. It is my responsibility. If we do not help, we can face danger at any time. friends. They are said to me female is suffer a lot when they are menstruating. She need to support family members during this period… WV volunteer improve our knowledge in MH activity to regularly meeting and discuss when female is menstruating times they feel difficulties and need to support their family members… As they are very troubled during menstruation, I feel they need to be helped this time. Did not know much about MHM before, Now I have learned a lot from World Vision, And my interest is greatly increased, So I work for my family and work for society… like to work for the good of the nation, so I do it, people should understand the benefits and losses well… I used to think, MHM is god gifted, no reason to worry, Now I have learned a lot So I work to keep my family and society good… Earlier we did not understand good and bad about menstruation, now we understand that we need to help them I know on MH with 4 to 5 years, I learned some things earlier from my friends, After I learned World Vision, World vision work for our good, So I like world vision and support him, Now I support my family and society as well… I used to think, MHM is god gifted, no reason to worry, Now I have learned a lot, at this time need more support for women, because wrong MHM is a responsible for various illness, So I work to keep my family and society for their goodness… I think, need more help during menstruation, earlier we did not understand good and bad about menstruation, now we understand that we need to help them, our supports help them a lot. I do not feel ashamed to help my mother and sister during menstruation. It is my responsibility and duty. My family is happy. Every man should perform his duties during menstruation. It is obligatory to do that… During menstruation I help my family in my way because it is my responsibility and duty. So that my family is healthy and beautiful.No problem for my family… I must help my family during menstruation. like collect water, heavy work, buying medicine in hospital. Earlier we did not understand good and bad about menstruation, now we understand that we need to help them, Specially camp area is very critical, Our small supports help them a lot.	
Spreading knowledge among community		when I have spending free time in camp that time I want to participant in World Vision Active for my better learning about MH. After the session we should share the message with our family members, neighbors and friends how they give an opportunity to change their attitude and opinion about menstruation… World Vision is working in our block regarding the WASH. They are improving our Facility and sharing hygiene knowledge on community better health and hygiene management. Once upon a time I had no knowledge on menstruation but when I started to participate with WV activities regarding the activities I gain knowledge on hygiene management and increase my self-ability to disseminate the message with others… I feel very comfort to talk or discuss with my wife and friends about MH. My wife she also very comfort to share her challenges about Menstruation. If share this message with my wife, then my wife also shares this information with others women. **Me and friends are same age as result we openly discuss regarding the issue**… **My strong Knowledge help me to change my opinion which knowledge I gain from WV MH activities**. According to knowledge I aware to my female family members for her better health and hygiene. I aware to friends to support her wife and others family member in menstruation time… when I support to my wife/family then she feels very happy. **When people are seeing I support to my wife in HH activities the people are encourage me.**	World Vision gave them the ability and enough knowledge to disseminate information themselves to family, neighbours and community. If he shares the information with his wife she also shares with other women. Share knowledge with people of the same age

		> No [safety] problem… because those who have sessions at home can also tell about menstruation and the people next door can know… Of course I want to change that. Because if I change myself, my family will change. Besides, others will learn from me. MHM male leaders engage in community people especially male arrange meeting and share their knowledge. WV volunteer speak well in MH activity and I will share my family members, friends and community level. misconception will have removed our community people in MH… yes always encourage me and I support our family members when she menstruating. I always encourage my family members this is not a disease. It is regular process to your body safe and healthy. No reactions. . If someone feels bad about their menstrual health, We awareness him.. -World Vision has done so much for our community and has been able to inform us about menstruation. Their good advice helps us stay healthy all the time. So I am spontaneously working with MHM on my own accord -I think I should give proper message about MHM to my family and people in my community. They are clearly understood through the separate MHM history books. - I was influenced by my elder brother-in-law to change my attitude. From my childhood I observed my brother-in-law he has been supporting my sister in household activities and take her special care during menstruation time… World Vision working with different types of people, gender and age group about menstruation health and hygiene. Regarding the approach individual age group gain a strong knowledge on menstruation health and hygiene towards their attitude and self-ability. After the learning they also share this message with their friends and family about menstruation… When I was adolescent that time I saw my father was helped my mother in household activities and he took her special care when she feels sick. My father is my real influencer to change my opinions and thoughts about menstruation. After my marriage I influenced by my senior family members. How they treating with their wife, how they support their wife and sister during menstruation time. After the influx we were came at Rohingya camp and we are introducing with many NGO and they working with MHM. NGO Volunteers are influence us how to support our female in menstruation time…This program engages different age and types of people from Rohingya community. This program including individual beneficiary because this organization have great moto to increase Community Hygiene knowledge and influence to committed to support his family member in menstruation time. Regarding the session, we gain knowledge and share this knowledge with my family and friends for community women health and hygiene… I feel most comfortable to talk/discuss with my wife and Friends without shame. Because we can't talk/discuss with our mother on Menstruation for the social barrier and lack of well understand regarding Menstruation. I attending MH activities in WVI as result I gain knowledge and share this knowledge with my wife and wife share this message with my mother… Previous I had poor knowledge on Menstruation Hygiene Management but now I learn more from WV. As a result, I sharing my knowledge with my female family members about MH. I have learned a lot from World Vision, And my interest is greatly increased, So I work for my society… Our society is not well aware of MHM, I need to inform them as a society conscious person. I have more learned with World Vision, So I have more committed… I feel very well, I am proud for this, By this I am leading my society towards progress	Want to change my opinion because if I change myself my family will change and others will learn from me Seeing older male family members take care of menstruating family members changes attitudes and influences thoughts. Sometimes there are still barriers like sharing knowledge with his mother – instead he shares knowledge with his wife and she shares with the mother.

Understanding and knowledge of MHM		-I can clearly hear and understand the MHM related issues through World Vision's MHM session and Youth Group Committee work of DRC office… After we know, we can provide different support to our family during menstruation… Had no idea about menstruation. I came to know about menstruation after attending the meeting. Since then my influence increased… Through your teaching, we have learned about menstruation and have a clear understanding of the issues. After my marriage last 9-10 I knows about menstruation; like every month it was occur to women but I only know about menstruation but I do not have any idea about Menstrual Hygiene or health. But after came at Bangladesh from Myanmar I knew about menstruation health from meeting organize by (NGO) World Vision/MHM facilitator I now has knowledge on MH. After all, in one word I have engaged with menstrual health from 1-2 years… **Meeting and discussion about MHM influence me about menstruation because in meeting facilitator share example, experience about Menstruation, Menstrual health, Menstrual hygiene organize by World Vision and facilitate by MHM facilitator which I can understand more easily so basis on that I think I was most influenced by MHM during meeting in sub block level. After getting influence from meeting discussion I support my family female member with nutritious food, make sure availability of MHM kit, HH level heavy work**… Need made meeting more organize like if their book/materials where Male support female example share with proper message step by step it will increase my understand and confident on MHM… **my attitude was changed about MHM compare to before but it's not by pressure just only because MH meeting discussion touch my heart I realize importance MH knowledge**… My knowledge improve prior time I did not know about MHM, my family practice it also I try to spread message to other's at community. **Before time I think it's not [a] matter [of] male concern… I behave with menstrual-period time female member rudely because I did not feel menstruation knowledge and their need, about their food. But right now I know why my role is crucial for my family… Risk factor about poor MHM knowledge help me to change view about menstruation. It may lead rashes, itching, germ infection, bleeding. Risk knowledge help me to change my opinion and help to my family member during menstruation.** <Files\\Arfan_122628_B-28 Tania> - Before arriving camp I did not know about girls related any things. After arrived in camp I see some ngos provides mhm materials. Then I heard about menstruation. I also learned menstruation health management from world vision volunteers and staff… One of my friend works at world vision as hygiene promotion volunteer. He shared me knowledge about menstrual health management and also shared why we have to help female during menstruation… World vision volunteers and staffs shared important information about menstruation to us. But some ngo give snacks in their session or meetings so people do not want to attend session or meeting without snacks. If it is possible to include snack at mhm related activities may increase community engagement and it's also helped message disseminate about why we have to support our mother or sister. After arriving in camp i heard about menstruation from World Vision volunteers and staffs. They give us clear concept about menstrual health management… Group discussion in community level will help to understand about menstruation… Sometimes people's who do not have academic knowledge make bad sound. World Vision involved them into session and they understand their fault**… If world vision volunteer and staff conduct meeting regularly may we gain more knowledge about menstruation which improve my opinion towards menstruation.** In every sub-block there are some male and female MH facilitators. They disseminate the knowledge about menstrual health management to community people. I also learned and influenced from them… World vision volunteer and staff shared clear knowledge about menstruation. - My understating about MHM is not good because I always not stays at HH in camp that's why I feel I know fewer about MHM. But… after getting knowledge from MHM facilitator group and WV volunteer I know how to help my family member and also… other to support my family Female member during menstruation time. this supportive This helped me to understand and feel confident about my ability to support family… I think my knowledge about Menstruation is improved as an example- Earlier time female did not use Soft and Clean cloth/ MHM kit during their menstruation but now after attending training and meeting I know about why MHM kit need use, why it's important! My opinion regarding menstruation was changed like before they do not have any idea about menstruation also I think menstruation knowledge on need for female no need any input from family male member but why MHM kit need to use right now after attending discussion and meeting I feel that my view and opinion about MHM is changed. **Also I think Menstruation Health and hygiene knowledge need know by both male and female.** Awareness activity and materials both are playing very important role to develop community attitude and practice. But MH session is very important to gain knowledge to improving attitude and materials well utilization… I need to gain concreate knowledge on MH, how can I support my family member when the face critical situation regarding menstruation… **World Vision has worked with different types of group, age and gender it's a very effective approach to develop Public awareness in community level regarding MH**. Once upon a time I have no minimum knowledge on MHM but regarding the session I gain knowledge about MH and share this information with friends and family… World Vision supporting us regarding WASH. They are trying to improve our Water, sanitation and hygiene behaviour and self-ability. We are benefited to increase our knowledge level how our community leading a healthy and risk free life as well as Menstruation… When I was adolescent that time I had no strong knowledge on menstruation. But when I am participating with WV session, discuss with MHM male facilitators that time I gain a strong knowledge on Menstruation health and hygiene. The suffering of the girls in the family when she menstruates and always feel to support my family… Every community people engage in this meeting and gather their knowledge. All works good for our community. **I need to understand more details and more information in MH activities if possible. If I know details information in MH, very confident to work our community level… I did not know much before, I learned something from my friends, Later I learned very well from World Vision**… I have	Can clearly understand MHM issues because of WV's sessions meaning we can provide all the necessary support Did not know about MHM things before the camp/WV Risk factor help me to change my opinion Peaked interest Need more knowledge to feel confident Understandings about 'good' and 'evil'

		become more interested since learning that bad things can happen without good measures on MHM… Earlier we did not understand good and bad about menstruation, now we understand that we need to help them… Earlier many people took it [menstruation as a concept] badly, when they did not understand good and bad, World Vision teaches us good and evil, so now I think a lot has changed. When at first I was coming at Camp that time I have no knowledge on menstruation and women health. One of my brother he was worked as Hygiene Volunteers at WV… At first I… attended a MH activity with [my] brother… and he took an interview on MH. Regarding the WV MH activities, I acquire knowledge on menstruation health and hygiene… WV staff and MH Facilitators are influenced me how I gain my knowledge, improve our practice and support to our female family member in menstruation time… **Before we learned from community menstruation is a disease**. But after the engage[ment] with WV activity (session, meeting and household visit) we learned menstruation not a disease it's a very natural process for women health. First time we could not support to our female family members in menstruation time. After the WV engagement work I change my attitude and I support to our family member for their better health and mental peace… **I participate with world vision for my family good health and wellbeing**. Regarding MH activities, I gain concrete knowledge on menstruation Hygiene and women health… World Vision is working in our block regarding the WASH. They are improving our Facility and sharing hygiene knowledge on community better health and hygiene management. Once upon a time I had no knowledge on menstruation but when I started to participate with WV activities regarding the activities I gain knowledge on hygiene management and increase my self-ability to disseminate the message with others… In my adolescent time I am only introduce with the word but I had no any concreate knowledge on MH. But regarding the WV activities I gain a concreate knowledge on Menstruation Hygiene and support for women. If I help to my mother in menstruation time she feels very peace and healthy… **My strong Knowledge help me to change my opinion which knowledge I gain from WV MH activities. According to knowledge I aware to my female family members for her better health and hygiene. I aware to friends to support her wife and others family member in menstruation time.** **They give us MHM materials, they conduct meeting with and they give us knowledge about poor menstrual health which made me more confident to support my family… When they conducted knowledge sharing meetings i feel the realistic scenario what actually women during this time. After that my opinion was changed regarding menstruation.** Learning [influenced my attitude towards menstruation]. For example: through Wife, family, Organization, Meeting**… Since creation, women have been made like this by Allah, I can understand from there… People's knowledge is increasing day by day at the community level as they are working about MHM… Earlier we knew little about menstruation. Now we know more after receiving MHM session from WV After hearing one thing from MHM session, another new thing comes out of our head. This way knowledge keeps increasing**… my confidence increase after learning about MHM help change my opinion. I need to understand more details and more information in MH activities if possible. If I know details information in MH, very confident to work our community level… I feel committed to work this situation to face problem our family members in menstruation. Arranged more training and meeting in separately in our community people (male /female). I'll attend all program in MH activity from WV. When I know details in MH activity I'll let every community separately in community level… They are share their knowledge about MH activities, which is good for us. They are always influenced us to participate their regular activity… Through you teaching more, we have learned more menstruation and have a clear understanding of things. Also WV volunteer improve our knowledge in MH activity to regularly meeting and discuss when female is menstruating times they feel difficulties and need to support their family members especially her husband. I need to [know] more details for understand in MH activity and feel more confident to work our community people… yes. MHM male leaders engage in community people especially male arrange meeting and share their knowledge. **WV volunteer speak well in MH activity and I will share my family members, friends and community level**. misconception will have removed our community people in MH… WV volunteer improve our knowledge in MH activity to regularly meeting and discuss when female is menstruating times they feel difficulties and need to support their family members. **Did not know much about MHM before, Now I have learned a lot from World Vision, And my interest is greatly increased, So I work for my family and work for society**… I need to understand more details and more information in MH activities if possible. If I know details information in MH, very confident to work our community level… **There are different groups that work well, many people do not like it, but if they understand it well, they take it well.** We will try We try to convince them… Too much influenced. World Vision has done so much for our community and has been able to inform us about menstruation. Their good advice helps us stay healthy all the time… I learned something from my friends and brothers wife, Later I learned very well from World Vision… Earlier we did not understand good and bad about menstruation, now we understand that we need to help them… Earlier many people took it badly, when they did not understand good and bad, World Vision teaches us good and evil, so now I think a lot has changed I know on MH with 4 to 5 years, I learned some things earlier from my friends, After I learned World Vision, World vision work for our good, So I like world vision and support him, Now I support my family and society as well… Now I have learned a lot from World Vision, And my interest is greatly increased, So at this time I am an Male facilitator…. Our society is not well aware of MHM,I have more learned to World vision and motivated by MHM issues, I have more committed for change my community… World Vision has done so much for our community and has been able to inform us about menstruation. Their good advice helps us stay healthy all the time. So I am spontaneously working with MHM on my own accord… I used to think, MHM is god gifted, no reason to worry, Now I have learned a lot, at this time need more support for women,	

		because wrong MHM is a responsible for various illness, So I work to keep my family and society for their goodness…. I think, need more help during menstruation, earlier we did not understand good and bad about menstruation, now we understand that we need to help them, our supports help them a lot. No one forces me to come to MHM sessions, I go to get knowledge myself, it's mine. A very important thing, I would learn about this if I was paid for it. Thanks to World Vision for teaching us this for free. Materials would be very much useful for women health safety in menstruation time. But WV MHM session/meeting would be most useful to develop our knowledge level and change our attitude regarding the menstruation. Regarding the MHM session our women are learning about the proper use of sanitary cloths. Through to the session male members are increasing their self-ability to supporting female family members during menstruation time… We want to gain more knowledge from WV regarding MHM. If WV will conduct more session with us on MHM that will be helpful to increase our knowledge and self-ability…. First time I learn about menstruation from my Brother-in-law. When I was coming at camp from Myanmar then Ngo's are openly discussed with us about menstruation. Regarding the NGO activities, I got a concrete knowledge on Menstruation Health and Hygiene management. This program engages different age and types of people from Rohingya community. This program including individual beneficiary because this organization have great moto to increase Community Hygiene knowledge and influence to committed to support his family member in menstruation time. Regarding the session, we gain knowledge and share this knowledge with my family and friends for community women health and hygiene…. WV staffs and MH volunteers are encouraging me to improve knowledge and self-ability. Previous we have poor knowledge how to we use MH materials but World Vison MH volunteers increase our knowledge level on proper use of MH cloth and safe disposal… Previous I had poor knowledge on Menstruation Hygiene Management but now I learn more from WV. As a result, I sharing my knowledge with my female family members about MH	

Barriers – self regulation	Working together	If any such obstacle is faced, every MHM male facilitator group members should work together with their family… If facing this types of problem WV volunteer and MHM facilitator group member work together try to solved it in block level.	If they face any types of problems or barriers, WV staff, volunteers and facilitators work together to solve it.
Suggestions	To improve attendance – snacks, soap, gender seg. Meetings	World vision volunteers and staffs shared important information about menstruation to us. But some ngo give snacks in their session or meetings so people do not want to attend session or meeting without snacks. If it is possible to include snack at mhm related activities may increase community engagement and it's also helped message disseminate about why we have to support our mother or sister… Meeting with female to female and male to male may increase community engagement which helps gain knowledge about why we have to support our family. And then if World Vision provides soap may also help.	Snacks and soap to improve attendance
	Materials and demonstrations	I think if the WV or other NGOs gives materials time to time may be community will more concern about it. If they give demonstrate may also help to understand the menstrual health.	
	To improve knowledge and ability	WV MHM session/meeting would be most useful to develop our knowledge level and change our attitude regarding the menstruation… Through to the session male members are increasing their self-ability to supporting female family members during menstruation time…. We want to gain more knowledge from WV regarding MHM. If WV will conduct more session with us on MHM that will be helpful to increase our knowledge and self-ability. WV staffs and MH volunteers are encouraging me to improve knowledge and self-ability. Previous we have poor knowledge how to we use MH materials but World Vison MH volunteers increase our knowledge level on proper use of MH cloth and safe disposal.	By improving knowledge on MHM non-menstruators gain confidence in their ability to support family with MHM know-how.
	Inputs - Pictures and books demonstrate roles and help the community understand easily	If world vision volunteers arrange meetings with picture or any book male person can understand easily. It will also help to better understand about support our family with menstruation… World vision volunteer and staff did very good. They did very activities which are need for community mobilization. Added that, if they provide book or picture may community understand easily. If they told any story or show any picture. Because it's easy to understand pictorial demonstration. Meeting with community may helpful to engage community with menstruation. From meeting community people will know why they should help to their family. It would be very good if any kind of Book will have provided about MHM, where we they will get example like- male support female during menstruation because he thinks example is very easy to understand. Book will be very much useful for community engage with menstruation and Male role in menstruation support… Need made meeting more organize like if their book/materials where Male support female example share with proper message step by step it will increase his understand and confident on MHM. you can easily understand or understand by showing pictures and Videos. 1. To know through pictures, 2. Presently with the example of those who help/support in the family, 3. Through Poster, 4. By direct viewing/ reporting. It could be better if you could show us something like picture or others. it's very help to our community. It would be better to show a picture as a document about menstruation and in line with the current practice, it would be better to show a picture of the cooperation that a boy is doing in a family during menstruation at the camp level. I think I should give proper message about MHM to my family and people in my community. They are clearly understood through the separate MHM history books… My confidence about MHM comes from family, friends and meetings with various organizations. It would have been better to show pictures of the current practice of having sessions with MHM related Male to increase confidence… In order to overcome the obstacles, the problem may be solved by showing pictures [of] the support given to the family during menstruation in the pattern of current practices at the Camp level. As a result, I hope that everyone will give family support during these periods. If MHM capacity building training is given to men at Camp level and their responsibilities are clearly explained, then it will be very benefits in the Community.	
Inputs	MH volunteers	One male and one female MH facilitators are working in every cluster. They are monthly one or two times visit our household and conduct session on menstruation hygiene management and encourage to male members for support to our family member during menstruation time.	

APPENDIX G – KII QUESTIONS FOR PROJECT MANAGERS CASE STUDY ONE

Questions for Project managers

Name:

Organisation:

Position within the project:

Where are you from:

What is your ethnic identity:

Site selection	
What was it about this site that made you select it for the pilot?	
What makes a site 'easy' or 'challenging' to conduct a project like this in?	
Did you think it would be easier to conduct the project here rather than somewhere else?	
If you could change something about this project to make it work more effectively here, what would you change and why?	
What else do you think we need to know, to understand how this project has worked here?	
What is it about this context that made the project work well/less well?	
What difficulties would be faced if this project were to be conducted in other contexts?	
How did the site characteristics affect how participants were engaged? How would this be different in a different or more challenging context?	
FGD facilitation	
Do you regard the camp as a safe place for inhabitants? If no, how did you ensure the FGDs were a safe space?	
Choice to participate	
How were participants engaged to be involved in the project? What information/resources were they provided with?	
Do you know the how the male attitudes towards menstruation and menstrual hygiene management are?	
Do you know the male attitudes towards female participation in this project/projects like these?	
If non-menstruators had negative attitudes towards menstruation and menstruator participation in this project, how did the project engage these people and address this?	
If they were not engaged, have any problems been faced because of this?	
How was the project designed to tackle any issues relating to gender?	
Do you feel that participant's gender roles (i.e. cooking/childcare) prevented people from participating? How did the project mitigate this?	
To what extent do you feel the project wanted to challenge existing power relations?	

Do you feel as though any of the project outcomes are constrained by broader societal pressures, norms and power related to gender?	
How did you recruit participants for this project?	
If some people refused to take part do you know why?	
Do you feel that everyone had an equal opportunity to participate if they wanted to?	
What was done to enable participants from a range of demographics to attend?	
Group dynamics	
Do you think it would have been better to split the FGDs by demographics? This is the normal guidance.	
Do you think it's more important to consult some demographics than others?	
Facility design	
Are you satisfied with how the facilities turned out? Please explain in detail.	
Sensitisation of project staff on values and menstrual needs of participants	
What differences in the cultural values/attitudes towards menstruation are there between you and the participants? Why do you think these differences exist?	
Were these gaps a problem? How were these gaps addressed?	
Were you given any training/sensitization on the cultural beliefs of participants/how to navigate any differences you might have in your cultural values?	
Do you feel you were able to have good understanding of and communication with the participants?	
Streamlining participation	
How much was the project designed to use standardised guidelines (both for the design of the project and conducting the FGDs)? Which guidelines were used?	
How different is the project from standardised guidance?	
How did the context effect use of standardised guidance? i.e. was some of it not applicable and it was better to adapt to the context instead?	
How do you think the project would differ without end-user participation?	
Do you think there was anything missing from the FGDs?	
Do you think you should have had more FGDs?	
Do you think there were any unnecessary questions that could have been left out of the FGDs?	
Barriers to project success	
How did any external risks inhibit the project?	
What ways did the project have to be adapted?	
How would the project have been more effective if these risks had not existed?	
What other risks would you be concerned about when deploying this project in other contexts?	
Do you have any advice for other organisations who may face these kinds of risks?	

APPENDIX H – PROFORMA FOR FGDS WITH MENSTRUATORS CASE STUDY ONE

Question proforma 1 for women/girls/those that menstruate

Group number (1-4 from list above):

Number of people in group:

Nationality of people in group:

Familial status of group (i.e. number with spouses/children):

Question
1. Camp safety
Do you feel safe in the camp?
If yes, what is it about the camp that makes you feel safe?
If not, what was done by the project staff to make you feel safe to participate in the project?
2. Relationship with FGD facilitators
Were you happy with the ways you were consulted throughout the project? Why/why not?
Did you have a previous relationship with the FGD facilitators?
Did you feel comfortable to speak with the FGD facilitators?
3. Project involvement
How were you engaged to be involved in the project?
Were any resources or information provided to you to explain the project/what your involvement would entail?
How did you feel about being approached for the project?
What motivated you to take part in the project?
Was there anything preventing you from deciding to take part?
If other people you know decided not to take part in the project, can you say why?
Did you foresee any negative consequences of participating in the project?
Have there been any negative consequences of participating in the project? i.e. how have the men in your life responded?
4. Male attitudes/gender roles
How are the male attitudes towards menstruation and menstrual hygiene management?
How are the male attitudes towards female participation in projects like these?
What roles do you perform that the men in your society do not (i.e. childcare/cooking)?
Did any of these roles make you consider not participating/make anyone else you know refuse to participate?
Did participation take a lot of time away from having to perform your roles (i.e. cooking/childcare)?
5. Group dynamics
Did you feel comfortable to speak in that specific group?
Would you have preferred to be in a different group i.e. split by age like this?
Did the group dynamics work well? Why?
Were some voices heard more than others? If yes, which ones?
Were some voices completely unheard? If yes, which ones?
6. Facility design
Are you satisfied with the facilities in terms of layout, privacy, sanitary waste facilities, and cleanliness? Please explain your feelings in detail
Do you feel safe to use facilities at all points of the day/night?
Was anything you suggested not incorporated into the designs? How do you feel about that?
If so, was the reasoning for this explained to you? How did you feel after that?
7. Sensitisation of project staff
What differences in the cultural values/attitudes towards menstruation are there between you and the project staff?
Do you feel these gaps were addressed? How?
Do you feel you had good communication with the project staff?
Do you feel the project staff understood your needs?

8. Menstrual hygiene management
Did you have good knowledge of the menstrual cycle and menstrual hygiene management before the project?
Did the project help you to learn anything new about the menstrual cycle or menstrual hygiene management?
9. Participation
During the project, do you feel like you were asked about anything irrelevant? Especially questions that were irrelevant and made you feel uncomfortable?
Would you have been happy with latrines as they were/for them to be built without consultation?
You were happy to have taken part in the project?
Did you find the project to be taxing/uncomfortable or take up too much time?
What do you think are the most important aspects of the WaSH facility design you should be consulted on?

APPENDIX I – PROFORMA FOR FGDS WITH NON-MENSTRUATORS CASE STUDY ONE

Question proforma 2 for men/boys/those that don't menstruate

Group number:

Number of people in group:

Nationality of people in group:

Familial status of group (i.e. number with spouses/children):

Question
Menstruation
Do you think your level of understanding of menstrual health, menstrual hygiene management and the menstrual cycle are adequate?
Do you feel comfortable discussing the topic of menstruation?
Do the women in your life discuss their menstruation with you?
Female participation
How have you felt about the women in your community (your wife/sister/girlfriend/mum) participating in the menstrual health project?
Do you think it is beneficial that they participated in this project? Why?
Do you see any negatives about them participating in this project? Why/what are they?
The new facilities
How do you feel about the new facilities?
Do you think menstrual health is an important thing to consider when building WaSH facilities? Why/why not?
Do you believe it was important for women to be consulted on the design of the facilities? Why/why not?

APPENDIX J – KIIS WITH PROGRAMME STAFF CASE STUDY TWO

Qualitative interviews to understand the project in general and CMOs organisational level taking theories from Lebanese case study
Interviewee background information
Name
Gender
Job position
Nationality/ethnicity
Brief description of you role
Length of time working with World Vision
Previous experience working in this type of project/context
Interview questions to project managers
World Vision expertise
How long has WV been working in Kutupalong camp?
Is WV a good organisation to conduct a project like this? Who would be better (UNICEF, gov.)?
Does WV do much knowledge sharing between its national branches? Does this work well?
World Vision is a Christian organisation – how does this manifest in this project?
What roles does World Vision have in the camp?
What other organisations and government bodies provide WaSH in the camp?
Is this project being deployed in other areas by World Vision? In other contexts?
How does this project have to be adapted based on context?
Do you think local, international or a mix of organisations work best in this context?
Do you think smaller or larger organisations work best in this context?
What differentiates World Vision from other organisations?
What other MH projects has WV worked on?
Have you and other organisations felt a bigger push to concentrate on MH? Where has this come from? What do you think of it?
Understanding the project
How does that affect the project?
Has COVID-19 affected the project at all? How has this been addressed?
What challenges have you faced for the project?
Were the groups split in any way e.g. by age?
From what age were people engaged?
What is UNICEF's guidance for this project?
World Vision diversity
What is the gender diversity within the World Vision Cox's Bazar office/the project?
Does this have an impact on how MH is addressed in the camp?
How is communication about MH between male and female staff?
What is the ethnic diversity within the World Vision Cox's Bazar office/the project?
Does this have an impact on how MH is addressed in the camp?
How is communication about MH between national and international staff?
Do project staff work well together?
Do all staff have equal voices regardless of gender, race, religion etc.?
Are certain staff members more concerned with MH than others?
What could be improved in terms of diversity within your team?
Do you think diversity of your team is important? Why?
What do you think makes a good MH service?
Why do you think the project is important?
Context
How was the BCC adapted to this context with Rohingya men? In what way?
What makes this site/population 'easy' or 'challenging' to conduct a project like this in?
Did you think it would be easier or harder to conduct the project here rather than somewhere else e.g. in a very small camp? Why?
If you could change something about this project to make it work more effectively here, what would you change and why?
What else do you think we need to know, to understand how this project has worked here?
What is it about this context that made the project work well/less well?

Do you regard the camp as a safe place for inhabitants? If no, how did you ensure the project was conducted in a safe space?
Gender in community
To what extent do you feel the project wanted to challenge existing power relations?
Do you feel as though any of the project outcomes are constrained by broader societal pressures, norms and power related to gender?
Participation interaction and relationship
What are the behaviour change techniques?
How participatory are the workshops?
Do you feel World Vision is imposing its cultural values on participants? Is this positive, neutral or negative?
Was there any backlash to this project being conducted (either by participants or the rest of the community)?
How were participants engaged to be involved in the project? What information/resources were they provided with?
If some people refused to take part do you know why?
Have the group dynamics affected how the project has worked?
What differences in the cultural values/attitudes towards menstruation are there between you and the participants? Why do you think these differences exist?
Were these gaps a problem? How were these gaps addressed?
Were you given any training/sensitization on the cultural beliefs of participants/how to navigate any differences you might have in your cultural values?
Do you think participants wanted to participate/enjoyed the project?
Do you think the community will/have faced any negative outcomes of the project (both participants and other community members)?
Inter-organisational and governmental aspects
Does World Vision Cox's Bazar work with any international societies or external organisations for this project? What benefits/hindrances are created by this?
What role does the Bangladeshi government provide? What benefits/hindrances are created by this?
What are the main WaSH systems? Does it cause a strain on local services?
Are there tensions between the refugees and local population?
Are there any governmental constraints to providing WaSH/MH projects and services?
How closely does WV work with government? How does this influence how you work?
Do you agree that 'A major revision of humanitarian leadership and coordination of humanitarian emergencies is needed that has fewer but more competent and operational actors with a clearer command and control leadership structure'?
Staff expertise
What training have you had in relation to this project (if any)?
Are you confident in your MH knowledge?
What rapport do you have with the community?
Organisational structures
What organisational level challenges are there in terms of culture/language, leadership, physical barriers, political, resources?
What benefits does WV hold compared with other organisations in delivering a programme like this?
What hindrances does WV face compared with other organisations in delivering a programme like this?
Does the WV team work well together?
Is there much turnover? How does this affect the work of WV?
Does WV work better on its own or when it collaborates with other partners?
How do time limits impact projects?
What will come after this project in terms of M&E?
Does this project expand on any MH projects that came before it (conducted by WV or others)?
Do you forsee any negative consequences of the project?
What key learnings have there been? What would you advise to other organisations conducting similar projects?
Close
Is there anything else you think I should know?
Interview questions to ground staff
Tell me about the MH training you had?

Did you find it uncomfortable to learn and talk about MH?
What main lessons did you learn from the training?
Did it change your attitudes towards MH?
Do you have a good rapport with the community?
Did they respond well to the BCC?
Are there many cultural differences between you and participants? How is this addressed? Do you think it’s necessary to address it?
Do you feel you were able to have good understanding of and communication with the participants?
Were you satisfied with the training?
Do you have much experience in general/with this particular group?
Did you feel confident carrying out the workshops?
Do you think participants were comfortable during the workshops?
To what extent did you follow UNICEF’s guidelines? Did you adapt them at all based on your own knowledge/the participants/the context?
Did you run into any problems when conducting the project?
If certain people refused to be part of the project, what were their reasons?
How were groups split for conducting the project i.e. age?
Did the group dynamics work well?
Did certain people/groups dominate the conversation?
Do you think it’s more important to involve some demographics rather than others e.g. older or younger, those with children etc.?
What did you do to ensure they worked better/that everyone’s voice was heard?
What differences in the cultural values/attitudes towards menstruation are there between you and the participants? Why do you think these differences exist?
Were these gaps a problem? How were these gaps addressed?
Were you given any training/sensitization on the cultural beliefs of participants/how to navigate any differences you might have in your cultural values?
Do you feel you were able to have good understanding of and communication with the participants?
How were you sensitised to participant’s values and view on menstruation?
What is your opinion on the project? What does/doesn’t work well?
Are you confident in your MH knowledge?
What rapport do you have with the community?
World Vision is a Christian organisation – how does this manifest in this project?
Is there anything else you think I should know?

APPENDIX K – INTERVIEW QUESTIONS WITH SURVEY PARTICIPANTS

Interview questions for male Rohingya

Respondent Name:

Block:

Interviewer Name:

Programme activities

1.How have you been engaged in menstrual health (either by World Vision or the facilitator)?

2. Who has influenced your attitude towards menstruation most and how?

3.What activities or materials do you think would be useful to help you or the community engage with menstruation and know how to support your family e.g. through drawing pictures?

4.What has helped you understand and feel more confident in your ability to support family with menstruation?

a.What do you need to understand more and feel more confident?

5.What barriers are there to you supporting family with menstruation? How can the programme help you overcome them?

6. Why/why don't you feel committed? What would make you more committed?

7.Do you think the programme has/hasn't worked for different types of people e.g. young/old, married/unmarried, those with/without children? Why? Why do you think it has or hasn't worked well in this community?

Relationship to WV/the facilitators

8.How has your relationship with World Vision influenced your participation in MH activities?

a.What is the relationship like?

b.What helps/hinders having a good relationship with them?
Ans- They are visit our HH in regular and support to us when I faced problem. It helps to maintain good relation.

9.Do you feel WV understands and is respectful of your culture rather than imposing their beliefs (in general and in relation to MH)? Please give examples if yes or no.

10.Does seeing male and female WV staff work equally together influence the way you view the roles of men and women?

11.How do you feel about the MH facilitators?

Structural programme elements

12. How have WV/the facilitators created a safe environment to attend meetings and talk about MH?

a.Do/did safety issues prevent you from attending activities?

13.Who do you feel most comfortable with to be a part of the group discussing MH with e.g. your neighbours, people of the same age? Why?

14. Do you feel pressure from the programme to change your attitudes and opinions or do you feel you have the space to learn and contemplate in your own time?

Actions

15.If WV stops distributing sanitary pads, would you buy them? Why/why not?

Behaviour/attitude change

16.How has your knowledge about menstruation improved and how has this changed your opinion towards menstruation/people who menstruate? Please be specific.

17.What else has helped to change your opinion about MH and/or made you want to help your family with menstruation?

Feelings

18.Why do you feel you should or should not help your family during menstruation?

19.How do you feel about the negative experiences females face regarding menstruation (e.g. being shamed or teased, restricted from certain activities e.g. not going out the house, gaining infection)?

a.Has this made you want to change things or act in a different way? Why?

Other influencing factors

20. Does your wife/family/other people's behaviours or reactions to your support with menstrual health encourage or dissuade you to continue? How so?

APPENDIX L – SURVEY QUESTIONS CASE STUDY TWO

Section	Question
Section A.2 - Background info	No.
	Age
	Education
	Education of mother
	Education of father
	Marital status
	Children
	Arrival in camp
	Have you already learned about menstruation from WV?
	Will you agree to take part in WV's next menstruation course?
	Where did you first learn about menstruation?
	Where did you learn more details about menstruation, MHM etc?
Section B - Attitudes/behaviours towards menstruation and menstruators (dependent variable for doer/nondoer analysis)	When girls/women menstruate what do you think of them?
	Do you think girls/women should go out/to school during menstruation?
	Do you think girls/women should join religious ceremonies during menstruation?
	Do you think girls/women should cook food during menstruation?
	Who do you discuss mensutration with?
	What support do you offer when a family member is menstruating?
	How acceptable is it for a man to use a 'female' toilet or shower block?
	SCORE
Section C1 - Risk factors	What is menstruation?(0 = disease impurity, 1 = natural bodliy process)
	What is menstrual health and MHM?
	At what age did you learn about menstruation?
	What is the result of poor MHM?
	Is it common for women to expereince GBV or peeping when using shower or toilet facilities?
	Is it common is it for women to gain infections due to poor MHM?
	Is it common that women are shamed or teased about their menstruation?
	Is it common for women to be restricted from normal daily activities?
	How serious is it if women experience GBV or peeping when using shower or toilet facilities?
	How serious is it if women gain infections due to poor MHM?
	How serious is it if women are shamed or teased about their menstruation?
	How serious is it if women are restricted from normal daily activities?
Section C2 - Attitude factors	How expensive is it to menstrual materials for your family members?
	Is it very effortful and time consuming to support your family members with menstruation?
	How do you think your female family members would feel if you supported them with MHM?
	How do you feel to support your family members during their menstruation?
Section C3 - Norm factors	Do other male community members support their family during their menstruation?
	Do others disapprove if you don't support your family members with their menstruation?
	How important do you feel your role is in supporting family members with their menstrual health?
	How important do you feel your role is in reducing taboo and stigma surrounding menstruation in the community?
Section C4 - Ability factors	How confident do you feel in your ability to support your family members during menstruation?
Section C5 - Self-regulation factors	How committed are you to continuing to support your family's menstrual health?