



**Exploring the Experiences of Adults from Low Socioeconomic Groups in
Green Spaces and Mental Health**

A thesis submitted in partial fulfilment of the requirements for the award of Doctorate
in Clinical Psychology (DClinPsy)

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Declaration

This thesis has been submitted for the award of Doctorate in Clinical Psychology at the University of Sheffield. It has not been submitted to any other institution, or for the purpose of obtaining any other qualifications.

Structure and Word Counts

Literature review

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Research report

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Lay Summary

Literature review: Literature suggests that spending time in nature like parks is good for our mental health, especially for people from lower socioeconomic groups. Three databases were searched, and nine studies were reviewed to understand how adults from these backgrounds experience green spaces and how it affects their wellbeing. The review found that green spaces provide mental health benefits, a sense of routine, purpose, and a way to feel connected to the world around them. Many people felt an emotional and spiritual connection to nature and enjoyed the sights and sounds of being outdoors. It was also found that green spaces can help people feel part of a community, feel less isolated and strengthen relationships. It isn't always easy for everyone to access these spaces and there are often barriers such as safety concerns that make it difficult to visit. Recommendations were suggested to support individuals from low socioeconomic groups to access green spaces.

Empirical report: Literature suggests that some groups visit natural environments less frequently, including women, those from lower socio-economic status groups and ethnic minorities. Therefore, the study aimed to explore ethnic minority women's experiences in using rural green spaces and how this relates to their mental health. Eight women who had experiences in rural green spaces, were from a low socioeconomic group and identified as being from an ethnic minority took part in the research. They were interviewed using a semi-structured interview format. The interviews were analysed which generated three themes. There was a connection between being in nature and participants identity, the therapeutic effects of nature were recognised by having a positive impact on mental health, and lastly constraints

to accessing rural green spaces were identified. Recommendations were identified to outline ways in which ethnic minority women could be supported to access rural green spaces.

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Section One: Literature Review

Adults from Low Socioeconomic Backgrounds: Experiences in Green Spaces and Psychological Well-being- A Systematic Review and Thematic Synthesis

Abstract

Objectives

Research suggests green spaces benefit mental health, particularly for low socioeconomic groups. This qualitative review synthesises evidence on how adults from these backgrounds experience green spaces and the impact of these environments on their psychological wellbeing.

Method

Three databases were searched for peer-reviewed studies, which were then quality-assessed using the Critical Appraisal Skills Programme (CASP) checklist.

Results

Nine studies were analysed through thematic synthesis, revealing four themes: Emotional and Mental Health, Holistic Benefits, Barriers and Facilitators, and Social and Community Wellbeing.

Conclusion

Green spaces provide emotional, spiritual, and sensory benefits, offering routine and purpose for low-income groups. While these environments foster social integration and family connection, safety and accessibility concerns remain challenging that impact green space access.

Practitioner Points

- Professionals should utilise an 'upstream' approach and encourage green space engagement to support emotional and mental health.
- Psychologists to consider environmental and socioeconomic factors within assessment and formulation, including access to green space.
- Professionals should support and advocate for inclusive green social prescribing initiatives and nature-based interventions into clinical practise.
- Professionals should collaborate with community organisations to facilitate access to green spaces.
- Urban planning and policymakers should prioritise addressing safety concerns in green spaces as well as community-based initiatives and park features to support social cohesion and community wellbeing.

Keywords: Socioeconomic Factors, Mental Health, Ethnic and Racial Minorities, Psychological Well-being, Parks, Recreational

Introduction

There is a growing body of literature indicating the potential benefits that green space can have on mental health and well-being. Irvine et al. (2013) highlighted the holistic health benefits of green spaces, including relaxation, positive emotions, tranquillity, revitalisation, and satisfaction. The term "greenspace" (GS) lacks a consistent definition, leading to varied interpretations across disciplines (Taylor & Hochuli, 2017). It is often understood as either natural areas broadly or urban vegetation such as parks, gardens, and urban forests. Urban green spaces (UGS) are key public health settings, including informal elements like green roofs and street trees (Hunter et al., 2019). Blue spaces are described as outdoor environments, natural or manmade that prominently feature water and are accessible to others such as rivers, lakes or the sea (Environment Agency, 2021).

Kaplan's Attention Restoration Theory (ART; 1989, 1995) suggests that spending time in natural environments has restorative effects that enhance psychological wellbeing, particularly after periods of intense concentration. Directed voluntary attention involves deliberate focus on tasks that may not be inherently engaging, leading to attention fatigue (Kaplan, 1989). ART proposes that natural environments support effortless cognitive processing, restoring directed attention capacity, which in turn reduces mental fatigue and supports overall psychological wellbeing. Spending time in nature also allows reflection on unresolved psychological or emotional issues (Herzog, Maguire, & Nebel, 2003; Kaplan & Berman, 2010).

Ulrich's psycho-evolutionary theory (PET), or stress reduction theory (SRT), proposes that natural environments improve affective responses and influence the brain and neuroendocrine system to promote stress recovery (Ulrich et al., 1991).

Together, these theories highlight the role of green spaces in mental health and wellbeing.

Positive links have been found between neighbourhood green space and mental health and wellbeing. People living in urban areas with more green space experience lower mental distress, anxiety, and depression, alongside greater wellbeing and healthier cortisol profiles, compared to those in areas with less green space (Maas et al., 2009). Accessibility and personal connection to nature enhance wellbeing, fostering a sense of belonging (Anders et al., 2023). However, understanding of urban green space use and perceived health and wellbeing remains limited, with experiential aspects underdeveloped (Pinder et al., 2009).

While UGS benefit everyone, they are especially valuable for socially disadvantaged or underserved groups, who often have limited access to high-quality green spaces (World Health Organization, 2017). Limited access reduces opportunities for physical activity, psychological benefits and social cohesion (World Health Organization, 2017). This is particularly significant for low socioeconomic groups who face higher rates of mental health issues, greater exposure to environmental stressors (e.g., noise and pollution) and fewer restorative opportunities (Marmot, 2010).

Variations in green space visitation have been found, with lower social grade groups less likely to visit green spaces than higher-grade groups (Burnett et al., 2022). Green spaces offer essential health and environmental benefits; reducing socioeconomic health inequalities, encouraging physical activity, and improving mental health and well-being (Barton and Rogerson, 2017). Addressing wellbeing in lower socioeconomic groups requires both formal strategies (e.g., urban planning,

policy, and design interventions) and informal approaches, including community involvement, to enhance accessibility and promote equitable wellbeing (Jennings & Gaither, 2015; World Health Organization, 2017).

Research across disciplines highlights green spaces' benefits for well-being, but much evidence remains quantitative, overlooking personal experiences (Smith & Turner, 2023). A systematic review identified themes including freedom, restoration, social connection, and emotional processes, emphasising self-awareness and altered thinking in promoting wellbeing and the need to address inequalities in green space access (Smith & Turner, 2023). Gascon et al. (2015) conducted a meta-analysis of residential green and blue spaces, finding limited evidence of long-term mental health benefits due to variability in exposure assessment and limited studies. They recommended stratifying future research by social class, education, age, and gender.

Qualitative systematic reviews have highlighted the benefits of green spaces, but research remains limited, especially regarding underrepresented urban populations, such as ethnic minorities, those in deprived areas, and people with health conditions (Smith & Turner, 2023). Qualitative evidence synthesis (QES) compiles interpretative data to better understand complex issues (Flemming et al., 2018). More qualitative research provides deeper insights into experiences and perceptions, informing equitable urban planning and policy.

Considering the gap in the literature, the review aims to synthesise qualitative evidence on adults' experiences in green spaces and the psychological well-being of individuals from low socioeconomic backgrounds. It will explore perceptions, interactions, mental health and social impacts, and any challenges to access.

Method

The review protocol was registered on PROSPERO, an international database of systematic review protocols produced by the University of York's Center for Research and Dissemination (reference: CRD42024534250).

Prior to registration, a scoping search assessed the coverage and viability of literature for the proposed review, indicating the volume and focus of existing studies. This process identified available qualitative studies on green space experiences and mental health, key concepts, definitions, and gaps highlighted in existing reviews. Research supervision contributed to discussions on literature gaps and refining the research focus. The scoping process informed the review protocol and search strategy, confirming feasibility and contribution to the literature.

Search Strategy

The SPIDER (Sample, Phenomenon of Interest, Design, Evaluation, Research type) tool was used to define key elements of the review question and develop the search strategy (Cooke et al., 2012; Appendix A). Searches were conducted in September 2024 across three electronic databases: PsycINFO via Ovid, Web of Science, and Scopus, identifying studies relevant to the review. Search strategies were applied in Web of Science and Scopus (Table 1, Appendices B and C), with MeSH terms in PsycINFO (Appendix D). No date or geographical limits were applied, but only studies published in English were included.

Table 1.*Search syntaxes*

Construct	Search Term
Green Spaces	("green space" OR "greenspace" OR "green area" OR "natural environment" OR "outdoor" OR "nature" OR "UGS" OR "open space" OR "urban green spaces" OR "rural" OR "nature connectedness" OR "therapeutic landscape" OR "forest" OR "woodland" OR "park" OR "parks")
Qualitative Research	("qualitative" OR "experiences" OR "perspectives" OR "views" OR "feeling" OR "interview" OR "narrative" OR "focus group" OR "reflect" OR "case study")
Mental Health/ Wellbeing	("psychological wellbeing" OR "psychological health" OR "mental wellbeing" OR "mental wellness" OR "well-being" OR "emotional health" OR "mental health" OR "wellness" OR "mood" OR "depression" OR "anxiety" OR "stress" OR "happiness" OR "pleasure" OR "negative affect")
Low Socioeconomic Group	("low income" OR "low-income" OR "urban deprivation" OR "deprivation" OR "low socioeconomic group" OR "social class" OR "socioeconomic factors" OR "poverty areas" OR "vulnerable populations" OR "poverty" OR "minority groups")

Note: Individual search terms for each construct were combined using the Boolean operator "OR," while broader constructs were linked using the Boolean operator "AND".

Study Selection

After the database search, studies were imported into Rayyan, a web-based systematic review tool. Duplicates were removed, and titles and abstracts were screened using predefined inclusion and exclusion criteria. To enhance reliability, a second reviewer (research supervisor) independently screened a sample of six studies (three included and three excluded reviews) against the inclusion and exclusion criteria. Initial inter-rater agreement was 67% (4/6 studies). Discrepancies were discussed and resolved through consensus, with clarification of the eligibility

criteria resulting in agreement on all six studies. The remaining studies underwent full-text review by the primary researcher, followed by forward and backward citation searching.

Table 2.

Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
Adult participants (from 18 years old)	Qualitative data that does not come from participants.
Participants experience of being in green spaces including urban parks, forests, green nature reserves, national parks, gardens, views of green spaces as well as experience of being in both green/blue spaces if the data relating to the green elements is explicitly separate from blue spaces.	Studies in languages other than English
The impact the green space has had on the participant's mental health and/or mental wellbeing.	Participants part of an outdoor intervention or group activity.
From a low socioeconomic group.	
Qualitative data/mixed methods (with qualitative component)	

Data extraction

The data extracted included details on the author, year, aims, country, participant number and characteristics, methodology, data collection, analysis, and main themes (Table 3).

Publication Bias

Publication bias, often called dissemination bias in qualitative research, was considered a potential limitation. It occurs when selective publication and reporting lead to systematic distortion of the phenomenon of interest (Booth et al., 2018). Unpublished studies and grey literature were not systematically searched, so relevant qualitative evidence may be missing. This reflects a broader challenge in qualitative evidence synthesis and should be considered when interpreting the review findings.

Researcher Reflexivity & Data Synthesis

Reflexivity in qualitative research, as defined by Olmos-Vega et al. (2022), is an ongoing process where researchers critically assess how their perspectives and experiences shape the research. It involves examining how subjectivity influences data collection and interpretation (Finlay, 2002), ensuring thoughtful, ethical decision-making. Reflexive writing, including memos, field notes, and other reflections, is a common approach (Olmos-Vega et al., 2022). The researcher made reflexive notes during analysis.

Thomas and Harden's thematic synthesis method (2008) was used to analyse the studies, uploaded to NVivo (QSR International, 2024). Data synthesis focused on study results/findings. In stages one and two, line-by-line coding produced a hierarchical tree of eight descriptive themes (Appendix E). Stage three involved synthesising these into analytical themes for higher-level interpretation (Thomas & Harden, 2008; Appendix F).

Quality Appraisal

A key step in any systematic review is quality assessment (Noyes et al, 2018). There is limited agreement on what constitutes quality within qualitative research, as standards of rigour vary across methodological traditions and epistemological perspectives (Sandelowski & Barroso, 2002). Consequently, studies were appraised rather than excluded, as appraisal in qualitative evidence synthesis is interpretive, prioritising transparency, reflexivity, and methodological coherence (Soilemezi & Linceviciute, 2018).

The Critical Appraisal Skills Program (CASP, 2024; Appendix G) qualitative tool was chosen as it is widely used for quality appraisal in health and social qualitative syntheses and endorsed by the Cochrane Qualitative and Implementation Methods Group (Long et al., 2020). CASP consists of ten items, scored as 'yes' = 1, 'can't tell' = 0.5, and 'no' = 0 (Butler et al., 2016; CASP, 2024). Scores of 9–10 indicate high quality, 7.5–9 moderate, and <7.5 low quality, though no studies were excluded based on score (Butler et al., 2016).

Nine full-text articles were independently appraised using the CASP tool by the primary researcher and a second reviewer (doctoral student). Initial inter-rater agreement was 67% (6/9 studies). Discrepancies in ratings were discussed and resolved through consensus, resulting in agreement on the final quality ratings for all studies.

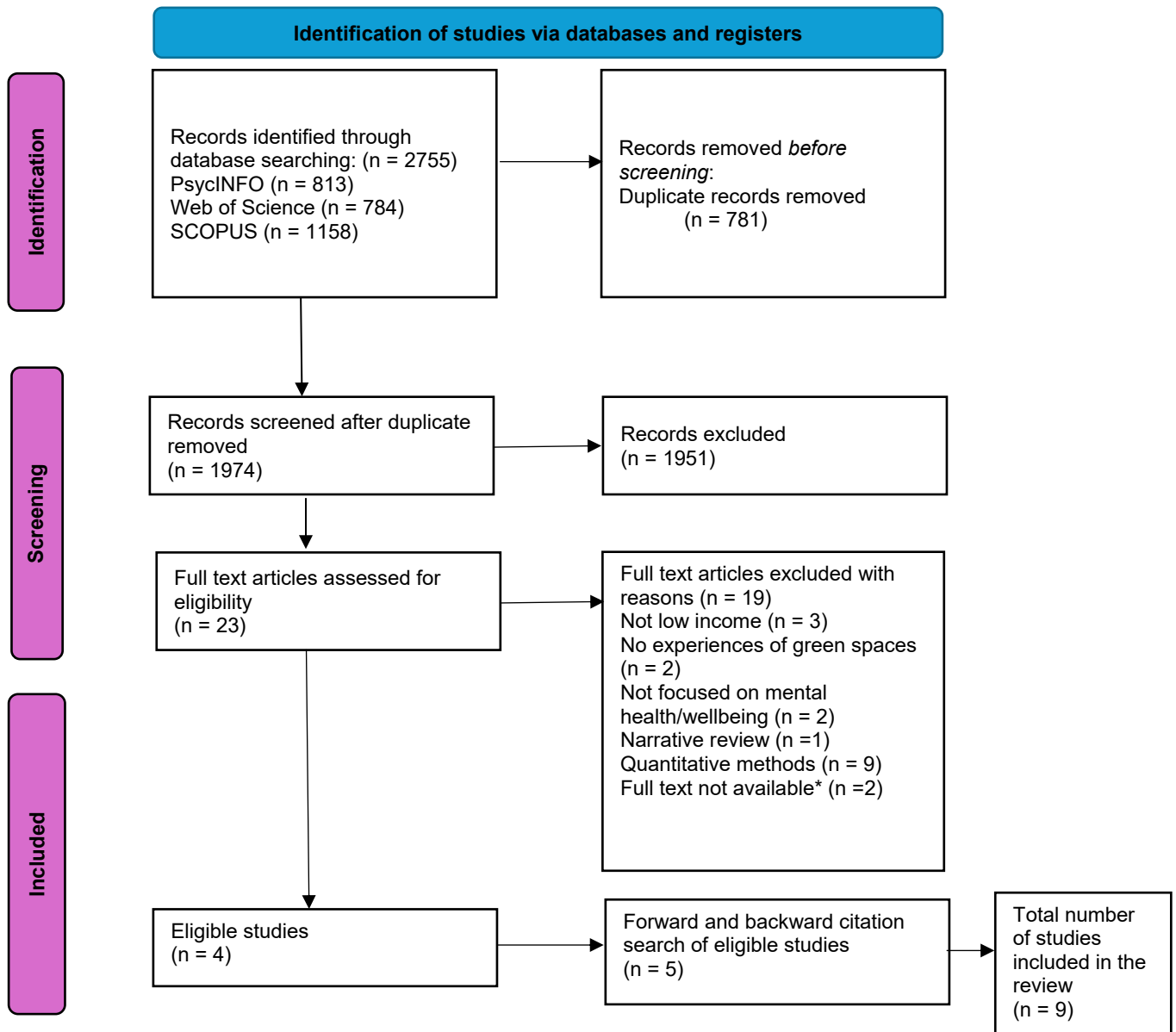
Results

Summary of Included Papers

The PRISMA flow diagram illustrated the study selection process, showing records identified, included, and excluded with reasons (Page et al., 2021; Figure 1). After removing duplicates, 1974 studies were screened by title and abstract; 1951 were excluded, leaving 23 full-text articles for eligibility assessment. Nineteen were excluded for reasons including, participants not from low socioeconomic backgrounds ($n = 3$), no experience of green spaces ($n = 2$), no focus on mental health or wellbeing ($n = 2$), quantitative methods ($n = 9$), narrative review ($n = 1$), and two unavailable full texts.

Four studies met inclusion criteria, and five additional studies were identified via forward/backward citation searches, totalling nine included studies. Two used mixed methods and seven were qualitative with research conducted between 2011 and 2024. Two studies included adults and young people, but only adult data were extracted. Participants' ages were clearly reported and data explicitly distinguished between adult and child participants.

Figure 1. PRISMA 2020 flow diagram illustrating the study selection process.
Adapted from Page et al. (2021).



*Note. Contact to authors were made, however no response was received up until the write up.

Table 3.*Table of characteristics*

Author(s), date	Aims	Country	Participants (Number, characteristics)	Method/Data Collection/Analysis	Main Themes
Anderson, Gough and Agic, 2021	To explore the impact of green infrastructure on individual and community well-being, service use, and perceived unmet needs.	Canada	N=8 Public health unit professionals (interview). N= 36 green infrastructure volunteers and workers (survey). Low-income, low socio-economic group.	Mixed method. Telephone interviews Qualitative content analysis.	Social Integration and Community Engagement
Cronin-de-Chavez, Shahid Islam, McEachan, 2019	To explore determinants of urban greenspace use among parents of young children in a deprived, multicultural urban area.	UK	N= 23 parents of children aged 0–3 (interview). White British 4; Pakistani 7; Eastern European 4; African; 4; other 4. Mean age 31. 13 born in UK. African; 7 (focus group). Low-income living in an area of high deprivation, characteristics of a low socioeconomic group.	Qualitative. Semi-structured interviews (N=23) and focus groups (N= 7). Thematic analysis.	Psychological Benefits, Restorative, Sensory Experiences, Accessibility, Barriers, Social Integration and Community Engagement and Valued Time with Family and Friends
Finlay et al, 2015	To investigate how green and blue spaces affect older adult health and wellbeing.	Canada	N= 27, N=19 follow up, 65–86 years old, Caucasian, Aboriginal, Chinese, South East Asian, Japanese, Filipino, Dutch, and German. Below low-income threshold, characteristics of a low socioeconomic group.	Qualitative, follow up. Sit down interview and voluntary walking interview. Framework analysis.	Psychological benefits, Restorative, Routine and Purpose, Sensory Experiences, Perceived Safety, Accessibility, Emotional and Spiritual Benefit, Barriers, Social Integration, Community Engagement and Valued

					Time with Family and Friends
Gidlow and Ellis, 2011	To explore perceptions of local green space, implications for use and potential interventions.	UK	Adults (N= 35) and young people (N= 23). Female adults (69%). No ethnic diversity. Deprived urban community indicating a low socioeconomic group.	Mixed methods, focus groups, thematic analysis.	Psychological benefits, Perceived Safety, Social Integration and Community Engagement
Hordyk, Hanley, Richard, 2015	To examine the embodied, every day practices of immigrant children and families in the context of urban greenspaces such as parks, fields, backyards, streetscapes, gardens, forests and rivers.	Canada	N=7 families including 10 adults and 13 children. Caribbean, Central Asia, Western Europe, Central America, South America, North Africa, and West Africa. Immigrant families in Canada (six months to seven years). Vulnerable families with underemployment, unemployment and inadequate housing, characteristics of a low socioeconomic group.	Qualitative. A hermeneutic phenomenological approach, interviews with families, non-verbal methods such as drawing and story-telling	Psychological Benefits, Restorative, Accessibility, Social Integration and Community Engagement and Valued Time with Family and Friends
Huerta and Cafagna, 2021	To explore the factors that have influenced the use of urban green spaces (UGS) in Mexico City during the COVID-19 pandemic and the implications of their usage on residents' well-being.	Mexico	N= 16, aged 22 to 58, female; 11, male; 5. Low-income and marginalised neighbourhoods, characteristics of a low socioeconomic group.	Qualitative. Solicited audio and written diaries, photography, and in-depth interviews	Psychological benefits, Restorative, Routine and Purpose, Emotional and Spiritual Benefit, Perceived Safety and Barriers

Jacobs et al, 2024	To identify the emotions experienced by older adults with low SEP when walking in their neighbourhood, and the physical and social environmental characteristics that influence these emotions.	Belgium	N= 24 older adults (65-89 years), female; 13, male; 11, low socioeconomic position (education level and low-income neighbourhood) indicating low socioeconomic group.	Qualitative. Interview based questionnaire, content analysis	Psychological Benefits, Restorative, Sensory Experiences, Perceived Safety and Social Integration and Community Engagement
King and Dickinson, 2022	To explore the reconfiguration of leisure practices during restrictions, using affordance and social practice theory to examine what people valued in urban green spaces and the lessons learned from this period of heightened interaction.	UK	N= 12 (20-70 years), female; 8, men; 4, areas lived considered to be socially disadvantaged indicating a low socioeconomic group.	Qualitative. Mobile instant messaging diaries using Whatsapp or email. Thematic analysis.	Routine and Purpose, Sensory Experiences and Social Integration and Community Engagement
Ward et al, 2023	To explore perceived barriers to greenspace access, how greenspace use contributes to well-being, the positive and negative aspects of greenspaces, the impact of COVID-19 on access, and ways to improve greenspaces.	UK	N= 40, under-represented groups, female; 28, male, 12 18-70+, N= 15 Asian/British Asian (6), Black/African/Caribbean/Black British (7), Mixed/ multiple ethnic groups (10). White British/Irish/European: 17 Low-income status, characteristic of a low socioeconomic group.	Qualitative, semi-structured interviews, Thematic analysis,	Sensory experiences, Barriers, Perceived Safety, Social Integration and Community Engagement and Valued Time with Family and Friends

Quality Appraisal Results

Using the CASP tool, a quality appraisal was completed (Appendix H). The reviewer used a scoring strategy to quantify study quality (Butler et al., 2016; CASP, 2024).

Of the nine studies, seven were rated high quality (Cronin et al., 2019; Finlay et al., 2015; Gidlow & Ellis, 2011; Huerta & Cafagna, 2021; Jacobs et al., 2024; King & Dickinson, 2022; Ward et al., 2023) and two were rated moderate quality (Anderson et al., 2021; Hordyk et al., 2015). All studies except King & Dickinson (2022) clearly stated their aims.

All studies outlined their qualitative methodology, apart from Anderson et al. (2021), which used mixed methods. Each study justified its design, which was appropriate to the research question, and described a clear research strategy. Some studies (Anderson et al., 2021; Hordyk et al., 2015; Huerta & Cafagna, 2021) did not explain why some individuals declined participation. However, recruitment was still considered robust and this did not affect scoring.

The data collection method was described in all studies; however, details were limited in some regarding recording, transcription, coding, or verification (Anderson et al., 2021; Hordyk et al., 2015; Huerta et al., 2021). The limited detail may weaken confidence in methodological rigor. Data saturation was inconsistently addressed across several studies (Anderson et al., 2021; Cronin-de-Chavez et al., 2019; Gidlow & Ellis, 2011; Huerta & Cafagna, 2021; King & Dickinson, 2022; Ward et al., 2023), except for Jacobs et al. (2024) who explicitly considered it. This highlights a minor transparency gap in how data adequacy was determined; however, this did not affect quality ratings. It is important to note that data saturation does not apply uniformly across qualitative methodologies.

Braun and Clarke (2021) challenge that data saturation is often used uncritically and may be misaligned with approaches such as reflexive thematic analysis. In the phenomenological studies (Finlay et al., 2015; Hordyk et al., 2015), the focus is on depth of lived experience rather than thematic repetition, aligning more closely with information power (Malterud et al., 2016).

Although the studies were contextually grounded, they were conducted across diverse locations including Canada (Anderson et al., 2021; Finlay et al., 2015; Hordyk et al., 2015), the United Kingdom (Cronin-de-Chavez et al., 2019; Gidlow & Ellis, 2011; King & Dickinson, 2022; Ward et al., 2023), and Mexico (Huerta & Cafagna, 2021). Transferability may therefore be limited, as participants' experiences were shaped by location-specific social, cultural, and environmental factors. All but one study (Anderson et al., 2021) explored the researcher–participant relationship. Reflexivity is important in qualitative research, as acknowledging preconceptions and positionality supports transparency and can shape data collection and analysis (Malterud, 2001).

Ethical considerations were reported in all studies. Two studies provided insufficient detail on data analysis (Hordyk et al., 2015; Huerta & Cafagna, 2021), and two lacked a clear statement of findings (Anderson et al., 2021; Hordyk et al., 2015) for example, Anderson et al. (2021) did not include participant quotations. While most studies reported their findings adequately, the depth and balance of evidence, discussion of limitations, and theoretical integration varied.

Thematic Synthesis

From the analysis, the data identified four superordinate themes and their subthemes (Table 4). These themes capture adults' experiences of green spaces from low socioeconomic backgrounds and their influence on psychological well-being. Illustrative data excerpts were documented (Appendix I).

Table 4.

Themes and Subthemes

Themes	Subthemes
Emotional and Mental Health	Psychological Restoration and Wellbeing Routine and Purpose
Holistic Benefits	Emotional and Spiritual Benefit Sensory experiences
Barriers and Facilitators	Perceived Safety Accessibility Challenges in Physical and Social Environments
Social and Community Wellbeing	Social Integration and Community Engagement Valued time with family and friends

Table 5. *The Representation of Themes*

	Anderson, Gough and Agić, 2021	Cronin-de- Chavez, Shahid Islam, McEachan, 2019	Finlay et al, 2015	Gidlow and Ellis, 2011	Hordyk, Hanley, Richard, 2015	Huerta and Cafagna, 2021	Jacobs et al, 2024	King and Dickinson, 2022	Ward et al, 2023
Emotional and Mental Health		✓	✓	✓	✓	✓	✓	✓	
Psychological Restoration and Wellbeing		✓	✓	✓	✓	✓	✓		
Routine and Purpose			✓			✓		✓	
Holistic Benefits		✓	✓			✓	✓	✓	✓
Emotional and Spiritual Benefit			✓			✓			
Sensory experiences		✓	✓				✓	✓	✓
Barriers and Facilitators		✓	✓	✓	✓	✓	✓		✓
Perceived Safety			✓	✓		✓	✓		✓
Accessibility		✓	✓		✓				
Challenges in Physical and Social Environments		✓	✓			✓			✓
Social and Community Wellbeing	✓	✓	✓	✓	✓		✓	✓	✓
Social Integration and Community Engagement	✓	✓	✓	✓	✓		✓	✓	✓
Valued time with family and friends		✓	✓		✓				✓

Emotional and Mental Health

This theme focuses on how nature supports psychological restoration and emotional wellbeing, for people from low socioeconomic backgrounds. It highlights how green space routines foster emotional renewal, mental clarity, and a sense of purpose.

Psychological Restoration and Wellbeing

Marcela, an immigrant mum in Canada, finds emotional relief and freedom for herself through daily visits to a nearby park with her daughter, which she views as essential for her wellbeing (Hordyk et al., 2015). Her uncertainty about coping without this space highlights the importance of accessible green areas for emotional and mental health, particularly for marginalised, low-income communities.

“Now I don’t have much money and I have a one-bedroom apartment that is small but we have a park like this one close to us and this helps us a lot. If we did not have a place like this to play in every day, I don’t know. I think that...[her voice trails off] ... I don’t know.” (Hordyk et al, 2015, p. 77).

Participants experiencing emotional distress described seeking connection with green spaces, recognising their restorative effects. They reflected on how time spent outdoors could “lift spirits”, alter emotions and ease initial worries (Cronin-de-Chavez et al., 2019; Gidlow & Ellis, 2011). Similarly, Jacobs et al. (2024) found that participants used green spaces to distract themselves and “take their mind off things,” emphasising the value of natural surroundings.

“it changes your perspective... lifts your spirits”; “you could be worried to death about something and half an hour at [District Park] and it’s all different” (Gidlow & Ellis, 2011, p.994).

“I feel satisfied and happy here. You hear the birds chirping, the weather is good.” (Jacobs et al, 2024, p. 5).

Participants also described green spaces as places to “breathe,” “sit and reflect,” “relax,” or “enjoy,” noting the psychological benefits often outweighed physical ones like improved fitness (Gidlow & Ellis, 2011; Jacobs et al., 2024). Regular UGS users also reported feelings of “comfort, happiness, and tranquillity” during their visits (Huerta & Cafagna, 2021). Nature was described as emotionally restorative and spiritually calming. Participants associated green spaces with “renewal,” “rejuvenation,” and “restoration,” using them to stay active and cope during hardship, supporting mental wellbeing (Cronin-de-Chavez et al., 2019; Finlay et al., 2015; Hordyk et al., 2015).

“I think that it would drive me up the wall if I couldn't go out and sit in the park or something” (Finlay et al, 2015, p. 102).

David, an 80-year-old “nature-lover,” finds calm and peace outdoors. Another participant said that being outside “clears up” their mind and offers a new outlook, helped by “fresh air” and watching the trees (Finlay et al., 2015). An immigrant mother contrasted the lack of outdoor space in her Canadian apartment with the open courtyard in her West African village, noting the rejuvenating effect of breathing

in open air. To cope with limited living conditions, her family spent hours in a nearby park (Hordyk et al., 2015).

“Back home, you always have space. You have your home. We have our courtyard, the gardens. You don't have to go inside. In the courtyard you breathe” (Hordyk et al, 2015).

During the COVID-19 pandemic, participants who experienced loss found comfort in natural environments or seeing elements of nature (Huerta & Cafagna, 2021). Spending time outdoors, walking, running, or going out with dogs or children contributed to improved mood during this period (Huerta & Cafagna, 2021).

Routine and Purpose

Green spaces helped participants build and maintain meaningful routines, especially during life transitions such as retirement (Finlay et al., 2015). Elizabeth, a 73-year-old participant, described a weekly routine of exercise, walking, and volunteering in a public garden, which helped her manage “boredom” and “loneliness.” She also highlighted how routine gave her purpose and structure.

“Without that structure, you 're just drifting, you 're floating and going dull” (Finlay et al, 2015, p. 100).

Six participants who were dog owners used green spaces more frequently than those without dogs (Huerta & Cafagna, 2021). Dog ownership added daily responsibility and routine, encouraging regular outdoor time. Woodland walks provided structure,

physical activity, and enjoyment for both owner and dog, described as their “favourite destination,” as well as opportunities to connect with nature through “scenic views” (King & Dickinson, 2022). Walking in UGS also supported health goals, with one participant continuing despite low motivation, showing resilience and commitment (King & Dickinson, 2022).

“a short walk for health reasons yet again tonight. Motivation could be higher - but onward” (King & Dickinson, 2022, p. 108).

Holistic Benefits

This theme brings the emotional and spiritual benefit of green space with sensory experiences. It highlights the comfort and peace nature provides, especially during times of loss, and highlights how sensory connection with nature can offer tranquillity, emotional renewal, and improved wellbeing.

Emotional and Spiritual Benefit

Participants who experienced loss felt spiritual peace and connection with their loved ones in green spaces, which offered comfort in coping with grief (Finlay et al., 2015; Huerta & Cafagna, 2021). Helen, aged 74, regularly visited a beach location with green elements where a memorial bench honoured her late husband, describing the experience as “spiritual” and “beautiful” (Finlay et al., 2015).

“To me, it's a spiritual experience going down and watching the water. Looking at the trees. That's a – what I call – beautiful” (Finlay et al, 2015, p. 101).

Similarly, Elizabeth (73 years old) felt a sentimental and spiritual connection when gardening, as it reminded her of gardening with her late husband (Finlay et al., 2015, p.99). She continues to maintain this space in his honour, describing feelings of joy and satisfaction it brings her (Finlay et al., 2015).

Sensory Experiences

Participants highlighted the importance of sensory experiences in nature, including smells, sounds, sights, and touch, as central to emotional well-being (Finlay et al., 2015). For instance, Anna (73 years old) found walking in her local parks, engaging with the sights and sounds, such as birdsong and blooming flowers, to be an “invigorating experience” (Finlay et al., 2015, p. 100). Similarly, Norma (76) noted that gardening and walking helped her notice her surroundings, giving her a “different outlook” and enhancing her wellbeing.

“Well, I like to look around and see things. Right now all the beautiful flowers [are in] bloom – the trees are blooming and that. And I 'll stop here and there and listen to the birds” (Finlay et al, 2015, p. 100).

“...The fresh air and watching the trees and looking at different things, it just gives you a different outlook” (Finlay et al, 2015, p. 101).

Participants valued the sensory and aesthetic qualities of nature in UGS (King & Dickinson, 2022; Finlay et al., 2015). They shared images of flowers, trees, sunrises, and audio recordings of water and birdsong, noting how scents, sounds, and views enriched their experience (King & Dickinson, 2022). Contact with nature was consistently linked to physical, psychological, and social wellbeing (Finlay et al., 2015; Jacobs et al., 2024; King & Dickinson, 2022). Participants described feeling “relaxed” and “calm” when enjoying simple moments such as sitting on a bench, enjoying the view and listening to birds (Jacobs et al., 2024).

“I feel satisfied and happy here. You hear the birds chirping, the weather is good” (Jacobs et al, 2024, p. 5).

Participants also emphasised the value of having “space for nature,” where wildflowers, wildlife, and natural green areas can grow and thrive, enhancing sensory experiences through observing dragonflies, butterflies, birds, and wildflowers (Ward et al., 2023). They highlighted the appeal of natural settings with “stillness”, “lack of noise” with minimal “human stuff” or “infrastructure”, which allowed James (68 years old) to fully engage his senses and feel rejuvenated (Finlay et al, 2015).

“[The] trees are beautiful. Grass. Sky. Fresh air. A natural setting, nature with minimal intervention of human stuff [or] infrastructure... Also stillness, lack of noise” (Finlay et al , 2015, p. 101).

Participants valued sharing natural spaces with others, especially family, which was important for those without private outdoor areas (gardens) due to socioeconomic

constraints. A mother of two visually impaired children without garden access noted the sensory benefits of natural environments for their wellbeing.

“...I just take them out... we listen to the birds and the grass and the nature.

It's something totally different, you know, and they do need that”

(Cronin-de-Chavez et al., 2019, p. 121).

Barriers and Facilitators

This theme combines barriers and facilitators related to safety, accessibility, and challenges in physical and social environments. Perceived safety includes fears of violence and anti-social behaviour leading to participants avoiding certain green spaces particularly at night. Accessibility is crucial for vulnerable and marginalised backgrounds to engage with green spaces encompassing familiarity, safety, social support, proximity and affordability. Across studies, barriers included mobility issues, access to entrances, distance, logistical difficulties, cultural and social barriers.

Perceived Safety

Safety concerns were prominent, especially from women, older adults and particularly from low socioeconomic backgrounds (Ward et al, 2023). Participants described fear of being “attacked” or encountering anti-social behaviour such as vandalism, drug use, and gang activity, when walking alone in UGS (Finlay et al, 2015; Huerta & Cafagna, 2021; Ward et al, 2023). As a result, they avoided green spaces they perceived as unsafe, especially at night, and chose nearby streets instead for walking or exercise (Finlay et al., 2015; Huerta & Cafagna, 2021; Jacobs et al., 2024). Some avoided areas associated with gangs or loitering, described as

“intimidating” (Gidlow & Ellis, 2011; Jacobs et al., 2024). Limited lighting and overgrown trees also contributed to feelings of vulnerability.

“They used the area round the trees to hide and do drugs and that’s why we stopped going there”; “They just let the trees get overgrown and you don’t know who is hiding in there.. I won’t even use it as a short cut now to get to [town]” (Gidlow & Ellis, 2011).

Safety concerns were also influenced by weather conditions and seasonal factors, including shorter daylight hours and darkness (Ward et al, 2023). However, one 71-year-old woman reported feeling unsafe even during the day, with her daughters discouraging park visits because safety concerns persisted regardless of daylight (Jacobs et al., 2024).

“I would not come here. No. It may be even during the day, no. My daughters totally forbade me. Just because it is daytime, that does not mean that nothing can happen. [...] yes, I am scared of that. [...] It is a pity that they hang out here, those loiterers” (Jacobs et al, 2024, p. 8).

Some women felt even more unsafe in green spaces during the pandemic due to fears of infection. They reported feeling unsafe both in crowded areas and in empty UGS, worrying they would not be heard if they needed help (Huerta & Cafagna, 2021; Ward et al., 2023).

“I don't think I'd ever go in that park... Because there's just too many dodgy people... people are regularly mugged and stuff. So, it's just not somewhere that I'd go” (Ward et al, 2023).

Gender differences in safety perceptions were also noted. Huerta and Cafagna (2021) found that women expressed anxiety about violence regardless of UGS quality, while no male participants reported such concerns. Norma (76 years old) avoided certain parks due to fear of homeless people she believed had moved into the area, whereas James (68) did not feel threatened in the same spaces, showing contrasting perceptions of identical environments (Finlay et al., 2015).

Some participants reported travelling to more distant green spaces due to local anti-social behaviour (Ward et al., 2023). Those receiving benefits or living in more deprived areas described issues such as drug use, drinking, fireworks, and vandalism in nearby green spaces, prompting them to seek safer areas elsewhere.

“If I think closer to home there's a park just around the corner which would be lovely to go and sit in if it was well maintained but people smash things up or leave drug paraphernalia around or not clear up after their dogs, things like that” (Ward et al, 2023).

Participants suggested improvements such as better lighting to enhance safety and comfort in green spaces, which they felt would increase their willingness to use these areas more often (Huerta & Cafagna, 2021).

“All the women who participated agreed that ample lighting... was an essential quality satisfier for UGS use.” (Huerta & Cafagna, 2021, p. 13).

Participants also suggested community policing or better maintenance of green spaces to reduce anti-social behaviour. However, increased police presence was not supported by all women (Huerta & Cafagna, 2021).

Accessibility

Positive social interactions and practical support such as help with transport or locating parks were important for people unfamiliar with the area, including immigrants. One participant described a bus driver offering directions, noting that most drivers help when they know someone is “foreign,” which improved accessibility (Cronin-de-Chavez et al., 2019).

“Most of the bus drivers will assume she's a foreigner will help her with some direction information ... Yeah most of them, I'd say 90% of the drivers will do this, especially when they knew the people asking are foreign”
(Cronin-de-Chavez et al., 2019, p. 122).

Familiarity with green spaces supported comfort and safety, encouraging regular use. Jack (86 years old), who lived in his neighbourhood for 25 years, felt confident and at ease in local green spaces because his long-term familiarity enhanced his accessibility (Finlay et al., 2015).

Parents appreciated free, accessible park activities such as sledding and skating, which helped them connect with other families and enjoy the outdoors in winter. Gerado emphasised the importance of parks that do not require transportation, making them accessible to the whole community.

“You might think that you have to have a car to get into nature but with a big park like Mount Royal... it is accessible for everyone... People skate, cross-country ski, snowshoe...”(Hordyk et al, p. 77).

Challenges in Physical and Social Environments

Participants faced physical accessibility challenges in green spaces due to park design and infrastructure, including inaccessible entrances and paths, limited benches, and poor signposting. These barriers particularly affected those with mobility difficulties (Ward et al., 2023).

“Getting somewhere that you can get a power chair or a wheelchair through... often the only thing that's stopping it being accessible is the entry point” (Ward et al, 2023, p. 1289).

Another participant described difficulties using green spaces with a pushchair and young children, noting challenges with steps and road crossings. She recalled being unable to get through an entrance, becoming stressed as her baby grew “fussy,” until a passerby helped lift the pram over the wall.

“...couldn’t get through, couldn’t get past. And my pram is on the big side but it’s not really big, even there’s the twin prams as well ... yeah, I was panicking, cause he [baby son] was getting really fussy, I couldn’t entertain him anymore, had to lift the pushchair over this wall, this one guy actually came to help me” (Cronin-de-Chavez et al., 2019).

Access to green spaces was affected by distance and transport barriers particularly for participants from low socioeconomic groups or without a vehicle, who were less able to visit higher-quality spaces (Cronin-de-Chavez et al., 2019; Ward et al., 2023). Participants highlighted challenges such as managing children and relying on public transport, which often involved lengthy journeys and limited their access options (Cronin-de-Chavez et al, 2019; Huerta & Cafagna, 2021; Ward et al, 2023).

“I think that’s the main thing having areas that cause not everybody drives and it’s hard for you to have a nice park if you don’t have a nice park around your area and you can’t drive and it’s a shame that you can’t get your kid to the park because you can’t drive and you can walk but it’s too far to walk” (Cronin-de-Chavez et al, 2019).

During the COVID-19 pandemic, participants reliant on public transport found accessing green spaces especially difficult due to anxiety about contagion (Huerta & Cafagna, 2021). One participant wanted to visit “mountains” and “water” but felt limited by the physical effort of cycling. Driving was considered impractical and contradictory having to drive to green spaces instead of walking discouraging them from visiting these areas (Finley et al, 2015).

“I love the mountains and I love the water, and I can't see any here... If I lived down [by Stanley Park], I'd walk on the Seawall every day, no doubt about it. But I just don't have the energy to ride my bicycle down that far. And I just don't want to take the car down there because then it's counterproductive driving the car down and walking and driving the car back, so I just don't do it” (Finlay et al, 2015, p. 103).

Cultural and social barriers also affected participants from ethnic minority backgrounds, who reported feeling unwelcome in green spaces due to racism and discriminatory behaviour (Ward et al., 2023). One participant described experiencing subtle exclusion through body language.

“You don't necessarily encounter it, but you feel a little uneasy sometimes the further away from home you are. People don't always say things, sometimes it's looks as if to say, “Hmm, why are you here?” as if you don't have a right to be in that space” (Ward et al, 2023, p. 1289).

Another participant expressed concerns about personal safety and felt cautious in certain green spaces. She was mindful of her appearance as a headscarf-wearing woman and felt the need to “alter her behaviour” (Ward et al., 2023).

“With me, I'd think twice about going to parks in certain areas, because I'm Asian. I wear a headscarf. I'm Muslim. So, you know, I'd be a bit wary about going to certain areas of the city, certain parks” (Ward et al, 2023, p. 1289).

Social and Community Wellbeing

This theme highlights the importance of social integration and community engagement, as well as valued time with family and friends. Green spaces act as key settings for building social connections, supporting community integration, and reducing social isolation. They also provide opportunities for families and friends to spend quality time together, strengthening relationships.

Social Integration and Community Engagement

Across most studies, participants highlighted the role of green spaces in building social cohesion (Anderson et al, 2021; Cronin-de-Chavez et al, 2019; Finlay et al, 2015; Gidlow and Ellis, 2011; Hordyk et al, 2015; Jacobs et al, 2024; King & Dickinson, 2022; Ward et al, 2023). Anderson et al. (2021) noted that green infrastructure such as urban forestry, park vegetation, trails, and community gardens helped promote social unity and support mental wellbeing.

"green infrastructure is beneficial in building social cohesion and supporting mental health" (Anderson et al, 2021, p. 10).

Parents who were new migrants often experienced social isolation, but parks offered opportunities to socialise with other families, form friendships with people from their home country, and support community integration. These spaces also provided access to help from those more familiar with the area (Cronin-de-Chavez et al., 2019; Hordyk et al., 2015).

“She got stuck... so I just helped a bit... we used to go on a weekend, and she enjoyed it... now she's doing, she goes every day in the park, she's so changed” (Cronin-de-Chavez et al, 2019, p. 122).

Green spaces encouraged casual social interactions with others in the community, helping to reduce boredom and loneliness. One participant shared, “It’s nice... sometimes people stop and have a chat” (Ward et al, 2023). Another highlighted how these social encounters supported a sense of community.

“I am very bored.... I am looking [at] people and my mind is fresh then and the day is very fast going... Normally I am very quiet but here I am talking to people so it is good for me” (Cronin-de-Chavez et al, 2019, p, 123).

Elizabeth (73 years old) volunteered at a botanical garden for over 20 years, collected seeds and maintained the garden with fellow volunteers. She described the social atmosphere as “amazing” and noted how people formed connections through this work (Finlay et al., 2015). Features such as chairs and benches enhanced emotional experiences by offering places to rest and encouraging social interaction (Jacobs et al., 2024). Additionally, a community initiative involving painted rocks in parks further fostered connections among green-space users and strengthened community engagement (King & Dickinson, 2022).

Valued Time with Family and Friends

Studies highlighted the role of green spaces in supporting interactions with family and friends through activities such as walking, talking, and children’s play

(Cronin-de-Chavez et al., 2019; Finlay et al., 2015; Ward et al., 2023). Families, especially those with children over three, often used parks to spend quality time together and strengthen family bonds (Hordyk et al., 2015).

"Yeah, and, you know, he just loves running around, he doesn't want anybody touching him, he won't even hold my hand... he wants to walk on his own"
(Cronin-de-Chavez et al., 2019, p. 121).

Informal and formal outings to green spaces often involved family, friends, and extended relatives (Cronin-de-Chavez et al., 2019; Finlay et al., 2015; Ward et al., 2023). Parks provided spaces to socialise, such as walking with friends. Jean and Betty regularly met for park walks, helping them facilitate social connection maintaining and valuing friendships.

"Betty noted that walks up to 1.5 h long go by quickly while chatting with friends in the "fresh and beautiful" park" (Finlay et al., 2015, p. 102).

Discussion

This review aimed to complete a qualitative synthesis of the evidence on adults' experiences in green spaces and the psychological well-being of individuals from low socioeconomic backgrounds. Following the thematic synthesis, four themes were developed: 'Emotional and Mental Health', 'Holistic Benefits', 'Barriers and Facilitators and 'Social and Community Wellbeing'.

Emotional and Mental Health

Time spent in green spaces provided significant psychological restoration and wellbeing benefits, fostering emotional renewal, positive feelings, relaxation and mental clarity which is particularly valuable for individuals experiencing mental health challenges such as depression (Cronin-de-Chavez et al, 2019). The psychological restorative effects of green spaces were also apparent, with these environments promoting a sense of tranquillity and serving as a valuable coping resource that provided emotional relief, particularly during the COVID-19 pandemic. Participants who experienced loss had to manage the constraints of the pandemic and reported finding comfort in nature (Finlay et al., 2015; Huerta & Cafagna, 2021). Additionally, engaging in meaningful physical activities such as walking and volunteering in green spaces fostered routine and purpose, particularly during retirement and for dog owners, alleviating feelings of boredom and loneliness (Finlay et al., 2015; Huerta & Cafagna, 2021; King & Dickinson, 2022). Green spaces are a vital resource for emotional and mental health, particularly for individuals from low socioeconomic backgrounds.

These findings align to research by Irvine et al. (2013), which highlights the restorative and tranquil effects of green spaces, fostering positive emotions related to both self and the environment. The review findings are also similar to Smith and Turner's (2023) synthesis although their review focused on the general population. The present review extends these findings demonstrating that for individuals from low socioeconomic groups, green space use is not predominantly experienced as leisure but as an essential coping mechanism for maintaining and stabilising mental wellbeing in the context of structural disadvantage. Smith and Turner (2023) uncovered "peace and restoration" and "freedom and escape" themes describing

green spaces as providing emotional peace, a sense of calm, relaxation and solitude reducing stress from daily demands. Additionally, Abraham et al. (2010) emphasised the potential of landscapes promoting mental wellbeing through attention restoration, stress reduction, and positive emotions. In contrast, the current synthesis highlights how these restorative experiences are shaped by conditions such as restricted housing, poverty, and limited access to safe environments, making green space use more critical for psychological functioning rather than optional. A unique finding of this review was that green spaces often compensated for limited living space and inadequate access to private outdoor environments. For low socioeconomic groups, parks were not solely places for relaxation but extensions of the home environment that supported daily psychological wellbeing. In addition, this review highlighted the importance of green spaces providing routine, structure, and purpose, particularly during life transitions such as retirement and social isolation.

There are also parallels with Attention Restoration Theory (ART) a well-known model within environmental Psychology proposed by Kaplan (1989), which suggests that time spent in nature alleviates mental fatigue and improves concentration. Additionally, low socioeconomic status is associated with increased stress and reduced coping capacity, heightening vulnerability to negative emotions that impact health (Gallo & Matthews, 2023). Therefore, green spaces are particularly important for low socioeconomic groups to help combat health inequalities, encourage physical activity, and improve mental health and well-being (Barton & Rogerson, 2017).

Holistic Benefits

Green spaces help participants cope with grief and loss, offering peace, a spiritual connection and comfort such as Helen visiting her late husband's memorial bench describing this as a "spiritual experience" and Elizabeth's attachment to gardening maintain the space to honour her husband (Finlay et al., 2015).

Sensory engagement (sight, sound, touch, smell) in nature was integral to emotional wellbeing for participants such as Anna's enjoyment of birdsong and blooming flowers (Finlay et al., 2015). Participants valued natural aesthetics of nature, there was an appreciation of "stillness" that nature provided with minimal human infrastructure which allowed engagement of senses and a rejuvenation of wellbeing (Finlay et al., 2015; King & Dickinson., 2022). By noticing surroundings in nature this provided a "different outlook" enhancing wellbeing (Finlay et al., 2015). Sensory benefits were valued by participants lacking private outdoor space such as a mother with visually impaired children who emphasised the importance of sharing nature's sensory experiences but had socioeconomic constraints (Cronin-de-Chavez et al., 2019). This review extends Smith and Turner's (2023) findings by demonstrating that sensory experiences in nature may be particularly valuable for low socioeconomic groups often without access to private outdoor space, highlighting the unequal distribution of opportunities to engaging in green spaces.

Consistent with Smith and Turner's (2023) "sensory dimension" and "memory/connection" experiences, being in green spaces stimulates the mind, supports connection with nature and loved ones, and offers a sense of escape that leaves a positive psychological impact. Conversely in this review sharing these spaces with others particularly those with limited green space access or in isolation

established meaning for low socioeconomic groups, again providing a coping resource beyond leisure alone.

The findings align to research by Irvine et al (2013) with one of the derivatives of urban green spaces being the effect of spiritual well-being which was an unexpected benefit of use. Ulrich's psycho-evolutionary theory (1999) highlights the innate restorative potential of natural elements, such as vegetation, flowers, and water. These elements are absent in-built environments, making nature uniquely effective in promoting well-being (Ulrich, 1999). This aligns with participants' appreciation of the natural aesthetics and "stillness" that nature offers, fostering sensory engagement and enhancing well-being (Finlay et al., 2015; King & Dickinson, 2022).

Sensory experiences were beneficial for participants' emotional well-being. Research suggests that while sensory quality positively impacts psychological well-being, sensory perception and variety do not always lead to restoration (Qu & Ma, 2024). However, incorporating a broader range of sensory experiences, including touch and smell, can have a greater impact on reducing stress and improving overall well-being (Qu & Ma, 2024).

Barriers and Facilitators

Safety concerns in green spaces related to violence and anti-social behaviour were prevalent particularly from vulnerable groups such as women, older adults and individuals from low socioeconomic backgrounds (Ward et al., 2023). This led to avoidance of using green spaces, especially after dark as well as travelling to more distant 'safer' green spaces (Finlay et al., 2015; Huerta & Cafagna, 2021; Jacobs et al., 2024; Ward et al., 2023). Similar findings are noted in a neighbourhood forest in

Norway where women expressed fear of the dark, a fear of rape and assault by men and gangs of youths thus influencing willingness to access spaces (Skar, 2010). To improve safety, participants emphasised the use of adequate lighting and community policing as measures to enhance perceived safety (Huerta & Cafagna, 2021).

Previous research links to findings on perceived safety and feelings of vulnerability, with lighting and low vegetation to be crucial elements for feeling safe (Lindgren & Nilsen, 2011). Similarly, “Safety/protection” was also a theme highlighted in Smith and Turner’s (2023) synthesis, however this review highlighted key experiences of safety concerns of vulnerable groups from low socioeconomic backgrounds leading to avoidance of green spaces or travelling to perceived ‘safer’ areas.

Accessibility is important in facilitating participants from immigrant and low socioeconomic backgrounds to engage with green spaces. Positive social support through transport assistance and familiarity with the area are important roles which can facilitate access to these spaces (Cronin-de-Chavez et al., 2019; Finlay et al., 2015). Additionally, free and accessible activities in local parks that do not require transportation were highlighted as important especially for families (Hordyk et al., 2023).

Barriers to engagement with green spaces were identified, including mobility challenges, issues with access to entrances, proximity, limited transportation and stress around the COVID-pandemic (Cronin-de-Chavez et al., 2019; Huerta & Cafagna, 2021). People with mobility impairments, pushchairs, and wheelchairs face challenges accessing certain green spaces due to inadequate facilities and pathways, which heightens feelings of exclusion (Corazon et al., 2019). Socio-cultural factors also played a significant role in limiting access to green spaces.

Ethnic minority participants felt unwelcome in green spaces due to racism, discrimination, and safety concerns, with some altering their behaviour to avoid attention (Ward et al., 2023). Similar barriers of feeling discomfort reduced a sense of belonging which was found by Hamza et al. (2024) with South Asians. Similarly, Latino focus group participants reported feeling unwelcome and excluded in parks mainly used by White individuals, citing factors such as the absence of Spanish-language signage, fears of persecution, and direct discrimination (Byrne, 2012). Low socioeconomic groups were found to be infrequent users of natural environments thus highlighting the unequal distribution of barriers or facilitators of access in green spaces (Boyd et al., 2018; Burnett et al., 2022).

Social and Community Wellbeing

Green spaces are important in fostering social cohesion, promoting community integration and preventing experiences of social isolation, supporting mental health for low socioeconomic groups. Benefits were experienced by new migrants facilitating connections, support and enhancing community integration (Cronin-de-Chavez et al., 2019; Hordyk et al., 2015). Similarly, Smith & Turner (2023) suggested that green spaces provide opportunities for social interaction and belonging. However, the current review highlights that these benefits may be particularly important for individuals from low socioeconomic backgrounds, for whom opportunities for social connection and community engagement may be limited. Green spaces not only facilitated friendship formation and community integration but also provided practical and emotional support, particularly for migrants and individuals experiencing social isolation. This suggests that, for low socioeconomic

groups, green spaces may function as important community resources that help mitigate the social consequences of socioeconomic disadvantage.

Green spaces enhance social well-being through volunteering activities, interactions with strangers as well as community-based initiatives enhancing community connectedness (Finlay et al., 2015; Jacobs et al., 2024; King & Dickinson, 2022). Volunteering provides opportunities to engage with others, working collaboratively restoring and maintaining parks, potentially leading to more resilient communities (Dresner et al., 2014).

Green spaces facilitate opportunities for family and friends to spend quality time together, enhancing bonding and strengthening interpersonal connections (Cronin-de-Chavez et al., 2019; Finlay et al., 2015; Hordyk et al., 2015; Ward et al., 2023). Walton (2014) also found nearby parks were used as a gathering space where they could nurture and maintain their relationships with family and friends.

Critique of Included Studies

Huerta and Cafagna's (2021) research show selection bias due to the digital exclusion of older adults. While most studies clearly described their data collection and analysis processes, two lacked sufficient detail, highlighting the need for rigorous reporting to ensure research quality (Green et al., 2007; Hordyk et al., 2015; Huerta & Cafagna, 2021;).

Several studies did not include detail on data saturation, which impacts credibility and optimises research efforts (Mwita, 2022). Although sample sizes appeared adequate for qualitative research, Mwita (2022) suggests larger samples for effective saturation (Smith et al., 2022). Ethical issues were addressed in most

studies, though some overlooked potential emotional harm, especially for those discussing sensitive topics (Finlay et al., 2015; Hordyk et al., 2015). Providing emotional support is essential for ethical research (Olson, 2023). Some studies strengthened data credibility through triangulation, using verbal, visual, and audio methods like photography and storytelling (Hordyk et al., 2015; Huerta & Cafagna, 2021).

Strengths, Limitations, and Future Directions

Future research should address the gaps in this review and continue to focus on underrepresented demographic groups, particularly those from low socioeconomic backgrounds, to better understand their experiences with green spaces. The lack of a definition of low SES limits comparability across studies and reduces the ability to draw clear conclusions within the review. Additionally, the inclusion of undifferentiated green space types reduces the precision of the findings, resulting in a more general overview. Future reviews should define low SES and distinguish between green space types to enhance precision.

The inclusion criteria limited the review to English-language, peer-reviewed publications, potentially excluding grey literature and studies published in other languages. A further limitation of the review is dissemination bias whereby certain qualitative studies may be less likely to be published or widely disseminated, potentially limiting the evidence base and contributing to the underrepresentation of perspectives (Booth et al., 2018; Song et al., 2010). Additionally, variations in keyword usage or omission of relevant research areas from titles or abstracts may result in some studies being overlooked. This may also account for the identification

of five studies through forward and backward citation. Future reviews should try and adopt broader search strategies including non-English studies and diverse keywords.

The thematic synthesis combined participant quotes and researcher analysis, which may influence findings. Reflexive practises were utilised to enhance transparency which may mitigate biases. Continued use of reflexive practices is recommended to support reliability in future qualitative syntheses.

Clinical Implications

These findings suggest that access to green spaces for low socioeconomic populations could improve emotional and mental health wellbeing. Considering clinical psychology, environmental and socioeconomic factors could be considered within assessment and formulation to recognise their role in shaping psychological distress.

Public health strategies should consider green spaces as an ‘upstream’ resource (Maller et al., 2006; McKinlay & Gartley, 1979). Clinical psychologists and services may integrate such upstream approaches into care pathways to support prevention and early intervention. Urban planning should prioritise accessible green spaces in low-income areas to promote restoration and wellbeing.

The holistic benefits of green spaces suggest that nature-based approaches may support individuals experiencing grief and emotional distress. Clinically, psychologists could incorporate interventions such as behavioural activation, mindfulness in nature, or green social prescribing, offering strategies beyond the therapy room. Sensory engagement with nature may complement existing therapies and enhance outcomes.

Barriers to green space access remain significant, particularly for low socioeconomic groups, women, older adults, and ethnic minorities. Clinical psychologists could consider how these intersecting factors influence engagement, integrating this into culturally sensitive formulations. Improving safety and accessibility through policy remains key. Additionally, fostering inclusivity in green spaces, ensuring ethnic minority groups feel welcomed through community-based programs and representation in outdoor activities could further enhance engagement. Psychologists may also advocate within community contexts to address structural barriers and broader social determinants of mental health.

Increasing access to green spaces for low socioeconomic families and migrants will enhance social cohesion and wellbeing. Urban planners and policymakers should consider the value of green spaces as platforms for community-based initiatives, park features like benches and volunteering opportunities which can enhance social integration, build friendships and strengthen communities.

Conclusion

The thematic synthesis highlights that green spaces can improve the emotional and mental well-being of individuals from low socioeconomic backgrounds, especially those facing grief, loss, or emotional distress. Nature's sensory elements offer emotional rejuvenation. However, barriers such as safety concerns, accessibility, and engagement challenges particularly affect women, older adults, and ethnic minorities. Green spaces also foster social integration and community engagement.

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Appendices

Appendix A: *The SPIDER tool applied to the research question*

SPIDER	
Sample	Adults, age 18 onwards, low socioeconomic background, female and male. Global sample.
Phenomenon of interest	Green spaces, woodland, natural environment, rural spaces, urban green space, mental health, depression, anxiety, deprived areas and low income.
Design	Published research, interviews, focus group, case study.
Evaluation	Experiences, views, beliefs, understandings and reflections.
Research Type	Qualitative studies and mixed methods.

Appendix B: Web of Science Search Strategy

Construct	Web of Science Term
Green Spaces	"green space" OR "greenspace" OR "green area" OR "natural environment" OR "outdoor" OR "nature" OR "open space" OR "urban green spaces" OR "rural" OR "parks"
Qualitative Research	"qualitative" OR "experiences" OR "interview" OR "narrative" OR "focus group" OR "case study"
Mental Health/Wellbeing	"psychological wellbeing" OR "psychological health" OR "well-being" OR "mental health" OR "depression" OR "anxiety" OR "stress"
Low Socioeconomic Group	"low income" OR "low-come" OR "low socioeconomic group" OR "vulnerable populations" OR "minority groups"

Appendix C: Scopus Search Strategy

Construct	Scopus Term
Green Spaces	("UGS" OR "green space" OR "greenspace" OR "green area" OR "natural environment" OR "outdoor" OR "nature" OR "open space" OR "urban green spaces" OR "rural" OR "nature connectedness" OR "therapeutic landscape" OR "forest" OR "woodland" OR "park" OR "parks")
Qualitative Research	KEY ("qualitative" OR "experiences" OR "perspectives" OR "views" OR "feeling" OR "interview" OR "narrative" OR "focus group" OR "reflect" OR "case study")
Mental Health/Wellbeing	("psychological wellbeing" OR "mental wellbeing" OR "mental wellness" OR "well-being" OR "emotional health" OR "mental health" OR "wellness" OR "mood" OR "depression" OR "anxiety" OR "stress" OR "happiness" OR "pleasure" OR "negative affect")
Low Socioeconomic Group	("low income" OR "low-come" OR "urban deprivation" OR "low socioeconomic group" OR "vulnerable populations" OR "minority groups")

Appendix D: *PsycINFO* MeSH Search Terms

Construct	MeSH Term
Green Spaces	exp Environment/ or exp Urban Environments/ or greenspace.mp. or exp Public Space/ or exp Neighborhoods/ or exp Built Environment/ or exp Recreation/ or exp Recreation Areas; natural environment.mp.; exp Communities/ or public park.mp.
Qualitative Research	exp Qualitative Methods/ or exp Qualitative Measures/ or qualitative.mp.; "experience".mp.; "perspective".mp.; exp Focus Group/; exp Interviews/ or interview.mp.; narrative.mp. or exp Narratives/
Mental Health/Wellbeing	exp Mental Health/; well-being.mp. or exp Well Being/; exp Emotional Health/ depression.mp.; exp Anxiety/
Low Socioeconomic Group	exp Lower Income Level/ or exp Poverty/ or low income.mp. or exp Socioeconomic Status/; exp Deprivation/; low socioeconomic group.mp.; exp Poverty/; vulnerable population.mp.; minority group.mp. or exp Minority Groups/

Appendix E: Descriptive Themes and Code Development

Codes				Search
	Name	Files	Reference	
☐	Emotional and Mental Health	0	0	
	Psychological benefits	4	6	
	Restorative	5	8	
	Purpose and Resilience	4	9	
	Mental and Emotional Wellbeing	5	14	
☐	Quality and Expectations of Green Spaces	0	0	
	Functional and Practical Use of Green Spaces	5	6	
	Negative aspects of green spaces	3	6	
	Quality expectation	3	7	
☐	Holistic Benefits	0	0	
	Emotional and Spiritual Benefits of Nature	3	7	
	Sensory experiences	5	10	
☐	Health and Quality of Life	0	0	
	Urban green space increasing quality of life	1	1	
	Physical and Emotional Health	5	12	
☐	Social and Community Wellbeing	0	0	
	Community Benefits of Green Infrastructure	1	1	

Codes				Search
	Name	Files	Reference	
	Social and cultural influences	2	2	
	Valued time with family and friends	3	5	
	Social Integration and Community Engagemen	9	18	
☐	Perceptions of Safety	0	0	
	Gender differences in safety concerns	2	3	
	Comfort and vulnerability	3	4	
	Fear of Dogs and Related Concerns	2	7	
	Safety and Security Concerns	8	20	
☐	Impact of COVID	0	0	
	Positive impact on wellbeing	2	2	
	Adaptation and Exploration of Green Spaces	2	4	
	Awareness of others during pandemic	3	6	
☐	Barriers	0	0	
	Disability and social stigma	1	1	
	Support related to transportation	1	1	
	Accessibility and Barriers	6	9	

Appendix F: Analytical Theme Development

Codes				
	Name	Files	References	
[-]	○ Emotional and Mental Health	0	0	
	○ Purpose and Resilience	4	5	
	○ Restorative	5	6	
	○ Accessibility and Barriers	5	7	
	○ Psychological benefits	4	7	
	○ Mental and Emotional Wellbeing	3	8	
[-]	○ Holistic Benefits	0	0	
	○ Emotional and Spiritual Benefits of	1	2	
	○ Sensory experiences	5	10	
[-]	○ Social and Community Wellbeing	0	0	
	○ Social and cultural influences	2	2	
	○ Valued time with family and friends	5	7	
	○ Social Integration and Community	8	16	
[-]	○ Enabling & Limiting Factors	0	0	
	○ Accessibility	3	3	
	○ Barriers	6	15	
	○ Percieved Safety	6	19	

Appendix G: CASP Appraisal Tool

Section A Are the results valid?	
1. Was there a clear statement of the aims of the research?	Yes No Can't Tell
CONSIDER: • <i>what was the goal of the research?</i> • <i>why was it thought important?</i> • <i>its relevance</i>	
2. Is a qualitative methodology appropriate?	Yes No Can't Tell
CONSIDER: • <i>If the research seeks to interpret or illuminate the actions and/or subjective experiences of research participants</i>	

• <i>Is qualitative research the right methodology for addressing the research goal?</i>	
3. Was the research design appropriate to address the aims of the research?	Yes No Can't Tell
CONSIDER: • <i>if the researcher has justified the research design (e.g., have they discussed how they decided which method to use)</i>	
4. Was the recruitment strategy appropriate to the s of the research?	Yes No Can't Tell
CONSIDER: • <i>If the researcher has explained how the participants were selected</i> • <i>If they explained why the participants they selected were the most appropriate to provide access to the type of knowledge sought by the study</i> • <i>If there are any discussions around recruitment (e.g. why some people chose not to take part)</i>	
5. Was the data collected in a way that addressed the research issue?	Yes No Can't Tell

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CONSIDER: • <i>If the setting for the data collection was justified</i> • <i>If it is clear how data were collected (e.g. focus group, semi-structured interview etc.)</i> • <i>If the researcher has justified the methods chosen</i> • <i>If the researcher has made the methods explicit (e.g. for interview method, is there an indication of how interviews are conducted, or did they use a topic guide)</i> • <i>If methods were modified during the study. If so, has the researcher explained how and why</i> • <i>If the form of data is clear (e.g. tape recordings, video material, notes etc.)</i> • <i>If the researcher has discussed saturation of data</i>	
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6. Has the relationship between researcher and participants been adequately considered?	Yes No Can't Tell
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CONSIDER: • <i>If the researcher critically examined their own role, potential bias and influence during (a) formulation of the research questions (b) data collection, including sample recruitment and choice of location</i> • <i>How the researcher responded to events during the study and whether they considered the implications of any changes in the research design</i>	
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Section B: What are the results?

7. Have ethical issues been taken into consideration?

Yes No Can't Tell

CONSIDER:

- *If there are sufficient details of how the research was explained to participants for the reader to assess whether ethical standards were maintained*
- *If the researcher has discussed issues raised by the study (e.g. issues around informed consent or confidentiality or how they have handled the effects of the study on the participants during and after the study)*
- *If approval has been sought from the ethics committee*

8. Was the data analysis sufficiently rigorous?

Yes No Can't Tell

CONSIDER:

- *If there is an in-depth description of the analysis process*
- *If thematic analysis is used. If so, is it clear how the categories/themes were derived from the data*
- *Whether the researcher explains how the data presented were selected from the original sample to demonstrate the analysis process*

• <i>If sufficient data are presented to support the findings</i> • <i>To what extent contradictory data are taken into account</i> • <i>Whether the researcher critically examined their own role, potential bias and influence during analysis and selection of data for presentation</i>	
9. Is there a clear statement of findings?	Yes No Can't Tell
CONSIDER: • <i>If the findings are explicit</i> • <i>If there is adequate discussion of the evidence both for and against the researcher's arguments</i> • <i>If the researcher has discussed the credibility of their findings (e.g. triangulation, respondent validation, more than one analyst)</i> • <i>If the findings are discussed in relation to the original research question</i>	
Section C: Will the results help locally?	
10. How valuable is the research?	Yes No Can't Tell
CONSIDER: • <i>If the researcher discusses the contribution the study makes to existing knowledge or understanding (e.g., do they consider the findings in relation to current practice or policy, or relevant research-based literature)</i> • <i>If they identify new areas where research is necessary</i>	

- *If the researchers have discussed whether or how the findings can be transferred to other populations or considered other ways the research may be used*

Appendix H: *CASP Scoring Tool*

Author(s) Year	1 Clear statement of aims	2 Qualitative methodology	3 Research design	4 Recruitment strategy	5 Data collection	6 Relationship between researcher and participant	7 Ethical issues	8 Rigorous data analysis	9 Clear statement of findings	10 Is the research valuable?	Quality rating
Anderson, Gough and Agic (2021)	Yes	Yes (mixed)	Yes	Yes	Yes	No	Yes	Yes	Can't tell	Yes	Moderate (8)
Cronin-de-Chavez, Shahid Islam, McEachan, 2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High (10)
Finlay et al, 2015	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High (10)
Gidlow and Ellis, 2011	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High (10)
Hordyk, Hanley, Richard, 2015	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Can't tell	Can't tell	Yes	Moderate (8)
Huerta and Cafagna, 2021	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes	Yes	High (9)
Jacobs et al, 2024	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High (10)
King and Dickinson, 2022	Can't tell	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High (9)
Ward et al, 2023	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High (10)

Note. The research implemented a scoring template. Scoring strategy: 'No' = 0; 'Can't tell' = 0.5; 'Yes' = 1. Total score ratings: <7.5 low quality; 7.5-9, moderate quality; 9-10, high quality

Appendix I: Examples of Data from Themes

Super-ordinate theme	Subtheme	Data
Emotional and Mental Health	Psychological Restoration and Wellbeing	<i>"It just seems when you go out, your brain kind of clears up or something... The fresh air and watching the trees and looking at different things, it just gives you a different outlook" (Finlay et al, 2015).</i> The seven participants who used UGS regularly reported experiencing positive feelings such as comfort, happiness, and tranquility during their use (Huerta & Cafagna, 2021). In discussions of general green space, participants' first thoughts were positive, as places where "you can breathe", "sit and reflect", "relax" or "enjoy". Most perceived benefits that were health-related, with those related to physical health (e.g. improving fitness through physical activity) being secondary to psychological benefits (Gidlow & Ellis, 2011). <i>"Since the pandemic started, I only go out once a day to walk my baby in the park two blocks from my house. My daily walks with my baby make me feel free, relaxed" (Huerta & Cafagna, 2021).</i> <i>"Back home, you always have space. You have your home. We have our courtyard, the gardens. You don't have to go inside. In the courtyard you breathe. You can go say hello to the neighbours... We have fun. It's not closed like it is here" (Hordyk et al, 2015).</i> "I feel satisfied and happy here. You hear the birds chirping, the weather is good" (Jacobs et al, 2024).

	Routine and Purpose	Interestingly, the six participants with dogs used green spaces more frequently than the rest of the group, showcasing that having dogs might contribute to spending time outside (Huerta & Cafagna, 2021). Participant 2 described a routine woodland walk that provided scenic views and had become ‘our favourite destination and also the dog’s favourite’... (King & Dickinson, 2022). <i>“Without that structure, you ‘re just drifting, you ‘re floating and going dull” (Finlay et al, 2015).</i>
Holistic Benefits	Emotional and Spiritual Benefits	Elizabeth (73 years) treasured the little gardening area outside her home. She felt a strong sentimental attachment stemming from planting the garden with her late husband, and discussed finding tranquillity and spiritual peace while gardening (Finlay et al, 2015). <i>“To me, it's a spiritual experience going down and watching the water. Looking at the trees. That'sa – what I call – beautiful” (Finlay et al, 2015).</i>
	Sensory experiences	<i>“[They ‘re] nice and quiet, and you can sort of hear the birds and you can see the flowers more. I find it a really invigorating experience if it's at least a 15, 20 min walk” (Finlay et al, 2015).</i> They felt relaxed, calm and happy in these places and enjoyed looking at the flowers, listening to the birds, walking in nature and sitting on a bench (Jacobs et al, 2024). <i>“They've let the wilderness grow... they used to mow the grass... but now you see dragonflies, butterflies, and I'm glad to see they just let it grow” (Ward et al, 2023).</i>
Social and Community Wellbeing	Social Integration and Community Engagement	Parents spoke of periods during their settlement process in which lack of friendships at home, work or school led to isolation for their children as well as themselves. They described how conversations with neighbours under the shade of the trees lining the sidewalks or encounters with families sharing the

		park spaces allowed them to develop relationships with friends and acquaintances (Hordyk et al, 2015). <i>“Even if it's just a case of saying, “Afternoon,” or “Morning,” or whatever. It is quite strange, I have always found that happening. It's nice... sometimes people stop and have a chat” (Ward et al, 2023).</i> <i>“The social [atmosphere] – it's just amazing, the people come from so many different walks of life and they make friends” (Finlay et al, 2015).</i>
	Valued Time with Family and Friends	Families arriving with children over 3 years of age found that activities in urban parks provided unique family-bonding opportunities while increasing the likelihood of meeting other families in the Montreal community (Hordyk et al, 2015). For ‘formal’ pre-planned outings involving family and possibly extended family, parks were chosen based on the high quality of the space and range of facilities available. These included quality safe play areas, well-kept gardens, access to toilets, shelter, refreshments, clean grass for picnic and play, and special features (Cronin-de-Chavez et al, 2019). <i>“Yeah, and, you know, he just loves running around, he doesn’t want anybody touching him, he won’t even hold my hand, he’s like, ‘get off me, I want to walk on my own,’ and he’s only 17 months” (Cronin-de-Chavez et al, 2019).</i>
Barriers and Facilitators	Perceived Safety	Several participants (particularly older females) mentioned feeling vulnerable to crime when walking alone. They avoided particular areas regarded as less safe, and did not walk at night (Finlay et al, 2015). <i>“[after dark] when you get the gangs gathering, you wouldn’t want to walk through... it’s intimidating” (Gidlow & Ellis, 2011).</i> <i>“I don't want to walk around that park at a certain time of night when I know that man's been stood there all day drinking, and still sat there drinking now, hiya, love, and all that, I can't be bothered with it” (Ward et al, 2023).</i>

Challenges in Physical and Social Environments

“accessing greenspace basically is all about public transport and that's why I find that I'm usually in Park because ...it is usually two buses to anywhere else and two buses back home” (Ward et al, 2023).

She usually used other UGS located in the city center, such as Chapultepec Park; however, she had no private transport means. Using public transport caused her stress due to the risk of contagion. Meanwhile, Participant 7 could not use UGS due to the extensive travel time needed to reach the closest green space (Huerta & Cafagna, 2021).

“..couldn't get through, couldn't get past. And my pram is on the big side but it's not really big, even there's the twin prams as well ... yeah, I was panicking, cause he [baby son] was getting really fussy, I couldn't entertain him anymore, had to lift the pushchair over this wall, this one guy actually came to help me” (Cronin-de-Chavez et al, 2019).

Accessibility

“Most of the bus drivers will assume she's a foreigner will help her with some direction information ... Yeah most of them, I'd say 90% of the drivers will do this, especially when they knew the people asking are foreign” (Cronin-de-Chavez et al, 2019).

Jack (86 years), for example, found his neighbourhood to be safe because he has developed a high level of comfort and familiarity with it over the past 25 years (Finlay et al, 2015).

“You might think that you have to have a car to get into nature but with a big park like Mount Royal... it is accessible for everyone... People skate, cross-country ski, snowshoe...” (Hordyk et al, 2015).

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Section Two: Research Report

Exploring Low Socioeconomic Ethnic Minority Women's Experiences in Rural Green Space, Understanding Access and How it Relates to Mental Health: An Interpretative Phenomenological Analysis

Abstract

Objectives

Certain groups visit natural environments less frequently, including women, those from low socioeconomic status groups and ethnic minorities. The study aimed to explore low socioeconomic ethnic minority women's experiences in using rural green spaces and how this relates to their mental health.

Design and Method

Purposive sampling was utilised to recruit women from ethnic minority backgrounds with experiences of being in rural green spaces. Eight people took part in a semi-structured interview and Interpretative Phenomenological Analysis was used to analyse the data.

Results

Four themes were reported, 'Developing a Sense of Self in Nature', 'Therapeutic Healing Through the Senses in Nature', 'Freedom and Constraint Shaping Experiences in Nature' and 'Group Belonging and Community Connection'.

Conclusion

The experiences of low socioeconomic ethnic minority women in rural green spaces highlighted the importance of childhood nature experiences, identity and belonging, and the restorative and therapeutic benefits of nature through sensory and spiritual connection. However, participants also identified several socio-cultural and practical barriers that constrained access to these spaces.

Practitioner Points

- Adopt an 'upstream' approach to address rural green space inequalities for ethnic minority women.
- Incorporate nature-based coping strategies into holistic formulations, recognising RGS as a tool for emotional regulation and spiritual reflection.
- To recognise the restorative potential of "natural" mindfulness fostered by RGS, aligning with Attention Restoration Theory (ART) and psycho-evolutionary frameworks to support psychological recovery.
- Adopt a socio-ecological approach that accounts for practical hurdles in RGS such as transport, safety concerns, and financial constraints.
- Promote outdoor group participation to enhance socialisation and collective access.

Keywords: Female, Minority Groups, Ethnicity, Ethnic and Racial Minorities, Mental Health, Interpretative Phenomenological Analysis

Introduction

Green spaces, including urban parks and woodlands, have been shown to positively impact mental health and wellbeing (Pouso et al., 2021; Wood et al., 2017). Although broadly defined, greenspace is commonly understood as natural environments (e.g., wilderness, street trees, coasts) or urban vegetation (e.g., parks, gardens, urban farms) (Taylor & Huchuli, 2017). Proximity to green spaces is linked to health inequalities, with ethnic minority communities often facing lower quality green spaces, especially in deprived areas, leading to reduced use (CABE, 2010; Mitchell & Popham, 2008).

In England, Black people are nearly four times more likely than White people to lack access to outdoor space at home (Office for National Statistics, 2020). Living in greener areas can reduce deprivation-related health inequalities and having more green space within a 3-km radius may buffer the impact of stressful life events and health complaints (van den Berg, 2010). Consequently, low-income populations may particularly benefit from green spaces, potentially alleviating some negative health and psychological impacts of relative poverty (Mitchell & Popham, 2008). However, evidence linking green space to adult mental health remains weak, partly due to variability in green-space quality and difficulty measuring non-physical benefits (Gascon et al., 2015; Lee & Maheswaran, 2011).

Kaplan's (1989) Attention Restoration Theory (ART) proposes that exposure to natural environments helps relieve mental fatigue and improves concentration by reducing the need for directed attention. Nature supports effortless cognitive engagement, allowing the brain to restore its capacity for focused attention (Kaplan,

1989, 1995). Ulrich's et al (1991) Stress Reduction Model suggests that natural environments reduce mental stress, whilst urban settings increase it. Additionally, Kamitsis and Francis (2013) found that nature exposure and connectedness to nature enhances spirituality, strengthening psychological wellbeing.

Certain groups visit natural environments less frequently, including adults over sixty-five, women, low socio-economic status (SES) groups, people with physical disabilities, ethnic minorities, and individuals living farther from the coast (Cohen et al., 2007; Natural England, 2019). Green space use also varies by age, older adults and teenagers often cited as infrequent users, though findings remain inconsistent (Lee & Maheswaran, 2011). Gender differences also exist, with men visiting natural environments more frequently than women, who often face constraints like fear and vulnerability (Boyd et al., 2018; Cohen et al., 2007; Foster et al., 2004). Ethnic and socioeconomic inequalities are also clear, 69% of White people visit natural spaces weekly, compared with 41% of Black people and 38% of Asian individuals. Similarly, 74% of those in the highest SES groups visit weekly, compared with 53% in lower SES groups (Boyd et al., 2018; Natural England, 2019).

Empirical research on racial and ethnic differences in green space use is limited, with much evidence remaining anecdotal (Lee & Maheswaran, 2011). Barriers to access for ethnic minorities include practical constraints like transport, time, and cost, as well as limited information about National Parks (Askins, 2004; Morris et al., 2011). Social barriers, such as discrimination and prejudice, further reduce visits to the countryside (Askins, 2004). Studies also show that low SES groups may gain greater mental health benefits from urban green spaces (Marselle et al., 2020; Ward et al., 2016). These findings highlight the need for an

intersectional perspective that considers race, class, and gender to fully understand inequalities in nature access (Colley et al., 2022).

The HM Government's (2018) 25-Year Environment Plan aims to improve the natural environment and enable people from all backgrounds to access green spaces daily. In line with the NHS Long Term Plan, individuals may be offered social prescribing (SP) or green social prescribing (GSP) as part of universal personalised care, supporting greater autonomy over mental and physical health (NHS England, n.d.). SP links people to community groups and statutory services for practical and emotional support, while GSP involves nature-based activities such as walking groups and community gardening (NHS England, n.d.). Research suggests that equitable access to green spaces in England could save the NHS £2.1 billion annually, and mental health providers are now encouraged to work with environmental voluntary organisations to offer therapies such as gardening and outdoor exercise for those experiencing isolation (Natural England, 2009).

The NHS Race and Health Observatory identified widespread ethnic inequalities across health services, with some communities experiencing poorer access, experiences, and outcomes (BMJ, 2022). Traditional models of care are unlikely to meet the growing mental health needs of these groups, highlighting the need for whole system approaches that strengthen community resilience, improve population health, and prioritise personalised care. An example of such work is the 'Stronger Roots' outdoor wellbeing project, delivered by Clinical Psychologists in partnership with a local council. Children reported greater enjoyment of nature and felt it helped them feel better, demonstrating the potential for long term cultural change and collaborative system level interventions (BPS, n.d.).

Slater (2022) found social connection being key in motivating some ethnic minority individuals to visit rural green spaces (RGS) and community based initiatives help to overcome some access barriers. Nevertheless, limited research remains, highlighting the need for further work exploring ethnic minority experiences in green spaces, the complex factors shaping access, and the implications for mental health (Slater, 2022).

Terminology

The term 'ethnic minorities' in this research refers to people born or living in Britain with parental roots in regions such as the Indian sub-continent, Southeast Asia, Africa, and the Caribbean (Rishbeth, 2001). It also includes individuals with parents from different ethnic backgrounds. It is important to recognise the diversity within these groups, including differences in immigration experiences, cultural practices, and religious beliefs (Montague, 1942; Rishbeth, 2001).

Research Aims

The study aims to explore the experiences of ethnic minorities women from low socioeconomic backgrounds in using RGS, understand how access to these spaces relates to their mental health and wellbeing, and gain a deeper understanding the challenges influencing access to green spaces.

Research Questions

- (i) What are the experiences of ethnic minority women from low socioeconomic background in using RGS?

- (ii) How do ethnic minority women from low socioeconomic backgrounds perceive the relationship between access to RGS and their mental health?
- (iii) What challenges do ethnic minority women from low socioeconomic backgrounds experience when accessing RGS?

Method

Ethics

Ethical approval was sought and granted from the University of Sheffield before the research was conducted (Reference number, 052611; Appendix D).

Design

Ethical principles guided all aspects of the study and were implemented throughout the research (Appendix E). Considering the aims, there is an assumption that participants assign personal meaning to their experiences and interpret them through their own subjective perspectives. This aligns with the chosen methodology, Interpretative Phenomenological Analysis (IPA).

The theoretical foundation stem from phenomenology (the description of an individual's experience) and hermeneutics, the theory of interpretation that gives meaning to those experiences (Biggerstaff & Thompson 2008). IPA explores how individuals make sense of personal experiences, prioritising their subjective perceptions rather than aiming for an objective account (Smith & Osborn, 2007). This idiographic approach aims to reveal experiences of a small number of individuals, exploring both shared and unique elements across participants (Smith et al., 2022). IPA is recognised as an effective method in Clinical Psychology to explore cultural

perspectives (Pietkiewicz & Smith, 2014).

Interview Guide

An interview guide was developed, in line with IPA practice, and informed by the research questions (Smith et al., 2022). Creating the guide allowed the researcher to anticipate potential challenges, such as simplifying complex questions and planning ways to support participant wellbeing and uphold duty of care. The guide consisted of open-ended questions designed to explore participants' worlds through first-person accounts, eliciting their thoughts, feelings, and contextual histories (Smith et al., 2022).

Semi-structured interviews provided the necessary framework to address research aims while granting participants flexibility to discuss personally meaningful experiences. This approach facilitated real-time dialogue and exploration of unexpected issues (Pietkiewicz & Smith, 2014). To build rapport, the interview sequence moved from descriptive to sensitive topics, such as mental health, with flexible prompts used to encourage depth and elaboration.

Planned Sample Size

In IPA, the priority is developing a rich, detailed account of an individual's experience, meaning the quality of data is more important than the size of the sample (Smith et al., 2022). As IPA privileges depth over breadth, an in-depth idiographic understanding of the phenomenon is essential. For doctoral research, six to ten participants are recommended to facilitate a nuanced idiographic analysis of convergences and divergences across cases (Smith et al., 2022).

Recruitment and Participants

Purposive sampling is widely used in qualitative IPA research, enabling the selection of participants whose characteristics are central to the phenomenon being studied (Patton, 2002; Smith et al., 2022; Stead, 2001). IPA prioritises a small, relatively homogeneous sample to support an in-depth, idiographic exploration of how participants make sense of their personal and social world (Smith et al., 2022). Homogeneity was sought by recruiting adult women from ethnic minority low socioeconomic backgrounds living in the UK with experience of accessing RGS.

Participants were recruited via UK third-sector organisations promoting ethnic minority engagement in rural green spaces. Leveraging these groups' extensive social media reach, the researcher established contact through Instagram and Facebook to engage individuals meeting the inclusion criteria, including those not directly affiliated with the organisations.

Following initial interest, a recruitment advertisement (Appendix F) was circulated via several social media groups, including Muslim Hikers, Black Girls Hike, Sole Sisters Scotland, Evergreen Hikers, Steppers UK, Mosaic Outdoors, All The Elements, and She Walks. Interested individuals received an information sheet via email and consent form via Qualtrics survey link (Appendices F and G). Eight participants meeting the criteria were recruited. The study applied the following inclusion and exclusion criteria:

Table 1.

Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
Over the age of 18 years old	Not fluent in English.
Female	
To have an ethnically diverse background	
Experience of being in rural green space	
From low socioeconomic group	

Public Involvement

To ensure methodological appropriateness and rigour, the researcher sought feedback from the target population. A volunteer from *The Wanderlust Women* reviewed the study design, participant information sheet, and interview guide. A pilot interview was then conducted with a member of *Black Girls Hike*. Their feedback on the interview process and debriefing was documented and incorporated, enhancing the research's acceptability (Appendix C).

Data Collection

Interviews were scheduled at a mutually convenient time, and all participants took part in online video-call interviews via Google Meet. Before beginning, the researcher explained the study aims and invited any final questions. Once participants were ready, the interview commenced. The interview guide included initial and follow-up questions, prompts, and demographic items to elicit in-depth

accounts of participants' experiences (Appendix G).

All interviews were audio-recorded using a University of Sheffield digital recorder. Interviews lasted 35–60 minutes, after which participants received a short debrief, a £10 shopping voucher, and an emailed debrief form containing researcher contact details (Appendix J). The researcher also recorded reflective notes (Appendix H). The recordings were securely stored in compliance with the University of Sheffield's data security guidelines, ensuring the confidentiality and integrity of the data.

Transcription was completed by an approved University of Sheffield transcriber, who was given clear instructions to ensure consistency and confidentiality. Data were stored according to University data security procedures (Appendix I). Demographic information was collected at the end of the interview to avoid disrupting the conversation (Table 2).

Validity and Quality Control

Some qualitative researchers argue terms like validity, generalisability, reliability, and objectivity are unsuitable to assess the qualitative research. However, there remains a need for quality checks, which has led to an emphasis on trustworthiness, asking whether the findings can be trusted (Lincoln & Guba, 1985). Trustworthiness is assessed through credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985).

Credibility refers to how well the findings represent participants' accounts and whether interpretations are grounded in the original data (Korstjens et al., 2018). Transferability refers to the extent to which the findings can transfer to other contexts (Korstjens et al, 2018). Dependability involves transparency and detail of the

research process where another researcher could follow the procedures and replicate a similar process (Kakar et al, 2023). Confirmability ensures that interpretations derive from the data rather than researcher bias, supported through strategies such as reflexive journalling and supervision (Korstjens et al., 2018).

Participant selection requires careful consideration to protect research quality (Smith et al., 2009). IPA research should minimise any explicit and implicit biases by separating personal experiences and maintaining reflective logs and supervision (Smith et al, 2009). Open-ended interview questions support rigour by maintaining a balance between researcher guidance with participant-led exploration (Smith et al., 2009). Broad questions prevent the imposition of researcher assumptions, therefore initially broad questions were explored (Smith et al., 2022).

To ensure rigor, research processes and findings were reviewed regularly, and documentation was securely stored. The Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist guided the reporting process (Tong et al., 2007).

Reflexivity

Reflexivity is a central component of qualitative research, requiring researchers to consider how their social and cultural positioning shapes the research process and interpretation of data (Finlay & Gough, 2003). In IPA reflexivity is particularly important due to the ‘double hermeneutic’ process, whereby the researcher makes sense of the participants experiences (Smith et al, 2022). Therefore, the researcher holds a central role, engaging with both descriptive and interpretative layers of meaning (Biggerstaff & Thompson, 2008).

The researcher identifies as a British Asian woman of Pakistani heritage,

raised within the Islamic faith, and is a Trainee Clinical Psychologist with professional knowledge of mental health. She also has personal experience engaging with RGS, which informed her interest in exploring their impact on ethnic minority women's wellbeing (see Appendix A).

Maintaining a reflexive journal is considered good practice for recording thoughts, reflections, and decision-making during analysis. A reflexive journal was kept throughout the study, and selected reflections were discussed in supervision to support professional development (Biggerstaff & Thompson, 2008; Appendix B). The researcher reflected on shared experiences with participants such as ethnic minority background and cultural upbringing and considered assumptions about who might choose to participate in the research.

Data Analysis

Philosophical Underpinning

This study adopted a critical realist epistemological position, consistent with the assumptions underpinning IPA and aligned with the study aims (Smith et al., 2022). Critical realism informed the analysis by recognising that experiences are shaped not only by personal histories and current circumstances, but also by the wider social, cultural, political and economic contexts (Bhaskar, 2010). This stance acknowledges that while participants provide subjective accounts, these accounts are influenced by broader structural factors (Smith et al., 2009).

A hermeneutic phenomenological approach was appropriate considering the focus on ethnic minority women's experiences of accessing RGS, allowing exploration of personal narratives alongside the structural conditions shaping them. In line with IPA's 'double hermeneutic', the researcher interpreted how participants

made sense of their experiences as well as the contextual influences surrounding them (Smith et al., 2022).

Coding and Analysis

The analysis followed the seven flexible stages outlined by Smith et al. (2022), reflecting an iterative and inductive process. Although interviews were professionally transcribed, the researcher listened to all the audio recordings in full and read each transcript multiple times to ensure immersion in the data (Pietkiewicz & Smith, 2014; Smith et al, 2022). The researcher moved between transcripts and audio whenever clarification was needed, engaging closely with participants' voices and meanings.

Initial notes capturing first impressions, reflections, and potentially significant points were recorded on each transcript. Exploratory comments were then developed at descriptive, linguistic, and conceptual levels (Smith et al., 2022). These notes were documented line-by-line in an Excel spreadsheet, alongside experiential statements summarising the essence of participants' accounts. Emergent themes were then generated and clustered into personal experiential themes (PETs) through grouping and refining interpretations (Appendix L).

This process was repeated for all transcripts, and patterns of similarity and difference across cases were identified, informing the development of group experiential themes (GETs) organised on a Word document (Appendix L). Most themes clustered naturally, while others with weaker evidence were separated and later excluded. Throughout analysis, the researcher returned to the transcripts to check that theme connections remained grounded in the original data, reflecting the hermeneutic circle and maintaining close attention to participants lived experiences.

Results

Following analysis, four GETs were identified, three containing two PETs each and one containing no PETs (Table 3). The GETs were: "Developing a Sense of Self in Nature", comprising the PETs "Childhood Memories in Nature Shaping Connection" and "Visibility, Identity and Belonging in Rural Green Spaces"; "Therapeutic Healing Through the Senses in Nature", comprising "Nature as a Spiritual and Sensory Connection" and "Outdoor Spaces as My Remedy"; "Freedom and Constraint Shaping Experiences in Nature", comprising "Being Able to Get There: Independence and Dependence" and "A Desire to Explore, Yet Restricted"; and "Group Belonging and Community Connection". Participants' contributions to each theme are presented in Table 4. These themes reflect an interpreted summary of the key patterns within the data.

Table 2.*Participant Demographic Information*

Participant	Gender	Age	Ethnicity	Education Level	Occupation
Nathifa	Female	30-35	Bangladeshi	University	Unemployed
Simran	Female	18-20	Indian British	University	Student
Nadia	Female	25-30	Central Asia	University	Project Co-ordinator
Jada	Female	35-40	British Caribbean	College	Student
Ayesha	Female	20-25	Pakistani	University	Care work
Sobia	Female	25-30	Pakistani	University	Assistant Psychologist
Mariam	Female	45-50	British Pakistani	University	Art Therapist
Amina	Female	35-40	Pakistani	GCSE	Administrator

Note. Each participant self-identified their ethnicity, and this has been reported verbatim.

Table 3.*Group Experiential Themes and Personal Experiential Themes*

Group Experiential Themes	Personal Experiential themes
Developing a Sense of Self in Nature	Childhood Memories in Nature Shaping Connection Visibility, Identity and Belonging in Rural Green Spaces
Therapeutic Healing Through the Senses in Nature	Nature as a Spiritual and Sensory Connection “Outdoor Spaces as My Remedy”
Freedom and Constraint Shaping Experiences in Nature	Being Able to Get There: Independence and Dependence A Desire to Explore, Yet Restricted
Group Belonging and Community Connection	

Table 4. Participants Contributions to Themes

Group Experiential Themes and Personal Experiential Themes	Participants							
	Nathifa	Simran	Nadia	Jada	Ayesha	Sobia	Mariam	Amina
Developing a Sense of Self in Nature	✓	✓	✓	✓	✓	✓	✓	✓
Childhood Memories in Nature Shaping Connection	✓	✓	✓	✓	✓			
Visibility, Identity and Belonging in Rural Green Spaces	✓	✓	✓	✓	✓	✓	✓	✓
Therapeutic Healing Through the Senses in Nature	✓	✓	✓	✓	✓	✓	✓	✓
Nature as a Spiritual and Sensory Connection	✓	✓	✓	✓	✓	✓	✓	✓
“Outdoor Spaces as My Remedy”	✓	✓	✓	✓	✓	✓	✓	✓
Freedom and Constraint Shaping Experiences in Nature	✓	✓	✓	✓	✓	✓	✓	✓
Being Able to Get There: Independence and Dependence	✓	✓	✓	✓	✓	✓	✓	✓
A Desire to Explore, Yet Restricted	✓	✓	✓	✓	✓	✓	✓	✓
Group Belonging and Community Connection	✓	✓	✓	✓	✓	✓	✓	✓

Developing a Sense of Self in Nature

Childhood Memories in Nature Shaping Connection

For participants, childhood experiences in RGS were formative, shaping their sense of connection to nature in adulthood. Memories of school trips, family gatherings, and celebrations created a sense of belonging, familiarity, and nostalgia. These early experiences fostered comfort in outdoor environments and motivated participants to seek similar spaces later in life. Psychologically, such memories appeared to position nature as a familiar, safe, and meaningful setting, influencing how participants related to outdoor environments as adults.

Simran recalled childhood trips to the countryside, staying in a static caravan because it was all her family could afford. These early experiences became foundational to her identity and shaped her later connection to the outdoors.

“I think my family have had a static in the countryside since I was young which is where I first encountered all the countryside... the background I’m in we’ve not really gone like abroad as such so that was kind of our family trips I guess” (Simran).

For Simran, these encounters as well as her later involvement with Girl Guides which was an outlet for her energy, and a “safe” space were crucial in sustaining her love for the outdoors into adulthood. These early experiences were central to her ongoing sense of self and connection to nature.

“...since then it’s kind of just stayed with me and related to nature and wildlife so I don’t think if I hadn’t have had all those experiences, I would have followed it through” (Simran).

Ayesha and Jada similarly described their first experiences of RGS during school trips, which felt exciting, adventurous, and challenging. Ayesha anticipated having the “time of [her] life” on her residential, reflecting expectations of freedom and enjoyment, while also acknowledging initial apprehension about an unfamiliar outdoor environment. These early encounters appeared to shape how they would later relate to nature in adulthood.

Nathifa and Nadia also described childhood memories in RGS as “nostalgic” and “poignant,” highlighting their emotional significance. Nathifa recalled exploring an “open wood kind of space” with her family, where extended time outdoors fostered her later connection to nature. Nadia’s memories reflected both comfort and loss; as an asylum seeker, the hills in the UK evoked childhood trips to the hills in Afghanistan with her parents, triggering both nostalgia and grief. These memories suggest how familial bonds were formed and reinforced through shared outdoor experiences where collective play and exploration shaped enthusiasm and connection to nature. It also reveals how RGS can hold emotionally ambivalent feelings, with feelings of comfort while also evoking emotions connected to displacement and loss.

“the first few years when I came to the UK it was very new and every time I was going out in the hills it reminded me of back home, which was nice in

many ways but could be nostalgic and makes me miss the experiences and memories I had with my family, especially my parents that we used to go to the hills” (Nadia).

Although Nadia described the landscapes of rural green spaces in the UK and Afghanistan as visually similar, she became aware of cultural and linguistic differences in her surroundings. Her use of the term “wake up” suggests a sudden interruption of immersion, where familiarity was disrupted by cues that reminded her, she was in a different cultural context. This moment appeared to shift her from nostalgic connection to a heightened awareness of difference, displacement, and her identity in the outdoors.

“When I see people around me, the language they speak, I wake up and it gets me out of the experience that ‘oh I’m from the UK’. ‘I’m not in Afghanistan”
(Nadia).

Visibility, Identity and Belonging in Rural Green Spaces

Participants were aware of how their visible religious and cultural identities positioned them in RGS, particularly as these environments in the UK are predominantly White. Women described feeling visibly different in these settings and navigating the emotional and social tensions this created. For some, an importance to modest attire was apparent, abiding by cultural and religious practises actively

expressing identity in the landscape but also responding to perceived norms.

Personal identity was considered with nature engagement, as Nathifa described.

“generally when I access these spaces I dress as an orthodox myself so I maintain hijab and usually like a longer garment and bottoms” (Nathifa).

Although Nathifa wears modest clothing, she reflected on more “traditional” attire that might be seen as “unexpected” in the countryside yet emphasised that belonging in nature did not require altering her identity. She stated, “if you find a great space you don’t have to wear exact clothing,” referring to Western outdoor wear. Nathifa demonstrated confidence in accessing RGS regardless of clothing choices, actively making space for herself in the outdoors.

Ayesha’s account, however, showed how anticipated judgement about her clothing initially limited her participation in certain activities. Concerns about “looking weird” and being stared at led to self-restriction based on social expectations, self-criticism, and perceived judgement from others. Over time, she shifted towards self-assertion, captured in her decision to “just do it,” prioritising her religious identity over conforming to outdoor-clothing norms. Feeling “comfortable” in what she wore helped cultivate a sense of empowerment, enabling her to access RGS without experiencing her identity as limiting.

“I would like say ‘oh I don’t really want to do that because I’d have to dress in this way”, or I wouldn’t want to wear what I had to wear without looking weird

maybe, people might stare at me but I think I just kind of like 'of I don't really care anymore, I'm just gonna do it" (Ayesha).

"I'm presenting myself as a Muslim woman... I'm openly showing that I'm a Muslim woman as well... it's also nice to see that I'm also showing myself in a sense, I can do this but also I'm still covered" (Ayesha).

Ayesha also described self-doubt and worry about being a visibly Muslim woman in these spaces. On her first hike, she did not want others to "think bad" of her, emphasising she was "still covered... not like I'm doing anything wrong." These concerns reflected an internal tension between belonging and perceived scrutiny, where religious or cultural judgement was anticipated even without explicit comments from others. Ayesha wanted to feel comfortable in her religious attire but remained alert to how her identity might be viewed, leading to subtle self-monitoring of her behaviour and appearance as a way of reassuring herself rather than responding to direct confrontation.

Participants also highlighted their awareness of being visibly different in RGS, often finding themselves the only ethnic minority individual within predominantly White outdoor spaces.

"...I was often like the only one... you know who is like me into those spaces...it can be challenging sometimes" (Simran).

Simran's account reflects heightened self-awareness in RGS, and a sense of

isolation linked to her visible difference in these environments. Safety concerns were a recurring issue for participants, particularly for women from ethnic minority backgrounds. Simran described how her intersectional identity, being “young,” “a person of colour,” and a “woman” shaped her decisions and confidence when exploring rural spaces alone.

“...yeah I think to be honest I’ve not really done much on my own...like yeah as a woman and I suppose a person of colour I think safety is always a big thing on my mind, especially its more that I’m still quite young” (Simran).

Mariam also described feeling unwelcome because of her racialised visibility, which contributed to fear and hesitation about venturing into RGS alone.

“..you know white Caucasian people around and you get stares, you know you get stares, you say hello, you don’t get hello back. It felt really unwelcoming and at the time that’s the other fear you have, ‘oh god if I do try and venture out on my own and I need help, would they help” (Mariam).

For others, this visibility was experienced as an opportunity for representation, empowerment, and re-defining who belongs in rural spaces.

“I think more than anything, it shows for me it’s representation... I absolutely can still access these spaces, and there isn’t a contradiction on that... I think it’s confidence-inspiring to others as well” (Nathifa).

These accounts show that being a woman in RGS can involve both vulnerabilities, through feeling visible and self-conscious and empowerment through asserting identity and gaining confidence in these spaces. However, not all experiences of being noticed were negative. Although Ayesha reported “getting looked at,” she described becoming absorbed in the challenge of the hike, saying, “I couldn’t care less right now,” suggesting that physical engagement with nature could override self-consciousness. Similarly, Sobia and Nathifa viewed nature as a space where they could be themselves without discomfort.

“I’ve never felt uncomfortable, I’ve never felt I can’t access this... that I would need to dress differently” (Nathifa)

Therapeutic Healing Through the Senses in Nature

Nature as a Spiritual and Sensory Connection

Participants consistently described feelings of happiness, peace and mindfulness through their connection with RGS, often reflecting a sense of being "at one with nature". Accessing RGS offered a temporary disconnect from everyday environments, shifting attention away from stressors toward spiritual and sensory immersion. This offered grounding, and relief, particularly during moments of stress. Being “at one with nature” enabled participants to feel connected to the natural environment, family, something larger than themselves, a meditative and spiritual connection to God.

Nathifa described lying on her back in a forest, experiencing stillness and deep connection with her surroundings. For her, being in RGS created a psychological integration with the environment, where breath, movement, and sensory awareness fostered a sense of belonging to a wider ecosystem. This connection helped her refocus, gain perspective, and reduce feelings of stress and isolation.

Amina's experiences further highlighted the sensory and emotional qualities of RGS. Spending time with her family in the countryside, she attuned to sensations like the breeze and sunlight through the trees. This sensory attunement facilitated a moment of presence and positive emotions, providing a sense of calm and familial connection within her surroundings. This experience contrasted with the busyness of everyday family life, offering a pause from routine demands and allowing her to re-centre. These moments fostered a shift in perspective where everyday stressors felt less dominant.

“...we were at the top of the cliff where we saw just countryside and erm just a lot of greenery and all around us so we just like sat on the side of the cliff for like, for like for a few minutes and something that we kind of enjoyed... there was a nice like breeze coming through” (Amina)

“We are so busy in our lives’ and...there is a lot of noise...the only thing we heard like birds were chirping...or when we were walking the crisp air...the branches were crackling on the ground under your feet, we absolutely love all things like that...it makes us feel happy” (Amina)

Amina's vivid attention to sensory details suggests these embodied experiences were especially meaningful to her. Noticing specific sounds, textures, and bodily sensations helped her feel happiness, presence, anchoring her in the moment to nature.

Simran, who enjoys birdwatching, described mindful moments in nature, such as being fully present and "in that moment watching that bird" while sitting in a bird hide. Her attention became absorbed in the environment, allowing distance from cognitive distraction. Similarly, Nadia and Nathifa reflected on how movement, stillness, and sensory awareness enabled them to process emotions, evoke nostalgia, and gain new perspectives on stressors. For Nadia, moments of stillness, carrying her backpack, having a snack, were linked to emotional memories of home. Participants often described these practices as sensory experiences that were easier to practise in nature than in daily life, supporting presence, reflection, and emotional clarity.

"You're using all five senses when you're outdoors... smelling the air, feeling the ground with your feet, seeing everything around you... it's like mindfulness in a way" (Mariam).

Participants highlighted the aesthetic qualities of RGS, Nadia emphasising the freshness, peace, and wonder. Amina also shared a vivid image of time spent in nature with her family, where sensory engagement and shared experience fostered joy, presence and connection with others.

“the branches they were overlapping with each other and we saw like the sun beaming through them so that is something that we absolutely loved and then walking through that where the sun was shining and we could see the shadow of things, so that is something that I really that I really liked” (Amina)

Sobia’s photography of pleasing landscape features evoked wonder and surprise, with the vastness of the environment making her feel “tiny.” This psychological shift reduced the perceived significance of personal struggles, facilitating a restorative sense of perspective. By viewing the self in relation to the expansive natural world, Sobia transitioned from internal distress to external reflection.

“... just like its crazy like, yeah just very like in awe of how big like everything is around. I like being in different spaces and like zoom out, like were on the edge of the moors right now, were stood on a cliff” (Sobia).

For Mariam and Nadia, RGS also offered a spiritual and meditative connection linked to their Islamic faith and a sense of closeness to God. Mariam described feeling nearer to God when on a mountain, highlighting how nature supported a spiritual focus that helped her disengage from others and remain present in the moment.

“... being on a mountain, the peak of a mountain, you’re closer to the sky, for me I just feel like I’m closer to God when I’m on a mountain, I really do. When for me being in nature... its like your whole body is in tune with nature you

know and it reminded me of, erm just the peacefulness, the tranquillity, you know being able to just connect, not with people"... (Mariam).

Nadia and Mariam both described a meditative rhythm of walking in RGS with Mariam focusing this time for reflection and engaging in spiritual practises such as "dhikr" (remembrance of God). Mariam described a sensory and spiritual integration when summiting a mountain.

"... whenever I summit I always sit down, sit down and take a moment. I close my eyes, I breath and its, yeah like I say it's a very sensory erm experience which comes through my spirituality and erm it makes it so easy to do what we call dhikr... it automatically comes to the lips cos you sync with nature, you're in sync with nature, you're in sync with, you know, what God created, were God's creation, that's what it is, you're in sync" (Mariam).

"Outdoor Spaces as My Remedy"

Participants consistently described RGS as a "remedy" for their mental health and wellbeing. Six participants reported experiencing mental health challenges of varying intensity, yet all emphasised the restorative and therapeutic value of nature. Nadia described the outdoors as her personal "remedy," using RGS as an alternative to traditional mental health support. These spaces offered a way to alter how distress was felt, creating time to process and understand difficult emotions without becoming overwhelmed.

“...why should I go on medication when I have the perfect medicine out there, that will get me out of whatever for me” (Mariam).

Sobia and Nathifa both described stress reduction when spending time in RGS. For Sobia, RGS nature facilitated emotional self-recognition, while Nathifa experienced a distinct physiological reduction in anxiety through physical movement. She noted that being in an open space “will process things in your life differently,” suggesting expansive environments supported cognitive processing and clarity compared with closed indoor settings.

“You feel it mentally but then that kind of just kind of disappears when you are in an outdoor space and sort of you might feel it in your chest or something, but because like I said because you are actually having to move your body in a different way, that’s kind of why your body is saying I don’t have time for you to be stressed right now, we need to be doing something else” (Nathifa).

Nadia initially described RGS as a “distraction” from the “circumstances” and “burden of life,” which encouraged her to keep returning. However, her account suggests a deeper process beyond distraction. RGS appeared to give her space to confront and process difficult emotions linked to seeking asylum and adapting to life in the UK. The combination of movement, stillness, and openness enabled emotional release particularly at the end of hikes, where she described crying as part of working through her feelings.

“...and I also think about how I am feeling as well, I know that I feel down I feel struggled and frustrated, yeah, I think it is all the negative emotions and positive emotions going back up and down right at that moment. Even there was moments that I came back from the hike and I cried” (Nadia).

Many participants described feeling calm, refreshed, refocused, and happier while in RGS. At the summit, Ayesha reported feeling “on top of the world,” reflecting a sense of accomplishment and contentment. She also noted a shift in mindset when present in nature; although certain thoughts remained, she was able to set them aside and focus on the moment, reducing their impact on her wellbeing.

“I just feel more at peace and even though there’s a lot of things like I’m still thinking about I just try to enjoy the moment and the nature and what I’m actually doing and just like live my life at the time. its like peace in my mind and I just don’t think about those kind of things and its like thrown everything to the back of my mind” (Ayesha)

Nadia was able to work through her feelings of low mood and frustration in RGS rather than avoid them. The outdoors offered a space to feel her emotions, reflect, re-evaluate her perspective, and connect with feelings of gratitude, strength and being “human”.

“...it helped me to sometimes see the world better...sometimes see my problems are little or it will be okay...find that strength in myself to motivate myself to move on...” (Nadia)

RGS were frequently described to reset and “recalibrate” providing participants with a sense of renewal. Amina noted the beneficial impact of these spaces, explaining how it helped achieve a “good mindset” and provided “a bit of a boost” to continue with her daily responsibilities. Similarly, Ayesha described feeling restored, which enhanced her productivity.

Freedom and Constraint Shaping Experiences in Nature

Being Able to Get There: Independence and Dependence

Participants’ access to RGS was closely tied to how confident they felt exploring independently or relying on others. Some women developed confidence, resources, or social support that increased their freedom to visit RGS, while others experienced unfamiliarity, limited experience, and uncertainty that created dependence and restricted independent exploration.

For Sobia, transport was central. Initially, she relied on friends for car journeys to RGS, but owning her own vehicle transformed her experience by enabling independent travel to remote locations. She described her car as “like my legs,” reflecting mobility, agency, and the ability to act spontaneously. In contrast, depending on someone with a car limited her autonomy and sense of freedom.

"Even knowing somebody with a car doesn't open it as much as like having your own car... my car was like my legs, if I don't put petrol in it I'm like lost"
(Sobia)

Similarly, for Simran, starting University increased her independence in accessing the outdoors. Finding like-minded peers provided social support that increased her confidence in accessing RGS, allowing her to explore more RGS.

"I think when I joined university... I had a bit more independence and a bit more freedom and I found likeminded people so I was able to venture a lot more" (Simran).

In contrast, some participants felt unable to explore independently due to various challenges. For Jada and Nadia, RGS felt out of reach because of limited experience, uncertainty about accessing remote locations without support, and low confidence, making these spaces difficult to visit alone. This uncertainty created a sense of distance from the RGS they wished to explore and reinforced dependence on others.

For Nadia, visiting places such as Scotland or the Lake District alone felt overwhelming due to unfamiliar surroundings, concerns about weather, and limited confidence in map reading. These factors reduced her sense of autonomy and created distance from spaces she was otherwise drawn to.

"I'd love to go...but I feel like it is hard to go by myself and managing it, just getting out and being able to read the map...I'm very unfamiliar with those

things” (Nadia)

Similarly, Ayesha expressed uncertainty about venturing into RGS alone, describing her limited hiking experience and not knowing who to go with restricted her confidence to explore independently, reinforcing a reliance on others to access RGS.

A Desire to Explore, Yet Restricted

While individual confidence shaped RGS engagement, structural barriers primarily transport as well as finances restricted access for many. For non-drivers, RGS entry was conditional rather than self-directed, relying on friends or community group schedules. Participants described a tension between wanting to explore RGS and encountering limits on their ability to do so.

“Well a lot of the times you need a car and I don’t drive so that’s the main issue that I don’t have a car so I’m not really able to go” (Ayesha).

Even without further elaboration, this reflects a tension between desire and constraint, where limited resources restricted independent exploration. Reliance on others shaped how Ayesha could experience the outdoors and the subtle emotional impact of being excluded from spaces others might access freely. Similarly, Nadia described how transport constraints were particularly limiting during her asylum-seeking period restricting her engagement with RGS and dependence on others.

“I couldn’t go when I was asylum only if somebody would give me a lift and invite me to get there” (Nadia).

Nadia’s access to RGS relied on external support, making her connection to RGS inconsistent rather than self-directed diminishing her autonomy.

Beyond transport, Amina and Sobia highlighted the cost of organised walks, adding financial pressure, particularly for families. Their hesitation to pay reflected a tension between financial constraints, a desire to access RGS, and uncertainty about the purpose or value of the cost.

“they have started introducing where they have to pay towards... these nature walk and things... you know it stops me, because if you’ve got a family of four and you’re paying like ten pounds, so its like forty quid, you know” (Amina).

Clothing and equipment were a concern for Nadia, who felt underprepared for British elements. She noted, “I don’t have proper gear... and they’re expensive to buy as an asylum seeker,” highlighting how access to nature often depends on resources. This financial barrier shows how people from low-income backgrounds may be excluded from outdoor activities without necessary equipment.

Group Belonging and Community Connection

Participants preferred group settings to solo RGS visits, motivated by shared interests and socialisation. For Ayesha, ethnic-minority women’s groups were particularly important, facilitating connections anchored in shared identity.

“... its nice to see likeminded people who are trying to focus on religion as well and you know, they have similar interests as me as” (Ayesha).

Shared identity fostered social connection, friendship and comfort within groups, which Amina highlighted as a vital catalyst for building personal confidence.

“It’s like I talk to my husband everyday but its sometimes good to speak to, to make a new friend you know, talk to them, get to know them you know just to create a bit of friendships and things as well” (Amina).

A barrier for Mariam was that the group did not align with her faith or cultural background, which made her hesitant to join.

“I was wanting to join a group but because they weren’t obviously, I think being the same faith as me is really, really good because when your with a group of people, you know, there are issues you talk about, there are certain erm you know, there are certain parts of your religion that you want to, like for example praying and like for example I know with the ramblers group they would go to a pub after each walk, that wouldn’t fit with me because you know I don’t drink so it was like I wanted to join it but I was hesitant because they weren’t of the same faith...” (Mariam).

Amina also described a sense of community when attending a local family walking group. She recalled sharing food, which she experienced as a positive and

meaningful moment.

“when we go for a walk and we are midway and we have snacks and we sit down for a break, we share our food with each other... the kids eating, just having that little bit of a break, chit chatting with each other, so its something good that” (Amina).

This reflects how shared physical activity of sharing food within a group fosters a sense of community, strengthening connections between people, creating a sense of belonging.

Discussion

This study explored the experiences of ethnic minority women from low socioeconomic backgrounds in accessing RGS, examining how access to these spaces relates to mental health and participation barriers.

Developing a Sense of Self in Nature

Participants’ early experiences with RGS were shaped by family trips and organised children’s groups, creating connections to nature that extended into adulthood.

These exposures fostered familiarity, adventure, and positive associations. This aligns with evidence that childhood "wild" nature activities strengthen adult environmental attitudes and nature connectedness (Passmore et al., 2021; Wells & Lekies, 2006). Parents’ own nature connectedness also predicts their children’s connection (Passmore et al., 2021). While school residential and environmental

education programmes can influence attitudes, Wells & Lekies (2006) found no significant effects (Chawla, 1999). Early RGS experiences also shaped participants' emerging identities and long-term environmental comfort. Nadia's nature experiences evoked nostalgic comfort intertwined with loss and displacement, mirroring findings that nature can preserve emotional ties to homelands while facilitating new forms of belonging (Haswell, 2023). Early experiences of RGS were often dependent on affordable and accessible opportunities, suggesting how socioeconomic factors may influence opportunities for developing nature connectedness across the life course.

Participants awareness of how cultural and religious identities manifested through modest dress and visibility were perceived in predominantly white rural contexts. Concerns around racialised visibility, safety, and belonging were common, consistent with research on under-representation, unwelcome visibility and racism being prevalent in the countryside (Askins, 2004; Boyd et al., 2018; Hamza et al., 2024; Natural England, 2019; Rishbeth et al., 2022). Others reframed visibility as an opportunity for representation. Heightened self-awareness and self-restriction in nature access was also present based on social expectations, perceived judgements and self-doubt in their identity. By rejecting external and internal judgments and normative/cultural expectations women asserted their right to belong, demonstrating that while discrimination and tension may limit enjoyment, it does not necessarily preclude participation (Sijtsma, 2011). These experiences highlight how intersecting identities shaped participants' experiences of belonging in RGS.

Therapeutic Healing Through the Senses in Nature

Participants' accounts of peace and sensory immersion demonstrate how nature supports wellbeing by attuning attention to sensory cues, offering cognitive respite. Through movement, sunlight, and expansive views, RGS facilitated restoration, enabling participants to reduce stress, gain perspective, and enhance emotional regulation. This presence focused engagement aligns with evidence that nature-based mindfulness improves mood and environmental awareness more effectively than indoor settings suggesting that the specific physical attributes of RGS are central to psychological recovery (Nisbet et al., 2019).

For Muslim participants, RGS facilitated spiritual and meditative connections through reflection and practices (*dhikr*), fostering a felt closeness to God. This aligns with findings that natural environments deepen religious ties to the earth, enhancing wellbeing (Hamza et al., 2024; Kamitsis & Francis, 2013). Specifically, nature-*dhikr* combinations further amplify mood and spiritual fulfilment (Roslan et al., 2022).

Participants framed RGS as a "remedy" for mental health, using nature as a coping strategy for emotional regulation. For women from low socioeconomic backgrounds, RGS may provide an accessible and low-cost means of supporting wellbeing and managing psychological distress. These findings align with ART and Psycho-evolutionary Theory, suggesting that natural settings alleviate mental fatigue and facilitate physiological stress recovery (Kaplan, 1995; Ulrich, 1991).

Furthermore, RGS supported the processing of migration related stress through emotional release and perspective taking, findings that are consistent with reduced stress in parks/forests compared with urban settings (Hedblom et al., 2019). Lower physiological stress responses were associated with higher ratings of 'pleasantness' for olfactory stimuli and, to a lesser extent, auditory stimuli, but not visual stimuli.

This contradicts with the findings of Elsadek et al. (2020), who reported that viewing green spaces from high-rise windows, compared with urban views, was associated with improved mental health indicators.

Freedom and Constraint Shaping Experiences in Nature

Across participants, freedom in accessing RGS was dependent on practical elements such as transport through relying on others or car ownership. Being able to travel independently offered spontaneity and opportunities for engagement with RGS. For women from low socioeconomic backgrounds, these opportunities were often shaped by financial and transport resources, influencing their ability to access RGS independently. Lack of car ownership significantly reduced independence in rural landscapes, a finding consistent with existing research (Slater, 2022). For participants without transport, accessing RGS became dependent on others and was therefore restrictive, demonstrating how structural constraints can directly impact autonomy.

Practical and financial barriers further shaped access to RGS. Challenges included planning public transport routes, navigating unfamiliar rural areas and financing outdoor clothing and equipment. This is consistent with research showing concerns of cost disproportionately limit access among families and lower-income groups (O'Brien, 2005). These findings highlight how socioeconomic disadvantage can create unequal opportunities to access and benefit from RGS.

Group Belonging and Community Connection

Group participation in RGS enhanced physical access and belonging for participants

with shared identity and interests. Beyond social motivations, these settings enabled participants to navigate safety concerns and cultural barriers. This aligns with research highlighting the necessity of supported access for South Asian women who face intersectional constraints (Morris & O'Brien, 2011). For women from low socioeconomic backgrounds, these groups also appeared to provide accessible opportunities for social connection and engagement with RGS that may be limited by practical, financial, or social barriers.

Sharing religious, cultural, and gender-based identities within a group was important for participants. Groups that shared similar faith-based practises such as modesty and prayer created environments where identity did not have to be explained or negotiated. This facilitated psychological comfort and belonging, whereas culturally unaligned groups were perceived as inaccessible. This suggests that access to RGS is shaped not only by physical factors but also by identity-based inclusion.

Groups also provided relational benefits through a sense of community, offering emotional and motivational support, increasing confidence and facilitating connection. Shared activities, such as sharing food, further demonstrate how collective practices strengthen community bonds and reinforce engagement.

These findings are relevant to clinical psychology, highlighting the importance of considering environmental and socioeconomic factors in understanding mental health and wellbeing. They also support community psychology approaches that promote community-based and preventative mental health support through access to supportive and restorative environments.

Strengths, Limitations and Future Directions

This research offers insights in an under-researched area; however further research will develop more comprehensive understanding. The lack of a clear definition of low SES and the absence of targeted recruitment for individuals with lived mental health difficulties may limit the generalisability of the findings, despite some participants reporting such experiences. Language barriers may have affected data richness and accuracy, suggesting future translation services. The average participant age was thirty-one, potentially excluding younger or older voices and digital exclusion of older demographics (Cotton et al., 2022). Additionally, despite targeting low SES, many participants were university educated, highlighting that education may not accurately reflect socioeconomic status and potentially limiting the representativeness of the findings. Future studies should include broader age ranges and diverse genders to fully understand intersectional experiences in green spaces.

Implications

The findings show that for ethnic minority women from low socioeconomic groups green spaces serve as vital areas for emotional regulation, sensory immersion and spiritual reflection. These experiences align with restorative theories like ART, and psycho-evolutionary theory, suggesting that mindfulness-related processes may naturally occur within natural environments. Without implying RGS should be prescribed, practitioners could consider clients relationships with nature as part of holistic formulation coping strategies. However, since transport, safety, and financial barriers limit access, an inclusive, socio-ecological approach could be considered.

Furthermore, the role of culturally aligned community groups in facilitating belonging and connection suggest the value of collaborative engagement with community organisations to enhance participation in RGS.

Conclusion

The research exploring experiences of ethnic minority women in RGS highlighted the role of nature shaping identity, supporting mindfulness and restorative processes, and promoting emotional regulation and wellbeing. Access and autonomy in RGS were influenced by transport, safety, financial, and identity-related barriers, while culturally aligned community groups enhanced belonging and engagement. These findings suggest the importance of considering social, cultural, and environmental factors when supporting access to RGS and promoting wellbeing.

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Appendices

Appendix A: Reflexive Statement

The researcher identifies as a female Trainee Clinical Psychologist who was born and lives in the UK and currently resides there. The researcher is in her mid-thirties, has a British Pakistani ethnicity therefore influenced by dual cultures, with both parents sharing the same identity although her father was born in Pakistan. Her maternal grandparents were both immigrants from Pakistan and therefore the researcher is a third-generation immigrant. The researcher grew up in a working-class family household, with siblings, and has a close relationship with family and friends throughout her life. The researcher has been brought up with the Islamic faith and continues to practise the religion. Her qualifications included an undergraduate degree in psychology; master's in health psychology as well as a low intensity CBT intervention degree.

The researcher has mostly had a positive experience of accessing RGS following the COVID-19 pandemic and considers herself an “outdoorsy person” and will engage in various outdoor activities. She also accessed some groups in the outdoors and went on many hikes and weekend adventures across the Peak District and Wales. The researcher volunteered for an outdoor group as an events assistant and engaged in conversations with women from ethnic minority backgrounds regarding their experiences travelling and engaging in outdoor activities. These experiences formed an interest to further explore the experiences of ethnic minority women in the outdoors as she recognised many complexities within green space access. Therefore, this triggered an exploration into the evidence base for pursuing research to address this gap for an underrepresented demographic and to explore

their personal experiences. The researcher knew two participants from the interviews through group hike organised by the volunteer organisation she was involved with, although she did not have a close relationship with them.

Considering clinical work, the researcher draws on a couple of therapeutic approaches valuing third wave CBT, and systemic approaches, in particular compassion and value-based work.

Appendix B: Reflective Log Excerpt Example

I felt like the participant kept gravitating towards talking about the societies she has joined in university, the volunteering roles she has and the pressure on her representing on behalf of other ethnic minorities in those spaces. Makes me think if she had this on her mind already as it seems like she was going towards these topics instead of focusing on the question. I did try and bring her back on the subject a few times with follow up questions however this proved difficult at times as she would then go back to her own topics. As this happened a few times I did actually ask her follow up questions about the topics she was talking about which were unrelated to the research questions. In hindsight I would have not asked the type of follow up questions in relation to her topic but gone back to the interview guide. Despite this I did get some detailed information, it was lovely to hear about her experiences of connecting to nature as a child, makes me think of how I would have liked that growing up but unfortunately didn't get the same experience as her.

I didn't realise how Nadia would compare Afghanistan rural spaces to the UK, this was surprising to me as I thought they would be very distinct experiences. I felt quite sad and privileged when Nadia was talking about the challenges and barrier of being an asylum seeker in the UK and how difficult it is accessing rural spaces particularly when you are unfamiliar with the surrounding, language and culture. I take this for granted having been born in the UK and not experiencing any hardship like this before. I think this interview went better than the first one I did, I kept focused on the questions trying to gather as much rich data as possible. Really enjoyed this interview, I found it very interesting but there was also an element of sadness, learning about her experiences and the challenges she has gone through to breaking barriers.

Struggled with an interview as I didn't expect the participant to have a learning disability which I assumed she had (she didn't disclose this to me) soon after the interview began. I had to really think of the questions and how to make adaptations making them simplistic as she didn't understand some of the questions. I was careful not ask any leading questions and at times I felt like I had, to be mindful of this in the next interview. This made me think about recruitment and not expecting someone with a learning disability would take an interest highlighting my bias in this.

I could relate to some of what Ayesha was talking about in terms of lack of experiences and opportunities in the outdoors and similarly my first experience of the outdoors was also a residential trip which I loved. We also had similar ethnic background, and my father too also worked a lot with mum being the main caregiver. I felt empathy towards Ayesha as she experiences mental health difficulties and seemed to have low mood, with difficulties in motivating herself and achieve her goals. Overall, I was careful not to relate my experiences with hers in the interview even though there was an internal urge to do so however I did well to adhere to the interview guide.

I don't think I expected as many emotions to arise with participants during the interview process. I think around 3 people became emotional, I think I did well in managing this giving them some time to compose themselves and not to delve deeper into any areas they didn't want to talk about or would be triggering. I followed the ethical protocol that was planned, this made me reflect on the importance of a plan and how to manage participants emotional experiences during the research process.

Implications on my clinical practise

- If English is someone's second language to provide more summaries and check in with the information to ensure you understand the participant without being leading and making assumptions.
- Check in with interviewees in the initial stages of arranging an interview if there are any extra measures needed/support to conduct the interview. To not assume people with learning disabilities are unable to take part in research, check in with own biases.
- Even if you are curious about the information if it doesn't align with your research question refrain from asking and focus on the interview guide and research aims.
- There may be similarities in experiences shared with similar ethnic or cultural backgrounds and it important to be mindful of this during the interview and research process. The reflexive journal can be impactful in these situations.
- Recognised the importance of an ethical protocol, debrief following some participants becoming emotional during the interview.

Appendix C: Summary of Public Involvement Feedback

Research Stage	Role and Involvement	Feedback and Recommendations
Design	Volunteer at The Wanderlust Women Group	<u>Conversation: For research proposal</u> • The research is useful and interesting. • To be mindful of professional jargon when explaining the research, use layperson terms as easier to digest. • Inclusion criteria use of 'ethnic minority'. She finds the term 'ethnic minority' personally fine. Was unsure of term for deprived socioeconomic group. - Research term for- deprived socioeconomic groups.
Design	Volunteer at The Wanderlust Women Group	<u>Email correspondence: To seek feedback from Information Sheet and Consent Form:</u> • Questioned how the women will be recruited for the interviews. • Contact number needs to be added. • Interview guide looks good. • Soften language on information sheet. ADD: Include a sentence at the end of the interview thanking the participant for taking part in the interview. ADD: To include researchers, contact number so the participant has the option to ring if there were any queries on the research. ADD: The time the interview will last. CHANGE: Wording on participant information sheet, 'invited' instead of 'expected'.
Pilot Interview	Member of The Black Girls Hike group	<u>Conducted pilot interview</u> • Research area is important and can personally relate.

		● Interview style was good, felt comfortable like it was a conversation, could have talked further. ● Stating that the interviews will be anonymised, some participants may not understand this term. ● Participants may feel uncomfortable sharing information on their mental health presentation and may not know how much/what to share. - Be mindful of the word 'anonymised' and use layperson friendly language. - Ensure participants do not feel obliged to share personal information regarding mental health if they don't feel comfortable to do so. - ADD: Prompt question, what their 'current' mental health looks like. - Ensure participant has a break if required. - CHANGE: The order of the mental health question to later in the interview.
Material	Develop written debrief form. Member of The Black Girls Hike group	<u>Develop debrief from: To seek feedback</u> ● Overlooked debrief form following the end of an interview (although completed a short verbal one in the pilot, a written one is important). ● Written debrief form and positive feedback received. No further amendments.

Appendix D: Research Ethics Committee (REC) approval letter



Downloaded: 16/05/2024
Approved: 21/12/2023

Shareen Abbas
Registration number: 210155006
Psychology
Programme: Doctorate in Clinical Psychology

Dear Shareen

PROJECT TITLE: Understanding ethnic minority women's experiences in rural green space, understanding access and how it relates to mental health

APPLICATION: Reference Number 052611

On behalf of the University ethics reviewers who reviewed your project, I am pleased to inform you that on 21/12/2023 the above-named project was **approved** on ethics grounds, on the basis that you will adhere to the following documentation that you submitted for ethics review:

- University research ethics application form 052611 (form submission date: 21/12/2023); (expected project end date: 31/05/2024).
- Participant information sheet 1119608 version 5 (21/12/2023).
- Participant consent form 1119609 version 2 (19/12/2023).

If during the course of the project you need to [deviate significantly from the above-approved documentation](#) please inform me since written approval will be required.

Your responsibilities in delivering this research project are set out at the end of this letter.

Yours sincerely

Department Of Psychology Research Ethics Committee
Ethics Administrator
Psychology

Please note the following responsibilities of the researcher in delivering the research project:

- The project must abide by the University's Research Ethics Policy: <https://www.sheffield.ac.uk/research-services/ethics-integrity/policy>
- The project must abide by the University's Good Research & Innovation Practices Policy: https://www.sheffield.ac.uk/polopoly_fs/1.671066!/file/GRIPPpolicy.pdf
- The researcher must inform their supervisor (in the case of a student) or Ethics Administrator (in the case of a member of staff) of any significant changes to the project or the approved documentation.
- The researcher must comply with the requirements of the law and relevant guidelines relating to security and confidentiality of personal data.
- The researcher is responsible for effectively managing the data collected both during and after the end of the project in line with best practice, and any relevant legislative, regulatory or contractual requirements.

Appendix E: A Summary of Ethical Considerations Implemented Throughout the Research

Valid Consent

All participants received a detailed information sheet via email outlining the aims of the study, procedures and their rights as a participant before providing informed consent via a Qualtrics survey link. Participants were invited to contact the researcher by email with any questions prior to agreeing to take part. Participation was entirely voluntary, and participants were informed that they could withdraw from the study at any point up to two weeks after their interview without providing a reason. Any data collected prior to withdrawal would be securely deleted upon request. Following completion of the interview, participants were reminded of the two-week withdrawal period, which aligned with the timeframe in which interview data were transcribed and anonymised.

Confidentiality

The information sheet outlined participant's right to confidentiality in data management and reporting with participant confidentiality ensured throughout the research process. Transcripts were produced by a professional University of Sheffield transcriber who was bound by a signed confidentiality agreement and provided with detailed guidance on transcription procedures. All interview data were anonymised during transcription, and pseudonyms (selected by the researcher) were used in both transcripts and reporting to protect participants anonymity. Any identifying information such as specific locations, personal references were removed.

Participants were informed that anonymised quotes might be used in the dissemination of the research, including publications, reports, and presentations, but that no identifying information would be presented. The original audio recordings were securely stored on a password-protected University of Sheffield server and permanently deleted following transcription. Data were handled in accordance with the University of Sheffield's data protection policy and the General Data Protection Regulation (GDPR) requirements. Confidentiality would only be broken if there were concerns about a risk of harm to participant or others, in line with ethical guidance.

Risk to Participants

The study was considered to pose minimal risk to participants; nevertheless, participant risk was carefully assessed and managed. Risk was managed by providing clear and detailed information of the nature of the study to the participant, confidentiality and anonymity protocols in the information sheet. Participants were reminded of their right to withdraw from the study at any time within the stated withdrawal period. Considering the interview explored potentially sensitive issues in relation to mental health, ethnicity and access to green spaces, this may have brought up emotional discomfort. Participants were encouraged to share what they felt comfortable to minimise potential distress and were reminded during the interview process when required. Procedures were in place in accordance with the University of Sheffield's ethical guidelines, including a duty to break confidentiality if there was evidence of a risk of harm to self or others.

If distress arose during the interviews, the researcher could manage this appropriately, drawing on professional training in managing emotional distress (as part of the Doctorate in Clinical Psychology competencies). The researcher checked in with participants if needed, offering breaks, to reschedule or referencing the participants right to withdraw at any time and provided opportunities to discuss any concerns arising from participation. At the end of the interview the participant was provided with a debrief information sheet outlining the aim of the study, confidentiality, contact details along with resources and signposting information for support services (GP, NHS 111 and mental health services). No participant requested to withdraw or reported distress that required intervention.

Appendix F: Information poster about research study for potential participants



 **University of
Sheffield**

**Research Participants
Needed!**

- Are you from an ethnic minority background?
- Do you have experience in accessing green spaces?
- Are you female?
- Are you aged 18 or over?
- Are you from a low income group?
- Can you speak fluent English?

If yes, I would like to hear from you!

My name is Shareen, third year Trainee Clinical Psychologist. I am interested in ethnic minority women's experiences in rural green spaces, understanding access, barriers and understanding how these factors relate to mental health. This research forms part of my doctoral thesis.

You are invited to take part in a one-to-one online video interview to explore your experiences in green spaces.

The interview will last approximately 1 hour.

You will receive £10 shopping vouchers for taking part in the research to thank you for your time.

If you have any questions or are interested in taking part in the research please contact Shareen:

sabbas4@sheffield.ac.uk

Appendix G: Participant Information Sheet



Shareen Abbas
Trainee Clinical Psychologist
University of Sheffield
Department of Psychology
Floor F, Cathedral Court
1 Vicar Lane
Sheffield S1 2LT
UK

Email: sabbas4@sheffield.ac.uk

PARTICIPANT INFORMATION SHEET

You are being invited to take part in a research project. Before you decide, it is important to understand why the research is being done and what it will involve. Please read the following information carefully and ask me any questions you have.

Why have I been invited?

You have been invited to take part in this research project because you are a female adult with experience of accessing green spaces from an ethnic minority background as well as from a low-income group.

Do I have to take part?

No, you do not have to take part in the research, participation is voluntary. There will be no negative consequences by not agreeing to take part. You do not have to answer all the questions in the interview if you do not want to. If you begin the interview but change your mind, you do not have to continue or give a reason why you want to stop. If you withdraw from the study early, all your data will be securely erased however there may be a point within the research process when data cannot be withdrawn (2 weeks after the interview once the shopping voucher has been provided). If you decide to take part in the research, you can keep this information sheet along and will be asked to sign a consent form.

What will happen if I take part?

If you decide to take part in the research, you will be contacted via telephone or email (please state your preference) by the lead researcher within two weeks. You will be asked to take part in a one-hour online interview where you will be asked

some questions around your experiences in green spaces, accessing green spaces and how this relates to your mental health. The interview will take place on Microsoft Teams video with an agreed date and time which is convenient for you. The interview will be recorded via a voice recorder and soon after will be transcribed by an approved University of Sheffield transcriber. Following this the researcher will examine all the interviews and look for common themes.

What are the benefits of taking part?

You have the opportunity to share your experiences of being in rural green spaces. The research would provide an insightful understanding of these themes from the perspective of people who have been overlooked, informing public health and Green Social Prescribing developments.

What if there is a problem?

If you feel that there is a problem at any time, please inform the researcher. There may be topics that are difficult to talk about and you may feel distressed. If you experience distress during the interview the researcher will be able to discuss this with you and signpost you to further services that could provide support such as your GP.

Will all the information be kept confidential?

The audio data will be collected by the researcher and provided to a professional transcriber who will transcribe the data using a pseudonym (a different name will be used to replace yours) resulting in an anonymised transcription. All personally identifying information will be removed from the transcript. The audio recording will be destroyed once transcription has taken place. You will not be identifiable in any reports or publications. During the interview if the researcher became concerned about a risk to yourself or harm to others, they would discuss the concerns with you and the need to breach confidentiality. You can withdraw from the study up to two weeks after the interview once the shopping voucher has been paid.

Will I receive any reimbursement of expenses for taking part in this research?

You will be offered a £10 shopping voucher for your participation. No other incentives or expenses will be provided for participation. You will still receive a voucher if you withdraw your participation during or after the interview. You will not receive a voucher if you cancel your participation prior to starting the interview.

What will happen to the results of the study?

The results will be submitted as part of the researcher's doctoral thesis in May 2024.

Further information

This research has been ethically approved by the University of Sheffield Clinical Psychology. The University will assume responsible for looking after your information and using it properly.

What if I wish to complain about the way the study has been carried out?

If you have a query about the research or for some reason you are unsatisfied with the process, you can make a complaint using the contact details below:

Please contact the researcher sabbas4@sheffield.ac.uk or their supervisor v.huddy@sheffield.ac.uk. If you feel your complaint has not been handled satisfactorily, you can also contact the Head of the Psychology Department, Professor Liz Milne, psy-hod@sheffield.ac.uk.

Contact Information

This research is being conducted by **Shareen Abbas**, Trainee Clinical Psychologist. This research will be used to write a thesis which fulfils part of their doctoral training. If you have any questions about the research, you can leave a telephone message with the Research Support Officer on: 0114 222 6650 and he will ask Shareen Abbas to contact you.

Additional Information about your data

New data protection legislation came into effect across the EU, including the UK on 25 May 2018; this means that we need to provide you with some further information relating to how your personal information will be used and managed within this research project.

The University of Sheffield will act as the Data Controller for this study. This means that the University is responsible for looking after your information and using it properly. In order to collect and use your personal information as part of this research project, we must have a basis in law to do so. The basis that we are using is that the research is 'a task in the public interest'.

As we will be collecting some data that is defined in the legislation as more sensitive (e.g. information about your health, we also need to let you know that we are applying an additional condition in law: that the use of your data is 'necessary for scientific or historical research purposes'.

Further information, including details about how and why the University processes your personal information, how we keep your information secure, and your legal

rights (including how to complain if you feel that your personal information has not been handled correctly), can be found in the University's Privacy Notice <https://www.sheffield.ac.uk/govern/data-protection/privacy/general>.

Appendix H: Informed consent form



Shareen Abbas
Trainee Clinical Psychologist
University of Sheffield
Department of Psychology
Floor F, Cathedral Court
1 Vicar Lane
Sheffield S1 2LT
UK

Email: sabbas4@sheffield.ac.uk

Title of Research Project: Understanding ethnic minority women's experiences in rural green space, understanding access and how it relates to mental health

An Interpretative Phenomenological Analysis

Consent Form

<i>Please tick the appropriate boxes</i>	Yes	No
Taking Part in the Project		
I have read and understood the project information sheet dated or the project has been fully explained to me. (If you will answer No to this question, please do not proceed with this consent form until you are fully aware of what your participation in the project will mean.)	☐	☐
I have been given the opportunity to ask questions about the project.	☐	☐
I agree to take part in the project. I understand that taking part in the project will include participating in an interview that will be audio recorded.	☐	☐
I understand that my taking part is voluntary and that I can withdraw from the study up until 2 weeks after the interview once the Amazon gift card has been provided. I do not have to give any reasons for why I no longer want to take part and there will be no adverse consequences if I choose to withdraw.	☐	☐
How my information will be used during and after the project		
I understand my personal details such as name, phone number, address and email address etc. will not be revealed to people outside the project.	☐	☐
I understand and agree that my words may be quoted in publications, reports, web pages, and other research outputs. I understand that I will not be named in these outputs unless I specifically request this.	☐	☐
I understand and agree that other authorised researchers will have access to this data only if they agree to preserve the confidentiality of the information as requested in this form.	☐	☐

I understand and agree that other authorised researchers may use my data from the anonymised transcripts in publications, reports, web pages, and other research outputs.	☐	☐
I understand and agree that the interview will be voice recorded, transcribed (by a professional transcriber employed by the University) and all personally identifying information will be removed. The audio data recording will not be stored or shared it will be destroyed as soon as it has been transcribed	☐	☐
So that the information you provide can be used legally by the researchers		
I agree to assign the copyright I hold in any materials generated as part of this project to The University of Sheffield.	☐	☐

Name of participant [printed]

Online signature

Date

Name of Researcher [printed]

Online signature

Date

Project contact details for further information:

Trainee Details

Name: Shareen Abbas
Address: Clinical Psychology Unit,
University of Sheffield,
Western Bank,
Sheffield,
S10 2TN
Email: sabbas4@sheffield.ac.uk

Academic Supervisor Details

Name: Dr Vyv Huddy
Address: Clinical Psychology Unit,
University of Sheffield,
Western Bank,
Sheffield, S10 2TN
Email: V.huddy@sheffield.ac.uk

Appendix I: Interview Guide

Introduction

Thank you for volunteering to take part in this research. I'm interested in exploring experiences of ethnic minorities women in rural green spaces, understanding access and how being in rural green spaces relate to mental health. I sent you some information about the research, before we begin do you have any questions you would like to ask?

The interview should last up to an hour. The interview is recorded; however, all your information will be anonymised. You may share personal experiences which you may want to keep confidential, the information you provide will be kept confidential unless there is a risk to yourself or to others and I would have to break that confidentiality and would discuss this with you.

1. What has been your experience of being in rural green spaces?

Prompts: Any particular memory stand out? What were your thoughts being in the outdoors?

2. How would you describe your experience being a women in rural green spaces?

3. How did you first access rural green spaces?

4. How would you describe your mental health?

Prompts: What is your current wellbeing like? What does it look like now?

5. How would you describe your metal health when you are in the outdoors?

Prompts: How does it feel being in the outdoors?

6. If you are part of a community outdoor group, what made you want to join this group?

Prompts: What prompted you to sign up to the group? Any particular reasons?

What have been your experiences being part of this?

7. Is there anything else you would like to add that you think it is important for me to know?

Demographic information

How old are you?

How would you describe your ethnicity?

What is your occupation?

What is your education level?

Are you part of an outdoor community group?

How long have you been part of this group?

End of Interview

Thank you for taking part in this study. Following this interview, I'm going to analyse all the interviews I've conducted and will explore the similarities and differences in peoples experiences. I will then report my findings.

Would you like to talk about anything further? Do you have any questions?

If you do feel anything discussed has brought up some difficult emotions, please

contact your GP. I will send a debrief form with key information on the research and further contact details for the research. It also has information on support services if you required this.

Appendix J: Debrief Form

DEBRIEF

Understanding ethnic minority women's experiences in rural green space, understanding access and how it relates to mental health.

PURPOSE

The purpose of the study was to understand ethnic minority women's experiences in rural green space, understanding access, barriers and understanding how these factors relate to mental health.

CONFIDENTIALITY

The audio data that has been recorded will be transcribed (by a professional transcriber) who will transcribe the data using a pseudonym (a different name will be used to replace yours) resulting in an anonymised transcription. All personally identifying information will be removed from the transcript. The audio recording will be destroyed once transcription has taken place. You will not be identifiable in any reports or publications. You can withdraw from the study up to two weeks after the interview once the shopping voucher has been paid.

CONTACT

If you have been affected in any way by taking part in this study, further support can be sought from your GP, NHS 111 as well as the resources below:

Samaritans Telephone (free): 116 123. Email: jo@samaritans.org website:

<https://www.samaritans.org/>

MIND Infoline: 0300 123 3393 (charges may vary from landline/mobile) Email:

info@mind.org.uk website: www.mind.org.uk

If you have *any* questions regarding this study, its purpose or procedures, please feel free to contact the primary investigators:

Shareen Abbas sabbas4@sheffield.ac.uk

Vyv Huddy v.huddy@sheffield.ac.uk.

Thank you for taking part!

Appendix K: Signed Confidentiality Contract by University Approved Transcriber

Transcribing Confidentiality Form & Guidance Notes

Type of project: Research thesis

Project title: Understanding ethnic minority women's experiences in rural green space, understanding access and how it relates to mental health

Researcher's name: Shareen Abbas

The recording you are transcribing has been collected as part of a research project. Recordings may contain information of a very personal nature, which should be kept confidential and not disclosed to others. Maintaining this confidentiality is of utmost importance to the University.

We would like you to agree:

1. Not to disclose any information you may hear on the recording to others,
2. If transcribing digital recordings – only to accept files provided on an encrypted memory stick
3. To keep the tapes and/or encrypted memory stick in a secure locked place when not in use,
4. When transcribing a recording ensure it cannot be heard by other people,
5. To adhere to the Guidelines for Transcribers (appended to this document) in relation to the use of computers and encrypted digital recorders.
6. To show your transcription only to the relevant individual who is involved in the research project.
7. If you find that anyone speaking on a recording is known to you, we would like you to stop transcription work on that recording immediately and inform the person who has commissioned the work.

Declaration

I have read the above information, as well as the Guidelines for Transcribers, and I understand that:

1. I will discuss the content of the recording only with the individual involved in the research project
2. If transcribing digital recordings – I will only accept files provided on an encrypted memory stick
3. I will keep the tapes and/or encrypted memory stick in a secure place when not in use
4. I will not use external storage programmes or website, such as Dropbox, for transferring recordings as it does not meet any of the University's data security guidelines
5. When transcribing a recording I will ensure it cannot be heard by others
6. I will treat the transcription of the recording as confidential information
7. I will adhere to the requirements detailed in the Guidelines for transcribers in relation to transcribing recordings onto a computer and transcribing digital audio files
8. If the person being interviewed on the recordings is known to me I will undertake no further transcription work on the recording

I agree to act according to the above constraints

Your name _____ Sarah Fox _____

Signature _____

Date __ 02/03/24 _____

Occasionally, the conversations on recordings can be distressing to hear. If you should find it upsetting, please stop the transcription and raise this with the researcher as soon as possible.

Appendix L: Analysis Evidence/Audit

Example of Coding Transcript

31 P: Erm so my experiences have been erm I wouldn't say extensive, I'm not a
32 kind of hiker type of person but I tended, you know enough, a few places that
33 have been rural enough I think.
34 T: Yeah.
35 P: And they have been positive in that you know they I have felt comfortable, I've
36 always felt safe, I've always felt like you know it was a beneficial experience
37 and I've always felt it was something that was sorry...
38 T: No go ahead.
39 P: Most places are something that are new, you know, extremely useful for
40 mental health and just you know once you access these kind of spaces, no
41 matter what kind of time frame you always find considerable benefit and I like
42 taking photos as well so that's an additional plus point and yeah I have quite a

SA Shareen Abbas ...
Not a "hiker" but knows enough places that are rural.

SA Shareen Abbas ...
ES: Not identifying as a hiker but has knowledge of rural areas.

SA Shareen Abbas ...
Positive, felt comfortable, safe in rural spaces.

SA Shareen Abbas ...
ES: Rural spaces are positive, comfortable and safe.

SA Shareen Abbas ...
Useful for mental health, no matter the time frame. Bonus is taking photos.

65 seeing blue sky and that's what it is for me, just having that kind of freedom to
66 be, to just be yourself and just you know, I saw the environment for what it is
67 and stuff, a quiet space and just that you know rebalance, sorry I know I'm
68 just wobbling on.
69 T: No no, that's yeah, that's exactly I guess yeah I'm just looking for information
70 on your experiences so its useful. I'm just thinking about when you were
71 laying down on the grass and looking up at the sky, what was going through
72 your mind at that moment if you can remember?
73 P: I remember thinking that I was extremely content and you know it was
74 because I like to do you know the anchor memories.
75 T: What's that sorry?
76 P: So you just, its what's called anchor where you anchor a memory, I'm a
77 previous Psychology student (LAUGH) so they say you will just take a few
78 seconds to pick up all your senses so what you can smell, see, touch so its
79 definitely like a memory, you know I can feel the wind as its coming across my

SA Shareen Abbas ...
ES: Awareness of the seasons, the sensory and visual experience of being in nature.

SA Shareen Abbas ...
Being herself- "Freedom to be", and seeing the environment for what it brings- "quiet space"

SA Shareen Abbas ...
ES: Freedom to be yourself and the environment being a quiet space for rebalance.

SA Shareen Abbas ...
Content because of doing anchor memories.

SA Shareen Abbas ...
ES: Feeling content because of doing anchor memory exercises in nature.

Example of IPA Analysis Process (Single Participant)

Transcript Extract	Experiential Statements	Emergent Themes/Personal Experiential Themes (PET)
nowadays we don't have an excuse not to access these spaces (130)	No excuse to not access spaces.	Accessibility and autonomy in the outdoors
in terms of finance again that's not an issue, there's lots of things that are accessible without costing too much or anything at all (131)	Access to these spaces is not limited by financial constraints, as they are either low-cost or free to use, removing economic barriers.	Accessibility regardless of financial constraints
I think more than anything it shows for me its representation you know that I can absolutely be myself and I absolutely can still access these spaces (159)	Being in outdoor spaces allowed for authentic self-expression and fostering confidence	Authentic self-expression and confidence
just having that kind of freedom to be, to just be yourself (65)	Being in nature is an opportunity for freedom and to be oneself	Identity as freedom in nature
I saw the environment for what it is and stuff, a quiet space and just that you know rebalance (66)	Experiencing the natural environment being a quiet space and for rebalance.	Environment as quiet and rebalancing
I can feel the wind as its coming across my face and I just remember feeling really grounded, just feeling like really like settles and you know... I felt at one with myself... I was very present in the moment (76)	Sensory engagement in nature supports grounding and being present in the moment	Sensory and grounding experience
I've never felt uncomfortable, I've never felt I can't access this or and this is a place that I would need to dress differently or appear differently or anything like that, I think that's the great thing about going to these places that there isn't a one kind of tick box (102)	Comfortable with her identity and clothing without pressure to conform to dominant norms.	Comfortable in identity
I think you kind of you see yourself in relation to so many other things happening as part of that eco system if you like and so yeah it, if you going through something it minimises all you know (238)	Being part of an eco-system enables one to take perspective and minimises difficulties supporting emotions positively	Nature as a reflective space supporting mental health
as children my father used to take us to a particular area outside sort of Essex area and it was just like erm, its not like a, I want to say its like like a farm but its like an open wood kind of space, its like a really open space and takes hours to explore (50)	Childhood experiences of family exploration in nature foster emotional connection and familiarity with outdoor spaces.	Childhood exploration through nature

Development of Group Experiential Themes from Personal Experiential Themes

Group Experiential Theme (GET)	Personal Experiential Themes (PET)
Freedom and Constraint Shaping Experiences in Nature	Accessibility and autonomy in the outdoors
Accessibility regardless of financial constraints	
Developing a Sense of Self in Nature	Authentic self-expression and confidence
Identity as freedom in nature	
Comfortable in identity	
Childhood exploration through nature	
Therapeutic Healing Through the Senses in Nature	Environment as quiet and rebalancing
Sensory and grounding experience	
“Outdoor Spaces as My Remedy”	Nature as a reflective space supporting mental health

Examples of Data from Themes

Group Experiential Themes	Personal Experiential Themes	Data
Developing a Sense of Self in Nature	Childhood Memories in Nature Shaping Connection	<i>“Erm they were day trips, this one place we used to go to was in Wales, it was really nice” (Jada)</i> <i>“So growing up we’d go to quite like rural places, we have like a lake near us that is quite a bit of a green bit and we’d like go on like birthday parties and places like Sherwood Forest and like Clumber Park and things like that when I was really young and then there was like a massive gap where I didn’t really do much like outdoorsy stuff” (Sobia)</i> <i>“because it then allowed me to still get out my energy and my love for nature and be outdoors but put it into something positive and also to a safe group, erm but yeah I think I was, yeah and since then it’s kind of just stayed with me and related to nature and wildlife so I don’t think if I hadn’t have had all those experiences I would have followed it through” (Simran)</i>
	Visibility, Identity and Belonging in Rural Green Spaces	<i>“generally like I’m quite like confident as a person and like in my identity so things like that wouldn’t phase me, I’m quite like I can hold my own in any like situations like that so for me personally there’s not really been big worries or barriers to accessing spaces like that because of who I am (Sobia)”</i> <i>“I was still seeing similar patterns, like I was often like the only one like yeah, you know who is like me into those spaces where it, it can be challenging sometimes (Simran)”</i> <i>“Erm yeah I feel like sometimes it puts me off activities as well, I would like say ‘oh I don’t really want to do that because I’d have to</i>

		<i>dress in this way”, or I wouldn’t want to wear what I had to wear without looking weird maybe, people might stare at me but I think I just kind of like ‘of I don’t really care anymore, I’m just gonna do it” (Ayesha)</i> <i>“... even from the, you know, from the white Caucasian, you know people that were there I still got smiles and hello’s and how are you’s” (Mariam)</i>
Therapeutic Healing Through the Senses in Nature	Nature as a Spiritual and Sensory Connection	<i>“I like to see birds and like fresh air and like wildlife and stuff” (Jada)</i> <i>“I think late in the summer because I remember the grass was quite dry probably around and I just remember looking up and seeing blue sky” (Nathifa)</i> <i>“Erm yeah great, erm I just love being out there, like its more like, its like happy and peaceful but like you’re just awe struck sometimes about like how places are and especially places that are like so close to home” (Sobia)</i>
	“Outdoor Spaces as My Remedy”	<i>“that was particularly apparent during the pandemic where you know, that was absolutely crucial for everyone’s mental health to be you know out outside and having these kind of mental breaks or you know just the valuable clean air, fresh space” (Nathifa)</i> <i>“It makes us feel good to be honest. I think it’s a bit of err, it’s a bit of like a refresh like starting again and everything so it makes us feels good when we go out” (Amina)</i> <i>“this morning for example I had to get the bus quite early like, I’m thinking it’s a Saturday, you should be sleeping in but like even though I was a little bit tired this morning I thought no, push yourself because when you get there, when you’re out there walking when</i>

		<i>you're you know ,in that moment you are gonna feel like a million dollars" (Simran)</i>
Freedom and Constraint Shaping Experiences in Nature	Being Able to Get There: Independence and Dependence	<i>" like I said we would have like family trips to the countryside and like for some people its like down to the coast or something whereas this was just a 40/45 minutes from our house so it was easy accessible, well not easy accessible but much easier than like a three/four hour journey" (Siman)</i> <i>"nowadays we don't have an excuse not to access these spaces" (Nathifa)</i>
	A Desire to Explore, Yet Restricted	<i>"I couldn't go because of the access, I couldn't go when I was asylum and if somebody would give me a lift and invite me to get there" (Nadia).</i> <i>" for me its literally just, the biggest barrier these days is finding time, and then other than that, to me it feels like there is not anything stopping me from going anywhere, its just like little annoying things like having to work (LAUGH), like my job and having to clean the house or something (LAUGH)" (Sobia)</i> <i>"Yeah. Sometimes something that stops me doing certain hikes is like having to pay for something that I could just, I could just have a look at the time and place and go myself and tag along, not that I've ever done that but I just think, I don't know" (Sobia).</i>
Group Belonging and Community Connection		<i>"Just like, erm, just like meeting likeminded people that doesn't have any problems with anyone with different ethnic culture and backgrounds that wanna go and walk with them in the Peak District" (Jada).</i> <i>"...kind of scary, especially if you wanna on your own, just best to go in a group yeah" (Jada)</i>

*“It was finding a group that had the same thinking, the same values,
the same you know beliefs as yourself, and you felt that environment”
(Mariam)*
