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Depression in People with Skin Conditions: The Role of Self-Compassion as an Adaptive Response

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For Sam

Abstract

The research presented in this thesis investigated the role of self-compassion in relation to depression in people with chronic skin conditions. A systematic review of the literature indicated that compassion-based interventions can reduce depression, although at the time of the review more rigorously-designed studies were required. Study 1 used surveys to investigate the relationships between self-compassion, depression and disgust traits in sample of patients attending a dermatology clinic ($N = 147$) and at three-month follow-up ($N = 80$). Self-compassion was associated with depression cross-sectionally and prospectively. Findings further indicated that self-compassion moderated the effect of disgust propensity on depression, as disgust propensity had a significant positive relationship with depression in people with low and average levels of self-compassion, but not in people with high self-compassion. In Study 2, a purposive sample of people with skin conditions and high self-compassion ($N = 10$) took part in qualitative interviews. Template analysis of the interview data was used to explore how high self-compassion operates in managing the difficulties of living with a skin condition. *Sensitivity to distress* and *care for wellbeing* emerged as fundamental attributes unpinning a wide variety of compassionate responses to skin-related distress. An online, compassion-based, guided self-help intervention for depression in people with skin conditions was then developed. Study 3 assessed the acceptability and feasibility of the intervention among people with heterogenous skin conditions ($N = 34$) recruited online. Recommendations were made for future intervention development, based on participants' feedback, and for future research, based on methodological difficulties. In conclusion, the current findings suggest that self-compassion is a valid therapeutic target for people with skin conditions and depression, and that self-compassion can be used flexibly to manage the difficulties of living with a skin condition. Further research on online compassion-based self-help for depression in people with skin conditions is warranted.

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Declaration

I, Elaine Nicola Clarke, confirm that the work presented in this thesis is my own. I am aware of the University's Guidance on the Use of Unfair Means (www.sheffield.ac.uk/ssid/unfair-means). This work has not been previously presented for an award at this, or any other, university. Where reference has been made to the work of others, I confirm that appropriate credit has been given within the thesis.

25th September, 2020

Publications

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Contents

Abstract i

Acknowledgements iii

Declaration v

Publications v

List of Figures xiii

List of Tables xvi

List of Acronyms xvii

Preface xix

Aims of the Research xxi

Structure of the Thesis xxi

1 An Introduction to Theory and Research on Skin Conditions, Depressive Disorders and Compassion 1

1.1 Skin Conditions 1

1.2 Depressive Disorders 4

1.3 Compassion 7

1.4 Conclusion 11

2 A Systematic Review of Compassion-Based Interventions for Depression 13

2.1 Background 13

2.1.1 Treatment of Depression 13

2.1.2 Compassion 14

2.1.3 Previous Reviews 14

2.1.4 The Current Review 15

2.2 Method 16
2.2.1 Literature Search 16
2.2.2 Inclusion Criteria 16
2.2.3 Exclusion Criteria 16
2.2.4 Appraisal of Study Quality 17
2.3 Results 17
2.3.1 Summary of Study Characteristics 18
2.3.2 Compassion Focused Therapy/Compassionate Mind Training . 27
2.3.3 Mindful Self-Compassion Programme 30
2.3.4 Cognitively-Based Compassion Training 32
2.3.5 Compassion as a Self-Help Emotion Regulation Strategy 34
2.4 Discussion 37
2.4.1 Outcomes of Interventions 37
2.4.2 Acceptability of Interventions 38
2.4.3 Study Quality 39
2.4.4 Clinical Implications 39
2.4.5 Research Implications 40
2.4.6 Limitations of the Review 41
2.4.7 Conclusions 42

3 The Effects of Disgust and Self-Compassion on Depression in Dermatological Outpatients 43

3.1 Introduction 43
3.1.1 Psychological Impact of Visible Differences 43
3.1.2 Disgust Responses to Visible Differences 44
3.1.3 Affect Regulation Systems and Depression 46
3.1.4 The Current Study 47
3.2 Method 48
3.2.1 Participants 48
3.2.2 Procedure 48
3.2.3 Measures 50

3.2.4 Data Analysis Strategy 53
3.3 Results 55
3.3.1 Time One Descriptive Findings 55
3.3.2 Time One Associations with Depression 56
3.3.3 Time One Regression Analyses 58
3.3.4 Time Two Descriptive Findings 62
3.3.5 Attrition Analyses 62
3.3.6 Time Two Associations with Depression 62
3.3.7 Time Two Regression Analyses 63
3.4 Discussion 66
3.4.1 Limitations 67
3.4.2 Implications 69
3.4.3 Conclusions 70

4 An Exploration of High Self-Compassion in People with Chronic Skin Conditions 71
4.1 Introduction 71
4.1.1 Adjustment to Skin Conditions 71
4.1.2 Self-Compassion 74
4.1.3 The Current Study 75
4.2 Method 75
4.2.1 Participant Characteristics and Recruitment 75
4.2.2 Procedure 77
4.2.3 Data Analysis Strategy 79
4.2.4 Quality Control 80
4.3 Results 81
4.3.1 Impact of the Skin Condition 81
4.3.2 Difficulty-Management Strategies 85
4.3.3 Development of Management Strategies 97
4.4 Discussion 104
4.4.1 Limitations 108

4.4.2 Implications 109
4.4.3 Conclusions 111

5 Acceptability and Feasibility of an Online Compassion-Based Intervention for Depression in People with Skin Conditions 113

5.1 Introduction 113
5.1.1 Psychological Treatments for People with Skin Conditions . . . 113
5.1.2 Treatment of Depression and Physical Health Conditions 114
5.1.3 Skin-Specific CBT-Based Self-Help 115
5.1.4 The Development of Compassion-Based Self-Help 116
5.1.5 Compassion Self-Help for Skin Conditions 117
5.2 The Current Study 118
5.3 Method 119
5.3.1 Design 119
5.3.2 Participants 119
5.3.3 Procedure 119
5.3.4 Intervention 121
5.3.5 Measures 123
5.3.6 Sample Size 125
5.3.7 Data Analysis Strategy 126
5.4 Results 126
5.4.1 Participant Flow 126
5.4.2 Baseline Characteristics 127
5.4.3 Acceptability Outcomes 127
5.4.4 Feasibility Outcomes 132
5.4.5 Depression, Self-Compassion and Quality of Life Outcomes . . . 132
5.5 Discussion 135
5.5.1 Limitations 140
5.5.2 Implications 141
5.5.3 Conclusions 143

6 General Discussion 145

6.1 The Relevance of Self-Compassion for People with Skin Conditions . . 145

6.1.1 Adjustment to Skin Conditions 146

6.2 Self-Compassion as a Therapeutic Target for Depression 148

6.2.1 Mechanisms of Change 149

6.2.2 Models of Depression 150

6.3 The Multifaceted Nature of Self-Compassion 152

6.3.1 Individual Differences in Self-Compassion 153

6.4 Strengths and Limitations 155

6.5 Future Directions 157

6.6 Conclusion 158

References 161

Appendices 188

A NHS Research Ethics Committee Approval Letter 191

B Study 1 Materials 197

B.1 Participant Information Sheet 197

B.2 Consent Form 201

B.3 Debrief Sheet 202

B.4 Demographic Questions 203

B.5 Skin Condition Questions–Time One 204

B.6 Depression Anxiety Stress Scales–21 205

B.7 Self-Compassion Scale–Short Form 206

B.8 Disgust Propensity and Sensitivity Scale–Revised 207

B.9 Skin Condition Questions–Time Two 208

C Study 1 Supplementary Analyses 209

C.1 Exploratory Factor Analysis of the Disgust Propensity and Sensitivity Scale–Revised (DPSS–R) 209

C.2 Exploratory Factor Analysis of the Self-Compassion Scale–Short Form (SCS–SF) 211
C.3 Supplementary Regression Analyses 213
  C.3.1 Supplementary Time One Regression Analyses 213
  C.3.2 Supplementary Time Two Regression Analyses 216

D Study 2 Materials **219**
D.1 Participant Information Sheet–Survey 219
D.2 Consent Form–Survey 222
D.3 PHQ-2 223
D.4 Participant Information Sheet–Interview 224
D.5 Consent Form–Interview 228
D.6 Interview Schedule 229

E Developing Templates **231**

F Template Analysis Codebook **245**

G Study 3 Materials **259**
G.1 Participant Information Sheet 259
G.2 Consent Statement 264
G.3 Screening Questions 265
G.4 Demographic Questions 266
G.5 Clinical Questions 267
G.6 Depression Anxiety Stress Scales–Depression Subscale 268
G.7 Self-Compassion Scale 269
G.8 Dermatology Life Quality Index 272
G.9 Weekly Feedback Questions 274
G.10 Overall Feedback Questions 276
G.11 Screenshots from the Compassion for Skin Conditions Website 278
G.12 Guided Self-Help Email Text 307

H Feedback on the Compassion for Skin Conditions Self-Help Programme **311**

List of Figures

1.1 Number of Articles with Titles containing ‘Compassion’ Indexed in the Web of Science Core Collection by Year of Publication 8

2.1 PRISMA Flowchart for the Selection of Eligible Studies 17

3.1 The Moderating Effect of Self-Compassion on the Relationship between Disgust Propensity and Time One Depression 60

4.1 Cognitive Strategies for Managing Skin-Related Difficulties 86

4.2 Behavioural Strategies for Managing Skin-Related Difficulties 90

4.3 General Developmental Factors 98

4.4 Skin-Specific Developmental Factors 100

5.1 Flowchart of Participants through Study 3 128

5.2 Self-Reported Homework Compliance by Session 130

5.3 Average Agreement with Weekly Feedback Items for the Compassion for Skin Conditions Intervention 133

5.4 Grand Means of Weekly Feedback Items by Session 133

6.1 Evidence-Based Paths connecting Self-Compassion and Depression . . . 151

G.1 Screenshot of Compassion for Skin Conditions Home Page 278

G.2 Screenshot of Compassion for Skin Conditions Session 1 280

G.3 Screenshot of Compassion for Skin Conditions Session 2 285

G.4 Screenshot of Compassion for Skin Conditions Session 3 290

G.5 Screenshot of Compassion for Skin Conditions Session 4 293

G.6 Screenshot of Compassion for Skin Conditions Session 5 296

G.7 Screenshot of Compassion for Skin Conditions Session 6 303

H.1 Website Evaluation Item Means by Session 311

H.2 Session Impacts Item Means by Session 312

List of Tables

2.1 Compassion-Based Intervention Studies with Depression Outcomes . . 21

3.1 Demographic Characteristics of Participants ($N = 147$) 56

3.2 Skin Condition Diagnoses of Participants ($N = 147$) 57

3.3 Correlations and Descriptive Statistics of Main Study Variables ($N = 147$) 58

3.4 Hierarchical Regression Model for the Prediction of Time One Depression by Disgust Propensity and Self-Compassion 60

3.5 Hierarchical Regression Model for the Prediction of Time One Depression by Disgust Sensitivity and Self-Compassion 61

3.6 Hierarchical Regression Model for the Prediction of Time One Depression by Ruminative Disgust and Self-Compassion 61

3.7 Hierarchical Regression Model for the Prediction of Time Two Depression by Time One Depression, Disgust Propensity and Self-Compassion . . . 64

3.8 Hierarchical Regression Model for the Prediction of Time Two Depression by Time One Depression, Disgust Sensitivity and Self-Compassion . . . 65

3.9 Hierarchical Regression Model for the Prediction of Time Two Depression by Time One Depression, Ruminative Disgust and Self-Compassion . . 66

4.1 Participant Characteristics 78

4.2 Qualitative Interview Topics 79

4.3 Compassion-Related *A Priori* Codes used in Template Analysis ($N = 10$) 82

5.1 Components of the Compassion for Skin Conditions Self-Help Intervention 122

5.2 Demographic Characteristics of Eligible Participants ($N = 34$) 129

5.3 Self-Reported Skin Conditions ($N = 34$) 130

5.4 Pre–Post Changes on Outcome Measures for Treatment Completers ($n = 8$) 134

5.5 Pre–Post Changes on Outcome Measures for Eligible Participants ($N = 34$) 135

5.6 Pre–Post Changes on Self-Compassion Subscales for Treatment Completers ($n = 8$) . . . 135

5.7 Pre–Post Changes on Self-Compassion Subscales for Eligible Participants ($N = 34$) . . . 136

C.1 Pattern Matrix of Items from the Disgust Propensity and Sensitivity Scale–Revised ($N = 147$) . . . 210

C.2 Pattern Matrix of Items from the Self-Compassion Scale–Short Form ($N = 147$) . . . 212

C.3 Supplementary Correlations and Descriptive Statistics of Main Study Variables ($N = 147$) . . . 213

C.4 Supplementary Regression Models for the Prediction of Time One Depression. . . . 215

C.5 Supplementary Regression Models for the Prediction of Time Two Depression. . . . 217

E.1 Participants that Contributed to each Theme in the Final Template . . . 240

F.1 Codes for Impact of Skin Condition . . . 245

F.2 Codes for Difficulty Management Strategies . . . 248

F.3 Codes for Development of Management Strategies . . . 254

H.1 Qualitative Feedback Given by Treatment Completers ($n = 8$) . . . 313

List of Acronyms

ACT	Acceptance and Commitment Therapy
APPGS	All Party Parliamentary Group on Skin
BDI-II	Beck Depression Inventory-II
CBCT	Cognitively Based Compassion Training
CBT	Cognitive Behavioural Therapy
cCBT	Computerised Cognitive Behavioural Therapy
CFT	Compassion Focused Therapy
CMT	Compassionate Mind Training
DASS	Depression Anxiety Stress Scales
DASS–D	Depression Anxiety Stress Scales–Depression subscale
DLQI	Dermatology Life Quality Index
DPSS–R	Disgust Propensity and Sensitivity Scale–Revised
DSM	Diagnostic and Statistical Manual of Mental Disorders
HPA axis	Hypothalamus-Pituitary-Adrenal axis
IAPT	Improving Access to Psychological Therapies
IPT	Interpersonal Therapy
MBSR	Mindfulness Based Stress Reduction
MDD	Major Depressive Disorder
MSC	Mindful Self-Compassion
NICE	National Institute for Health and Clinical Excellence
NHS	National Health Service
PHQ-2	Patient Health Questionnaire-2
PWP	Psychological Wellbeing Practitioner
RCT	Randomised Controlled Trial
SCS	Self-Compassion Scale
SCS–SF	Self-Compassion Scale–Short Form
SPSS	Statistical Packages for the Social Sciences
TAU	Treatment As Usual

Preface

There are three strands to the research presented in this thesis: skin conditions, depression and compassion. My interest in these topics has developed over many years as a result of personal and professional experiences. First of all, skin conditions have always been part of my life, as I have had atopic eczema since childhood. I am fortunate that my eczema is usually fairly mild and has not led to any significant impact on my life. However, I also have a family member who suffered severely with acne as a teenager, and this person's self-esteem was significantly affected as a result. The contrast between our experiences made me keenly aware of the importance of the psychosocial aspects of skin conditions and I became motivated to improve understanding of these aspects, with the goal of ultimately alleviating distress. Throughout my PhD studies I have grown increasingly fascinated with skin: not only is it the boundary between ourselves and the world, it is the largest organ in the body and performs many functions. Skin helps us to regulate our temperature, protects us from microorganisms, ultraviolet radiation and fluid loss, allows us to feel the world around us, and leads to manufacture of vitamin D. It also grows with us, renews itself constantly, and heals when damaged. However, there are many ways that skin can malfunction, and skin conditions are the result. There are so many types of skin condition that I became interested in developing interventions that would be suitable across skin conditions, so as not to neglect or exclude people with rarer conditions, who arguably might be more in need of psychosocial support due to the rarity of their conditions.

I have been interested in mental health for a long time, having observed family members with depression and experiencing periods of depression myself. I was an early member of the Improving Access to Psychological Therapies (IAPT) workforce in England, working as a Psychological Wellbeing Practitioner (PWP) to provide low-intensity psychological interventions to people with depression and anxiety disorders, a role that I had for five years. The interventions I provided were delivered face-to-face, by telephone, online and in group formats. During this role I was introduced to the CBT formulations of depression and anxiety disorders and discovered how helpful this approach can be for some people. I also discovered the range of self-help information that is available and became passionate about self-help materials being user-friendly to enhance people's engagement with them. Because of my interest in self-help materials, I helped re-design the self-help booklets used by one primary care mental health team, and helped develop a group programme for people with chronic pain in another. The latter was part of IAPT's long term conditions/medically unexplained symptoms pathway and incorporated some 'third-wave' CBT approaches such as mindfulness and value-based living, which emphasise the context, rather than content, of one's experiences. Working in multidisciplinary teams in IAPT allowed me to gain a comprehensive understanding of the different types of therapies that are currently available for people with mental health problems. I also gained an appreciation of how important it is to have a good match between the intervention and the individual's needs, and therefore the value of having a range of treatment options available. I became interested in developing self-help interventions to facilitate access to suitable treatments for more people, which led me to consider moving from a clinical role into research. I then began my PhD under the supervision of Prof. Andrew R. Thompson, who was then working at the University of Sheffield, leading research on the psychosocial aspects of skin conditions and the development of brief psychological interventions.

Compassion-based approaches put into words what I had often observed while working in mental health services: that some people seem to have a lifelong habit of belittling or persecuting themselves. Although negative thoughts about the self are a common feature of depression, for some people, the idea of being self-compassionate seems completely alien, even when not feeling depressed. Such people often have double standards, treating themselves much more unkindly than they would others. Traditional CBT approaches tackle this lack of self-compassion obliquely, with thought challenging questions such as "what would you say to a friend who was in the same situation?" In contrast, compassion-based approaches address the issue head-on, teaching people about what compassion is, why we can sometimes have problems with it and how to apply it to ourselves and others.

My own self-compassion, as measured by the Self-Compassion Scale, has increased since starting my PhD. This has been the result of reading and thinking about compassion a great deal, noticing more things about myself and also using many of the therapeutic techniques from compassion-based therapies. I have also been fortunate to attend two of the Compassionate Mind Foundation's annual conferences, which were personally and professionally beneficial. I find it uplifting that there so many researchers and clinicians who work on increasing compassion in the world, and I am pleased that my research may contribute to this work.

Aims of the Research

The research presented in this thesis aimed to investigate the use of compassion as a therapeutic intervention for depression in people with chronic skin conditions. Specifically, it aimed to address the following research questions:

1. Can compassion-based interventions reduce depression?
2. Does self-compassion act as a protective factor against depression in people with skin conditions?
3. How does high self-compassion operate and develop in people with skin conditions?
4. Is compassion-based self-help acceptable to people with skin conditions and depression, is it feasible to provide and what improvements are needed?

To address these research questions, a mixed methods approach was used. A systematic review was chosen as the most appropriate method of addressing whether compassion-based interventions can reduce depression, although at the time of the review, there were not enough published randomised controlled trials (RCTs) to conduct a quantitative (meta-analytic) synthesis of the results. A quantitative approach was used for investigating self-compassion as a protective factor against depression, as this involved testing hypotheses derived from the psychological literature. However, there is little existing research on positive adaptations to skin conditions or naturalistic high self-compassion. Therefore, it was decided to carry out an in-depth study of how high self-compassion operates and develops in people with skin conditions using a qualitative approach. A combination of quantitative and qualitative measures were used to evaluate the acceptability and feasibility of a novel compassion-based self-help intervention.

Structure of the Thesis

This thesis comprises six chapters. Chapter 1 provides the context for the research presented in this thesis. It introduces the challenges faced by people who live with skin conditions, the symptoms and theoretical approaches to depressive disorders, and the application of compassion as a therapeutic approach for emotional distress. Chapter 2 then presents a systematic review of the literature on compassion-based interventions for depression, which was conducted in July 2016. The next three chapters present empirical studies. Study 1, a correlational study of the effects of disgust variables and self-compassion on depression in dermatology outpatients, is presented in Chapter 3. Study 2 was a qualitative investigation of how high self-compassion operates and develops in people with skin conditions, which is presented in Chapter 4. Chapter 5 presents Study 3, an acceptability and feasibility study of an online, compassion-based intervention for depression in people with skin conditions, with recommendations for further intervention development. A general discussion of the research conducted is provided in Chapter 6.

Chapter 1

An Introduction to Theory and Research on Skin Conditions, Depressive Disorders and Compassion

This chapter provides the context for the research reported in this thesis. Types and causes of skin conditions are briefly described, along with some of the common symptoms, treatments and impacts. The symptoms and prevalence of depressive disorders are then introduced, and a brief overview of theoretical models of depression is provided. Finally, the concept of compassion is introduced, including research on self-compassion and its associations with mental health.

1.1 Skin Conditions

Skin conditions, or *cutaneous* conditions, are those that affect the integumentary system—the skin and its “accessory structures”, which include hair, hair follicles, exocrine glands and nails (Martini et al., 2017, p. 199). There are over 1,000 known skin conditions (Schofield et al., 2009) and skin conditions can begin at any age (Gawkrodger, 2013). Skin conditions can be caused by infections (bacterial, viral, fungal or parasitic), allergens/irritants, autoimmune and inflammatory responses, and internal medical conditions (e.g., diabetes mellitus). In many cases, the aetiology of the condition is unknown, but some skin conditions run in families and so appear to have a genetic component. Skin conditions that are caused by infections, allergens or irritants can generally be cured with treatment, and so are often acute, or short-term, conditions. They can be further prevented by avoiding exposure to the allergen, irritant or source of infection. Other skin conditions are not curable, so for these, the aim of treatment is management of symptoms. Out of the chronic skin conditions seen in dermatology departments, psoriasis, eczema and acne are the most common (Schofield et al., 2009). Naturally, symptoms vary between conditions, but common symptoms of skin conditions include pruritis (itch), skin that is reddened, raised, flaking, split, or crusted, and lesions such as blisters, pustules, and ulcers (Gawkrodger, 2013). Treatment of skin conditions varies by condition and severity, but common treatments include moisturisers (ointments, creams and lotions), topical treatments (e.g., steroid creams and coal tar preparations), ultraviolet light therapies, steroid injections and oral medications (e.g., antibiotics or systemic medications).

The research presented in this thesis focuses on chronic skin conditions, not those that are transient and curable, nor any types of skin cancer. Furthermore, the research presented here focuses on substantive skin conditions, excluding conditions that exclusively affect the hair (e.g., alopecia) or nails (e.g., onycholysis). This is because the research ultimately aimed to provide knowledge that will help improve the lives of people with substantive skin conditions, such as eczema and psoriasis, who generally experience uncomfortable or painful physical symptoms affecting their skin. In Study 1 (Chapter 3), because of the inclusion of disgust variables, the sample was further restricted to people who had skin conditions that can typically cause disruption to the skin surface (e.g., causes plaques or erosions), as these changes to the skin surface are a theorised disgust elicitor (Haidt et al., 1994). As Study 2 (Chapter 4) constituted a qualitative exploration of the findings of Study 1, the same inclusion criteria were used in Study 2 for consistency. However, for Study 3 (Chapter 5), which was a self-help study aiming to build self-compassion, it was not necessary to use this additional restriction, as self-compassion is adaptive for many types of problems (see Section 1.3). Therefore, in Study 3, people with any type of substantive skin condition were included.

Overall, skin conditions are extremely common, being the most common reason that people see their GP for a new complaint (Schofield et al., 2011). In the UK, an estimated 54% of the population experience a skin condition each year. While the majority (69%) of these people self-care, almost 13 million people in England and Wales visit their GP each year for skin complaints (Schofield et al., 2009). However, skin conditions due to infections account for the largest proportion of new skin complaints (41%; Schofield et al., 2011). Perhaps because most people will have experienced a minor skin condition at some point in their lives, the impact of chronic skin conditions is often misunderstood. Skin conditions are rarely life-threatening and thus can be perceived as less important than conditions that affect other organs. Dermatology is sometimes described as a ‘Cinderella’ service, that is, a poor relation to other medical specialities in terms of commissioning and specialist training (British Association of Dermatologists, 2013; Schofield et al., 2009, 2011). Perhaps unsurprisingly, given the limited resources for medical dermatology treatments, access to skin-specific psychological support is limited even for those who are referred for specialist care (All Party Parliamentary Group on Skin [APPGS], 2013, 2020).

Chronic health conditions are those that "persist for an extended amount of time, typically have an unforeseeable cure and can greatly impact an individual's life" (Petrie & Jones, 2019, p.110). Heart disease, diabetes, and arthritis are just a few examples of chronic health conditions. Chronic skin conditions, being a particular type of chronic health condition, naturally fit into the definition given above. Skin conditions may present many of the same challenges as other chronic health conditions, for example, a deterioration in physical health, adjusting to the diagnosis and becoming a 'patient', reappraisal of one's abilities and goals, learning about the condition and its treatment, and facing uncertainty about the future (Petrie & Jones, 2019). However, skin conditions may differ from other chronic health conditions in several ways. First, many skin conditions follow a chronic intermittent course (Gawkrodger, 2013), with episodes of greater severity, often referred to as a *flare* or *flare-up*. The changing, and often unpredictable, nature of the skin can make it difficult to adjust to living with the condition. Second, skin conditions often have the unenviable quality of causing uncomfortable physical symptoms *and* being visible to others. When this is the case, people have the difficulties of living with a chronic health condition combined with the difficulties of living with an appearance-altering condition. Many chronic health conditions are not visible to others (e.g., diabetes, HIV) but the visibility of certain skin conditions means that individuals affected by them have a lack of control over whether other people know that they have a health condition. Third, as mentioned above, the impact of skin conditions can be trivialised by society. This may leave people with skin conditions feeling that they are somehow less-deserving of healthcare resources or support for their condition.

The impacts of skin conditions can be wide-ranging. Studies have shown that skin conditions can have comparable effects on quality of life as angina, hypertension (Parks et al., 2003), arthritis, cancer and heart disease (Rapp et al., 1999). Skin conditions can negatively affect activities of daily living (e.g., bathing, laundry and cleaning) due to having to use specialist cleansers and/or avoid contact with detergents (de Aruda & de Moraes, 2001). Sleep (Hebert et al., 2018; Schofield et al., 2009) and exercise (Auker et al., 2020) can be affected due to pain or itch. The costs associated with treatment can impact on finances (Hebert et al., 2018), and work/school can be affected by symptoms being distracting and by needing time off (de Aruda & de Moraes, 2001; Dures, Morris, et al., 2011; Sampogna et al., 2012). Some people experience difficulties in socialising due to appearance concerns (de Aruda & de Moraes, 2001; Dures, Morris, et al., 2011; Hebert et al., 2018) and some find that their family and sexual relationships are affected by physical contact being uncomfortable for them (de Aruda & de Moraes, 2001). Skin conditions can also negatively impact body image (Gupta & Gupta, 2013).

A further, related, impact of skin conditions is on mental health. Living with a chronic skin condition can involve ongoing difficulties in the aforementioned areas, which can be sources of stress and hence chronic skin conditions can be chronic stressors. Living with any chronic stressor is an important predictor of psychological distress (Wheaton & Montazer, 2009). Moreover, living with a skin condition may present particular challenges to emotional wellbeing. People living with skin conditions commonly report being subject to intrusive reactions from other people (Johnston et al., 2018) and there is some evidence to suggest that such reactions may be automatic (Grandfield et al., 2005). Furthermore, there is evidence that people with a skin condition exhibit a preference for clear skin over diseased skin (Grandfield, 2007), which may play a role in the internalisation of stigma that can be experienced by people with skin conditions (Thompson et al., 2010). If people with skin conditions perceive themselves to be falling short of their ideal standards due to their skin condition, they may experience difficulties such as self-criticism, or feelings of shame (Thompson, 2005), both of which are positively associated with mental health problems (e.g., Kim et al., 2011; Tangney et al., 1995; Werner et al., 2019). Indeed, skin conditions have been found to be associated with increased prevalence of mental health problems (Dalgard et al., 2015; Picardi et al., 2000).

While there is generally a higher prevalence of mental health problems among people with skin conditions than those without, there is also considerable individual variation (Thompson, 2005). Drawing together a framework of the factors implicated in the origin and/or maintenance of skin-specific distress, Thompson (2005) identified five key areas: (1) disease and treatment factors; (2) predisposing developmental factors; (3) cognitive factors, such as personality traits and core beliefs; (4) coping strategies; and (5) ongoing sociocultural factors. Understanding the factors that lead to or maintain psychological distress is important for developing effective therapeutic interventions. Of the five areas identified, disease/treatment, developmental and sociocultural factors may be difficult or impossible to change and therefore offer limited opportunities for intervention. In contrast, cognitive factors and coping strategies are more amenable to change and can be targeted with psychological interventions. The research presented in this thesis therefore aims to add to the psychological literature on intrapersonal processes in people with skin conditions, with particular regard to depression. Depression is one of the mental health problems most commonly experienced by dermatology patients (Gupta, 2005) and can adversely affect health outcomes for people with chronic physical health conditions (Stein et al., 2006).

1.2 Depressive Disorders

Major depressive disorder (MDD) is characterised by depressed mood and/or loss of interest in usual activities, accompanied by symptoms such as lack of appetite, insomnia, fatigue, feelings of worthlessness, poor concentration and recurrent thoughts of death (American Psychiatric Association, 2013). Five or more symptoms must have been present nearly every day for a two week period and cause clinically significant distress or impairment in functioning to meet the criteria for MDD. Persistent depressive disorder (dysthymia) is characterised by depressed mood for most of the day, on more days than not for at least two years, accompanied by two or more symptoms such as lack of appetite, insomnia, fatigue, low self-esteem, poor concentration and feelings of hopelessness. Dysthmia is therefore a less severe but chronic depressive disorder. Persistent symptoms of dysthmia that have been present for less than two years can be referred to as *subthreshold depressive symptoms* (National Institute for Health and Clinical Excellence [NICE], 2009). Depressive disorders often have a chronic intermittent course, with 75% of people who have had a major depressive episode experiencing this more than once (Andrade et al., 2003). While a clinical interview with a qualified clinician is required to give a diagnosis of a depressive disorder, experiences of depressive symptoms can be assessed using self-report measures. For simplicity, in this thesis, *depression* will be used to refer to the experience of individuals who have depressive symptoms, regardless of whether a formal diagnosis has been given (i.e., *reduced depression* means fewer symptoms of depression being experienced over a given time period).

Worldwide, depressive disorders affect over 264 million people and are the third leading cause of non-fatal health loss (James et al., 2018). Global prevalence is estimated at 3.4%, with variation by country ranging from 2% to 6% (Ritchie & Roser, 2020). In a European study, the 12-month prevalence rates of MDD and dysthymia were found to be 3.9% and 1.1% respectively, with lifetime prevalence rates of 12.8% and 4.1% respectively (Alonso et al., 2004). Women are approximately twice as likely to experience depression in their lifetime than men, with this gender difference emerging during puberty and then persisting throughout life (Kuehner, 2017). Being divorced or separated is associated with higher rates of depressive disorders than being currently married, while associations between depressive disorders and age, education level and income vary across cultures (Andrade et al., 2003; Kessler & Bromet, 2013). In addition, stressful life events, such as bereavements and work difficulties, are associated with depression (Tibubos et al., 2020).

The societal costs of depression are substantial. In 2000, the total cost of depression among adults in England was estimated to be over £9 billion, including £370 million direct treatment costs and 109.7 million working days lost due to depression (Thomas & Morris, 2003). Depression further adds to societal costs by worsening physical health. Depression predicts coronary heart disease (CHD) in healthy people (Rugulies, 2002) and worsens the health of people with chronic diseases such as angina, arthritis, asthma, and diabetes (Moussavi et al., 2007). Depression also predicts mortality among people with CHD (Barth et al., 2004), cancer (Satin et al., 2009), and end-stage renal disease (Lopes et al., 2002). Finally, depression is an important determinant of suicidality (Bernal et al., 2007).

Several different theoretical approaches to depression exist. Biology undoubtedly plays a role in depression: there is evidence for a genetic component, with heritability estimates suggesting around a third of the variance in depression is explained by genetics (Fernandez-Pujals et al., 2015; Sullivan et al., 2000). This genetic predisposition to depression can be understood as part of a diathesis-stress model, given that heritability is less than 100%, and that adverse life events, especially during childhood, are positively associated with depression (Chapman et al., 2004; Tibubos et al., 2020). Epigenetics, the influence of environmental factors on gene expression, may play a role in the development of depression. Although there is no unified neurobiological theory of depression, a number of the biological mechanisms involved have been identified (Goldstein et al., 2011). Changes in the levels and functions of various neurotransmitters and hormones are associated with depression, including serotonin, norepinephrine, dopamine, gamma-aminobutyric acid (GABA), cortisol, growth hormone and melotonin. Many of these substances interact with each other and form feedback mechanisms. It has been suggested that the physiological changes in depression can be understood as a “cascade of neuroendocrine effects”, with different antidepressants acting at different steps of this pathway (Goldstein et al., 2011, p. 21). Structural and functional changes in the brain have also been found in depression, notably in the prefrontal cortex, anterior cingulate cortex, hippocampus and amygdala, areas that are associated with self-referential functions and emotional processing (Drevets et al., 2008).

Taking an evolutionary perspective raises the question of why depression exists at all, that is, whether it can confer some advantage for reproductive success. In their *social risk hypothesis*, Allen and Badcock (2003) propose that depression evolved as a way of reducing risk in social interactions at times when the value an individual brought to their social group was in danger of being outweighed by the burden they placed upon it. Such individuals potentially faced social ostracism, which would have been a distinct disadvantage in the evolutionary past. Accordingly, the depressive mechanism served to make ‘at-risk’ individuals more vigilant to social cues signalling threat, more reliant on support within close relationships, less competitive and less motivated to achieve outcomes that would involve social risk (e.g., finding a mate). These strategies would have helped individuals improve their ratio of social value to social burden and thus remain within their social group. In this view, mild and transient depressed mood states are proposed to be an adaptive strategy to avoid social exclusion, whereas more severe and/or chronic depression are seen as maladaptive divergences from this strategy.

Regardless of the aetiology of depression, there are undoubtedly changes that occur in a depressed person's behaviour and cognitions that serve to maintain the depression, which could be via altered chemical pathways (cf. Drevets et al., 2008). Behavioural models of depression use principles of operant conditioning, such as positive and negative reinforcement. For example, someone who is depressed may stop doing everyday activities due to lethargy and amotivation. While reduced activity means that they don't have to expend as much energy (negative reinforcement), it also means that they have fewer opportunities for activities that would normally give them a sense of achievement or enjoyment and so lift their mood (lack of positive reinforcement). Interventions based on behaviourist perspectives therefore focus on changing depressive behaviour. In contrast, cognitive theories of depression focus on the changes in thinking that occur in depression. Beck (1967) identified the *negative cognitive triad* that is typical of depression: negative thoughts about the self, world and future. Subsequent cognitive theories of depression emphasised the role of attribution style, with evidence that attributing negative events to internal, stable and global factors is involved in depression (Abramson et al., 1978; Rubenstein et al., 2016; Seligman et al., 1979). Traditionally, cognitive interventions encouraged people with depression to reconsider the validity of their negative thoughts. Combining the techniques based on cognitive and behavioural models of depression gave rise to cognitive behavioural therapy (CBT), which is now a recommended, evidence-based treatment for depression (NICE, 2009). In the last twenty years or so, cognitive-behavioural approaches have begun to emphasise the context of one's experiences rather than trying to change the content of cognitions. *Contextual CBT* approaches generally aim to foster greater psychological openness, mindful awareness and meaningful action (Hayes et al., 2011). Mindfulness-based Cognitive Therapy, Acceptance and Commitment Therapy and Compassion Focused Therapy (CFT) are examples of these contextual, or *third wave* CBT approaches. A meta-analysis found evidence that third-wave CBT approaches were more effective for depression than treatment as usual (TAU), but the quality of the evidence was very low, highlighting the need for further research (Churchill et al., 2013).

1.3 Compassion

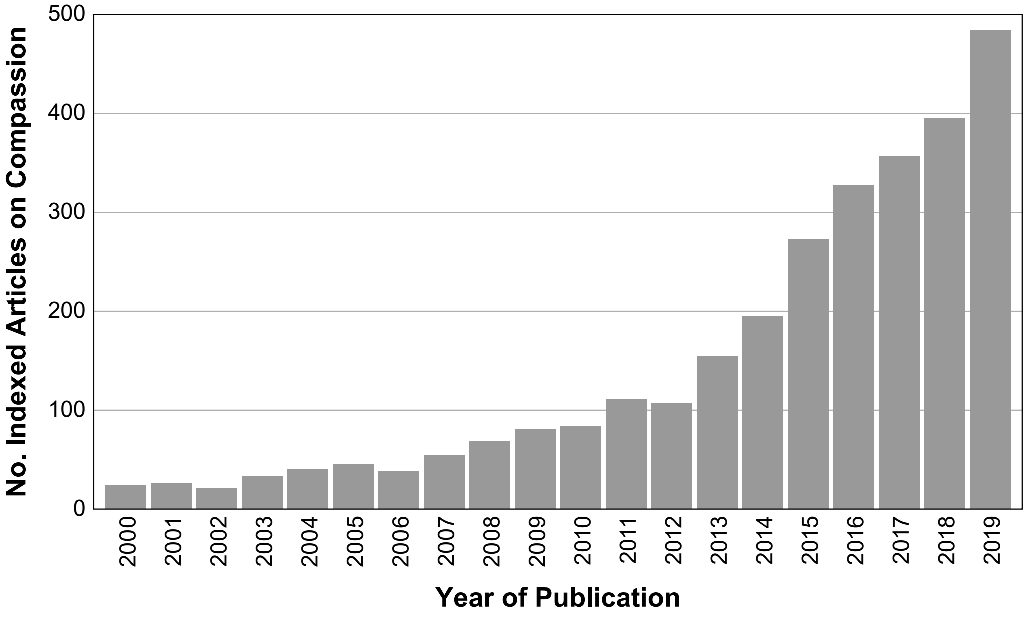
The word compassion comes from the Latin *compati*, meaning 'to suffer with' (*com* = with, *pati* = to suffer). Most conceptualisations of compassion involve it occurring in response to suffering and including the desire to help. From an evolutionary perspective, compassion is adaptive in that it is part of affiliative processes that promote group survival. However, compassion is also at odds with competitive processes that promote individual (or in-group) success. Because of these conflicting motivations, religious and philosophical traditions have often included the desire to cultivate compassion, acknowledging the value of compassion and emphasising the need to practise. In recent years, Western psychology has started to incorporate aspects of Eastern philosophies, and so research on compassion, including self-compassion, has become increasingly popular. Figure 1.1 shows the rapidly-increasing number of publications on compassion indexed in the Web of Science database since 2000.

However, definitions of compassion vary. For example, Goetz et al. (2010) argued that compassion is a distinct emotion with associated facial expressions and postures, although they acknowledged that the interpretation of these may be context-dependent. In contrast, Gilbert, who developed CFT, has pointed out that compassion involves different emotions based upon the context, for example, sadness is likely to occur if comforting a bereaved person, while fear is likely to occur if rescuing someone from a burning building (Gilbert, 2019). In both cases, compassion prompts engagement with the distressing situation, but the affective states are markedly different. In CFT, compassion is conceptualised as a motivation that involves many skills and attributes (Gilbert, 2005, 2010, 2019), and is defined as "a sensitivity to suffering in self and others, with a commitment to try to alleviate and prevent it" (Gilbert, 2014b, p. 19). CFT also identifies three possible flows of compassion: self-to-other, other-to-self and self-to-self. The research presented in this thesis focuses on the self-to-self flow of compassion, or self-compassion.

An alternative conceptualisation of self-compassion is given by Neff, who defined

Figure 1.1

Number of Articles with Titles containing 'Compassion' Indexed in the Web of Science Core Collection by Year of Publication



self-compassion as “an emotionally positive self-attitude”, comprised of self-kindness, common humanity and mindfulness, in the face of pain and failure (Neff, 2003b, p. 85). Gilbert and Neff’s ideas about self-compassion are not mutually exclusive, but are organised around different frameworks. The majority of published research on self-compassion has used Neff’s Self-Compassion Scale (SCS; Neff, 2003a), although other scales to measure compassionate engagement and actions have since been developed (Gilbert et al., 2017). The qualitative research presented in Chapter 4 includes an exploration of how Gilbert’s and Neff’s different frameworks translate into self-compassionate strategies in people with skin conditions.

Gilbert and Neff both posit that self-compassion involves the internalisation of social processes, particularly those connected to early experiences of receiving care. Children who have warm, supportive parents are expected to develop self-compassion more readily than children whose parents are cold, rejecting or abusive (Gilbert, 2000; Neff, 2003b). In *social mentality theory*, Gilbert (2000) has further argued that people’s compassion or cruelty towards themselves recruits evolved mechanisms for navigating social interactions. A *social mentality* is an appraisal system that “provides instruction about what to attend to in self and the other and what to exhibit, or display in order to fulfil a particular role” (Gilbert, 1989, p. 315). As humans evolved to have multiple social roles, such as finding a mate, caring for offspring and defending against competitors, they needed to be competent at interpreting and sending social signals in various contexts and developed a number of social mentalities accordingly. Each social mentality organises a particular pattern of attentional focus, cognitions, emotions and behaviours that help meet the current goal. For example, a care-giving mentality would be active when caring for offspring, and this would include compassion—sensitivity to another’s distress and the attempt to alleviate it. In contrast, a competitive or social ranking mentality would be active when trying to establish social dominance, and might include the use of social comparisons, aggression or humiliation to reduce the rival’s social status. Although social mentalities evolved to aid social interactions, it is proposed that they are also involved in self-evaluations (Gilbert, 2000) and therefore play a role in mental health. When the social ranking mentality is directed towards the self, a combination of dominant strategies, such as self-criticism and self-harm, and submissive strategies, such as striving to avoid inferiority, social comparisons and submissive behaviour, would be expected to emerge. Each of these are known to be are positively associated with depression (Blatt & Zuroff, 1992; Gilbert et al., 2009). Habitually relating to oneself from a social ranking mentality may therefore play a role in depression. Using a care-giving mentality instead is expected to reduce these symptoms and provide opportunities for self-soothing.

Self-compassion is expected to be particularly relevant for people with skin conditions, as it can be seen as a cognitive factor and also leads to coping strategies. Self-compassion therefore fits in with Thompson's (2005) framework of adjustment to skin conditions in the two areas most amenable to psychological intervention: cognitive factors and coping strategies. Indeed, looking at health more broadly, there is evidence that self-compassion is linked to more health-promoting behaviours and fewer negative emotional reactions to illnesses (Terry et al., 2013). Self-compassion has been found to be positively associated with self-rated health across student, community and clinical samples, and this relationship holds even after accounting for positive and negative affect (Sirois, 2020). Furthermore, self-compassion has been shown to be linked to lower stress in people with chronic health conditions (arthritis and inflammatory bowel disease), with indirect effects through greater use of adaptive coping strategies (active coping, acceptance and positive reframing) and reduced use of maladaptive coping strategies (self-blame and behavioural disengagement; Sirois et al., 2015). However, there has been little previous investigation of self-compassion in people with skin conditions. As noted earlier, some people with skin conditions may internalise stigmatising reactions and thus would be expected to experience self-criticism and/or shame due to their skin, in line with a self-directed social ranking mentality. In such cases, self-compassion is likely to be particularly adaptive as it is expected to act in opposition to such processes, through use of a self-directed care-giving social mentality instead. The research presented in this thesis has focused on self-compassion in relation to skin conditions based on this rationale.

There is also neuroscientific evidence that points to the particular relevance of compassion to depression. Research shows that different kinds of positive emotional experiences, specifically, those rooted in affiliation and those rooted in achievement, involve the activation of different neural systems (Depue & Morrone-Strupinsky, 2005). Importantly, affiliative processes generate parasympathetic nervous activity, which works in opposition to the sympathetic nervous activity generated by threatening or incentive-based situations. Based on this research, Gilbert (2009a) proposed a model of three main types of affect regulation system in the brain: a threat/protection system, a drive/excitement system, and a soothing/contentment system. The threat/protection system responds quickly to threats, causing emotions such as anxiety, anger, and disgust, which motivate one to take protective action. The drive/excitation system is a positive affect regulation system that motivates one to seek the resources needed for survival and prosperity. The soothing/contentment system is also a positive affect regulation system, but one that includes feelings of calm, safeness, and contentment rather than striving for things (Gilbert, 2005, 2009a). Each of these systems is important for wellbeing, but will be active in different contexts. Crucially though, the soothing/contentment system acts as the regulator of the threat/protection and drive/excitement systems, giving rise to calm and peaceful feelings (Gilbert, 2009a, 2009b). Depression is theorised to involve the three affect regulation systems being chronically out of balance: the threat/protection system is over-active, causing feelings of dread and being trapped, the drive/excitement system is under-active, causing feelings of despair and anhedonia, and the soothing/contentment system is under-active, causing feelings of being unsafe and disconnected from others (Gilbert, 2014a). Receiving compassion, from the self or others, is expected to provide protection against the development of depression by keeping the three affect regulation systems in balance (Gilbert, 2014a).

Meta-analyses have shown that self-compassion is positively associated with wellbeing (Zessin et al., 2015) and negatively associated with psychological distress, including depression (MacBeth & Gumley, 2012). There is also good evidence that fears of receiving compassion from others and/or oneself are associated with depression (Coelho et al., 2019; Gilbert et al., 2014; Joeng & Turner, 2015; Merritt & Purdon, 2020). Furthermore, there is evidence that self-compassion causally affects wellbeing (Zessin et al., 2015), which implies that interventions to increase self-compassion may be beneficial for people with depression. Consistent with this, qualitative research has shown that individuals with depression or anxiety disorders could see the value of becoming self-compassionate but expected that this would be difficult for them due to their long-standing negative attitudes towards themselves and the impact of their depression/anxiety problems (Pauley & McPherson, 2010). Several interventions to increase compassion have been developed, and the effects of these on depression are reviewed in Chapter 2.

1.4 Conclusion

The number of identified skin conditions is substantial, and there is great variety in their aetiology, course, symptoms and treatments. The impacts of skin conditions are also wide-ranging, especially as responses to skin conditions include personal and social/cultural factors. However, if the skin condition leads to negative, threat-based emotions (e.g., anxiety, anger or disgust) or negative self-evaluations (e.g., perceptions of being undesirable or inferior), this may increase vulnerability to depression through the activation of the threat/protection system and the use of a social rank mentality, as described above. Evolutionary and neuroscientific accounts of affect regulation and cross-sectional empirical studies suggest that the use of compassion may be a beneficial therapeutic intervention for people with depression. This is explored further in the next chapter, with a systematic review of compassion-based interventions for depression.

Chapter 2

A Systematic Review of Compassion-Based Interventions for Depression

2.1 Background

2.1.1 Treatment of Depression

Evidence-based clinical guidelines for depression recommend a stepped care model of treatment, including the use of exercise, guided self-help, antidepressant medication and high-intensity psychological interventions, such as CBT or interpersonal therapy (NICE, 2009). A combination of a high-intensity psychological therapy and medication is recommended for those with moderate or severe depression, and mindfulness-based cognitive therapy is recommended as a relapse prevention strategy for people who have previously experienced three or more depressive episodes. Stepped care has been found to be moderately effective for depression ($d = 0.34$ at six months; van Straten et al., 2015). To date, CBT has been the most researched psychotherapy for depression, and hence has the most robust evidence base. There is evidence that treating depression with CBT leads to lower relapse/recurrence rates than using medication (Vittengl et al., 2007), and that the combination of CBT and medication is more effective than medication alone (Hedges' $g = 0.49$; Cuijpers et al., 2013).

Although CBT is the psychotherapy for depression with most evidence to recommend it, it still only has a medium effect size compared to control groups (Hedges' $g = 0.53$ after adjustment for publication bias; Cuijpers et al., 2013). This is likely to be because some patients fail to improve with CBT, as no single therapy is effective for all clients. For example, a large-scale study of CBT in routine clinical practice reported that while 63% of patients with depression showed reliable improvement, 36% showed no reliable improvement and 1% reliably deteriorated (Westbrook & Kirk, 2005). Thus, although many people do benefit from CBT for depression, a substantial minority fail to improve and may benefit from alternative interventions. Third-wave CBT interventions, such as Mindfulness-Based Cognitive Therapy and Compassionate Mind Training, are gaining popularity among therapists, but research regarding their efficacy is still in its infancy (Churchill et al., 2013). These third-wave CBT interventions aim to change clients' emotional responses to their cognitions, without necessarily first changing the content of these cognitions (Hayes et al., 2011). One way of achieving this is through the use of compassion, directed inwards.

2.1.2 Compassion

As noted in Chapter 1, compassion has attracted a great deal of research interest in recent years, with a meta-analysis finding a large negative association ($r = -0.54$) between self-compassion and psychopathology, including depression (MacBeth & Gumley, 2012). Accordingly, there is increasing clinical interest in using compassion as a psychotherapeutic intervention for patients with mental health difficulties and for health promotion with non-clinical populations. Several interventions aimed at increasing compassion and/or self-compassion have now been developed, including Compassion Focused Therapy/Compassionate Mind Training (Gilbert, 2010; Gilbert & Irons, 2005), the Mindful Self-Compassion Programme (Neff & Germer, 2013), Compassion Mindfulness Therapy (Lo et al., 2013), Cognitively-Based Compassion Training (Desbordes et al., 2012), and Compassion Cultivation Training (Jazaieri et al., 2013).

A concept related to compassion is that of *loving kindness*, the wish for all beings to experience happiness (Dalai Lama, 2001). Loving kindness and compassion are sometimes referred to interchangeably in psychological literature, and have been reviewed together (Galante et al., 2014). However, loving kindness is distinct from compassion, which specifically focuses on the desire to alleviate suffering. Compassion may be particularly relevant to the treatment of depression as the alleviation of distress is the main treatment goal. Being caring towards oneself in those moments of distress, that is, being self-compassionate, is an emotion regulation strategy that should be particularly adaptive for depression.

2.1.3 Previous Reviews

There has been growing interest in compassion as a therapeutic tool and several reviews on compassion have been conducted. Two of these were narrative reviews, which both included sections on treatment of mental health problems (Barnard & Curry, 2011; Hofmann et al., 2011). However, they contained only two compassion-based intervention studies with relevant outcomes (Gilbert & Procter, 2006; Mayhew & Gilbert, 2008). More compassion-based intervention studies are now available for review. Additionally, the validity of both of these reviews was limited due to their lack of systematic review methodology, as this may have led to the omission of important, relevant studies from the reviews (Critical Appraisal Skills Programme (CASP), 2014).

Three systematic reviews that included compassion-based intervention studies have also been conducted (Galante et al., 2014; Leaviss & Uttley, 2015; Zessin et al., 2015)[1]. One of these did not review effects on depression, focussing instead on measures of wellbeing (Zessin et al., 2015). The other two reviews reported effects on depression as part of a broader review of wellbeing or psychotherapeutic outcomes. Galante et al. (2014) carried out a systematic review and meta-analysis of 22 randomised controlled trials (RCTs) on meditative techniques that elicit kindness in a conscious way ('kindness-based meditation'; KBM). They concluded that KBM was moderately effective in reducing depression against passive controls (Hedge's $g = -0.61$), and was not significantly different to active controls of other types of meditation or a health discussion group. However, as the review combined results of compassion-based and loving kindness interventions, it remains unclear whether compassion-based interventions have specific benefits for depression. There may also be variation in the effectiveness of different compassion-based interventions for depression, which the review did not address.

Leaviss and Uttley (2015) systematically reviewed 14 studies of Compassion Focused Therapy (CFT) as a psychotherapeutic intervention, including three RCTs. The reviewers concluded that CFT shows promise as an intervention for mood disorders, particularly for those high in self-criticism, as it appears to be more effective than no treatment and as effective as treatment as usual (TAU). However, as this review only focused on CFT, it excluded studies of other compassion-based interventions, such as the Mindful Self-Compassion Programme (Neff & Germer, 2013) and Cognitively-Based Compassion Training (Desbordes et al., 2012).

2.1.4 The Current Review

The current review aimed to identify, synthesise, and critically evaluate research on the psychological treatment of depression using all forms of compassion-based interventions. At the time of the review, there was relatively little published literature on compassion-based interventions for people with chronic health conditions, so it would not have been feasible/informative to carry out a review on such a specific

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[1] After the current literature review was conducted, further reviews were published (Ferrari et al., 2019; Kirby et al., 2017). See discussion for further details.

topic. The review therefore investigated the effects of compassion-based interventions on depression more broadly, in any population. As such, the current review has value for understanding the application of compassion-based interventions to people with depression across contexts, including those with co-morbidities. Guidelines for the treatment of depression acknowledge that although interventions may need to be adapted/tailored for people with co-morbid physical health conditions, the interventions are substantively the same (NICE, 2010). This review, therefore, was intended to inform subsequent research on the application of compassion-based interventions to depression in people with skin conditions. Studies for inclusion were identified using established systematic review methodology and appraised using established criteria.

2.2 Method

2.2.1 Literature Search

Titles, abstracts and keywords in Web of Science, Scopus, PsycInfo, Medline and CINAHL databases were systematically searched on 30th January 2015, using a three component strategy as follows: Component one: {COMPASSION*}; Component two: {DEPRESS* or SHAME or SELF-CRITIC*}; Component three: {THERAP* or INTERVENTION or TRAINING or TREATMENT}. Searches were repeated to update the review on 25th July 2016. References from key papers were searched manually, along with the reference and citation lists of included articles.

2.2.2 Inclusion Criteria

Studies were included if (1) they investigated an intervention designed to increase compassion, (2) they reported depression as a dependent variable, (3) they were published in peer-reviewed journals, and (4) they were published in English.

2.2.3 Exclusion Criteria

Studies were excluded if they investigated an intervention that was not ostensibly compassion-based. This excluded studies on loving kindness and mindfulness interventions that were not specifically intended to cultivate compassion. No limits were set on the age or clinical status of participants. During the initial search on 30.01.15, no limit was set on the date range. When the search was repeated on 25.07.16, results were restricted to articles published between 01.01.2015 and 25.07.16.

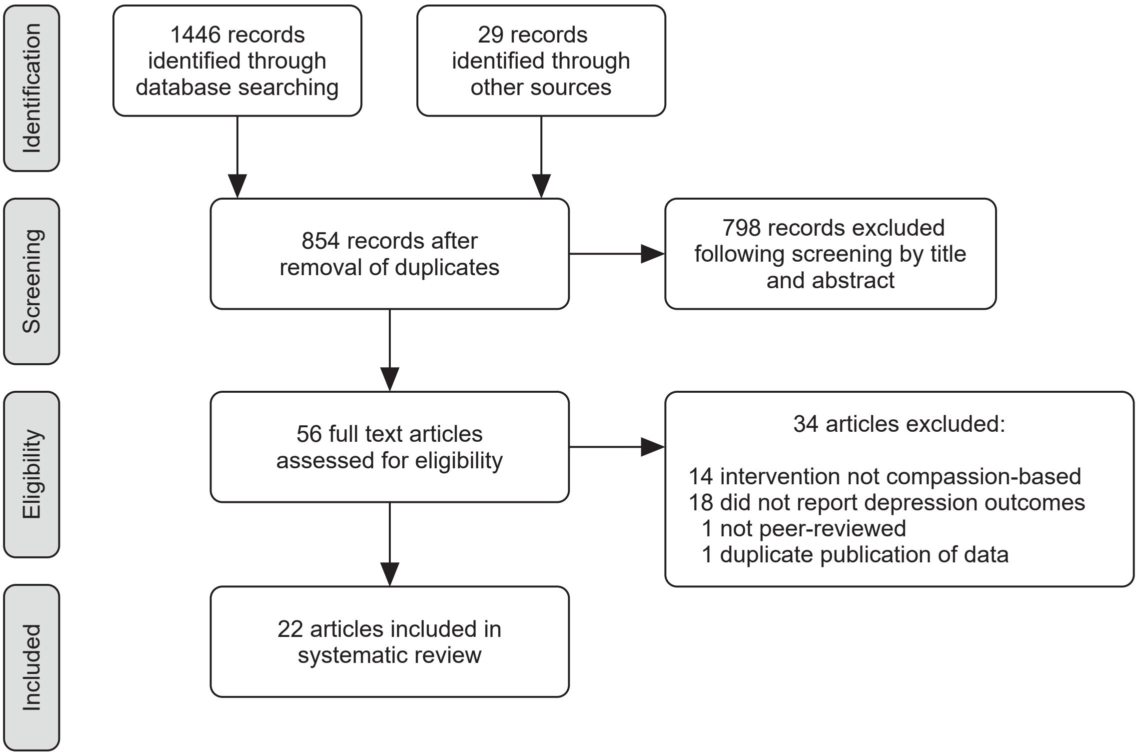
2.2.4 Appraisal of Study Quality

Included studies were appraised with a modified version of the Downs and Black (1998) checklist. As a modification of item 27 on power, studies were allocated one point if they were designed to be able to detect a medium effect size ($d = 0.50$) at a significance level of $\alpha = .05$ and power of .80. The maximum possible on the checklist was 28. Where studies could be scored differently for different dependent variables, scores were given for study design features relating to depression. Two of the included papers (9%) were appraised independently by a second researcher. Researchers agreed on 96% of the checklist items and discrepancies were resolved through discussion. Checklist items for which discrepancies had occurred were re-checked for all other included articles.

2.3 Results

Figure 2.1

PRISMA Flowchart for the Selection of Eligible Studies



Note. PRISMA diagram based on Moher et al. (2009).

2.3.1 Summary of Study Characteristics

Figure 2.1 shows a flowchart of the selection of eligible studies. Searches identified a total of 1475 articles, of which 22 articles remained in the review following removal of duplicates and screening with eligibility criteria. One article contained two included studies (Neff & Germer, 2013), which were appraised separately. Another article contained two studies (Johnson & O'Brien, 2013), but only the second study met the review's inclusion criteria. Therefore, 23 studies met the inclusion criteria for review. These are summarised in Table 2.1.

2.3.1.1 Participants

Of the 23 included studies, 13 used clinical populations and 10 used non-clinical populations. Only two studies specifically recruited patients with MDD as diagnosed by a psychiatrist or clinical psychologist (Diedrich et al., 2014; Noorbala et al., 2013), although depression was likely to have been present in many of the other clinical samples. The use or otherwise of psychotropic medication was generally not reported. Twenty-one studies took place in Western countries such as the UK, the USA, and Canada, while the remaining two studies took place in Iran (Noorbala et al., 2013) and Hong Kong (Wong & Mak, 2016). When ethnicity was reported, the majority of participants (70% or more) were Caucasian. Most studies used working-age adult participants, with only four studies reporting the inclusion of participants below the age of 18 or above the age of 65. Gender split varied across studies. Sixteen studies included more female participants, and two case report studies included one female participant each. Four studies that used participants with psychosis or traumatic brain injuries included more male participants. One study (Beaumont et al., 2012) did not report gender.

2.3.1.2 Interventions

Eleven studies investigated Compassion Focussed Therapy/Compassionate Mind Training (Gilbert, 2010; Gilbert & Irons, 2005), three investigated the Mindful Self-Compassion Programme (Neff & Germer, 2013), two investigated Cognitively-Based Compassion Training (Desbordes et al., 2012), and seven investigated the use of compassion as an emotion regulation strategy in a self-help format (see Table 2.1). For mode of delivery, five studies investigated an individual therapy (Ashworth et al., 2015, 2011; Beaumont et al., 2012; Bowyer et al., 2014; Mayhew & Gilbert, 2008), 11 investigated a group therapy/training course (Bluth et al., 2016; Dodds et al., 2015; Braehler et al., 2013; Desbordes et al., 2012; Gilbert & Procter, 2006; Judge et al., 2012; Laithwaite et al., 2009; Lucre & Corten, 2013; Neff & Germer, 2013; Noorbala et al., 2013) and seven investigated a self-help intervention (McEwan & Gilbert, 2016;

Wong & Mak, 2016; Kelly & Carter, 2015; Diedrich et al., 2014; Johnson & O'Brien, 2013; Kelly et al., 2009; Shapira & Mongrain, 2010). Duration of the compassion interventions ranged from five minutes self-help imagery to 20 group sessions. Fourteen studies specifically reported compliance with their intervention, usually in terms of average number of sessions attended or time spent practising techniques at home. Wong and Mak (2016) used text analysis to assess compliance with their self-compassion writing condition. Most interventions that involved face-to-face contact with a therapist or trainer included mindfulness practice initially to help participants learn to focus their attention before directing it to compassionate imagery or phrases.

2.3.1.3 Outcome Measures

All included studies used self-reports to measure depression. Twenty-two studies used established and validated self-report scales to measure depression, such as the Beck Depression Inventory-II (BDI-II; Beck et al., 1996) or the Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983). The only included study which did not use an established measure of depression was Diedrich et al. (2014), which used a visual analogue scale of depressed mood state for participants with a current clinical diagnosis of MDD, as assessed in a clinical interview with certified psychologist.

Sixteen studies also measured participants' abilities to be self-compassionate and/or self-reassuring, which would be expected to improve with practice of compassion towards the self. Self-reassurance is the ability to emotionally support the self when things go wrong, maintaining a "positive warm disposition to the self" (Gilbert et al., 2004, p.38) rather than being self-critical. Ten studies measured self-compassion using either the Self-Compassion Scale (Neff, 2003a) or the Self-Compassion Scale–Short Form (Raes et al., 2011). Seven studies measured self-reassurance using the Forms of Self-Criticism/Attacking and Self-Reassuring Scale (Gilbert et al., 2004). One study (Braehler et al., 2013) coded participants' narratives to measure their degree of compassion.

2.3.1.4 Study Design

Thirteen of the 23 studies compared a compassion intervention to a control condition. These comprised seven randomised controlled trials (RCTs; Bluth et al., 2016; Braehler et al., 2013; Desbordes et al., 2012; Dodds et al., 2015; Kelly & Carter, 2015; Neff & Germer, 2013, Study 2; Noorbala et al., 2013), one non-randomised controlled trial (non-RCT; Beaumont et al., 2012), four experimental studies (Johnson & O'Brien, 2013; Kelly et al., 2009; Shapira & Mongrain, 2010; Wong & Mak, 2016), and one quasi-experimental study (Diedrich et al., 2014). The experimental studies investigated compassion as a self-help emotion regulation strategy in non-clinical samples, while the quasi-experimental study used participants who were clinically depressed, but did not randomise. As such these studies were not RCTs but can be considered analogues of clinical trials. Of the 13 studies with a comparison group, seven studies reported only pre- to post-intervention effects on depression (Beaumont et al., 2012; Bluth et al., 2016; Braehler et al., 2013; Desbordes et al., 2012; Diedrich et al., 2014; Kelly et al., 2009; Kelly & Carter, 2015), while the other six reported outcomes up to two weeks (Johnson & O'Brien, 2013), one month (Dodds et al., 2015), two months (Noorbala et al., 2013), three months (Wong & Mak, 2016), six months (Shapira & Mongrain, 2010) or one year later (Neff & Germer, 2013, Study 2). One RCT used an intention-to-treat analysis (Kelly & Carter, 2015). The RCTs and non-RCT used a variety of comparison groups: two used TAU, in the forms of miscellaneous community support (Braehler et al., 2013) or antidepressant medication (Noorbala et al., 2013), one used CBT (Beaumont et al., 2012), one used mindful attention training and a health discussion group (Desbordes et al., 2012), one used behavioural self-help strategies and a waitlist control (Kelly & Carter, 2015) and three used solely waitlist controls (Bluth et al., 2016; Dodds et al., 2015; Neff & Germer, 2013, Study 2). Four of the analogue studies compared their compassion intervention to at least one alternate emotion regulation strategy: resisting self-attacks (Kelly et al., 2009), optimistic writing (Shapira & Mongrain, 2010), expressive writing (Johnson & O'Brien, 2013), and cognitive reappraisal and acceptance (Diedrich et al., 2014). Two of the analogue studies used an active control: early memory writing exercise (Shapira & Mongrain, 2010); and writing about daily activities (Wong & Mak, 2016). Three of the analogue studies also used a passive (no-intervention) control (Diedrich et al., 2014; Johnson & O'Brien, 2013; Kelly et al., 2009). Sample sizes for studies with a comparison group ranged from 19 to 203.

The remaining ten studies did not have a comparison group, which makes it difficult to identify whether specific factors in the interventions were responsible for any reported improvements, or if the experience of receiving any intervention was responsible for changes found. Seven of these studies were pilot studies (Ashworth et al., 2015; Gilbert & Procter, 2006; Judge et al., 2012; Laithwaite et al., 2009; Lucre & Corten, 2013; McEwan & Gilbert, 2016; Neff & Germer, 2013, Study 1), one was a case series report (Mayhew & Gilbert, 2008), and two were case reports (Ashworth et al., 2011; Bowyer et al., 2014). Each of these studies used before–and–after comparisons. Three pilot studies reported only pre–post effects on depression (Gilbert & Procter, 2006; Judge et al., 2012; Neff & Germer, 2013, Study 1) while four reported results from follow-ups at six weeks (Laithwaite et al., 2009), three months (Ashworth et al., 2015; Wong & Mak, 2016), six months (McEwan & Gilbert, 2016) or one year (Lucre & Corten, 2013). The case series report reported outcomes at six-month follow-up while the two case reports reported pre–post therapy effects only. Sample sizes for studies without a comparison group ranged from one to 45.

Table 2.1

Compassion-Based Intervention Studies with Depression Outcomes

Author(s) and year	Country	Aims	Study design	Participants (N)[a]	Details of compassion intervention	Comparison group(s)	Depression outcomes	Effect size (d)[b]	Quality rating
Compassion Focused Therapy / Compassionate Mind Training									
Ashworth et al. (2015)	UK	Investigated use of group-based and one-to-one CFT	Pre-post study	Patients with acquired brain injury (12)	4 days compassionate mind mood group plus up to 18 weekly individual CFT sessions	None	Significant pre–post reduction in depression, treatment gain maintained at 3-month follow-up.	1.06	14
Ashworth et al. (2011)	UK	Provided account of use of CFT	Case report	Female with traumatic brain injury (1)	Individual CFT: 24 weekly sessions, 18 of which CFT	None	Clinically meaningful pre–post reduction in depression.	–	12
Beaumont et al. (2012)	UK	Compared CBT plus CMT with CBT	Non-RCT	Trauma victims (32)	Individual CBT with CMT: up to 12 weekly sessions	CBT	Significantly greater improvement in depression scores in CBT plus CMT group than in CBT group.	1.03	13
Bowyer et al. (2014)	UK	Investigated addition of CFT to trauma-focused CBT	Case report	Adolescent trauma victim (1)	Individual CFT: 18 sessions lasting 1-1.5 hours over eight months	None	Clinically meaningful pre–post reduction in depression.	–	11
Braehler et al. (2013)	UK	Compared CFT plus TAU with TAU.	RCT	Patients with a schizophrenia-spectrum disorder or bipolar disorder with psychotic features (35)	Group CFT: 16 weekly sessions, 2 hours each.	TAU	Significant pre–post increase in compassion in CFT group only, which was significantly correlated with reduction in depression.	−0.48[c]	21
Gilbert & Proctor (2006)	UK	Investigated the process and effectiveness of CMT in a group setting	Pre-post study	Patients with chronic mental health difficulties (6)	Group CMT: 12 weekly sessions, 2 hours each.	None	Significant pre–post reduction in depression.	1.62	12

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Table 2.1
Continued

Author(s) and year	Country	Aims	Study design	Participants $(N)^a$	Details of compassion intervention	Comparison group(s)	Depression outcomes	Effect size $(d)^b$	Quality rating
Judge et al. (2012)	UK	Explored value and change process of CFT in a group setting	Pre-post study	Patients with severe and enduring mental health difficulties (27)	Group CFT: 12-14 weekly sessions, 2 hours each.	None	Significant pre–post reduction in depression.	1.40	12
Laithwaite et al. (2009)	UK	Investigated effectiveness of group CMT	Pre-post study	Patients with schizophrenia or bipolar affective disorder in high security setting (19)	Group CFT for psychosis: 20 twice-weekly sessions.	None	Significant pre–post reduction in depression, treatment gain maintained at 6-week follow up.	0.82^d	11
Lucre & Corten (2013)	UK	Investigated CFT outcomes	Pre-post study	Self-critical patients with personality disorders (8)	Group CFT: 16-week	None	Significant pre–post reduction in depression, treatment gain maintained at 1-year follow up.	–	10
Mayhew & Gilbert (2008)	UK	Explored the effects, understanding and acceptability of CMT	Case series report	Patients with schizophrenia and hostile auditory hallucinations (3)	Individual CMT: 12 sessions, one hour each	None	Pre–post reductions in depression for all three participants, treatment gain maintained for two participants at 6-month follow-up.	–	9
Noorbala et al. (2013)	Iran	Investigated effectiveness of group CMT in Iranian culture	RCT	Female patients with major depressive disorder (19)	Group CMT: 12 twice weekly sessions, 2 hours each.	TAU	CMT group had significantly greater reduction in depression than control group between pre-treatment and two-month follow-up.	–	12

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Table 2.1
Continued

Author(s) and year	Country	Aims	Study design	Participants (N)[a]	Details of compassion intervention	Comparison group(s)	Depression outcomes	Effect size (d)[b]	Quality rating
Mindful Self-Compassion Programme									
Bluth et al. (2016)	USA	To investigate the feasibility, acceptability and effects of an adapted MSC Programme for adolescents.	RCT	Adolescents aged 14-17 years (34)	Group MSC: 6 weekly sessions, 90 mins each.	Wait list	MSC group had significantly lower depression scores than control group pre- to post-intervention. Increase in self-compassion did not predict reduction in depression.	0.49	18
Neff & Germer (2013) Study 1	USA	Explored effects of MSC programme	Pre-post study	Community adults (21)	Group MSC: 8 weekly sessions, 2 hours each, plus half day retreat.	None	Significant pre–post reduction in depression.	0.98	12
Neff & Germer (2013) Study 2	USA	Compared MSC programme with waitlist control	RCT	Community adults (51)	Group MSC: 8 weekly sessions, 2 hours each, plus half day retreat.	Wait list	MSC group had significantly greater reduction in depression than control group pre- to post-intervention, treatment gains maintained at 6-month and 1-year follow-ups. Increased self-compassion significantly predicted reduction in depression.	0.91	18
Cognitively-Based Compassion Training									
Desbordes et al. (2012)	USA	Compared compassion meditation training with mindful attention training and health discussion group	RCT	Healthy adults (36)	Group CBCT: 8 weekly sessions, 2 hours each, plus 20 mins per day practice time.	Mindful attention training; health discussion group	Significant and equivalent reductions in depression across conditions.	0.47; 0.30	19

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Table 2.1
Continued

Author(s) and year	Country	Aims	Study design	Participants $(N)^a$	Details of compassion intervention	Comparison group(s)	Depression outcomes	Effect size $(d)^b$	Quality rating
Dodds et al (2015)	USA	To assess the feasibility, acceptability and effects of CBCT	RCT	Women with a history of breast cancer (28)	Group CBCT: 8 weekly sessions, 2 hours each, plus 90 minutes home practice per week and booster class at 12 weeks.	Wait list	CBCT group had significant reduction in depression at post-test compared to control but no difference between groups at one-month follow-up.	0.70	19
Compassion as a self-help emotion regulation strategy									
Diedrich et al. (2014)	Germany	Compared self-compassion, cognitive reappraisal, and acceptance emotional regulation strategies	Analogue study: Quasi-experiment	Patients with clinical depression (48)	Five minutes compassionate imagery following depressed mood induction. Administered via computer.	Cognitive reappraisal; acceptance; waiting	Self-compassion induction significantly reduced depressed mood compared to waiting control, and to same extent as cognitive reappraisal and acceptance strategies.	0.02; 0.13; 0.23	20
Johnson & O'Brien (2013) Study 2	Canada	Compared effects of self-compassionate writing, expressive writing and no-writing control on processing shame experiences	Analogue study: Experiment	Shame-prone undergraduates (90)	Single episode of self-compassion writing- three paragraphs reflecting on a shame experience. Administered via computer.	Expressive writing; no writing	No effect of condition on depression in ANCOVA when adjusted for baseline depression, self-compassion, and self-esteem.	0.09; 0.21	20
Kelly & Carter (2015)	Canada	To assess and compare a CFT-based self-help intervention to a behavioural intervention for binge eating disorder.	RCT	Community participants with binge eating disorder (33)	Daily compassionate imagery and writing exercises online for 3 weeks. Administered via computer.	Behavioural strategies; wait list	Participants in the self-compassion condition who were low in fear of self-compassion were the only participants to have significant decreases in depression over time.	1.13; 2.61	22

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Table 2.1
Continued

Author(s) and year	Country	Aims	Study design	Participants (N)[a]	Details of compassion intervention	Comparison group(s)	Depression outcomes	Effect size (d)[b]	Quality rating
Kelly et al. (2009)	Canada	Compared self-soothing and attack-resisting emotion regulation strategies	Analogue study: Experiment	Facial acne sufferers (75)	Self-soothing imagery, letter writing, and creating self-statements administered via computer. Five minutes practice of compassionate imagery and self-statements daily for 2 weeks.	Attack-resisting; no intervention	Self-soothing condition did not lower depression more than no-intervention control.	−0.44; 0.14	19
McEwan & Gilbert (2015)	UK	To explore the use of compassion-focussed imagery online self-help	Pre-post study	Undergraduates (45)	Five minutes compassion-focused imagery daily for two weeks. Administered via computer.	None	Significant reduction in depression at post-test and gain maintained at 6 month follow-up.	1.12	13
Shapira & Mongrain (2010)	Canada	Compared self-compassion and optimistic thinking interventions	Analogue study: Experiment	Community adults (203)	Writing a compassionate letter to self daily for 1 week. Administered via computer. 5-15 minutes completion time per day.	Early memory writing; optimistic writing	Self-compassion group showed significantly greater decreases in depression at 3 months compared to the early memory writing condition.	0.46	21
Wong & Mak (2016)	China (Hong Kong)	To examine the effect of self-compassion writing on mood and health	Analogue study: Experiment	Undergraduates (65)	Three episodes of self-compassionate writing within a week. Administered via computer.	Writing about daily activities	Self-compassion writing had no significant effect on depression at 1 or 3 months compared to control	0.16	23

Note. CBCT = cognitively-based compassion training, CBT = cognitive behaviour therapy, CFT = compassion focused therapy, CMT = compassionate mind training, MSC = mindful self-compassion, RCT = randomised controlled trial, TAU = treatment as usual.

[a] *N*s reported are the number of participants included in analyses for depression outcomes.[b] Positive effect sizes indicate an improvement in depression. In studies with more than one comparison group, effect sizes are shown for compassion-based intervention vs. comparison group in the order listed in the table. [c] Pre–post effect size for CFT group was 0.18. [d] Effect size converted from r reported by authors of study using formula recommended by Fritz et al. (2012).

2.3.1.5 Reporting of Results

Most studies relied exclusively on null hypothesis significance testing (NHST), whether this was testing for differences between treatment conditions or over time. Although a conventionally used method of interpreting outcomes, NHST cannot demonstrate whether observed improvements are clinically meaningful. Conversely, effect sizes denote the amount of improvement observed, which can be compared between different treatments. Effect sizes therefore aid interpretation of results and can help to inform researchers and clinicians whether emerging treatments are worth further investment. Only three of the included studies reported an effect size of compassion-based intervention for depression relative to a comparison group (Diedrich et al., 2014; Kelly & Carter, 2015; Neff & Germer, 2013, Study 2). A further four studies reported an effect size for pre-post change in depression (Ashworth et al., 2015; Bluth et al., 2016; Laithwaite et al., 2009; McEwan & Gilbert, 2016). Where possible, effect sizes at post-test (d) were calculated based on the formula recommended by Morris (2008). For consistency, this was also carried out for studies that reported an effect size. For the effect size index of d, 0.20 is considered small, 0.50 is considered medium and 0.80 is considered large (Cohen, 1992). Sixteen studies reported sufficient data to calculate effect sizes. The lead authors of two other studies provided additional data for effect size calculations (C. Braehler, personal communication, August 26, 2016; E. Johnson, personal communication, August 26, 2016.) As five studies used multiple comparators, 24 effect sizes were calculated in total, ranging from 0.02 to 2.61. Ten effects were large, one effect was medium, eight effects were small and five effects were trivial ($< .20$). Effect sizes based on Morris (2008) are reported in Table 2.1.

Where sample sizes were so small that NHST was not appropriate, studies used alternative means of describing their results. The two case reports (Ashworth et al., 2011; Bowyer et al., 2014) described changes in depression in terms of clinical cutoffs, and one (Ashworth et al., 2011) also used a Reliable Change Index to aid interpretation. Using these descriptions demonstrates whether there has been a clinically meaningful change in these single cases. The case series report (Mayhew & Gilbert, 2008) solely used histograms to describe changes in symptoms and normative data for the scales used were not reported. As such, the clinical significance of reported changes could not be interpreted.

2.3.1.6 Quality Assessment

The quality of the included studies was less than optimal. The mean score on the checklist was 16, and the scores ranged from 9 to 23. Several limitations of internal validity lowered checklist scores. The lack of comparison group in ten of the studies meant no randomisation was possible, which increased risks of selection bias. Failing to assess participants' compliance with the interventions also lowered scores for many studies. Risk of expectancy biases further lowered scores, as all studies tested psychological interventions where participants were actively involved, so no blinding was possible, and all studies used self-reports to measure depression outcomes. The external validity of almost all studies was also limited due to the use of non-representative samples obtained through convenience or volunteer sampling. However, most studies succeeding in achieving an acceptable checklist rating based on what was possible for the particular study design used. Scores for the reporting component of the checklist were generally good.

The interventions under investigation are now reviewed in turn.

2.3.2 Compassion Focused Therapy / Compassionate Mind Training

Compassion Focused Therapy (CFT) was developed by Paul Gilbert based on social mentality theory and neuroscience literature (Gilbert, 2000, 2005, 2009a). CFT can be described as a framework around which other interventions are fitted. It developed out of CBT and still incorporates many aspects of CBT that are empirically supported, such as Socratic dialogue and behavioural experiments (Gilbert, 2010). Part of CFT is designed to help clients understand that due to evolutionary processes, people possess brains with capacities for primitive emotions and abstract thought, which can be problematic for mental health. CFT emphasises a de-shaming process of helping clients to understand that their emotions and thoughts are not their fault, while still being able to take responsibility for future choices. While CFT refers to the whole therapy approach, including psycho-education about the brain and a rationale about the benefits of compassion, Compassionate Mind Training (CMT; Gilbert & Irons, 2005) refers to the exercises such as compassionate imagery and writing, which are designed to generate internal signals of compassion and soothing. CFT necessarily includes CMT, although a therapy that uses CMT could be described as CFT if the therapy also includes a compassion-focused formulation and rationale for the CMT exercises. In this review CFT and CMT have been considered together as there is sometimes little to distinguish the two. Eleven studies on CFT/CMT met inclusion criteria for review; two RCTs, one non-randomised controlled trial, five pre-post studies, one case series report and two case reports.

2.3.2.1 Effects on Self-Compassion and Self-Reassurance

In addition to measuring depression outcomes, nine studies measured changes in participants' self-compassion and/or self-reassurance. Six of these studies reported statistically significant improvements in these abilities following CFT/CMT (Ashworth et al., 2015; Beaumont et al., 2012; Braehler et al., 2013; Gilbert & Procter, 2006; Judge et al., 2012; Lucre & Corten, 2013), and one was a case report that simply described the increase in self-reassurance as 'clinically significant' (Bowyer et al., 2014, p. 252). Two other studies assessed self-compassion/self-reassurance, but did not find similar improvements. One of these was the case series report (Mayhew & Gilbert, 2008), which used self-report measures of self-compassion and self-reassurance. Outcomes on both measures were different for the three participants and due to the small sample size, inferential statistics were not conducted. The other study was a pre-post study, which failed to find a significant improvement on the Self-Compassion Scale after therapy (Laithwaite et al., 2009). Overall, the evidence suggests that CFT/CMT does increase participants' abilities to be self-compassionate/self-reassuring, although some populations may struggle with the use of self-report measures for these abilities. However, there is mixed evidence that CFT/CMT is superior to controls for increasing self-compassion. Using blinded observer ratings, Braehler et al. (2013) found CFT superior to TAU for increasing the amount of compassion in participants' narratives about their psychoses. In contrast, in Beaumont et al.'s (2012) study, CBT plus CMT and CBT-only led to equivalent increases in self-compassion, indicating that the two types of therapy did not differentially affect self-compassion. This inconsistency between studies could further indicate problems with the use of self-report methods for measuring self-compassion.

2.3.2.2 Effects on Depression

CFT/CMT appears to be effective for reducing depression. Most studies did not focus specifically on depression, although depression was expected to be commonly present in the transdiagnostic studies using patients with chronic mental health difficulties (Gilbert & Procter, 2006; Judge et al., 2012; Lucre & Corten, 2013) and commonly comorbid in the other studies. Out of the 11 included studies on CFT/CMT, seven carried out inferential statistics to determine whether depression levels reduced following therapy. All seven found a significant reduction in depression at post-intervention and/or follow-up among participants who undertook CFT/CMT. Six studies reported a significant pre–post reduction in depression, and five reported a significant reduction in depression between pre-therapy and follow-up. Only two studies clearly reported effect sizes of CFT/CMT for depression: both reported large effects ($d = 1.43$, Ashworth et al., 2015; $d = 0.82$, Laithwaite et al., 2009), which were maintained at follow-up. Another study reported an effect size of CMT of $d = 0.98$ (Noorbala et al., 2013), but it was unclear whether this related to depression or anxiety, or both.

Four studies of CFT/CMT did not conduct inferential statistics for depression (Ashworth et al., 2011; Braehler et al., 2013; Bowyer et al., 2014; Mayhew & Gilbert, 2008) but all suggested that CFT/CMT had reduced depression. In three cases the lack of inferential statistics was due to the study design, and in one case the study did not directly report changes in depression. In a case series report, Mayhew and Gilbert (2008) observed pre–post and pre–follow-up reductions in depression for all three participants. However, the researchers do not comment on whether these changes in depression were clinically meaningful. One of the case reports used a reliable change index to show a clinically meaningful reduction in depression following CFT (Ashworth et al., 2011). The other case report described the reduction in depression following CFT as clinically meaningful based upon symptoms moving from the 'moderate-severe' to the 'normal' range for depression (Bowyer et al., 2014). Statistical changes in depression were not directly reported in Braehler et al.'s (2013) study as depression was not a primary outcome measure. Data provided by the lead author indicated that TAU had a larger effect on depression than CFT (C. Brahler, personal communication, August 26, 2016). However, the TAU group was significantly more depressed at baseline. There was a significant negative association ($r = -.78$) between change in depression and change in compassion in the CFT group only, and only the CFT group had significantly increased in compassion by the end of the study. This suggests that CFT did benefit the intervention group in terms of depression. Overall, although the quality of the CFT/CMT studies varied greatly, the evidence suggests that CFT/CMT is effective in reducing depression.

However, it is less clear whether CFT/CMT is superior in reducing depression than other available interventions. Only two studies directly compared depression outcomes between CFT/CMT and a comparator (Beaumont et al., 2012; Noorbala et al., 2013). Although both found CFT/CMT superior to the control for reducing depression, these results must be treated with caution. Noorbala et al.'s (2013) RCT found significantly decreased depression in the CMT group compared to the medication-only control group at two-month follow-up, but reporting within the article was limited. In particular, the researchers did not clearly describe nor give a rationale for their data analysis strategy, and descriptive statistics were not reported for the main results. Beaumont et al. (2012) found CBT plus CMT to be superior to CBT alone for reducing depression, but this study was not randomised, so was at greater risk of bias. Large, well-designed RCTs are still needed to establish the efficacy of CFT/CMT for depression in comparison with other interventions.

2.3.2.3 Acceptability of Intervention

The included studies also provided insights about the acceptability of CFT/CMT to patients. The proportion of patients who complete a therapy can indicate its acceptability. Excluding the $n = 1$ case reports, seven out of nine studies had retention rates of 80% or more, which is the average retention rate in psychotherapy trials (Swift & Greenberg, 2012). The two studies with lower retention rates (Gilbert & Procter, 2006; Mayhew & Gilbert, 2008) were the earliest pilot studies on CMT/CFT that met inclusion criteria for review, which might indicate improvements in the delivery of the therapy over time. Indeed, both studies engaged participants as active collaborators in CFT/CMT research and gave recommendations for future researchers and clinicians. The higher retention rates in the more recent trials indicate that CFT/CMT is perceived as acceptable in its current format.

Participants' experiences of therapy can also be explored to understand the acceptability of the approach, and to this end two studies collected qualitative data. Lucre and Corten (2013) carried out a content analysis of the participants' written reflections of CFT at 1-year follow-up, revealing themes of taking responsibility for one's thoughts and reassurance, the comfort of shared group experiences, fear of compassion, and awareness of self-criticism and addressing it with assertive action. Ashworth et al. (2015) interviewed six participants post-therapy and Interpretative Phenomenological Analysis (IPA) was used to analyse the interview transcripts, although the criteria for this purposive sample was not reported. Among the themes that emerged was that taking the new approach of CFT had been helpful for the participants.

2.3.3 Mindful Self-Compassion Programme

The Mindful Self-Compassion (MSC) programme was developed by Neff and Germer (2013) as a hybrid programme that can be used with both clinical and non-clinical populations, aimed at teaching self-compassion. It was developed after research found that mindfulness interventions improve psychological outcomes by increasing self-compassion (Kuyken et al., 2010). Increasing self-compassion was therefore chosen as an explicit aim of the MSC programme. The MSC programme includes teaching participants what self-compassion is and explaining how it is helpful for wellbeing. The programme includes formal (meditative) and informal self-compassion practices. The programme is delivered in a group format by two trained leaders, and comprises eight group sessions and a half day retreat. Three studies on the MSC programme met inclusion criteria for review; one pre-post study and and two RCTs, which were reported in two published articles (Bluth et al., 2016; Neff & Germer, 2013).

2.3.3.1 Effects on Self-Compassion

All three studies measured participants' levels of self-compassion, which increased following participation in the MSC programme. Both RCTs also demonstrated that self-compassion increased significantly more in the MSC group than in the control group, with medium–large effect sizes (Bluth et al., 2016; Neff & Germer, 2013, Study 2). However, results on mechanisms of change were inconsistent between the two RCTs. In Neff and Germer's (2013) RCT, the amount of formal and informal home self-compassion practices were significantly positively associated with increases in self-compassion at the end of the programme. This suggests that the ability to be self-compassionate can indeed be taught using the specific approach of the MSC programme. Additionally, a hierarchical regression analysis found that increased self-compassion, but not increased mindfulness, significantly predicted reduced depression in the MSC group. This indicates that, in this study, increasing self-compassion was the key process through which depression reduced during the MSC programme. In contrast, in Bluth et al.'s (2016) RCT, the amount of home practice was not significantly associated with increases in self-compassion. Regression analyses indicated that changes in self-compassion did not significantly predict changes in depression, although changes in mindfulness did. The difference in findings between these studies might be explained by the majority of participants in Neff and Germer's (2013) study having had prior meditation experience, which is unlikely to have been the case in Bluth et al.'s (2016) adolescent sample. Learning mindfulness may be a necessary precursor for self-compassion training to reduce depression.

2.3.3.2 Effects on Depression

The MSC programme does appear to be effective for reducing depression: all three studies found significant reductions in depression after participants completed the programme. In addition, in one RCT (Neff & Germer, 2013, Study 2), the treatment gain for depression was maintained at one-year follow-up. However, each of these studies investigated the MSC programme with non-clinical populations, so caution must be exercised in generalising the results, particularly as the majority of participants were female, Caucasian and well-educated/from well-educated families. Age did vary between studies: two studies used adult samples (Neff & Germer, 2013) and one study (Bluth et al., 2016) used an adolescent sample (14—17 years), which shows that the MSC programme can be adapted according to the age of participants and still be beneficial for depression.

Both RCTs (Bluth et al., 2016; Neff & Germer, 2013, Study 2) demonstrated that the MSC programme is superior to a waiting list control in reducing depression, with medium–large effect sizes. However, it would be beneficial to compare efficacy of the MSC programme to that of an active control or another psychological intervention.

As Neff and Germer (2013) point out, different interventions may be beneficial for individuals with different presenting problems, such that the MSC programme may be more beneficial for self-critical individuals whereas Mindfulness Based Stress Reduction (MBSR; Kabat-Zinn, 1982) may be more beneficial for individuals suffering from stress. Further research is needed to explore which interventions work for whom.

2.3.3.3 Acceptibility of Intervention

The retention rates of the MSC programme participants across the three studies were between 86% and 91%, which ordinarily might indicate that participants found the intervention acceptable. However, in Neff and Germer's (2013) pilot study and RCT, participants paid a fee for attending the MSC programme, albeit reduced for taking part in the study. In Bluth et al.'s (2016) RCT, participants received up to $75 in gift cards for completing the survey and attending sessions. These strategies may have increased participants' motivation to attend sessions regardless of the perceived benefit, which reduces confidence in the acceptability of the MSC programme. However, Bluth et al. (2016) also carried out an inductive content analysis about the acceptability of the programme, using transcripts of audio-recorded class discussions. This revealed themes that, over the course of the programme, participants had enhanced understanding of self-compassion and that they were able to implement self-compassion in their daily lives. Other themes suggested that participants preferred the experiential aspects of the programme but found it hard to implement formal home meditation practice.

2.3.4 Cognitively-Based Compassion Training

Cognitively-Based Compassion Training (CBCT) was developed by Lobsang Tenzin Negi, based on traditional Buddhist methods for mind-training and cultivating compassion (Desbordes et al., 2012; Ozawa-de Silva & Dodson-Lavelle, 2011). It aims to help practitioners reverse thoughts, emotions, and behaviours that are harmful to self and others and to develop beneficial alternatives instead. It promotes the cultivation of specific states of mind, such as equanimity, appreciation, affection, and compassion. The programme is taught in stages, culminating with active compassion for others. Each class includes a didactic session, a discussion period, and meditation practice. Practitioners are also asked to practice meditating daily. Two studies on CBCT met inclusion criteria for review, both of which were RCTs (Desbordes et al., 2012; Dodds et al., 2015). Desbordes et al. (2012) was primarily a brain imaging study.

2.3.4.1 Effects on Self-Compassion or Self-Reassurance

Neither of the included studies on CBCT measured self-compassion or self-reassurance.

2.3.4.2 Effects on Depression

There is some evidence that CBCT can temporarily reduce depression. Both studies found significant pre–post reductions in depression among participants who undertook CBCT. However, the results from both studies give cause for doubt about whether CBCT holds promise as a intervention specifically for depression. Desbordes et al. (2012) compared CBCT with Mindful Attention Training (MAT) and an active control (health discussion group). Main results indicated that the different conditions did not differentially affect depression, and therefore CBCT was only as beneficial as the active control. Effect sizes were not reported. Although Dodds et al. (2015) found that CBCT significantly reduced depression compared to a waiting list control at post–test, there was no significant difference between groups at one-month follow-up. Both studies used non-clinical samples, so may have suffered from floor effects for depression scores.

In addition, neither study found a significant positive association between the amount of practice time and change in depression. In CBCT, compassion meditation is purportedly a key agent of psychotherapeutic change, so it is difficult to argue how CBCT could be effective for depression in the absence such an association. These results suggest that although CBCT may improve the mood of participants while the course is ongoing, the main benefit from CBCT comes from the group meetings, rather than from the compassion meditation itself. CBCT does not appear to provide a lasting benefit for depression among community samples. The effect of CBCT on trait self-compassion remains unknown, as this was not assessed.

2.3.4.3 Acceptability of Intervention

The CBCT conditions had retention rates of 71% (Desbordes et al., 2012) and 75% (Dodds et al., 2015). In Desbordes et al. (2012), participants were a subset from a parent study at Emory University who volunteered to take part in the brain imaging study. No incentives were reported. However, in Dodds et al. (2015), participants received $120, which may have increased their motivation to attend the CBCT sessions. This reduces confidence in the perceived acceptability of CBCT. Neither study carried out any qualitative data analysis, so participants' experiences of CBCT remain unknown. In Dodds et al. (2015), participant satisfaction was briefly assessed with two self-report items, which indicated that most participants were highly satisfied with the CBCT programme. However, this was not a validated measure and was only answered by those who completed the programme, so reported satisfaction was likely to be biased in favour of CBCT.

2.3.5 Compassion as a Self-Help Emotion Regulation Strategy

Seven studies evaluated the use of compassion as a self-help strategy, rather than as a longer-term therapeutic intervention with input from a therapist or teacher. Three studies were conducted entirely online (Johnson & O'Brien, 2013; McEwan & Gilbert, 2016; Shapira & Mongrain, 2010) and four studies used self-administration of the instructions via computer during a laboratory session (Diedrich et al., 2014; Kelly et al., 2009; Kelly & Carter, 2015; Wong & Mak, 2016). Participants were generally given a brief explanation of self-compassion and instructions for trying to increase their self-compassion. Most studies also asked participants to practise or repeat the compassion exercises at home.

2.3.5.1 Effects on Self-Compassion

Only two of the seven studies measured effects on self-compassion (Johnson & O'Brien, 2013; McEwan & Gilbert, 2016), but both found that the compassion self-help did improve self-compassion. Johnson and O'Brien (2013) found that after controlling for baseline self-compassion and self-esteem, participants in the compassionate writing condition showed significantly higher self-compassion at two-week follow-up than the no-intervention control. McEwan and Gilbert (2016) found a significant increase in self-compassion and self-reassurance after participants used compassion focused imagery for two weeks, and these gains were maintained at six-month follow-up. No comparison group was used in this study, which reduces confidence that this effect was solely due to the compassion self-help. Nevertheless, taken together, these results suggest that brief compassion-based self-help exercises hold promise for increasing self-compassion.

2.3.5.2 Effects on Depression

Evidence for the effectiveness of compassion as a self-help strategy for depression was inconsistent across studies. Only one study had no comparison group: McEwan and Gilbert (2016), which was a pilot exploration of using compassion imagery exercises (from CFT/CMT) online with no therapist input. This study found a significant pre–post reduction in depression, which was maintained at six-month follow-up. The other six studies compared compassion self-help strategies to a variety of control conditions. Even when compared to passive (no intervention) controls, evidence for the effectiveness of compassion self-help in reducing depression was mixed. Kelly et al. (2009) found that two weeks of using self-soothing imagery did not lower depression more than the control. Similarly, Johnson and O'Brien (2013) found that writing about a shame episode in a compassionate way did not reduce depression at two-week follow-up more than the control, after baseline differences had been accounted for. In contrast, Diedrich et al. (2014) found that using a self-compassion induction reduced depressed mood state more than a waiting control among people with MDD. Similarly, Kelly and Carter (2015) found that three weeks of food planning plus self-compassion exercises significantly reduced depressive symptoms in individuals with binge eating disorder who were low in fear of self-compassion, while no such reduction was found among similar wait-list control participants.

When compared against active controls or other emotion regulation strategies, results for compassion-based self-help were similarly mixed. Kelly et al. (2009) found that the self-soothing imagery was less effective at lowering depression than attack-resisting imagery. Wong and Mak (2016) found no effect on depressive symptoms for self-compassionate writing compared to writing about daily activities. Conversely, Shapira and Mongrain (2010) found that compassionate writing was superior to early memory writing for reducing depression, and had similar effects to optimistic writing. Diedrich et al. (2014) found that a self-compassion induction significantly reduced depressed mood state to the same extent as cognitive reappraisal and acceptance strategies. Large pre- to post-intervention effect sizes was found for the self-compassion and reappraisal strategies, which were slightly superior to acceptance. Finally, Kelly and Carter (2015) found that self-compassion exercises were superior to behavioural strategies for reducing depressive symptoms among participants with low fear of self-compassion. These results suggests that exercises in compassion can be useful options to reduce depressed mood, but it remains unclear what features of a self-help compassion intervention are necessary to reduce depression over time.

2.3.5.3 Acceptability of Interventions

Due to methodological and reporting issues, the included self-help studies can only offer limited insights into the acceptability of compassion self-help strategies as treatments specifically for depression. Diedrich et al. (2014) was the only study to use a clinical sample of people with MDD, but used a repeated measures design within a single laboratory session, so cannot provide data about the longer-term acceptability of the different emotion regulation strategies for people with depression. However, there were no reports of any adverse events during the session, which implies that all the strategies were at least reasonably acceptable to people with MDD in the short-term.

As with other modes of therapy, retention rates for self-help interventions can give some indication of acceptability. However, evidence from two of the included studies regarding retention rates was at risk of bias. One study (McEwan & Gilbert, 2016) did not report any attrition between recruitment and post-intervention, although attrition at follow-up was reported. It is unclear whether no attrition occurred during the intervention, although this seems unlikely in an online study with a student sample, or whether attrition was simply not reported. The other study (Kelly et al., 2009) compensated participants up to $100 for completing the study, which limits confidence about the acceptability of its interventions despite a 97% retention rate across all conditions. Across the remaining four self-help studies, retention rates during the intervention period ranged from 65% to 100%. One study did not report the number of drop-outs in different conditions, but the overall retention rate over the one-week intervention period was 65% (Shapira & Mongrain, 2010). Compassion self-help fared worse for retaining participants than the comparisons in one study: Kelly and Carter (2015) reported a retention rate in the compassion condition of 73% compared to 92% in each of the behavioural intervention and wait-list conditions. However, the relatively small sample size in this pilot RCT makes it hard to assess whether systematic factors affected drop-outs. In the other two studies, compassion self-help retained the same or similar proportions of participants as the comparison conditions (Johnson & O'Brien, 2013; Wong & Mak, 2016).

Two of the self-help studies measured compliance with their intervention, which can also give an indication of acceptability. Wong and Mak (2016) assessed compliance with their self-compassionate writing task using a manipulation check. This indicated that participants in the compassion condition had correctly followed the instructions for self-compassionate writing, as they had engaged in more emotional and cognitive processing than the control writing group. In Kelly and Carter's (2015) study, self-reported compliance with the compassion intervention increased over the three-week study period, suggesting that participants became increasingly engaged with the intervention with increasing familiarity. The compliance with the interventions in these two studies indicates that the compassion self-help exercises were perceived as acceptable, as they were something that participants were willing and able to do.

Two studies directly asked participants for their views on the compassion self-help intervention. Kelly and Carter (2015) assessed the perceived credibility of their self-compassion and behavioural treatments at the start of the study, and found that the treatments were perceived as equally credible. McEwan and Gilbert (2016) collected written feedback from participants during their intervention, which showed that 72% participants found the compassion imagery beneficial, such as finding it calming or relaxing. An unspecified number of participants reported difficulties with generating a clear image and concentrating, while two participants (4%) reported experiencing negative emotions when trying to feel compassion. Overall, feedback from participants in these two studies indicated that compassion self-help is generally perceived as credible and helpful.

2.4 Discussion

This review critically evaluates existing research into the effects of compassion-based interventions on depression. Compassion-based interventions are becoming increasingly popular, but further research is needed before they can be incorporated into evidence-based guidelines for the treatment of depression. A number of different compassion-based interventions are now available, but their effects on depression had not previously been reviewed at the time that the searches were last carried out in July 2016. This review was therefore intended to advance the psychological literature and offers insights for future research and clinical work. However, in November 2017, a meta-analysis of compassion-based interventions was published, which included outcomes for depression (Kirby et al., 2017). This meta-analysis found that compassion-based interventions were moderately effective for depression, with an average effect size of $d = 0.64$ for between-group differences in depression change scores. Following this, Ferrari et al. (2019) published a meta-analysis of self-compassion interventions, finding an average effect size of $g = 0.66$ for depression. Both of these meta-analyses used different criteria for the selection of studies than the current systematic review, but there is some overlap between their subject areas. As such, publication of the current systematic review was not pursued and hence literature searches have not been further updated. Despite this, the current review still offers insights into the effects on depression of different compassion-based interventions, which the Kirby et al. (2017) and Ferrari et al. (2019) meta-analyses do not.

2.4.1 Outcomes of Interventions

Overall, evidence to date shows that compassion-based interventions can reduce depression, although further research is required to identify the necessary conditions for this to occur. The most promising interventions appear to be CFT/CMT and the MSC programme, while there is little evidence to recommend CBCT as a treatment for depression at this time. The mixed results from the heterogeneous clinical analogue studies indicate the need for further research to establish what features of a compassion self-help intervention are required, and for whom, to be beneficial for depression. There is less compelling evidence that compassion-based interventions are superior to existing treatments for depression. Of the studies that investigated a therapist-led intervention and found such an effect, only one compared a compassion-based therapy against another established psychological therapy for depression (Beaumont et al., 2012). There was mixed evidence from the clinical analogue studies whether brief, self-administered compassion strategies were useful for reducing depressive symptoms/mood compared to other emotion regulation strategies.

Most of the included interventions aimed to increase participants' abilities to be self-compassionate, except for CBCT, which focused on compassion for others. Eleven studies of either CFT/CMT or the MSC programme found that the ability to be self-compassionate and/or self-reassuring increased alongside a reduction in depression following the compassion-based intervention (Ashworth et al., 2015; Bluth et al., 2016; Bowyer et al., 2014; Braehler et al., 2013; Gilbert & Procter, 2006; Judge et al., 2012; Kelly & Carter, 2015; Lucre & Corten, 2013; McEwan & Gilbert, 2016; Neff & Germer, 2013, Studies 1 and 2). However, despite the availability of data, the relationship between changes in compassion and changes in depression was only investigated in three studies (Bluth et al., 2016; Braehler et al., 2013; Neff & Germer, 2013, Study 2), with mixed results. There is therefore only a small amount of evidence that increasing self-compassion offers a specific benefit for reducing depression.

2.4.2 Acceptability of Interventions

Many studies included in this review were more suited to initial explorations of the interventions than evaluating their effects on depression. Most of the pilot studies sought to investigate whether carrying out the planned compassion intervention was feasible with their chosen population and if the intervention would be acceptable to participants. Retention rates of CFT/CMT were generally good, above 80%, with the exceptions of the earliest pilot studies (Gilbert & Procter, 2006; Mayhew & Gilbert, 2008). More recent studies of CFT/CMT with similar populations to the early pilot studies had lower attrition rates along with larger samples (Braehler et al., 2013; Judge et al., 2012; Laithwaite et al., 2009), suggesting that over the years, the implementation of the therapy has developed and that patients find the current version of CFT/CMT acceptable. It is less clear whether the MSC programme is perceived as similarly acceptable because of the use of fees, and higher attrition rate for CBCT suggests it is perceived as less acceptable. Attrition rates in the online studies suggest that participants find these interventions less acceptable than interventions involving therapist contact.

Only five studies reported feedback from participants about the compassion-based intervention: three studies on CFT/CMT (Ashworth et al., 2015; Lucre & Corten, 2013; McEwan & Gilbert, 2016), one on the MSC programme (Bluth et al., 2016) and one on CBCT (Dodds et al., 2015). All reported generally positive feedback from participants. Three of these studies used qualitative data analysis (Ashworth et al., 2015; Bluth et al., 2016; Lucre & Corten, 2013). All found that participants valued the compassion-based intervention and believed that it had given them tools to make positive changes in their lives.

2.4.3 Study Quality

Many of the reviewed studies comprised low quality evidence. This is in keeping with the studies' aims to explore new therapeutic approaches, investigate feasibility of interventions, and to generate research interest. Most of the reviewed studies reported sufficient details to allow an unbiased assessment of the findings to be made. However, the quality of the studies was less than ideal in several ways. Firstly, the design of many studies meant that internal validity was limited, and therefore any reductions in depression could have been due to factors other than the compassion-based intervention. The risk of confounding was especially high in studies where there was no comparison group. Secondly, the use of convenience/volunteer samples reduced external validity, which means that findings may not be generalisable, although generalisability of depression outcomes is likely to be higher for the studies that used clinical populations. Finally, most studies had small Ns and so were underpowered. This limits confidence in the conclusions of studies that reported null findings, as they may not have been able to detect an effect given their sample size. The reviewed studies add to the compassion literature, but their various methodological limitations mean that findings must be interpreted with caution.

2.4.4 Clinical Implications

The reviewed studies are heterogeneous in terms of intervention used, study design, and participant characteristics, which limits the clinical implications that can be drawn at this time. However, it appears that it is feasible to carry out compassion-based interventions and these are acceptable to participants. The use of compassion appears to be a teachable skill, which may help to reduce depression. Some of the effects of the compassion interventions may be common therapy effects, but there is evidence that specific compassion interventions may be useful with certain populations. There is most evidence to support the use of CFT/CMT in a variety of different clinical populations, both in terms of reducing depression and being acceptable to patients. It is notable that many of CFT/CMT studies used participants with complex and/or long-standing mental health difficulties, which adds weight to the idea that the focus on compassion gave a specific benefit. There is also evidence that the MSC programme can reduce depression in community adults and adolescents, although generalisability is limited. Self-help strategies of using compassion can be as effective as other emotion regulation strategies, although participants may not engage with this format as well as with therapist-led interventions.

However, one of the problems faced when using compassion-based interventions is that the people who have the most to gain from them may struggle the most initially:

depression is strongly positively associated with fear of compassion, which can be an obstacle to using compassion therapeutically (Gilbert et al., 2014). Fear of compassion can reduce through compassion-based interventions (Jazaieri et al., 2013; Krieger et al., 2016; Lawrence & Lee, 2013), but initial difficulties with this may lead to resistance or disengagement from therapy. This signifies the importance of clients understanding and accepting the rationale for the intervention.

2.4.5 Research Implications

More rigorous studies of compassion-based interventions, with depression as a primary outcome measure, are required to advance the field. Many of the included studies were pilot studies, which can now be built upon with RCTs. It is recommended that control groups in future RCTs include existing treatments relevant to the population being studied. This will allow researchers to investigate whether compassion-based interventions offer any additional benefit to currently available treatments. It will also allow investigation into which people benefit from which interventions. Future studies must ensure that they have adequate power to detect differences between groups to aid interpretation of findings.

All of the reviewed studies assessed depression using self-report methods, which carry risks of recall bias and experimenter effects. One study (Braehler et al., 2013) used blind assessment of narrative strategies to evaluate their intervention, but did not include depression in this analysis. Future research could consider using a similar strategy or using clinical interviews to assess depression, rather than relying exclusively on self-report. In addition, when depression is measured through self-report, it would be beneficial for participants to complete measures routinely during the intervention rather than solely at pre- and post-intervention. This would allow intention-to-treat analyses to be carried out.

Another challenge for research that relies on self-reports is that participants may not fully comprehend the concepts being assessed at baseline. This problem has been noted previously by the author of the Self-Compassion Scale, who stated “many people may not be aware enough of their own emotional experiences to realize the extent to which they lack self-compassion” (Neff, 2003a, p.244). Mayhew and Gilbert (2008) and Laithwaite et al. (2009) commented that some of their participants rated themselves as within the normal range or highly self-compassionate at baseline, but still struggled to use self-compassion exercises at first, suggesting that these participants may have inaccurately rated their abilities at baseline. This may have led to the apparent lack of improvement in their self-compassion scores. Such a lack of initial understanding will cause problems for any studies seeking to understand the mechanisms by which a compassion intervention works. Self-compassion has been successfully rated observationally in one previous correlational study (Sbarra et al., 2012) and future research could consider using this option.

It is imperative for future research to investigate the mechanisms by which compassion-based interventions reduce depression; specifically, studies should test whether increasing compassion reduces depression. Change in compassion could be investigated as a mediator of the effect of interventions on depression, or baseline compassion could be investigated as a moderator of the effects of interventions on depression.

It would also be valuable for future research to systematically collect data on the acceptability of, and compliance with, their compassion-based interventions. If interventions do not monitor compliance it is difficult to interpret whether null findings are due to a lack of treatment effect or due to participants not undertaking the intervention as intended (i.e., lack of intervention fidelity). Such research could help to inform whether there is a 'dose effect' for compassion interventions.

2.4.6 Limitations of the Review

The search strategy used in this review was at risk of selection bias, as searching for depression-related terms within titles, abstracts and keywords may have been more likely to retrieve studies with positive findings than with negative findings. To reduce this risk, the search strategy also looked for studies where depression was included as a secondary outcome measure, by including search terms relating to shame and self-criticism. Full texts were sought whenever abstracts were unclear about the psychological measures used.

The review was also vulnerable to the effects of publication bias, as it only included research published in peer-reviewed journals, excluding other sources such as conference papers and dissertations. If there is a publication bias, there will be unpublished studies of compassion-based interventions that showed non-significant effects, which were not included in this review. As such, the review could have over-estimated the effects of compassion-based interventions for depression.

Due to lack of resources for translations, searches were limited to the English language, which may have excluded relevant studies that were published in other languages. This may limit the generalisability of the results; most of the included studies took place in Western countries and it is uncertain whether the findings of the review are generalisable to other cultures. Aside from this language restriction, this review sought to ensure all relevant published studies were included by not limiting searches by date of publication, clinical status of participants, or methodology. However, the resulting heterogeneity of the included studies prevented a meta-analysis from being carried out. Due to the small number of studies meeting inclusion criteria and the lack of rigorously controlled studies in the review, conclusions remain tentative.

2.4.7 Conclusions

In conclusion, there is evidence that compassion-based interventions reduce depression, and some limited evidence that compassion-based interventions are superior or equivalent to other psychological interventions for depression. However, there is only a small amount of evidence that compassion-based interventions reduce depression through increasing abilities for compassion. The literature for compassion-based interventions would benefit from rigorously designed studies with depression as a primary outcome, which use active controls or established therapies for depression as comparison groups, and which investigate change in compassion as a mechanism of change in depression. As compassion-based interventions have been found to be potentially beneficial for depression, the following chapter investigates the link between self-compassion and depression in an at-risk population, namely, people with skin conditions.

Chapter 3

The Effects of Disgust and Self-Compassion on Depression in Dermatological Outpatients

3.1 Introduction

3.1.1 Psychological Impact of Visible Differences

Psychological distress among people who live with an altered appearance is a problem that affects many people worldwide. Skin conditions can cause visible differences and are extremely prevalent; skin conditions are the fourth leading cause of nonfatal global disease burden, with three skin conditions in the top 10 most prevalent diseases worldwide (Hay et al., 2014). Skin conditions are also commonly associated with depression. In a study across several European countries, depression was found in 10.1% of dermatological patients compared with 4.3% of controls (Dalgard et al., 2015). Broader narrative reviews of conditions affecting appearance report similar results; that people with visible differences tend to experience higher than average levels of psychological distress, including depression (Clarke et al., 2013; Rumsey & Harcourt, 2004; Thompson & Kent, 2001). The prevalence of skin conditions combined with the increased incidence of depression in people with skin conditions means that this problem warrants urgent attention from researchers and clinicians (APPGS, 2013, 2020; Lavda et al., 2012).

However, although overall levels of distress may be higher than average among people with a visible difference, there is considerable individual variation in the psychosocial impact of an altered appearance, with many people coping well (Clarke et al., 2013; Rumsey & Harcourt, 2004; Thompson & Kent, 2001; Thompson & Broom, 2009). Clinical severity of a visible difference is a poor predictor of psychological distress, and even evidence about the visibility of one's difference predicting distress is equivocal (Clarke et al., 2013; Thompson & Kent, 2001). Self-assessed severity of skin condition is more strongly associated with psychological distress than clinician-assessed severity, suggesting that individuals' perceptions and emotions regarding their skin condition play a key role in the development of skin-related distress (Magin et al., 2008, 2011). There is also evidence that personality traits, which are not specifically related to skin conditions, can influence skin-related distress. Insecure adult attachment orientation is linked to greater appearance-related distress and poorer quality of life among people with skin conditions (Krasuska et al., 2018). It is therefore important to investigate theoretical factors that contribute to, or protect against, the development of psychological distress among individuals with skin conditions, as greater theoretical understanding will aid the development of targeted interventions for distress in this population. Currently, there are few evidence-based psychological interventions available for people with skin conditions, so the development of further specific interventions would be beneficial (Lavda et al., 2012).

3.1.2 Disgust Responses to Visible Differences

One psychological factor that may play a role in depression among people with skin conditions is the emotion of disgust. Many skin conditions cause broken skin (for example, skin that is cracked, flaking, weeping or bleeding), which is a potential disgust elicitor, as "body envelope violations" tend to elicit disgust (Haidt et al., 1994, p. 701). Despite this potential link between skin conditions and disgust, studies of negative emotions in people with skin conditions have tended to neglect disgust, with a recent systematic review highlighting the need for further empirical work in this area (Mento et al., 2020). Disgust is commonly seen as a 'basic' emotion that requires minimal cognitive processing to occur (Power & Dalgleish, 1997) and which is difficult to reduce once the response to a certain elicitor is acquired (Rozin & Fallon, 1987). Disgust can be considered an adaptive response that evolved to help individuals avoid disease (Oaten et al., 2009; Curtis et al., 2011), for example, through contaminated food or contact with infected individuals. However, the disgust system is biased towards false alarms (see Oaten et al., 2009, for a review), meaning that disgust can be felt in response to triggers that pose no logical threat of contamination.

Research has distinguished three disgust traits: disgust propensity, one's tendency to be disgusted in any given situation; disgust sensitivity, how aversive one finds the experience of being disgusted; and self-focused/ruminative disgust, negatively appraising oneself in response to feeling disgusted[1] (Goetz et al., 2013; van Overveld et al., 2006). Having high disgust propensity can be described as being 'squeamish', that is, easily made to feel the emotion of disgust, while high disgust sensitivity and ruminative disgust both result in more negative cognitive appraisals about feeling

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[1] Self-focused/ruminative disgust is hereafter referred to more simply as ruminative disgust.

disgust. Each of these three constructs may predict depression in individuals with visible skin conditions. Individuals with high disgust propensity are expected to react to their skin condition with greater disgust and so activate the brain's threat/protection system frequently. When individuals with high disgust sensitivity feel disgusted, the feelings are experienced as more unpleasant. This may recruit other emotions such as fear or anger and make it likely that the threat/protection system is activated more strongly. Individuals with high ruminative disgust are expected to pay more attention to unpleasant aspects of themselves, which is known to be associated with depression (Alanzi et al., 2015).

There is evidence from studies using a variety of methods that supports the idea that disgust can occur in response to non-communicable health conditions. One study using an implicit association task showed that people have an implicit preference for clear skin over diseased skin (Grandfield et al., 2005). This preference suggests that disgust reactions could be present in response to viewing diseased skin. In a study that used observer ratings, participants responded equivalently towards individuals with a port wine stain on the face and individuals with an infectious disease, both in terms of behavioural avoidance and facial expressions of disgust (Ryan et al., 2012). These reactions exceeded those shown towards a healthy confederate. The presence of the distinctive facial expression of disgust suggests that disgust may be the principal negative emotion in reactions to visible difference, rather than other negative emotions such as fear. Another study that used self-report measures found that observers reported greater levels of disgust in response to increasing severity of appearance-altering conditions affecting the face (Shanmugarajah et al., 2012). These studies suggest that disgust can occur as an automatic reaction to seeing appearance-altering conditions, even if those conditions pose no potential harm to the observer in the way an infectious disease would. People with visible skin conditions may therefore experience disgust responses from others who see the affected skin. Indeed, there is evidence that people with psoriasis have reduced neural and cognitive responses to facial expressions of disgust in others, suggesting that people with psoriasis have blocked the processing of disgust expressions as a coping mechanism to avoid perceiving part of oneself to be an object of disgust for others (Kleyn et al., 2009). It is known that the visibility of a skin condition can be a major source of difficulty for sufferers (Uttjek et al., 2007) and receiving disgust responses from others (however unintentional) may contribute to emotional distress.

In addition to potentially receiving disgust responses from others, some individuals living with skin conditions may experience feelings of disgust on viewing their own condition (and possibly also by sensing it in other ways, e.g., by touch). People with skin conditions have been found to have the same implicit preferences for clear skin as people without skin conditions (Grandfield, 2007), and indeed, research has shown that some people with skin conditions experience disgust towards their own affected skin (Wahl et al., 2002). A recent systematic review highlighted the need for empirical work on disgust in people with skin conditions due to the relative neglect of this area of study (Mento et al., 2020). Individual differences in disgust have previously been investigated in relation to cancer, sexual dysfunction, surgical wounds, and colorectal conditions, with findings indicating that disgust is associated with distress in people with these conditions (Azlan et al., 2017; de Jong et al., 2013; Gaind et al., 2011; Reynolds et al., 2015), but the relationship between disgust and depression has not previously been investigated in people with skin conditions.

However, there is some evidence to suggest that disgust plays a role in depression even in individuals without a visible difference or physical health condition. First, facial expressions of disgust appear to be processed differently in depression. In an fMRI study, depressed patients were found to have significantly greater activation in bilateral temporal-limbic regions in response to viewing facial expressions of disgust, compared to controls (Surguladze et al., 2010). This was despite the two groups performing equivalently on an overt emotion recognition task. These results suggest that people with depression have a processing bias for expressions of disgust in others. Second, there is evidence that disgust traits are associated with depression. In student samples, positive correlations have been found between disgust propensity/sensitivity and depressive symptoms in studies that have used implicit measures of disgust (Nicholson & Barnes-Holmes, 2012) and self-report measures of disgust (Olatunji et al., 2010). A study investigating disgust in clinical populations found that clinically depressed patients had higher disgust sensitivity than healthy controls and were significantly more disgusted than controls in the domain of death and deformation (Ille et al., 2014). These findings suggest that heightened disgust responses may be maladaptive. This could be especially relevant for people with skin conditions who are often exposed to a potential disgust elicitor, their affected skin, which, unlike other disgust elicitors, they are unable to avoid.

3.1.3 Affect Regulation Systems and Depression

Gilbert's (2009a) model of affective regulation systems provides an explanation for the link between heightened disgust responses and depression. As noted in Chapter 1, depression is proposed to involve the threat/protection system being chronically overactive and the soothing/contentment system being underactive. Frequent contact with stimuli that activate the threat/protection system (including disgust elicitors) may therefore contribute to the development of depression. In contrast, experiencing compassion is theorised to trigger the soothing/contentment system (Gilbert, 2009a). Each of the affect regulation systems can be stimulated by internal signals as well as external ones (Gilbert, 2000), so how one relates to oneself has implications for mental health. Neff's (2003b) theorised components of self-compassion—self-kindness, common humanity and mindfulness—are conceptually similar to the abilities of the soothing/contentment system described by Gilbert (2009a), that is, they allow us to treat ourselves with warmth and kindness, to feel connected with others, and to engage with our experiences from a position of 'safeness'. According to Gilbert's (2009a) model, self-compassion should protect against depression by keeping the affect regulation systems in balance: after the activation of the threat/protection system (for example, due to a disgust elicitor), being self-compassionate activates the soothing/contentment system, which then tones down the threat/protection response. As threat-based and contentment-based emotions are underpinned by different neurological systems (Depue & Morrone-Strupinsky, 2005; Gilbert et al., 2009), self-compassion is not expected to alter one's trait level of disgust propensity/sensitivity/ruminative disgust. However, self-compassion is expected to provide some protection against depression in those individuals who have high levels of these traits, and consequently more frequent disgust experiences due to a lower threshold for experiencing disgust in response to potential disgust elicitors. Self-compassion should prevent frequent disgust experiences from contributing to depression, as although the threat/protection system will be active when disgust is experienced, it will not be chronically over-active.

Self-compassion has been shown to moderate the effects of various cognitive vulnerabilities on depression, such as maladaptive perfectionism (Ferrari et al., 2018), dysfunctional attitudes towards motherhood (Fonseca & Canavarro, 2018), irrational beliefs (Podina et al., 2015), and implicit cognitions (Phillips et al., 2018). Furthermore, self-compassion has been shown to protect against body-related threats, as it moderates the negative effects of body comparison and appearance contingent self-worth on body appreciation (Homan & Tylka, 2015). To date, no study has investigated whether self-compassion can offer some protection against depression in people with visible skin conditions, and the current study sought to address this gap.

3.1.4 The Current Study

This study aimed to examine the effects of disgust propensity, disgust sensitivity, ruminative disgust and self-compassion on depression in people with visible skin conditions. In addition, the study aimed to examine whether self-compassion moderated the effects of the disgust factors on depression. The study focused on patients with visible skin conditions that had a chronic course and manifested as disruption of the skin surface at the time of recruitment, as disrupted skin may potentially trigger disgust. Acne, eczema, and psoriasis are examples of commonly-occurring skin conditions that cause such signs. A longitudinal survey design was used, with participants completing questionnaires at the point of recruitment (time one) and at three-month follow-up (time two), to draw firmer conclusions about the directions of relationships found between disgust experiences, self-compassion, and depressive symptoms. The main hypotheses were:

- Disgust propensity, disgust sensitivity, and ruminative disgust will be significantly positively associated with depression both cross-sectionally (at time one) and prospectively (at time two).
- Self-compassion will be significantly negatively associated with depression cross-sectionally and prospectively.
- Self-compassion will moderate the effect of disgust experiences on depression, so that the positive relationships between disgust experiences and depression will weaken with increasing levels of self-compassion.

3.2 Method

3.2.1 Participants

Participants were a convenience sample of dermatological patients, recruited from a hospital outpatient clinic between November 2015 and March 2016. Participants' diagnoses were identified from their medical records or discussion with the treating dermatologist. Two participants refused permission for their diagnosis information to be collected, although they were identified as eligible participants by the treating dermatologist.

3.2.2 Procedure

Dermatological clinical staff were given a printed copy of the inclusion/exclusion criteria and used this to identify potential participants based on the signs of the patients' skin conditions observed that day. Potentially suitable participants were then asked by the clinic staff if they would be interested in taking part in a research study and, if so, were introduced to the lead researcher.

3.2.2.1 Inclusion Criteria

- Currently experiencing signs of a visible skin condition that is disrupting the surface of the skin (e.g., presenting with papules, pustules, vesicles, bullae, plaques, erosions, excoriation, or maceration).
- Aged 16 or over.
- Sufficient English language ability to complete self-report questionnaires.

3.2.2.2 Exclusion Criteria

- Primary psychiatric diagnosis affecting the skin (e.g., trichotillomania, delusions of parasitosis, body dysmorphic disorder).
- Diagnosis of skin cancer, or undergoing investigations for skin cancer.
- Seeking treatment for hair disorders (e.g., alopecia areata).
- Seeking treatment for moles or warts.
- Seeking treatment for burns or scarring.
- Skin conditions caused by an infestation.
- Co-morbid skin condition that does not meet the inclusion criteria but causes equal or greater subjective distress than the included skin condition.

The final exclusion criterion was intended to be a rubric for decision-making in any case a where patient presented with co-morbid skin conditions, one of which would be included and one of which would not (e.g., a patient with psoriasis and vitiligo). However, it was not necessary to exclude any potential participants on the basis of the latter three exclusion criteria.[2]

Participants were given a copy of the participant information sheet (see Appendix B.1) and provided written consent (see Appendix B.2), which included questions about

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[2] One potential participant was experiencing another health condition that caused greater subjective distress than his skin condition, so decided against taking part.

being contacted with follow-up measures and being sent a summary of the results at the end of the study. Participants were then given a set of pen-and-paper questionnaires. Participants either completed the time one questionnaire in the clinic or completed it at home and returned it by mail using a freepost envelope. Four participants contacted the researcher by email after seeing the study advert in the dermatology department, and were sent a link to an online version of the time one questionnaire at their request. Participants who consented to undertake the time two questionnaire were contacted after three months by post or email, according to their preferences. The time one questionnaire consisted of demographics, skin condition information, and measures of disgust, self-compassion, and depression. The time two questionnaire consisted of the depression measure and skin condition information. Participants were entered into a prize draw for a £50 shopping voucher if they completed the follow-up questionnaires. Participants that chose not to take part in the follow-up section of the study were given a debrief sheet about the purpose of the study while they were in the dermatology department (see Appendix B.3), while participants who requested a summary of the results were sent this at the end of the study. The study received ethical approval from by the Wales NHS Research Ethics Committee.

3.2.3 Measures

3.2.3.1 Demographics

Participants were asked to provide information about their age, gender, ethnicity, employment status, marital status and education level.

3.2.3.2 Skin Condition Information

Participants were asked how long they had had their skin condition and to identify which parts of their body were affected at the time of recruitment. Participants were also asked to rate the subjective severity of their condition over the past week using a visual analogue scale. This was used as a validated measure of perceived severity that was suitable for use across different skin conditions could not be identified. The question was phrased 'How severe has your skin condition been over the last week? Please draw a line anywhere on the scale below.' The scale was 150mm in length, with points marked along the scale in multiples of 10 from 0 to 100. Verbal descriptions were also used for anchors: 'no noticeable condition' at 0 and 'very severe' at 100, with 'mild', 'moderate' and 'severe' spaced equally in between. Participants' markings on the scale were measured to the nearest millimetre and converted to an integer score between 0 and 100. Higher scores indicated greater perceived severity.

At time two, participants were asked to rate how the severity of their condition had changed (for better or worse) over the previous three months on a visual analogue scale. The question was phrased 'How has the severity of your skin condition changed over the past three months? Please draw a line anywhere on the scale below.' The scale was 150mm in length, with points marked along the scale in multiples of 10 from −50 to 50, to avoid biasing participants towards indicating improvement rather than deterioration in their skin condition (Schwarz, 1999). Anchors were 'very much worse' at −50, 'no change' at 0 and 'very much better' at 50. Participants' markings on the scale were measured to the nearest millimetre and converted to an integer score between −50 and 50. Greater positive scores indicated greater perceived improvement, while greater negative scores indicated greater perceived deterioration. For participants completing online versions of these questions, the scale was presented on a sliding scale where participants could move the slider along the scale in integer increments. Rather than being asked to draw a line, participants were instructed to 'Please move the slider to any point on the scale below'.

3.2.3.3 Disgust Propensity and Sensitivity Scale–Revised (DPSS–R)

A 12-item version of the DPSS–R (van Overveld et al., 2006) was used to measure participants' disgust propensity, disgust sensitivity, and ruminative disgust, following recommendations by Goetz et al. (2013). Concurrent validity for the 12-item DPSS–R has been demonstrated by patterns of correlations with other established measures: the disgust propensity factor correlates more strongly with another disgust propensity measure than does the disgust sensitivity factor, and conversely, the disgust sensitivity factor correlates more strongly with an anxiety sensitivity measure than does the disgust propensity factor (Goetz et al., 2013). Additionally, construct validity of the 12-item DPSS–R has been demonstrated by an exploratory factor analysis finding three factors with acceptable internal consistency, and a confirmatory factor analysis supporting the three factor model (Goetz et al., 2013). Concurrent validity of the DPSS–R has been demonstrated by its ability to predict symptoms of disgust-relevant phobias (Fergus & Valentiner, 2009). These validation studies have used student samples, but the DPSS–R has also been used successfully in studies using other populations, such as patients with schizophrenia or depression (Ille et al., 2010), and combat veterans (Engelhard et al., 2011). Internal reliability of the 12-item DPSS–R is acceptable, with Cronbach's alphas of .77, .78, and .79 for the propensity, sensitivity, and ruminative subscales, respectively (Goetz et al., 2013). In contrast to other validated measures of disgust (e.g., the Disgust Scale; Haidt et al., 1994), the DPSS–R assesses participants' everyday experiences of disgust rather than presenting hypothetical scenarios, and hence was considered to have greater ecological validity.

Participants were asked to rate how often statements are true for them, on a five-point scale from 'never' (1) to 'always' (5), for example, 'I avoid disgusting things'. Higher scores indicate higher levels of disgust propensity/sensitivity/rumination. The reduced item version of the DPSS–R has six items for disgust propensity, four items for disgust sensitivity and two items for ruminative disgust. Mean scores were computed for each subscale. In the current sample, Cronbach's alphas were .82, .79, and .79 for the propensity, sensitivity, and rumination subscales, respectively.

3.2.3.4 Self-Compassion Scale–Short Form (SCS–SF)

The SCS–SF (Raes et al., 2011) was used to measure participants' levels of self-compassion. The SCS–SF is a 12-item version of the longer, 26-item SCS (Neff, 2003a), which demonstrated several forms of validity in the initial scale-development study. Content validity was indicated as high scorers on the SCS tended to describe themselves as being equally kind to self and others, whereas lower scorers reported being kinder to others than the self. In addition, a Buddhist sample scored higher on the SCS than undergraduates, showing construct validity. Convergent validity was shown by strong correlations in expected directions with other established measures, including the Beck Depression Inventory (Beck et al., 1961) and the self-criticism subscale of the Depressive Experiences Questionnaire (Blatt et al., 1976). The SCS also showed discriminant validity as it did not have a significant association with the Narcissistic Personality Inventory, in contrast to various measures of self-esteem. The SCS–SF has been found to have near-perfect correlation with the full-length SCS ($r \geq .97$ in all samples; Raes et al., 2011) and confirmatory factor analysis supported the same six-factor structure as found in the SCS, and the higher order factor of self-compassion. Additionally, the SCS–SF has been shown to have good internal reliability, with a Cronbach's alpha of .86 (Raes et al., 2011) and test-retest reliability of .71 over five months (Raes, 2011). At the time that the current study was planned and conducted, the SCS and SCS–SF were the only validated measures of self-compassion available. The short form was chosen for use in this study to reduce participant burden.

Participants were asked to rate how often they behave in the manner described in the statements on a five-point scale from 'almost never' (1) to 'almost always' (5), for example, 'When I'm going through a very hard time, I give myself the caring and tenderness I need'. Half the items are negatively worded, so these items were reverse coded and then mean scores were calculated. Higher scores indicate higher levels of self-compassion. In the current sample, Cronbach's alpha was .77.

3.2.3.5 Depression Anxiety Stress Scales–21 (DASS–21)

The DASS–21 (Lovibond & Lovibond, 1995) was used to measure participants' levels of depression. The 21-item scale contains seven items each for depression, anxiety and stress. Only the depression subscale data were included in the current study.

Convergent validity of the DASS–21 depression subscale has been demonstrated by strong positive correlations with established measures of depression, in both clinical and non-clinical samples (Antony et al., 1998; Henry & Crawford, 2005). The DASS–21 has also been shown to have discriminant validity as nonclinical samples had lower scores than clinical samples (Antony et al., 1998) and patients' scores reduced between their admission to a psychiatric hospital and their discharge (Ng et al., 2007). Internal consistency of the DASS–21 depression subscale is good, with a Cronbach's alpha of .88 (Henry & Crawford, 2005). The DASS–21 was chosen for use in the current study because of its simple language as compared to other validated depression measures (e.g., the PHQ-9; Kroenke et al., 2001). Having an easily-comprehensible measure was considered important for use in a busy clinic environment with members of the public.

Participants were asked to rate how much statements applied to them over the past week on a four-point scale from 'did not apply to me at all' (0) to 'applied to me very much, or most of the time' (3), for example, 'I couldn't seem to experience any positive feeling at all'. Higher scores indicate higher levels of depression. Mean scores were calculated, which were then converted into totals and multiplied by two for comparisons with normative data from the full length (42-item) Depression Anxiety Stress Scales (Lovibond & Lovibond, 1995), as recommended by Lovibond (2020). This gave a possible range for the scores of 0–42. In the current sample, Cronbach's alpha was .91 at baseline.

3.2.4 Data Analysis Strategy

3.2.4.1 A Priori Power Analysis

Previous research has found correlations between disgust propensity and depressive symptoms of .23 and between disgust sensitivity and depressive symptoms of .24 (Olatunji et al., 2010), which indicate small effect sizes according to Cohen (1992). A meta-analysis found a correlation between self-compassion and depression of $-.52$ (MacBeth & Gumley, 2012), which indicates a large effect size according to Cohen (1992). Power analysis indicated that 146 participants would be needed to detect a correlation of .23 with alpha = .05 and power = .80, but only 26 participants to detect a correlation of $-.52$. For the regression analyses, assuming a 'medium' effect size of $R^2 = .13$, a significance level of alpha = .05, and nine predictors (disgust propensity, disgust sensitivity, self-focused/ruminative disgust, self-compassion, three disgust and self-compassion interaction variables, and two covariates of age and gender), a sample size of 114 would be required to achieve 80% power. The addition of the baseline depression level and change in perceived skin severity in the longitudinal data analysis would add another two predictors, which increased the required number of participants to 123. A previous longitudinal study of dermatological outpatients with psoriasis reported a drop-out rate of 25% over one year (Scharloo et al., 2000). As the length of follow-up is shorter in the current study, the attrition rate was expected to be lower. To allow for 20% attrition of participants between data collection points in this study, a sample of 148 participants was required, assuming all covariates would be required in the analyses.

3.2.4.2 Data Analyses

This study used multiple regression analyses to test whether self-compassion moderated the relationships between disgust traits and depression at time one and time two. SPSS 26 was used for analyses. Preliminary analyses—bivariate correlations and independent t-tests—were carried out to determine whether it was necessary to include age and gender as covariates in the regression analyses, as these constructs have been found to be associated with depression in previous studies (Kessler et al., 2010; Nolen-Hoeksema, 2001). Additional analyses explored associations between the psychological variables and duration of skin condition, using correlations, and affected area(s) of skin, using independent t-tests.

Three hierarchical multiple regression analyses were conducted with depression as the dependent variable, each containing one of the disgust traits, self-compassion and a disgust x self-compassion interaction term. For each analysis, the disgust and self-compassion variables were mean centred to aid the interpretation of subsequent moderation analyses. An interaction term was then computed between the disgust variable and self-compassion. The regression analyses were run with data entered in the following blocks; (1) the disgust trait and self-compassion; (2) the disgust trait x self-compassion interaction term. In the first regression analysis, disgust propensity was the predictor variable and self-compassion was the moderator variable. The second and third regression analyses were conducted in the same way but replaced disgust propensity with disgust sensitivity and ruminative disgust, respectively.

Three additional multiple regression analyses were conducted with time two depression as the dependent variable. These replicated the analyses for time one depression as described above, with the addition of time one depression being included as a covariate in each analysis, to control for its effects. The regression analyses were run with data entered in the following blocks: (1) time one depression; (2) the disgust trait and self-compassion; (3) the disgust trait x self-compassion interaction term. Simple slopes analyses were used to probe significant moderation effects at the mean and at one standard deviation above and below the mean for high and low levels of the moderator variable.

3.3 Results

3.3.1 Time One Descriptive Findings

Information about the study and the time one questionnaire were given to 177 dermatology patients. The time one questionnaire was returned by 154 participants, of whom 133 participants (86.4%) completed the questionnaire in the dermatology department and 21 participants (13.6%) completed the questionnaire at home (17 returned by post, 4 completed online). Independent samples t-tests showed no differences on disgust propensity, disgust sensitivity, ruminative disgust, self-compassion or depression between participants who completed the questionnaires in the dermatology department and those who completed them at home (all *ps* $>$.05, all η^2s $\leq$ .01). Data were screened for outliers and missing values. Five participants were removed from the dataset as they had extreme values on one or more of the psychological measures. One participant failed to complete the DPSS–R and one participant failed to complete the DASS–21, so were excluded from analyses. This left 147 participants in the sample. Missing data within this sample was minimal, at 0.002%. The mean age of the sample was 40.51 years (SD = 19.36, range = 16–88), and the mean duration of the skin condition was 14.91 years (SD = 16.00, range = 0.25–77). The mean subjective skin severity rating for the past week was 48.07 (SD = 22.88, range = 0–100). The sample contained a slightly higher proportion of women (60.5%) than men (39.5%). Most participants (86.4%) described their ethnicity as 'White'. Other demographic information is shown in Table 3.1. The most common skin conditions in the sample were dermatitis/eczema (32.0%), psoriasis (32.0%), and acne (20.4%). Skin condition diagnoses are shown in Table 3.2.

Descriptive statistics were conducted for the psychological variables, which are shown in Table 3.3. The mean depression score was just above the clinical cutoff (10) for depression; 63 (42.9%) participants exceeded this cutoff. Compared with other normative data from the UK general population, in which the mean depression score was 5.55 and the percentage of the sample at or above the clinical cutoff was 18.3% (Crawford & Henry, 2003), the sample in the current study were experiencing higher than average depressive symptoms.

Independent t-tests revealed no significant differences in any of the psychological variables between those who did and did not have the skin condition on each body area, nor were there any differences when participants were grouped according to those that had visible conditions (affecting the head/scalp, face, or hands) and non-visible conditions (all *ps*$>$.05). None of the psychological variables were significantly correlated with duration of the skin condition (all *ps*$>$.05).

Table 3.1
Demographic Characteristics of Participants ($N = 147$)

Characteristic	*n*	%	Characteristic	*n*	%
Gender			Ethnicity		
Female	89	60.5	White	127	86.4
Male	58	39.5	Asian/Asian British	12	8.2
			Black/Black British	4	2.7
Marital status			Other	4	2.7
Single	61	41.5			
Married/cohabiting	68	46.3	Highest qualification level		
Divorced	8	5.4	No qualifications	13	8.8
Separated	4	2.7	GCSE or equivalent	27	18.4
Widowed	6	4.1	A–level or equivalent	34	23.1
			Apprenticeship	19	12.9
Employment status			Degree or above	53	36.1
Employed full time	45	30.6	Unspecified	1	0.7
Employed part time	35	23.8			
Student	30	20.4	Site(s) of skin condition		
Retired	25	17.0	Head/scalp	60	40.8
Full time homemaker/carer	7	4.8	Face	72	49.0
Unemployed	4	2.7	Arms	85	57.8
Unable to work	1	0.7	Hands	64	43.5
			Body/trunk	101	68.7
			Legs	91	61.9
			Feet	55	37.4

3.3.2 Time One Associations with Depression

Preliminary analyses showed that depression was not significantly associated with age, $r(144) = .01$, $p = .87$, or duration of skin condition, $r(145) = .001$, $p = .99$, nor did depression differ by gender, $t(145) = 1.25$, $p = .22$, $\eta^2 = .01$.

A correlation matrix was computed for the disgust variables (disgust propensity, disgust sensitivity, and ruminative disgust), self-compassion and depression at time one. This is shown in Table 3.3. As hypothesised, all three disgust variables were significantly

Table 3.2

Skin Condition Diagnoses of Participants (N = 147)

Diagnosis	n^a	%	Type	n	%
Dermatitis/eczema	47	32.0	Atopic	22	15.0
			Allergic contact	4	2.7
			Discoid	2	1.4
			Hand	7	4.8
			Plantar	1	0.7
			Pompholyx	1	0.7
			Seborrhoeic	2	1.4
			Unspecified	8	5.4
Psoriasis	47	32.0	Guttate	3	2.0
			Plaque	44	29.3
			Unspecified	1	0.7
Acne	30	20.4	Comedonal	2	1.4
			Cystic	1	0.7
			Excoriee	1	0.7
			Unspecified	4	2.7
			Vulgaris	22	15.0
Lupus	6	4.1	Discoid lupus erythermatosus	2	1.4
			Lupus profundus	1	0.7
			Systemic lupus erythematosus	3	2.0
Other	27	18.4	Behçet's disease	1	0.7
			Bullous pemphigoid	1	0.7
			Darier's disease	1	0.7
			Granuloma annulare	1	0.7
			Hidradenitis suppurativa	2	1.4
			Impetigo	1	0.7
			Leg ulcers	1	0.7
			Lichen planus	2	1.4
			Necrobiosis lipoidica diabeticorum	1	0.7
			Nodular prurigo	3	2.0
			Pemphigoid (unspecified)	1	0.7
			Perforating collagenosis	1	0.7
			Polymorphic light eruption	1	0.7
			Pyoderma gangrenosum	1	0.7
			Rosacea	3	2.0
			Seborrhoeic keratosis	1	0.7
			Urticaria	4	2.7
			Urticarial vasculitis	1	0.7
Undiagnosed	3	2.0	-	-	-
Diagnosis not disclosed	2	1.4	-	-	-

[a] 14 participants were diagnosed with more than one skin condition: 13 participants had two skin conditions and one participant had three skin conditions.

Table 3.3

Correlations and Descriptive Statistics of Main Study Variables ($N = 147^{a}$)

	Variable	1	2	3	4	5	Mean	*SD*
1	Disgust propensity	-	-	-	-	-	2.49	0.74
2	Disgust sensitivity	$.71^{***}$	-	-	-	-	1.96	0.75
3	Ruminative disgust	$.58^{***}$	$.52^{***}$	-	-	-	1.90	1.00
4	Self-compassion	$-.22^{**}$	$-.27^{**}$	$-.28^{**}$	-	-	3.08	0.68
5	Time one depression	$.41^{***}$	$.33^{***}$	$.47^{***}$	$-.45^{***}$	-	10.19	10.32
6	Time two depression	$.23^{*}$	.16	$.45^{***}$	$-.47^{***}$	$.78^{***}$	11.21	10.57

^{a} For time two depression, $N = 80$.

$^{*}p \leq .05$, $^{**}p \leq .01$, $^{***}p < .001$.

positively correlated with depression, and self-compassion was significantly negatively correlated with depression. A high correlation was found between disgust propensity and disgust sensitivity, $r(153) = .72$, $p < .001$. A factor analysis was carried out to investigate whether the DPSS–R yielded three distinct disgust factors in the present sample. This indicated that despite the high correlation between disgust propensity and disgust sensitivity, their subscale items were loading onto separate factors. The factor analysis is presented in Appendix C.1.

3.3.3 Time One Regression Analyses

To test the hypotheses, moderated regression analysis was required, which involves the computation of an interaction term between each predictor and the moderator, which are then entered into the model. As disgust propensity and disgust sensitivity were highly correlated, the 'disgust propensity*self-compassion' and 'disgust sensitivity*self-compassion' interaction terms would therefore also be highly correlated. To avoid the regression model containing highly correlated independent variables and interaction terms, it was decided to examine the effect of disgust traits on depression individually.

Preliminary analyses showed that the data met the assumptions of non-zero variances, independent errors (Durbin-Watson values = 2.08, 2.04 and 2.09 for disgust propensity, disgust sensitivity and ruminative disgust regressions respectively), lack of multicollinearity (Tolerances > 0.1, VIFs < 10). The scatterplots of standardised residuals indicated that the data met the assumptions of linearity and homoscedasticity. The histograms and P-Plots of standardised residuals indicated that the data failed to meet the assumption of normally distributed errors. Bias corrected and accelerated interval bootstrapping was therefore performed, as bootstrapped regression is a more robust method that is reliable even when the normal assumptions of regression are not met (Field, 2013). Multivariate outliers were detected using a $p < .001$ criterion for Mahalanobis distance and an absolute value > 3 criterion for standardised residual. Two outliers were removed from the disgust propensity regression, one outlier was removed from the disgust sensitivity regression and two outliers were removed from the ruminative disgust regression.

Post hoc power analyses indicated that the time one regression analyses were adequately powered: with a significance level of $\alpha = .05$, three predictors, Ns of 145, 146, and 144 for the disgust propensity, disgust sensitivity, and ruminative disgust regressions respectively, and effect sizes of f^2 of .45, .30, and .61, the power achieved each analysis was > 0.999.

3.3.3.1 Disgust Propensity

At step 1, disgust propensity and self-compassion explained 29% of the variance in depression, $R^2 = .29$, $F(2,142) = 29.55$, $p < .001$. Disgust propensity and self-compassion were significant independent predictors. At step 2, the addition of the disgust propensity x self-compassion interaction term produced a significant increment in the amount of variance explained, $\Delta R^2 = .02$, $\Delta F(1,141) = 4.02$, $p = .047$, indicating that self-compassion moderated the effect of disgust propensity on depression. Disgust propensity, self-compassion, and the disgust propensity x self-compassion interaction term were significant independent predictors. The final model explained 31% of the variance in depression, $R^2 = .31$, $F(3,141) = 21.46$, $p < .001$. Results are shown in Table 3.4. The nature of the interaction was decomposed using simple slopes analysis, using one standard deviation above and below the mean for high and low levels of the variables. This showed that at low levels of self-compassion, there was a significant positive relationship between disgust propensity and depression, $b = 6.71, t = 4.64, p < .001$. There was also a significant positive relationship between disgust propensity and depression at mean levels of self-compassion, $b = 4.33, t = 4.48, p < .001$. In contrast, at high levels of self-compassion, there was a non-significant relationship between disgust propensity and depression, $b = 1.95, t = 1.21, p = .23$. This interaction effect is shown in Figure 3.1.

3.3.3.2 Disgust Sensitivity

At step one, disgust sensitivity and self-compassion explained 23% of the variance in depression, $R^2 = .23$, $F(2,143) = 21.13$, $p < .001$. Disgust sensitivity and self-compassion were significant independent predictors. However, at step 2, the addition of the disgust sensitivity x self-compassion interaction term did not significantly increase the amount of variance explained, $\Delta R^2 = .01$, $\Delta F(1,142) = 1.08$, $p = .30$, indicating

Table 3.4

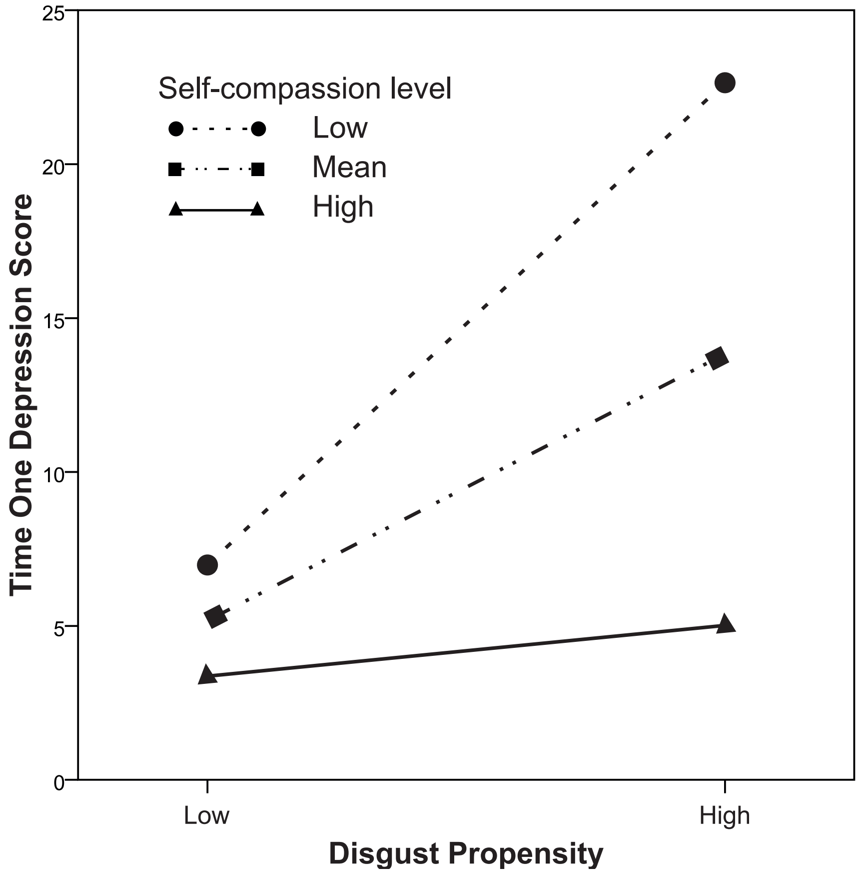
Hierarchical Regression Model for the Prediction of Time One Depression by Disgust Propensity and Self-Compassion

Block	Variable	*B*	95% CI	*SE*	β	*p*
1	Disgust propensity	4.54	[2.54, 6.37]	0.95	.34	.001
	Self-compassion	-5.32	[-7.28, -3.38]	1.02	-.36	.001
2	Disgust propensity	4.33	[2.45, 6.10]	0.93	.32	.001
	Self-compassion	-5.31	[-7.18, -3.40]	0.96	-.36	.001
	Disgust propensity*Self-compassion	-3.50	[-6.62, -0.08]	1.60	-.14	.033

Note. Confidence intervals and standard errors based on 1000 bootstrap samples.

Figure 3.1

The Moderating Effect of Self-Compassion on the Relationship between Disgust Propensity and Time One Depression



that self-compassion did not moderate the effect of disgust sensitivity on depression. Results are shown in Table 3.5.

Table 3.5
Hierarchical Regression Model for the Prediction of Time One Depression by Disgust Sensitivity and Self-Compassion

Block	Variable	*B*	95% CI	*SE*	β	*p*
1	Disgust sensitivity	2.91	[0.66, 5.14]	1.14	.21	.010
	Self-compassion	-5.71	[-8.00, -3.67]	1.08	-.38	.001
2	Disgust sensitivity	2.64	[0.33, 4.90]	1.13	.19	.019
	Self-compassion	-5.74	[-7.87, -3.76]	1.08	-.38	.001
	Disgust sensitivity*Self-compassion	-1.73	[-4.97, 1.56]	1.60	-.08	.255

Note. Confidence intervals and standard errors based on 1000 bootstrap samples.

3.3.3.3 Ruminative Disgust

At step 1, ruminative disgust and self-compassion explained 38% of the variance in depression, $R^2 = .38$, $F(2, 141) = 42.39$, $p < .001$. Ruminative disgust and self-compassion were significant independent predictors. At step 2, the addition of the ruminative disgust x self-compassion interaction term did not significantly increase the amount of variance explained, $\Delta R^2 < .01$, $\Delta F(1, 140) = 0.181$, $p = .67$. This indicates that self-compassion did not moderate the effect of ruminative disgust on depression. Results are shown in Table 3.6.

Table 3.6
Hierarchical Regression Model for the Prediction of Time One Depression by Ruminative Disgust and Self-Compassion

Block	Variable	*B*	95% CI	*SE*	β	*p*
1	Ruminative disgust	4.26	[2.72, 5.52]	0.78	.43	.001
	Self-compassion	-4.78	[-6.89, -2.91]	1.02	-.33	.001
2	Ruminative disgust	4.17	[2.49, 5.45]	0.76	.42	.001
	Self-compassion	-4.82	[-6.89, -2.91]	1.06	-.33	.001
	Ruminative disgust*Self-compassion	-0.45	[-2.97, 2.28]	1.26	-.03	.705

Note. Confidence intervals and standard errors based on 1000 bootstrap samples.

3.3.4 Time Two Descriptive Findings

Eighty-seven participants responded to the follow-up questionnaire. Of these, three participants who were excluded from the analyses at time one due to extreme scores were once again excluded from further analyses. No participants had extreme scores on the time two depression measure, although four participants failed to complete it and so were excluded from analyses. This left 80 participants in the sample for time two analyses. The mean depression score at time two was 11.21 (SD = 10.57, range 0–40). A repeated measures t-test showed that depression scores had not changed significantly between times one and two, $t(79) = -.92$, $p = .34$, $\eta^2 = 0.01$. The mean subjective change in skin condition severity score was 6.44 (SD = 29.74, range −50 to 50), indicating, on average, little subjective change in skin condition severity in the period since the time one measures were completed.

3.3.5 Attrition Analyses

Independent samples t-tests and chi-square analyses were conducted to see whether participants who responded to the follow-up questionnaire differed in key variables from participants who did not respond. Participants who responded at follow-up were significantly older ($M = 45.6$ years, $SD = 20.9$) than participants who did not respond at follow-up ($M = 34.0$ years, $SD = 14.97$), $t(138) = 3.72$, $p < .001$, $\eta^2 = .09$. Gender did not affect whether participants responded at follow-up, $\chi^2(1, n = 143) = 0.01$, $p = .91$, $\phi = .009$. There were also no differences in disgust propensity, disgust sensitivity, ruminative disgust, self-compassion or time one depression between participants who took part in the follow up and those who did not (all $ps > .05$, all η^2s $< .01$).

3.3.6 Time Two Associations with Depression

As at time one, depression at follow-up was not significantly associated with age, $r(78) = -.22$, $p = .054$, or duration of skin condition, $r(77) = -.06$, $p = .59$, nor did depression at follow-up differ by gender, $t(78) = 0.59$, $p = .55$, $\eta^2 = .005$. Subjective change in skin condition severity was not associated with depression at follow-up, $r(77) = .03, p = .83$.

Correlations between the disgust variables, self-compassion and time two depression are shown in Table 3.3. Disgust propensity and ruminative disgust were significantly positively correlated with time two depression, while self-compassion was significantly negatively correlated with time two depression. Disgust sensitivity was not significantly correlated with time two depression. Depression at times one and two were highly positively correlated, $r(78) = .78$, $p < .001$.

3.3.7 Time Two Regression Analyses

As before, preliminary analyses were used to test the suitability of the data for regression analyses. A strong positive correlation was found between depression scores at times one and two, $r(80) = .78, p < .001$. However, collinearity tests indicated that the assumption of multicollinearity had not been violated (Tolerances > 0.1, VIFs < 10). As at time one, the data also met the other assumptions for multiple regression analysis. The data had non-zero variances, and independent errors (Durbin-Watson values = 2.00, 2.00, and 1.87 for the disgust propensity, disgust sensitivity and ruminative disgust regressions respectively). The scatterplots of standardised residuals indicated that the data met the assumptions of linearity and homoscedasticity. The histograms and normal P-Plots of standardised residuals indicated that the data contained approximately normally distributed errors. For consistency, bias corrected and accelerated bootstrapping was performed as for the time one regression analyses. Two multivariate outliers were removed from the disgust propensity and disgust sensitivity regressions and three multivariate outliers were removed from the ruminative disgust regression.

Post-hoc power analyses indicated that the time two regression analyses were adequately powered: with a significance level of $\alpha = .05$, four predictors, Ns of 78, 78, and 76 for the disgust propensity, disgust sensitivity, and ruminative disgust regressions respectively, and an effect size of $f^2 = 3.35$ in each analysis, the power achieved was $> .999$.

3.3.7.1 Disgust Propensity

At step 1, time one depression explained 73% of the variance in time two depression, $R^2 = .73$, $F(1,76) = 205.26$, $p < .001$. At step 2, disgust propensity and self-compassion significantly increased the amount of variance explained, $\Delta R^2 = .03$, $\Delta F(2,74) = 4.19$, $p = .02$. Time one depression and self-compassion were significant independent predictors. At step 3, the disgust and self-compassion interaction term did not significantly increased the amount of variance explained, $\Delta R^2 = .01$, $\Delta F(1,73) = 2.97$, $p = .09$. This indicates that self-compassion did not moderate the effect of disgust propensity on depression at time two, after controlling for depression at time one. The final model explained 77% of the variance in depression, $R^2 = .77, F(4,73) = 60.00, p < .001$. Results are shown in Table 3.7.

Table 3.7

Hierarchical Regression Model for the Prediction of Time Two Depression by Time One Depression, Disgust Propensity and Self-Compassion

Block	Variable	*B*	95% CI	*SE*	β	*p*
1	Time one depression	0.90	[0.73, 1.08]	0.08	.85	.001
2	Time one depression	0.85	[0.66, 1.04]	0.10	.80	.001
	Disgust propensity	-0.57	[-2.20, .13]	0.82	-.04	.481
	Self-compassion	-2.70	[-4.74, -0.83]	0.94	-.18	.008
3	Time one depression	0.86	[0.68, 1.03]	0.10	.82	.001
	Disgust propensity	-0.57	[-2.24, 1.09]	0.80	-.04	.481
	Self-compassion	-2.48	[-4.50, -0.69]	0.96	-.16	.016
	Disgust propensity*Self-compassion	2.85	[-0.30, 6.20]	1.76	.10	.090

Note. Confidence intervals and standard errors based on 1000 bootstrap samples.

3.3.7.2 Disgust Sensitivity

As in the previous regression analysis, at step 1, time one depression explained 73% of the variance in time two depression, $R^2 = .73$, $F(1,76) = 205.26$, $p < .001$. At step 2, disgust sensitivity and self-compassion significantly increased the amount of variance explained, $\Delta R^2 = .03$, $\Delta F(2,74) = 3.93$, $p = .02$. Time one depression and self-compassion were significant independent predictors. At step 3, the disgust sensitivity x self-compassion interaction term significantly increased the amount of variance explained, $\Delta R^2 = .01$, $\Delta F(1,73) = 4.45$, $p = .04$. Time one depression, self-compassion and the disgust sensitivity x self-compassion interaction term were significant independent predictors. This indicates that self-compassion moderated the effect of disgust sensitivity on depression at time two, after controlling for depression at time one. The final model explained 77% of the variance in depression, $R^2 = .77, F(4,73) = 61.02, p < .001$. Results are shown in Table 3.8.

The nature of the interaction was explored using simple slopes analysis, using one standard deviation above and below the mean for high and low levels of the moderator. Non-significant relationships were found between disgust sensitivity and depression at low levels of self-compassion ($b = -1.81, t = -1.54, p = 0.13$), at mean levels of self-compassion ($b = 0.16, t = 0.20, p = .84$) and at high levels of self-compassion ($b = 2.13, t = 1.63, p = .11$). The interaction effect was therefore further explored using the ‘PROCESS’ macro for SPSS (Hayes, 2013) to implement the Johnson–Neyman technique (Johnson & Neyman, 1936). This calculates a zone of significance to identify

Table 3.8

Hierarchical Regression Model for the Prediction of Time Two Depression by Time One Depression, Disgust Sensitivity and Self-Compassion

Block	Variable	*B*	95% CI	*SE*	β	*p*
1	Time one depression	0.90	[0.74, 1.07]	0.08	.85	.001
2	Time one depression	0.84	[0.66, 1.01]	0.09	.79	.001
	Disgust sensitivity	-0.03	[-1.70, 1.57]	0.90	-.002	.987
	Self-compassion	-2.68	[-4.51, -1.06]	0.99	-.17	.014
3	Time one depression	0.84	[0.67, 1.01]	0.09	.79	.001
	Disgust sensitivity	0.16	[-1.50, 1.78]	0.88	.01	.821
	Self-compassion	-2.53	[-4.36, -0.88]	0.96	-.16	.015
	Disgust sensitivity*Self-compassion	2.95	[0.59, 5.59]	1.33	.12	.027

Note. Confidence intervals and standard errors based on 1000 bootstrap samples.

for which values of self-compassion there was a significant relationship between disgust sensitivity and depression. This indicated that there was a significant negative relationship between disgust sensitivity and depression only for individuals with the lowest 1.3% self-compassion scores. As this represents approximately only one participant, the significant interaction term may be irrelevant: for most participants, level of self-compassion did not affect the relationship between disgust sensitivity and time two depression.

3.3.7.3 Ruminative Disgust

As step 1, time one depression explained 74% of the variance in time two depression, $R^2 = .74$, $F(1,74) = 209.91$, $p < .001$. At step 2, the inclusion of ruminative disgust and self-compassion significantly increased the amount of variance explained, $\Delta R^2 = .03$, $\Delta F(2,72) = 4.73$, $p = .01$. Time one depression and self-compassion were significant independent predictors. At step 3, the ruminative disgust x self-compassion interaction term did not significantly increase the amount of variance explained, $\Delta R^2 = .002$, $\Delta F(1,71) = 0.66$, $p = .42$. The final model explained 77% of the variance in depression, $R^2 = .77, F(4,71) = 60.02, p < .001$. Results are shown in Table 3.9.

Table 3.9

Hierarchical Regression Model for the Prediction of Time Two Depression by Time One Depression, Ruminative Disgust and Self-Compassion

Block	Variable	*B*	95% CI	*SE*	β	*p*
1	Time one depression	0.96	[0.78, 1.10]	0.08	.86	.001
2	Time one depression	0.89	[0.67, 1.07]	0.11	.79	.001
	Ruminative disgust	0.08	[-1.51, 1.86]	0.85	.01	.932
	Self-compassion	-2.86	[-4.79, -1.00]	1.00	-.19	.011
3	Time one depression	0.88	[0.67, 1.07]	0.11	.79	.001
	Ruminative disgust	0.20	[-1.48, 1.87]	0.87	.02	.825
	Self-compassion	-2.82	[-4.64, -1.00]	1.01	-.18	.009
	Ruminative disgust*Self-compassion	0.85	[-1.03, 2.57]	0.97	.05	.365

Note. Confidence intervals and standard errors based on 1000 bootstrap samples.

3.4 Discussion

This study sought to examine the effects of disgust propensity, disgust sensitivity, ruminative disgust, and self-compassion on depression in people with visible skin conditions, and also to examine whether self-compassion moderates the effects of these disgust variables on depression. This study demonstrated the importance of psychological variables—disgust traits and self-compassion—in explaining depression in a dermatology outpatient population. In this study, participants were experiencing high levels of depression, which is consistent with previous research (Dalgard et al., 2015). People with skin conditions commonly report that their general practitioners and dermatologists do not appreciate the psychological aspects of skin conditions (Magin et al., 2009). The findings of the current study therefore suggest that healthcare professionals should be aware not only of the high prevalence of depression in people with skin conditions, but also of the psychological vulnerability factors that might be influence patients' psychological distress. The results suggest that disgust traits may contribute to depression in people with skin conditions: each of the disgust traits explained significant amounts of variance in baseline depression. These findings support the idea that increased experiences of threat-based emotions play a role in depression (Gilbert, 2009a, 2014a). Although none of the disgust traits were significant independent predictors of depression at follow-up, this could be due to the lack of change in depression scores over the follow-up period. The results also showed that self-compassion was strongly associated with depression: people who were higher in self-compassion had lower depression scores. The finding that self-compassion explained significant variance in depression at follow-up after controlling for baseline depression suggests that trait self-compassion protects against depressed mood state, rather than depressed mood causing a reduction in self-compassion or both self-compassion and depression being simultaneously influenced by a third factor. This gives support to the idea that interventions to increase self-compassion may be beneficial in reducing depression (e.g., CFT; Gilbert, 2009a).

As hypothesised, self-compassion was also found to moderate the effect of disgust propensity on baseline depression: at high levels of self-compassion, disgust propensity no longer had a significant positive relationship with depression. Being self-compassionate may offer some protection against depression among dermatology outpatients, and this may be particularly beneficial for those who are higher in disgust propensity. Although self-compassion may not reduce one's disgust propensity, it does appear to stop disgust propensity from contributing to depression. The findings for self-compassion support the notion that the soothing/contentment system regulates the threat/protection system (Gilbert, 2009a, 2014a). However, contrary to hypotheses, no clear moderation effects were found for disgust sensitivity or ruminative disgust. This was surprising, as self-compassion was expected to be an adaptive strategy for any type of distressing thought or feeling. The reason for the lack of moderation effects is unclear, but these results suggest that being self-compassionate is more adaptive for certain types of negative experiences than others. Specifically, self-compassion was able to moderate the effect of a negative emotion (disgust) on depression, but was not able to moderate the effect of negative cognitive appraisals about disgust on depression. This is in contrast with other research studies that have found self-compassion to moderate the effects of dysfunctional cognitions on depression (Fonseca & Canavarro, 2018; Podina et al., 2015). Further research is required to examine which types of negative cognitions are moderated by self-compassion, and the mechanisms through which this occurs. Overall, the current findings provide strong evidence that self-compassion may protect against depression as a main effect, but weaker evidence that it moderates the relationship between disgust traits and depression.

3.4.1 Limitations

This is the first study to investigate self-compassion and disgust traits among people with skin conditions. However, there are a number of limitations to this study that should be noted. First, a correlational design was used, which means that strong inferences about causality cannot be drawn. To address this limitation as far as possible, a longitudinal design was used, where follow-up data was collected after three months. It was then possible to run analyses that controlled for baseline depression, which suggested that self-compassion level is an antecedent of depression level. The prospective design of this study allows for greater confidence that self-compassion protects against depression, but experimental evidence is needed to establish causality.

Second, in common with much psychological research, a further limitation of the study was that the sample was a self-selected, convenience sample. This increases the risk of bias in the results of the study and may limit generalisability, although all participants were recruited from a dermatology clinic and had a confirmed visible skin condition. To minimise sampling bias as far as possible, participants were able to complete the measures at a time and place of their choosing, reducing inconvenience that may have led to withdrawal from the study. In addition, the measures used were chosen because they were the least burdensome possible, to minimise withdrawal and attrition. An incentive of a prize draw was also used for completing the follow-up questionnaires, in an attempt to reduce attrition from the study.

Third, a related limitation is that the study used the 12-item SCS–SF, rather than the original 26-item Self Compassion Scale (SCS; Neff, 2003a), due to the wish to reduce participant burden. Due to reliability issues, it is recommended that the SCS–SF is used to provide an overall self-compassion score (Raes et al., 2011), in contrast to the SCS, which can be used to generate six subscale scores that relate to the presence of the three positive, and absence of the three negative, components of self-compassion. Supplementary analyses confirmed that the six subscales of the SCS–SF in the current study had poor internal reliability, with Cronbach's alphas ranging from .34 to .76. The SCS–SF data were also subjected to a factor analysis, which identified two factors, consisting of the positive and negative self-compassion components. Subsequent supplementary regression analyses indicated that it is the lack of uncompassionate self-responding that may protect against depression. (These analyses are reported in Appendix C). However, as the use of positive and negative subscale scores from the SCS is controversial (Neff et al., 2019), future research should measure self-compassion in people with skin conditions using the full-length SCS, to allow investigation into the effects of the six self-compassion components.

Fourth, while the sample consisted of people whose skin problems comprised disruptions to the skin that might be particularly relevant to disgust traits, is it is not possible to know whether, for a small number of participants, non-skin morbidity might have been more problematic than their skin condition. Indeed, three participants had systemic lupus erythematosus and one had Behçet's disease. With these diseases there can be symptoms such as widespread pain and fatigue, which potentially could have more impact on patients than their skin symptoms. If this was the case, disgust traits might be less relevant to depression level and therefore explain less variance in depression than for other participants.

Finally, the time two results need to be interpreted with caution as the participants who responded at time two were significantly older than those who did not respond. As self-compassion tends to increase with age (Neff & Pommier, 2013) while disgust responses tend to decrease with age (Oaten et al., 2009), the potential for self-compassion to prevent disgust responses from contributing to depression may be most clinically relevant for younger people. Further research is needed to investigate this possibility. In particular, future studies could measure disgust traits and/or self-compassion longitudinally in younger adults to assess their role in the development of depression.

3.4.2 Implications

Despite the above limitations, there are clinical implications that can be drawn from the present study. First, this study further highlights the potential importance of disgust responses in depression, which may be particularly relevant for people with appearance-altering conditions (Ryan et al., 2012; Shanmugarajah et al., 2012). Disgust has hitherto been largely ignored in previous research with people with appearance altering conditions, in comparison to other emotions like shame and anxiety (see Thompson & Kent, 2001, for a review). This study provides the first empirical evidence of a link between disgust traits and depression in people with skin conditions, suggesting that clinicians could usefully explore disgust responses when treating depression in people with skin conditions. Although disgust responses can be difficult to reduce, there are techniques such as conceptual reorientation and imagery restructuring that may prove beneficial for reducing problematic disgust (Mason & Richardson, 2012). Third-wave cognitive behavioural therapies such as CFT (Gilbert, 2010) and ACT (Hayes et al., 1999), which encourage non-judgemental awareness of thoughts and feelings, may also be beneficial for reducing distress caused by problematic disgust.

Second, this study shows that self-compassion should also be explored with people with skin conditions who are seeking treatment for depression, as self-compassion was found to be a negative independent predictor of current and later depression. Having high self-compassion also gave the additional benefit of buffering the effect of disgust propensity on time one depression. These results suggest that increasing self-compassion is a viable target in the psychological treatment of depression. Being self-compassionate may be particularly valuable for people with long term health conditions as they may be faced with regular, but varying, difficulties arising from their conditions. Self-compassion is a way of responding to one's problems that may be particularly useful if one's ideal standards persistently cannot be met: unlike self-esteem, self-compassion does not rely on evaluations of oneself (Neff, 2003b). There is an increasing research base for interventions that aim to increase compassion/self-compassion (see literature review in Chapter 2, also Ferrari et al., 2019; Kirby et al., 2017), with evidence that these interventions can reduce depression. As access to psychological support for skin conditions is often limited (APPGS, 2013, 2020), an outpatient population may benefit from access to self-help interventions based on self-compassion. Indeed, there is emerging evidence that compassion-based self-help can benefit people with skin conditions: studies in this population have found compassion self-help to reduce depression, shame, self-criticism and negative affect, and improve quality of life (Hudson et al., 2019; Muftin et al., 2018; Sherman et al., 2019). However, null results have also been found (Kelly et al., 2009) and increases in shame, self-criticism, and appearance-related distress have been found for some individuals, suggesting that caution needs to be exercised with compassion-based self-help (Krasuska et al., 2017). Therapist-led interventions, such as CFT (Gilbert, 2010), may be more suitable for people with longstanding difficulties with compassion (for example, fears of compassion; Gilbert, 2010; Gilbert et al., 2014), but, to date, this type of intervention has not been investigated with a dermatology population. More research is needed to explore how compassion-based interventions can best be used with people with skin conditions who have depression.

3.4.3 Conclusions

Being self-compassionate may benefit people living with skin conditions in terms of reduced depression. Self-compassion explains variance in depression cross-sectionally and prospectively and so appears to protect against depression. Having high self-compassion also gave the additional benefit of buffering the negative effect of disgust propensity on concurrent depression. However, further research is required to investigate the mechanisms through which self-compassion is adaptive for people with skin conditions, and how best to help people with skin conditions become self-compassionate. The development and operation of high self-compassion in people with skin conditions is explored in the next chapter.

Chapter 4

An Exploration of High Self-Compassion in People with Chronic Skin Conditions

4.1 Introduction

4.1.1 Adjustment to Skin Conditions

As noted in Chapter 1, living with a skin condition can greatly impact quality of life. Psoriasis, for example, has a comparable impact on health-related quality of life as other chronic diseases such as cancer, arthritis, diabetes, and heart disease (Rapp et al., 1999). As well as causing physical symptoms, skin conditions can affect work/school performance, activities of daily living, socialising, and self-perception (Anderson & Rajagopalan, 1997). Furthermore, skin conditions are associated with higher than average psychological distress (e.g., Dalgard et al., 2015; Picardi et al., 2000), but this is not well explained by objective severity of the condition. Patient-assessed severity of the skin condition is far more strongly associated with psychological distress than clinician-assessed severity (e.g., Sampogna et al., 2004; Magin et al., 2011), which implicates psychological factors in the aetiology of distress associated with skin conditions. As noted in Chapter 1, evidence suggests that predisposing developmental factors, personality/cognitive factors and sociocultural factors all contribute to individual differences in adjustment to chronic skin conditions (Thompson, 2005). Personality/cognitive and sociocultural factors may be relatively stable over time, while developmental factors are determined before adulthood. Therefore, these factors may offer few opportunities for intervention with individuals who struggle to adjust to their skin conditions. In contrast, coping strategies can be changed or developed across the lifespan and are also an important factor in adjustment (Thompson, 2005).

Quantitative studies have identified a number of correlates of distress in people with skin conditions. For example, higher levels of fatigue, perceived helplessness and lack of social support have been shown to be associated with psychological distress in patients with psoriasis or atopic dermatitis, while clinical severity and itching have little impact on distress (Evers et al., 2005). Planning and active coping were found to be the coping strategies most frequently employed by dermatological patients (Finzi et al., 2007; Mazzotti et al., 2012). However, there have been discrepancies in results about how different coping strategies affect psychological distress in people with skin conditions. In Finzi et al.'s (2007) study, the coping strategy of venting was a risk factor for major psychological distress, while active coping was a protective factor. In contrast, Mazzotti et al. (2012) found that frequent use of planing/active coping was a risk factor for anxiety, while social support/venting was not a significant risk factor for anxiety or depression. Quantitative studies such as these do not identify the ways or context in which coping strategies are used, so cannot identify when these coping strategies are more or less adaptive. For example, Mazzotti et al. (2012) analysed coping strategies of seeking social support and venting of emotions as a single factor, but important differences may be present between these strategies. Seeking social support is largely seen as an adaptive coping strategy, while venting feelings may become maladaptive if it encourages rumination, which is known to be linked to depression and anxiety (Nolen-Hoeksema, 2000). As Carver et al. (1989) point out, certain coping strategies, such as seeking emotional support, may be helpful in some circumstances, but may become maladaptive if they continue to be used to the exclusion of other more useful strategies. Therefore, whether a coping strategy is seen as adaptive or maladaptive depends upon how, and in what context, it is being used.

Qualitative research can provide in-depth understanding of psychological processes, and so has been used to explore individuals' experiences of skin conditions. A meta-ethnography of previous qualitative research on skin conditions in adults found two broad areas of study: the discovery of the skin condition and its impact on life (Lam, 2012). As part of this, some studies also explored coping or moderating factors (e.g. Thompson et al., 2002; Magin et al., 2006; Dures, Morris, et al., 2011). Participants reported using strategies such as avoidance and concealment, which can be maladaptive, depending on the circumstances of use. Those who coped less well also viewed themselves as undesirable in some way. In contrast, social support and personal acceptance of the condition were usually linked with positive coping, and those who coped better placed less value on appearance (Lam, 2012). A meta-ethnography has also been conducted on qualitative research on childhood skin conditions, which incorporated parental, child and adolescent experiences (Ablett & Thompson, 2016). Most of the themes identified concerned the impact of childhood skin conditions. Strategies for coping with or managing the skin conditions were not specifically addressed, although the review identified a theme of parents and young people becoming skin condition experts, and one study reported that adolescents found talking to peers helpful (Fox et al., 2007). While these meta-ethnographies demonstrate that there has been research interest in the experiences of people living with skin conditions, participants in these studies tended to be recruited from clinical settings, and so may have been experiencing higher than average levels of difficulties with their skin. The majority of people who live with skin conditions self-manage, without ongoing face-to-face medical care (Schofield et al., 2009). Participants recruited from clinical settings may, therefore, have had relatively limited experiences of using positive coping strategies.

No previous qualitative research on skin conditions has specifically focussed on processes that contribute to positive adjustment. In the broader area of visible difference, only two published qualitative studies have purposively sampled people who were positively adjusted. In the first, Thompson and Broom (2009) explored naturalistic coping among people with visible differences who felt that they coped well with others' intrusive reactions. Participants reported that making external attributions and positive meaning-making helped them adjust to their visible difference, as did inclusion by others/society, valuing other aspects of themselves over their appearance, and being able to identify positive personality attributes. Smiling, ignoring, explaining, concealment, and avoidance were used to deal with others' intrusive reactions to their appearance. In the second study, Egan et al. (2011) investigated positive consequences of living with a visible difference. Participants reported being personally changed in positive ways as a result of living with visible difference, having improved relationships with and understanding of others, and developing coping strategies that could be used in other situations. One such coping strategy was dealing with things on a daily basis and allowing themselves to feel temporarily distressed as appropriate, rather than seeking to avoid negative emotional experiences.

Although Thompson and Broom (2009) and Egan et al. (2011) demonstrated that research with people who are coping well with a visible difference can provide insights into adjustment, neither focussed specifically on people with skin conditions. Some conditions cause a visible difference without any lasting impact on health, whereas skin conditions often also cause physical symptoms that require ongoing management. This may add an extra layer of complexity to living with the condition. Skin conditions can also have a chronic intermittent course, which requires a flexible approach to their management. Therefore, it is important to research positive adjustment in a population of people with skin conditions to inform future psychological interventions. One factor that may be important for positive adjustment is self-compassion, as this is positively associated with wellbeing (Zessin et al., 2015) and negatively associated with psychological distress (MacBeth & Gumley, 2012).

4.1.2 Self-Compassion

Compassion directed towards the self is expected to promote positive adjustment to skin conditions, given that compassion involves sensitivity to suffering and the attempt to alleviate it. People with skin conditions who are high in self-compassion are expected to notice their own (skin-related) distress and take appropriate steps to manage it. High self-compassion could facilitate both problem-focused coping and emotional-approach coping (Baker & Berenbaum, 2007), that is, individuals taking practical steps to manage their physical symptoms and engaging with the distressing feelings arising from having the condition, respectively. This notion is supported by research showing that, in people with other chronic illnesses, self-compassion is associated with active coping (a problem-focused strategy) as well as acceptance and positive reframing (emotion-focused approach strategies; Sirois et al., 2015). These are, in turn, associated with better coping outcomes (Sirois et al., 2015).

As noted in Chapter 1, Gilbert (2009a) and Neff (2003b) have both proposed models of (self-)compassion. Gilbert (2009a) described the attributes of compassion as care for well-being, sensitivity to distress, sympathy, distress tolerance, empathy, and non-judgement. These attributes are likely to have played a role, to a greater or lesser extent, in the positive coping strategies described by Thompson and Broom (2009) and Egan et al. (2011) above. In Neff's (2003b) model, three positive components of self-compassion are described: self-kindness, common humanity and mindfulness, which are also resonant with the positive coping strategies described above. Although there is a lack of qualitative research on self-compassion in people with physical health conditions or visible differences, there is quantitative evidence that self-compassion acts as a protective factor against depression in people with skin conditions. Study 1 (Chapter 3, this thesis, also Clarke et al., 2020) found that self-compassion was significantly negatively associated with depression ($r(150) = -.48, p < .001$) in dermatological outpatients. In addition, in a hierarchical regression analysis, self-compassion moderated the effect of disgust propensity (tendency to be disgusted) on depression. At low and average levels of self-compassion, there was a significant positive relationship between disgust propensity and depression. In contrast, at high levels of self-compassion there was no significant relationship between disgust propensity and depression. This indicates that dermatological patients who are highly self-compassionate can experience frequent feelings of disgust without a corresponding increase in depressive symptoms.

Self-compassion may develop in a variety of ways. There is evidence to suggest that certain early experiences, including parental rejection (Pepping et al., 2015) and lack of warmth (Naismith et al., 2019), adversely affect the development of self-compassion, while early experiences of warmth and safeness promote self-compassion (Steindl et al., 2018). Therefore, it is likely that some people who are highly self-compassionate will have developed this naturally during childhood. Other people who are high in self-compassion but did not develop this during childhood presumably had other experiences that helped them develop high self-compassion later in life. These experiences might be naturally occurring life experiences (e.g., becoming a parent) or therapeutic processes (e.g., having psychotherapy). Research on the development of self-compassion has tended to focus on either its childhood origins (e.g., Ross et al., 2019) or the effects of psychological interventions (see literature review, Chapter 2). There has been little published research on the naturalistic development of high self-compassion during adulthood: what few studies there are have been in the field of sport psychology (e.g., Frentz et al., 2019). However, it is important to understand how high self-compassion develops in other contexts, such as living with a chronic health condition, as different contexts will offer different opportunities and challenges for the development of self-compassion. Understanding how high self-compassion develops in people with skin conditions will aid efforts to increase self-compassion in this population.

4.1.3 The Current Study

The current study aimed to investigate how self-compassion operates and develops in people living with skin conditions, using existing models of self-compassion (Gilbert, 2009a; Neff, 2003b) as a starting point. It aimed to increase understanding of the adaptive processes involved and thus inform psychological interventions for people with skin conditions. The study objective was to obtain detailed accounts of the processes involved in self-compassion in the context of chronic skin conditions. Qualitative interviews with participants with chronic skin conditions and high self-compassion were used to collect data on the impact of participants' skin conditions, the strategies they used to manage these difficulties, and the ways in which they had developed these strategies.

4.2 Method

4.2.1 Participant Characteristics and Recruitment

Participants were adult members of the general population who had chronic skin conditions and were high in self-compassion, as identified with a screening survey. The study was advertised to staff and students at the University of Sheffield via email, and to other members of the community by social media (Facebook and Twitter). A purposive sample was formed by asking individuals who were interested in taking part in an interview to complete an online screening survey. Participants read a participant information sheet online and filled in a consent statement prior to accessing the survey, which consisted of the Self-Compassion Scale–Short Form (SCS–SF; Raes, 2011), the PHQ-2 (Kroenke et al., 2003) and questions about the skin condition and contact details. Potential participants were also identified through review of data and consent forms from a previous study of people with skin conditions (Chapter 3, this thesis). Previous participants who had consented to being contacted for future research and who had previously scored at or above the midpoint on the SCS–SF were invited to take part, and were directed to the online screening survey or sent a hard copy by post depending on their contact preferences.

Survey participants were potentially eligible to take part in an interview if they self-reported having a skin condition for six months or more, were aged 16 years or over, were able to undertake an interview in English, were able to attend a face-to-face interview in the Sheffield area, and scored 45 or more on the SCS–SF[1] and less than 4 on the PHQ-2[2]. After completing the screening survey, potential interview participants were contacted by the researcher and answered additional questions relating to the exclusion criteria. To be consistent with Study 1 (Chapter 3), participants were only invited for an interview if their skin condition typically caused symptoms that disrupt the skin surface (e.g., papules, pustules, plaques). This was considered important as the current study was a qualitative exploration of the findings of Study 1; that high self-compassion appears to be adaptive for people with these kinds of skin conditions. Eligibility for the study on the basis of skin condition was determined by the researcher through discussion with each potential interview participant. The researcher also asked these participants whether they had a current mental health diagnosis, a diagnosis of skin cancer, a skin condition caused by an infestation, or were seeking treatment for burns or scarring. These exclusion criteria were addressed on an individual basis to allow discussion about these potentially sensitive subjects. The aforementioned issues were expected to unduly influence the results, but it was not necessary to exclude any of the potential participants on this basis.

The online survey was completed by 61 people and paper surveys were returned by four people. Of these, six people scored too highly on the PHQ-2 to be invited for an interview and an additional 39 did not score highly enough on the SCS–SF. This

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[1] The author of the Self-Compassion Scale, Kristin Neff, states on her website that for self-assessment, overall mean scores between 3.5 and 5 (on a 1–5 scale) can be considered ‘high’ self-compassion (Neff, 2018). However, based on previous research (Chapter 3, this thesis), the more conservative cut-off value of 3.75 was used, which translates to a total score cut-off value of 45, as this represents individuals who are approximately one standard deviation above the mean for self-compassion.

[2] The criterion for the PHQ-2 of a total score of 4 or more was used to screen participants for possible depressive disorders. This cutpoint was considered to be the most appropriate balance of sensitivity and specificity for the current study, based on recommendations by the authors of the scale (Kroenke et al., 2003).

left 16 potentially eligible interview participants, of whom 12 were invited for an interview, although one did not attend. Of the remaining four eligible participants, one did not leave any contact details and three did not respond to contact attempts by the researcher. As the study aimed to gain a detailed account of the processes involved in self-compassion, the sample size was kept deliberately small, that is, additional participants were not sought out. Dates, times and locations for interviews were arranged individually and an interview-specific information sheet was sent to each participant in advance.

Eleven people participated in an interview. However, one participant was subsequently excluded from the data analysis as she had not experienced her skin condition for the previous three years and therefore did not have recent examples of managing difficulties to discuss in the interview. The other ten participants had ongoing chronic skin conditions, which required regular treatment at the time of the interviews. The ten participants in the final sample ranged in age from 22 to 65 years of age. Six participants developed their skin condition in childhood, and four participants developed their skin condition as adults. Five participants had eczema, three had psoriasis, one had Darier's disease and one had urticaria. Nine participants described their ethnicity as White British and one described it as Chinese. The sample contained three men, six women and one person who classed their gender as 'non-binary'. Other demographic information is shown in Table 4.1.

4.2.2 Procedure

All interviews were conducted face-to-face. Nine interviews took place within university premises and one took place at the participant's home. Each participant completed an interview consent form before the interview commenced, and informed consent was revisited at the end of the interview. The interviewer was a 33-year-old, white, middle-class woman, with atopic eczema (although not generally visible to others), who had clinical experience of conducting sensitive interviews. Interviews were semi-structured, using open-ended questions and probes as necessary. A summary of the interview topics is shown in Table 4.2. Participants were guided through describing the main impact(s) of their skin condition. Subsequent questions explored the strategies that participants used to manage the difficulties of living with their skin conditions, and how they developed these strategies. Questions about management strategies were based on Neff's (2003a, 2003b) six components of compassion. Direct questions about the attributes of compassion described by Gilbert (2009a) were not asked, as they were expected to be captured within Neff's (2003a, 2003b) broader components. The interview schedule is shown in Appendix D.6. Interviews were audio-recorded

Table 4.1
Participant Characteristics

Pseudonym	Age	Gender	Employment status	Relationship status	Skin condition	Duration of skin condition
Steve	40	Male	Employed full time	Married	Chronic plaque psoriasis	10 years
Emily	33	Non-binary	Employed full time	Non-cohabiting relationship	Dyshidrotic eczema	18 years
Julie	60	Female	Unemployed	Married	Urticaria	3–4 years
Maureen	65	Female	Retired	Non-cohabiting relationship	Darier’s disease	25 years
Martin	53	Male	Employed full time	Married	Atopic eczema	Since infancy
Philippa	29	Female	Employed full time	Non-cohabiting relationship	Atopic eczema	Since infancy
Helen	41	Female	Employed part time	Married	Atopic eczema	Since infancy
Claire	39	Female	Student	Married	Secondary auto-immune psoriasis	33 years
David	22	Male	Student	Single	Atopic eczema	Since infancy
Joanne	36	Female	Self-employed	Married	Chronic plaque and guttate psoriasis	30 years

and transcribed verbatim. The study received ethical approval from the Psychology Department Ethics Sub-Committee at the University of Sheffield.

The decision was made not to disclose the interviewer’s own eczema to participants, so as not to influence participants’ responses to the interview questions based on their expectations of what the interviewer may or may not know. The intention was to be (as far as is possible) a neutral but interested facilitator of participants’ disclosures, rather than to be seen by participants as a peer. It was also felt that disclosing personal information about the interviewer’s skin condition might prove distracting for participants if they then became curious about the interviewer’s experiences of eczema or attempted to compare their experiences with the interviewer’s. Such as dynamic may have impaired the professionalism of the interview, and may have differentially affected participants with eczema compared to those with other conditions.

Table 4.2
Qualitative Interview Topics

Expected flow of interview	Topic
1	Effects and impact of skin condition (context for later questions)
2	Attitudes and responses towards skin-related difficulties; self-kindness vs self-judgement
3	Mindfulness vs over-identification
4	Common humanity vs isolation
5	Development of approach to managing skin condition
6	Interpersonal flows of compassion (context for strategies that participants value)

4.2.3 Data Analysis Strategy

Each participant was given a pseudonym to maintain their anonymity, which has been used throughout the results. Interview transcripts were analysed using template analysis as described by King (2012), using *a priori* codes derived from the compassion literature. These consisted of theorised components of self-compassion (Neff, 2003a, 2003b) and attributes of compassion (Gilbert, 2009a). Table 4.3 shows the *a priori* codes that were used. Template analysis was selected as the analysis method as it is a flexible approach that can incorporate both inductive and deductive (*a priori*) coding—new codes are devised and *a priori* codes are modified or deleted as fits with the data. In this study, template analysis was used within a critical realist stance, in which it is assumed that external truths exist but that there will always be error when investigating phenomena. It was assumed that people's common experiences comprise truths and that verbal reports of these experiences constitute knowledge. Therefore, interviews were considered to be a legitimate way of gathering data (Mason, 2018). However, it is acknowledged that people's reports will be influenced by the nature of the interaction, in addition to normal cognitive biases and errors in recall.

In qualitative research, *saturation* is "a criterion for discontinuing data collection and/or analysis" and is commonly used to assess methodological quality (Saunders et al., 2018, p. 1894). In this study, saturation was conceptualised as an internal process, "the point at which no new information or themes are observed in the data" (Guest et al., 2006,

p. 59). As such, the focus of saturation was on the data analysis rather than data collection. The process for achieving saturation of the data analysis is described below.

Qualitative software, NVivo 11, was used for initial coding and template construction. An initial coding of all transcripts was carried out using the *a priori* codes.[3] In instances where no *a priori* code was relevant, a new code was devised to encompass this data. Template 1 was then produced based on this initial coding, consisting of themes grouped under higher-order themes as appropriate to the data. This template was then developed by applying it to the data set and modifying it as necessary to produce Template 2. Codes were inserted, modified or deleted as necessary to encompass the data. This process was repeated to create Template 3, at which point saturation of data analysis was considered to have been achieved[4] as all data were codable using the template (King, 2012) and no new codes were emerging from the data (Guest et al., 2006). The developing templates are shown in Appendix E. The final template was used to interpret findings from the data. Themes in the final template are shown diagrammatically in Figures 4.1–4.4.

4.2.4 Quality Control

In qualitative research, it is important to demonstrate that the methods used are trustworthy (Lincoln & Guba, 1986). Several processes were used to ensure that was the case. Firstly, the researcher kept a reflexive journal throughout data collection and analysis. This served to increase the researcher's awareness of pre-existing assumptions about the research topic, which might have otherwise unduly influenced the outcomes (Mays & Pope, 2000). Secondly, an audit trail was kept of the developing templates, to demonstrate how the final interpretation of the data was produced (Brod et al., 2009). This included the use of a codebook of all codes that were applied to the data, which documented at what point in the analysis codes were inserted, modified, merged or deleted. The final codebook is shown in Appendix F. Finally, an audit of the data analysis was conducted with an independent researcher. This included examination of the developing templates and codebook, to demonstrate dependability of the data analysis process, and cross-checks between identified themes and interview transcripts, to demonstrate confirmability of the results (Lincoln & Guba, 1986).

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[3] Although an initial template can be created using a subset of the data in template analysis, in this study, because the number of interviews was small (10), it was decided to carry out the initial coding on all interview transcripts to produce a workable initial template in line with King's (2012) recommendations.

[4] Alternatively, this could be described as 'enough' saturation of data analysis having been achieved, reflecting the view that saturation is a process rather than an event (Saunders et al., 2018).

4.3 Results

Themes arising from the interview data were divided into three broad categories: the impact of the skin condition, the strategies participants used for managing the difficulties associated with their skin conditions, and how participants developed these strategies. Four main areas of impact were identified, namely, physical, psychological, practical and social impacts. The difficulty-management strategies were organised into ‘cognitive’ and ‘behavioural’ strategies (see Figures 4.1 and 4.2). Themes relating to the development of these strategies were organised into ‘general’ and ‘skin-specific’ factors (see Figures 4.3 and 4.4). Table 4.3 shows how many participants contributed to use of the *a priori* codes derived from the models of Neff (2003b) and Gilbert (2009a).

4.3.1 Impact of the Skin Condition

To give context to the skin-related difficulties that participants had to manage, participants were asked about the ways that their skin condition affected their lives. Differences between past and present impacts were common: participants’ skin conditions had often had more negative impact in the past, indicating that participants had adjusted over time.

4.3.1.1 Physical Impacts

Participants experienced a range of physical symptoms: pain/soreness, burning sensation, itch, skin that is red, dry, cracked, flaking, bumpy/blistering, weeping or bleeding, erythroderma (skin surface feeling hot but person feeling shivery), and skin infections. Two participants reported that pain from the skin condition led to secondary physical impacts: restricted movement (to avoid stretching/moving the affected skin) and unusual experiences (e.g., feelings of unreality). In addition, physical symptoms often affected sleep, leading to tiredness, and some participants felt fatigued as a direct result of skin condition flares. Treatment side-effects were, or had been, a concern for some participants, and potential side-effects had affected treatment for two participants who had experienced flare-ups during pregnancy.

4.3.1.2 Psychological Impacts

All participants experienced negative thoughts and/or emotions relating to their skin condition. These were often relatively minor or fleeting, such as feelings of annoyance or frustration when the skin condition worsened or made it difficult to carry out desired activities. An additional impact for some was that the skin condition placed an extra

Table 4.3

Compassion-Related A Priori *Codes used in Template Analysis (N = 10)*

Code	Description	*n* contributing to each code
Self-kindness[a]	Responding to one's suffering and personal failure with thoughts that demonstrate care, support, tenderness, patience, tolerance, and understanding towards oneself.	7
Self-judgement[a]	Responding to one's pain and failure with thoughts that demonstrate disapproval, condemnation, blame, impatience, intolerance, and callousness towards oneself.	0
Common humanity[a]	Viewing suffering and personal failures as normal parts of life, and believing that feelings of failure and inadequacy are shared by most people.	7
Isolation[a]	Viewing one's difficulties and painful feelings as unusual, and perceiving oneself as different from others due to feelings of failure and inadequacy.	0
Mindful attention[b]	Paying attention in a particular way (on purpose, in the present moment, and non-judgementally) either in normal daily life, during a distressing event or through meditating. Sense of watching events/thoughts/feelings pass by.	10
Over-identification[a]	Being carried away with or consumed by painful feelings, obsessing or fixating on one's difficulties, and overreacting to situations.	0
Care for wellbeing[c]	Believing that being compassionate towards oneself is a desirable attribute. Wanting to care for, nurture and support oneself to promote one's well-being.	10
Sensitivity to distress[c]	Being able to notice and pay attention to one's distress and needs; being attentive to changes in physical feelings, emotions and thoughts (in distressing situations).	10
Sympathy[c]	Being emotionally moved by one's own distress.	0
Distress tolerance[c]	Being able to accept and tolerate distressing feelings as they occur; being familiar with and unafraid of distressing emotions and thoughts.	9
Empathy[c]	Understanding one's thoughts and feelings in distressing situations.	9
Non-judgement[c]	Accepting and not condemning oneself for real or perceived failures or inadequacies.	10

[a] concept specified by Neff (2003b).

[b] *Mindfulness* was the concept specified by Neff (2003b), but the label and description were modified during data analysis.

[c] concept specified by Gilbert (2009a).

burden on attention, through intrusive physical sensations and having to plan daily routines around accommodating the skin condition.

Social concerns were a common experience. All participants had concerns about the visibility of the condition, and one participant was also concerned that her skin condition might have a noticable odour, which was a known possible symptom of her condition. Some participants also had concerns about the impact of their skin condition on their families, due to possible vicarious embarrassment and/or the skin condition restricting family activities.

> . . . I think that's one of the problems with a skin condition is that it's visible to everybody. Erm and I think, cos a lot of uneducated people think that it's contagious or it's because you don't look after yourself or you're not very clean, and I think it's got a bit of a stigma around it. (Philippa)

Some participants had experienced more significant emotional difficulties connected with their skin condition in the past, such as feelings of depression, anxiety and habitual self-criticism.

> I [used to] catch myself saying negative thoughts all of the time, things like, erm, "oh I look awful today". (Joanne)

However, all these participants had managed to overcome such difficulties, through a variety of methods (see 'development of management strategies' section, Section 4.3.3), and were now living with their skin condition without ongoing mental health problems or self-judgement.

Despite the negative impacts of skin conditions, some participants considered that having their skin condition had been an opportunity for personal growth. They were able to transfer learning from dealing with skin-related problems to other areas of their lives, and commonly felt that having had the skin condition helped them empathise with other people's problems.

> . . . [I]t's given me a degree of wisdom, er it's helped me with empathy and communication in social situations. Erm, yep it's taught me that setbacks are just that, they're just setbacks,. . . so I'm quite resilient. . . . I know that getting through this and . . . managing what I have managed has taken some doing, so, even quite significant problems are manageable I think. (Martin)

4.3.1.3 Practical Impacts

Most participants experienced treatment for their skin condition as a burden in some way—often treatment was seen as a necessary inconvenience, requiring extra time and effort. These practical impacts could be seen as the ‘costs’ associated with participants’ ways of managing their skin condition as best they could, for example, by avoiding physical triggers for their conditions and using daily treatment (see Section 4.3.2.4.1). Applying creams could be time-consuming, as could other everyday ways of managing the condition, such as cleaning with special care.

> It does take time, and that’s one of the annoying things about eczema is the amount of time you have to spend doing your stuff and paying attention to your skin, washing your clothes, ironing your clothes, having to re-wash clothes because all of the cream has coagulated inside your clothes after one wash so you have to turn your clothes inside out and wash them again so, that’s annoying (laughs). (Helen)

At times, participants needed to attend frequent medical appointments, which could also be time-consuming and even a barrier to accessing appropriate treatment. Taking time off work or study was sometimes an issue, with participants either finding it difficult to take the time off due to work pressures or having to catch up with work later. A few participants occasionally had to miss out on other activities, such as leisure activities, because of their skin condition. Financial costs of treatments were sometimes mentioned, but most participants were treated through the NHS and so expenditure relating to the skin condition was limited.

4.3.1.4 Social Impacts

All participants talked about the reactions of others (e.g., strangers or acquaintances) to seeing their skin condition. Having received negative comments and misconceptions from others was particularly common for those who had had their skin condition during childhood/adolescence. Even as adults, participants commonly received unwanted comments or advice from others—while participants could appreciate that these reactions usually came from ignorance or even good intentions, they often caused some degree of distress.

> [P]eople have said things like “well it’s disgusting, I don’t know how you cope, how you live with it”. (Claire)
>
> [W]hen I had my flare at the place I worked, they were *really* good about it er but . . . one woman came up to me and said “Oh Joanne, you shouldn’t be at work, you should be at home, you look so itchy in that jumper, you’re just making me itch just looking at you” and she was being really nice, but. . . that’s what made me stop wanting to go to work, the fact I was making *other* people feel uncomfortable. (Joanne)

Participants sometimes felt socially isolated due to the restrictions caused by their skin condition, for example, having to leave social gatherings early or forego them altogether due to feeling unwell. There were concerns that others may not appreciate the seriousness of skin conditions and might instead perceive the person as being 'anti-social'. These concerns related to colleagues and acquaintances; friends and family did understand how the skin conditions affected participants, and using social support could counteract this sense of isolation (see also 'using social support' on page 95 and 'support from family and friends' on page 101).

4.3.2 Difficulty-Management Strategies

All of the strategies that participants used to manage the difficulties of living with a skin condition seemed to be built upon two basic components: sensitivity to distress and care for wellbeing. As such, these were described as *foundation* themes, in that they were the necessary components of a compassionate response to distress. Subsequent strategies were divided into cognitive and behavioural strategies, although links between different strategies could be seen.

4.3.2.1 Sensitivity to Distress

Participants were generally very good at being sensitive to their own distress, whether this was physical symptoms or emotional distress. Once participants had noticed their distress, they then applied one or more specific strategies to try to alleviate it. They were often able to see their distress as a cue for taking holistic remedial action, that is, not simply attending to the skin but to their lives more generally.

> So it [eczema], it's massively affected by stress, is one of the big triggers so a lot of it is around stopping the flare ups by managing my stress levels, and when I start to get one or two blisters going 'okay I need to sort out my stress levels' rather than getting to the point where it's out of control. (Emily)

Participants were able to use sensitivity to distress as a preventative measure as well: being sensitive to distress had allowed participants to become aware of helpful and hindering factors for their skin conditions, and so could make appropriate choices to try to prevent flare-ups. Having sensitivity to distress also contributed to participants being skilled at articulating their distressing thoughts and feelings, although often these were historic, that is, not currently ongoing.

> I think at that time . . . it [urticaria] did get me really down, 'cos I thought 'I've got no control over it, you know, I'm gonna lose my job because I can't work. . . .' (Julie)

4.3.2.2 Care for Wellbeing

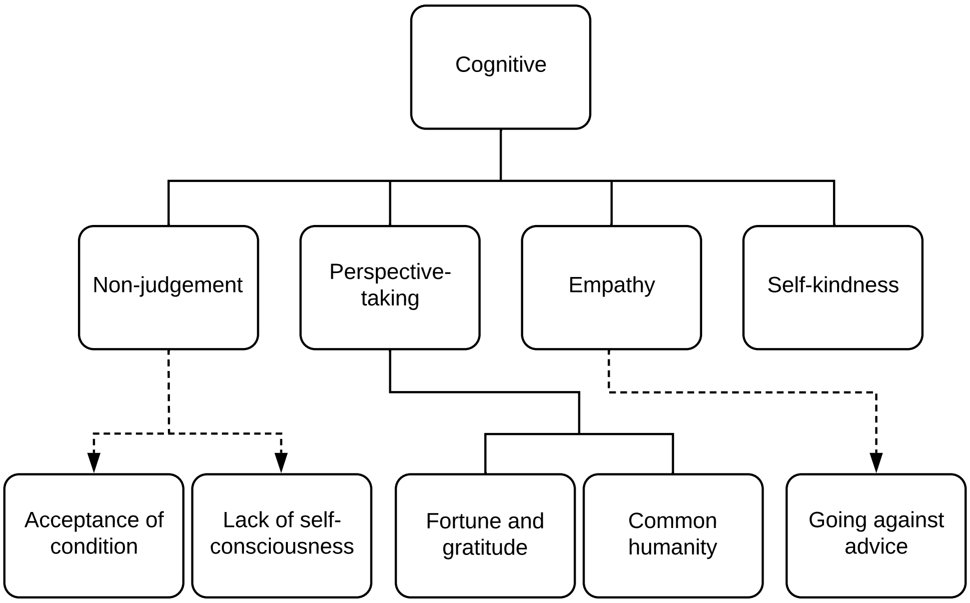
Behind all the strategies that participants were using to manage their difficulties was a sense of valuing themselves and a consistent desire to look after themselves well.

> [How I treat myself is] just giving myself a bit of space and being kind to myself a bit, doing things that I know probably make me feel good, like go for a run. Yeah.. . . if I need a bit of peace then I let myself have some peace. So being kind to myself I think. (Helen)

At times this care for wellbeing required finding a balance between actions that would benefit their physical health and those that would benefit their mental/emotional health. This is reflected in the tension between the themes 'physical health care' (page 89) and 'getting on with life' (page 94). Sometimes this tension also mapped onto making choices between short-term and long-term wellbeing.

4.3.2.3 Cognitive Strategies

Figure 4.1
Cognitive Strategies for Managing Skin-Related Difficulties



Specific cognitive strategies that built upon sensitivity to distress and care for wellbeing comprised participants' approaches towards themselves, their condition and the wider world. These approaches occurred spontaneously, without much ongoing conscious effort. For some participants, these cognitive strategies had developed over time, often from having gone through difficulties (see 'development of management strategies', Section 4.3.3), but the resulting approaches had now been integrated into participants' daily lives. Figure 4.1 shows the organisation of the cognitive difficulty-management strategies.

Non-Judgement. All participants expressed and/or demonstrated non-judgement about difficulties that they experienced to do with their skin. They were often able to talk about their perceived failures and inadequacies without condemnation.

> I guess it [eczema] makes me feel kind of, um, (pause) what's the word? (pause) Like I'm missing out, yeah, yeah, like I'm missing out. But I don't feel like (pause) I'm of less self-worth. (David)
>
> I don't sort of blame myself for my skin being dry or whatever if I haven't had time to moisturise or that, I just sort of catch up and do it. (Steve)

As part of this non-judgement, participants very commonly expressed an acceptance of their condition, appreciating the futility of wishing that things would be or could have been different.

> I don't think I think negatively about it now because I think there's nothing really that I can do about it apart from just control it as best I can. (Julie)
>
> I wouldn't change it for instance.... I've just sort of accepted who I am. ... That isn't to say that I don't want it to go away or get better, I do want it to get better but I wouldn't change my life history or who I was 'cos that's part of me now. So I would say I'm quite accepting really. (Martin)

Participants also often reported a lack of self-consciousness about their condition, which in many cases had developed over time.

> I was a bit more self-conscious at first but quite often I just (pause) I've just sort of got used to it really. It doesn't bother me too much to be honest. (Steve)
>
> 'Cos if we're on holiday and you want to go and sit on beach I wouldn't be covering my legs up, whereas I think at first I would have, you know but now I think 'I'm not bothered' (laughs). More important things in life. (Julie)

Perspective-Taking. All participants were able to reflect on their skin-related difficulties from other perspectives, particularly those relating to other people and other times in their lives, and they did this with apparent ease. As a result of these perspective-taking skills, all participants spontaneously expressed a sense of fortune or gratitude for the good things in their lives; very commonly this was for having a supportive family and that the skin condition was not worse in some way.

> I'm thankful to have, you know, quite a supportive family and friends network, especially now, didn't when I was younger but now I've got a really supportive friend network. (Emily)
>
> I'm quite lucky, I don't really suffer from it terribly on my body. Very, very small patches and probably only five [or] six times on my body in my lifetime, since I've had it, it's predominantly on my limbs, er mainly on my legs. (Claire)

Sometimes this sense of fortune/gratitude included the use of downward social comparison; the appreciation that things are worse for some other people.

> ...[I]t kind of eases my stress a bit, I guess, to know that people have it worse than me and they're still, they're still living, right. (David)

Common humanity, the understanding that suffering is a normal part of life, was also demonstrated by many participants.

> I mean everybody's got their own problems haven't they, just because you haven't got a skin condition it doesn't mean that you haven't got your own set of problems. (Philippa)

Being able to see their skin-related difficulties from different perspectives meant that participants saw their skin condition as just one aspect of their lives, even though it was difficult to live with at times.

Empathy. Participants were able to understand thoughts and feelings that occur in distressing situations. Participants most often explicitly expressed empathy in the context of understanding others' difficulties, or potential difficulties.

> I think if you were someone that was quite concerned with how you look and that kind of thing I could see that [psoriasis] would affect you a lot more because it'd be (pause) you'd be more conscious and more worried about it I think. (Steve)

In addition to having empathy for others, participants often had a good understanding of their thoughts and feelings about their skin-related difficulties, both physical and psychological. They could use this understanding to decide on the best way forward for them as individuals, even if it contravened medical advice.

> Like, tomatoes, I'm apparently extremely allergic to tomatoes....[W]ell there's no way I'm gonna stop eating tomatoes 'cos of the nutritional benefit. ...I've got *so* many other allergies...so what's the point of taking out tomatoes?...So going easy [on myself] is partly about making your own choices, ...like I have been recommended some things by dermatologists that I've just been like, "you know, that's just never gonna happen" (laughs). (Helen)

Having empathy for one's own difficulties—both physical and emotional—therefore contributed to finding the right balance between short-term and long-term consequences of lifestyle choices.

Self-Kindness. Many participants reported responding to their difficulties with thoughts that showed self-kindness, that is, directing care and support towards themselves. It often appeared that this self-kindness now occurred fairly naturally, without too much conscious effort. However, some participants reported having previous difficulties with mental health problems and/or self-criticism, which they had worked through to arrive at their current attitude of self-kindness. For other participants, self-kindness seemed to have developed naturally earlier in life.

> That counselling…gave me some really good kind of basic tools around not beating yourself up, …treat yourself how you'd treat other people. Be as kind to yourself as you are to the people around you. Be [as] compassionate to yourself as you are to the people around you. Don't hold yourself to different standards…. (Emily)
>
> The condition is just so, so long term, so much part of my everyday life I don't even, I don't think I go through a process of cognition really…. Yeah it's like saying, 'well I've done the best I can do'. (Helen)
>
> I try and approach myself with the same attitude with what I approach the kids with, yeah. (Maureen)

4.3.2.4 Behavioural Strategies

The behavioural strategies used by participants were those that required ongoing, deliberate action: they were choices made as a result of being sensitive to distress and caring for wellbeing. These choices mostly, but not always, benefited their skin condition. When participants made choices that did not benefit their skin condition, it was in favour of a benefit in another part of their lives, such as socialising or fitness. Figure 4.2 shows the organisation of the behavioural difficulty-management strategies.

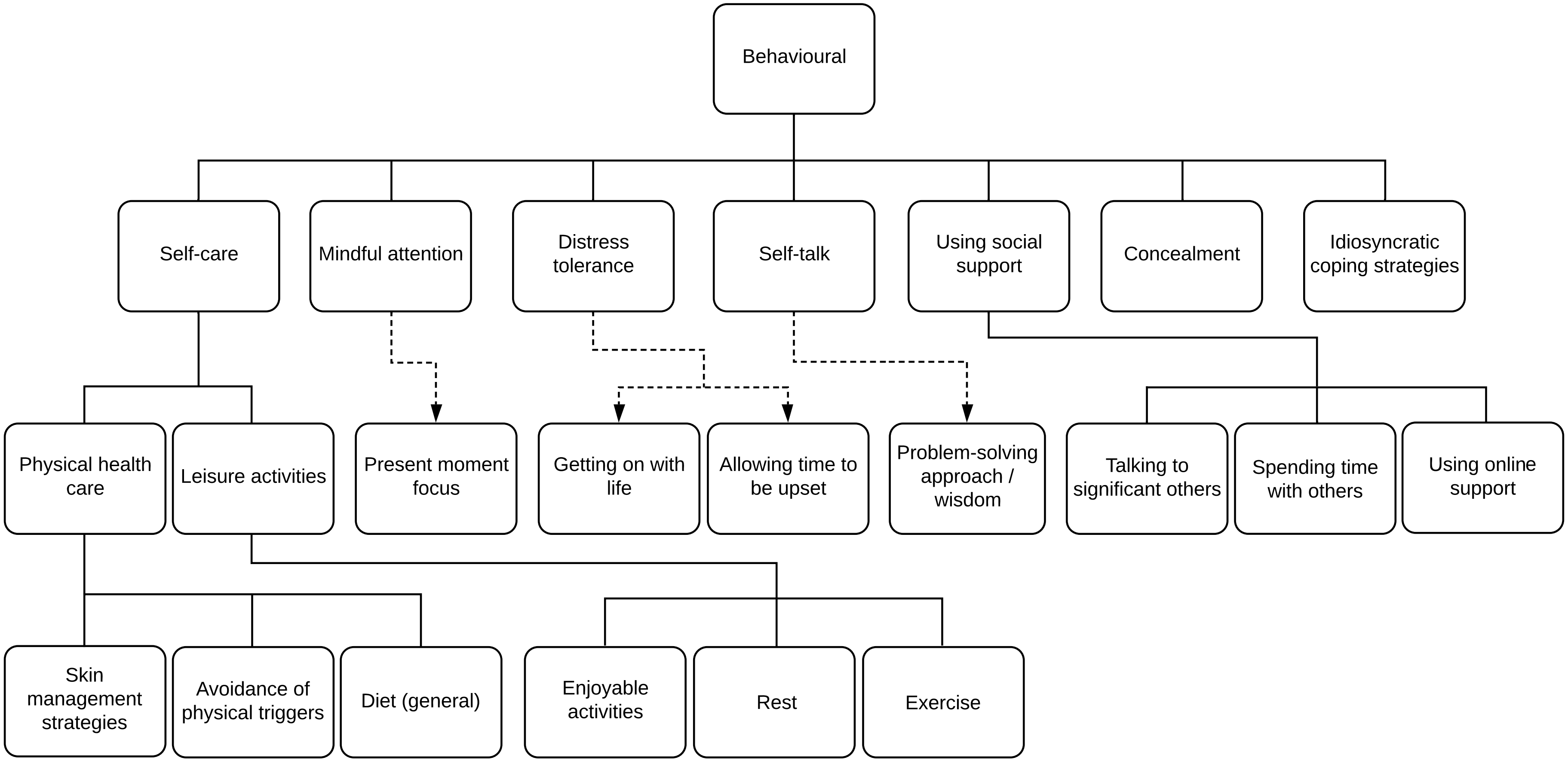
Self-Care. All participants used a variety of self-care strategies, in which the sole aim was to look after oneself. Self-care activities either focussed on looking after physical health, particularly the skin condition, or were more holistic leisure activities that incorporated care for emotional health as well.

Physical Health Care. All participants talked about the specific strategies they used to manage the physical symptoms of their skin conditions. These strategies fell into two categories. First, all participants took steps to manage their skin conditions on a daily basis. Most often this was through the use of moisturisers.

> [I]t's such an everyday part of my life I don't really see it as management, I just see it as part of my everyday life. …I generally use like a lighter moisturiser daily, twice daily, usually morning and evening, and then as I need it, so if my skin feels itchy and dry I'll put moisturiser on. (Helen)

Figure 4.2

Behavioural Strategies for Managing Skin-Related Difficulties



Note. For clarity, fifth-level themes are not shown in this diagram but are included in the developing templates (Appendix E) and the codebook (Appendix F).

Some participants also used specialist cleansing products and tried to avoid scratching their skin as part of their daily management. One participant was taking immunosuppressant medication daily and two others had used it in the past. Two participants were following lifelong special diets to benefit their skin: one did not eat dairy and the other was on a more restrictive auto-immune protocol diet for Coeliac disease, avoiding gluten, dairy, nightshades (e.g., potatoes, peppers, tomatoes) and products containing sulphates (e.g., wine).

Second, most participants also made sure that they responded quickly when their skin condition began to worsen. This was through a variety of means: increased use of moisturisers or steroid creams, taking antihistamines or steroid tablets, using phototherapy (UVB or PUVA treatments) and by cooling the skin. One participant even bought a hospital-grade UV machine to use at home during a severe flare, as she knew that it would have otherwise have taken weeks/months for her to receive the UV treatment she needed through the NHS.

All participants chose to avoid certain things that triggered or exacerbated their skin conditions, but these were usually only things that were not highly valued. Most commonly this was avoiding certain activities, particularly types of exercise such as swimming or aerobic exercise.

> I don’t really like being in water much ‘cos that seems to bother me. ...I try and avoid it [swimming] just ‘cos I just don’t like the feeling of it on my skin. ...Em but because I don’t really like swimming anyway, it doesn’t really bother me. (Helen)

Occasionally, participants chose to miss out on valued activities, for example, going away with friends, because of their skin condition and this had a more negative impact on them. However, avoiding such activities was not normally the case, indicating that participants were responding flexibly to fluctuations in their health. Sometimes participants avoided social situations, not due to social anxiety, but because they felt too ill/tired because of their skin condition, and did not want to make themselves more unwell from the effort of socialising. Participants also commonly tried to avoid certain environmental factors that exacerbated their skin conditions, such as sunlight, heat, pollution, dust and hard water. This included making changes to their home environment, for example, washing bedclothes regularly to get rid of dust mites or using a chlorine filter in the shower. One participant even moved cities partly to avoid pollution that was exacerbating his skin condition.

> [S]un isn’t ideal for it either so again, that’s another thing: you cover it up, it gets hot, you leave it open to the sun, that affects it as well. (Claire)

Clothes made of wool or nylon were avoided by some participants because of physical irritation these cause to the skin. Similarly, some participants chose to avoid certain cosmetics and jewellery, and certain specific foods and drinks (raw tomatoes, takeaways, alcohol). Although avoiding physical triggers helped minimise the severity of the skin conditions, these choices were not without negative consequences: sometimes they made normal activities feel difficult.

> I can't really drink any alcohol at the minute, that seems to set it off, so... going to the pub and having a drink or going out for like a full big night out or something like that, em I can't really do that at the moment so that's quite hard.... [E]ven just getting ready doesn't really make you particularly want to go out because you don't-, I personally can't put much makeup on anymore... so it's quite hard to get excited about going out and socialising when you're not quite as dressed up as everybody else. (Philippa)

A few participants also tried to make sure that they ate healthily (e.g., eating plenty of fruit and vegetables) with the aim of improving their general health, and therefore their skin condition. More extreme changes to diet are described below.

Leisure Activities. Many participants deliberately made time to do enjoyable activities as a way of looking after themselves emotionally. Some of these activities were relaxing: reading, knitting, puzzles, baths, reflexology; while others were more active: cooking, playing games, trips out.

> [To manage how I'm feeling] I'll make time for myself. I'll read, 'cos I love reading, and I think when you, when you have got other things on your mind, ... you tend not to make time for yourself and I think it's important to just make that time, so I started doing a bit of knitting, not anything difficult, just something I can pick up, and also reading as well. (Julie)
>
> I'm quite enthusiastic about cooking and Chinese food and Vietnamese food, um, it's very fun, baking's quite fun, and while I'm doing these activities indoors it takes my mind off finding a reason to itch, or scratch. (David)

Sometimes there was overlap between the activities that people did anyway (see 'getting on with life', page 94) and those that they did as a way of improving/maintaining their mood. In these cases, participants made sure that they carried on doing their enjoyable activities despite their skin conditions.

Participants commonly allowed themselves to rest when their skin condition was flaring, although this sometimes felt difficult due to work commitments. Sometimes participants rearranged their work or study to facilitate being able to rest more when needed.

> . . . okay can I do some, you know, later starts or early finishes [at work] to give myself a bit more time. . . (Emily)

The most extreme instance of this came from a participant who deferred his course of study for a year due to a severe flare of his eczema, incurring social and financial costs as a result.

A few participants, who each had a skin condition that was exacerbated by stress, used exercise as a way of caring for themselves. These participants all noted that exercise helped to relieve stress and therefore this had a positive effect on both their mental and physical health. One participant also reported a previous improvement in her skin due to an immunosuppressant effect of high levels of exercise.

Mindful Attention. All participants used some form of mindfully paying attention to the present moment and were aware that this helped them deal with potentially distressing situations. Using mindful attention naturally linked with non-judgement (see page 87) but is described here as a behavioural strategy because it was an active process: it is something participants were actively *doing*. Sometimes this mindful attention was achieved through formal meditation practices, such as observing the breath or letting go of thoughts and feelings without reacting to them.

> I do practice mindfulness in terms of taking like a ten or twenty minute chunk to practise it but I also quite like to use it in terms of. . . mindful pauses, which is just when you're really busy. . . to just take a moment to stop, to breathe, to finish that task, to then start the next task, and I find that it stops, it helps me feel less like I'm panicking. (Emily)

At other times, mindful attention was used more informally, through focussing attention on current activities, that is, acting with awareness.

> But, you know, just concentrate on actually what you're doing at that time and things like. . . if you're washing pots or anything, just feeling how water feels on your skin. . . and I think that is, that has been a massive help as well. (Julie)

Some participants noted that they found it easiest to use mindful attention while doing yoga or sensory activities, and therefore made time for these. Some participants also talked about not paying undue attention to the skin condition and generally having a present-moment focus instead.

> There's. . . so much more of my life to get on with, so that's good, so it just means that I've given it [the eczema] some attention but I'm getting on with the rest of the stuff that I either need to do or the challenges that I enjoy or the things that I just enjoy for pleasure's sake, yeah. (Martin)

Distress Tolerance. Participants very commonly showed distress tolerance: they were able to accept and tolerate distressing feelings, and could therefore actively engage with distressing situations, or potentially distressing situations, rather than try to escape or avoid them.

> I've done patch testing, that was a disaster because I have such generalised eczema. . . . My whole back just came up in the most enormous flare and it was horrendous and I sort of stuck with it because I'm so used to dealing with feeling horrible in my skin, but it felt really horrible, and they took all the patches off and were like "*Whoa* (laughs) this looks awful." (Helen)

This ability to tolerate distress fed into participants' abilities to get on with their lives despite their skin conditions: they frequently chose to do valued activities even though this meant having to accept negative consequences due to the skin condition, for example, pain/discomfort or feeling self-conscious around others.

> When you sweat it kind of makes things worse, makes you itch. . . but I try not to let it stop [me] doing too much. . . . I've started going to a running club and stuff. . . . I just think if I let it stop [me] doing everything then I just would be just sitting in the house on my own all the time, so there's no point. (Philippa)

Some participants had worked out simple explanations of their skin condition to give to others when needed, which made it easier for them to go out and do things.

> I mean if somebody come up and said "what's that?", I'll say "oh it's a rash".. . . If you say to somebody "oh it's only a rash", (pause) it's a lot easier. (Maureen)

Another aspect of distress tolerance shown by some participants was the willingness to allow limited periods of time to be upset about the difficulties caused by their skin conditions.

> So sitting and crying about it's not really gonna make any difference to anything but I feel like that helps [me] just get rid of whatever I've been feeling, like frustration or whatever, and then after that you've just gotta get back on with your life. (Philippa)

Self-Talk. Participants very commonly 'had a word with themselves' when they were struggling with the difficulties of living with their skin condition. When doing this, they were deliberately directing their thoughts in helpful ways and reminding themselves of their coping strategies, often involving trying to take a different perspective.

> I do often think to myself, you know, 'will this matter in five years time? Will this be important?' (Claire)
>
> [I] have to kind of build myself up to it [going out to exercise] and kind of give myself a bit of a pep-talk about it (laughs)....you know, 'this is what it is at the minute and there's no quick fix so you're just gonna have to get on with it' and it's either I sit at home on my own or I go out and do something about it. (Philippa)
>
> [Y]ou just spiral downwards don't you if you get these thoughts in your mind so I just think it's better to try and think things through. Yeah, it just feels so much better when I (pause) have a word with myself (laughs). (Julie)

Sometimes when participants reported their self-talk, it came across as somewhat blunt, but was still expressed in warm tones rather than cold or condemning tones. Furthermore, participants who were blunt with themselves reported that they treated themselves similarly to how they would treat others that they cared about: the intention was still to help rather than criticise themselves.

> I think 'come up, buck up, it's only a rash, come on' [in encouraging but no-nonsense tone]. (Maureen)

As part of this self-talk, participants commonly incorporated a problem-solving approach/wisdom: considering options and being prepared to find out what is helpful.

> [S]o now when I get really worried, I just write everything down and then just try to solve each individual thing, (Joanne)
>
> [I think about] how to manage. ...So that could be like medical interventions, what exactly am I going to do medically or biologically to help myself, so am I drinking enough, am I eating the right foods, am I getting enough sleep, anything that will affect my body chemistry. So I think, I strategise. (Martin)

Often, this approach helped participants address the tensions between different choices they might make in terms of their physical and emotional health. It also helped participants respond flexibly to situations: using a problem-solving approach/wisdom meant that participants could take their current circumstances into account rather than always responding to situations in the same way.

Using Social Support. Participants commonly used one or more types of social support to help manage the difficulties of living with a skin condition. All participants had people in their lives who they described as supportive (see also 'support from family and friends' on page 101 for ways in which others provided support). Most commonly, participants found it helpful to talk to their significant others about the difficulties they had due to their skin condition, although this was not currently needed very often as participants' skin conditions were generally under good control.

> I'm quite happy to mention it or to talk to someone about it. I find that's easier sometimes if I am having a bit of a bad day or if it's flared up or whatever. . . . I tend to talk to my wife about it. (Steve)

However, participants also identified that, at times in the past, there had been problems talking to other people about their skin-related difficulties. Participants were now clear on who they could turn to for support of this nature. Some participants also identified that simply spending time with others helped them to feel better when they were having skin-related difficulties. When they did this, the focus was not on the skin condition but other everyday things.

> [S]ometimes it's nice having somebody there just to sit and like watch the telly with, or sit and chat to, or go out for a walk with or something like that. (Philippa)

Some participants used online support, as this was a convenient way of connecting with others who had the same skin condition and could therefore understand the difficulties they were having.

> So like I found that really hard and I ended up on online forums just writing about how much I was struggling, and people on the forums were writing back and it was really nice because I can't talk to anyone about it round here, cos no-one has it. . . you just want someone who understands . . . and they're like "yeah I get you", and then you feel better. (Joanne)

Some participants now used online forums to provide support to others who were going through similar difficulties.

Concealment. Although participants were generally coping well with their skin conditions, concealment was commonly used as a strategy for managing potential social difficulties. However, concealment was viewed as a choice, with participants feeling that if they didn't want to cover their affected skin, they wouldn't. Concealment therefore seemed to be used only when it was convenient, but having the option to conceal seemed to lessen the impact of the skin condition.

> Because I can just wear a shirt and trousers like this at work and no-one asks me about it I kind of can just get on with it. (Steve)

Some participants gave examples of going to greater lengths to conceal their skin condition in the past.

> It was my daughter's birthday last year and it was a fantastic party, . . . and I spent all day not daring to take my cardigan off 'cos my arms were in such a mess. And I can, all I remember is being, feeling red hot. All day. And that memory of that, what should have been . . . [a] really fabulous day, erm was just, I just would not take my cardigan off. (Claire)

However, a combination of better control of the skin condition and a change in mindset over time meant that participants no longer felt the need to conceal the skin condition to this extent.

Idiosyncratic Coping Strategies. Some participants used idiosyncratic strategies to reduce their skin-related distress during flares. For one participant, this was using an autonomous sensory meridian response (ASMR) to temporarily cool the skin and reduce itching. Two participants used cleaning and tidying as a way of reducing their overall stress level and gain a sense of achievement. One participant with a science background read academic research to improve her understanding of her skin condition. All of these strategies were underpinned by being sensitive to distress and caring for wellbeing, but were used by so few participants they could not be incorporated into other themes.

4.3.3 Development of Management Strategies

Factors that enabled participants to arrive at their current way of managing their difficulties could be split into two categories: general factors and skin-specific factors.

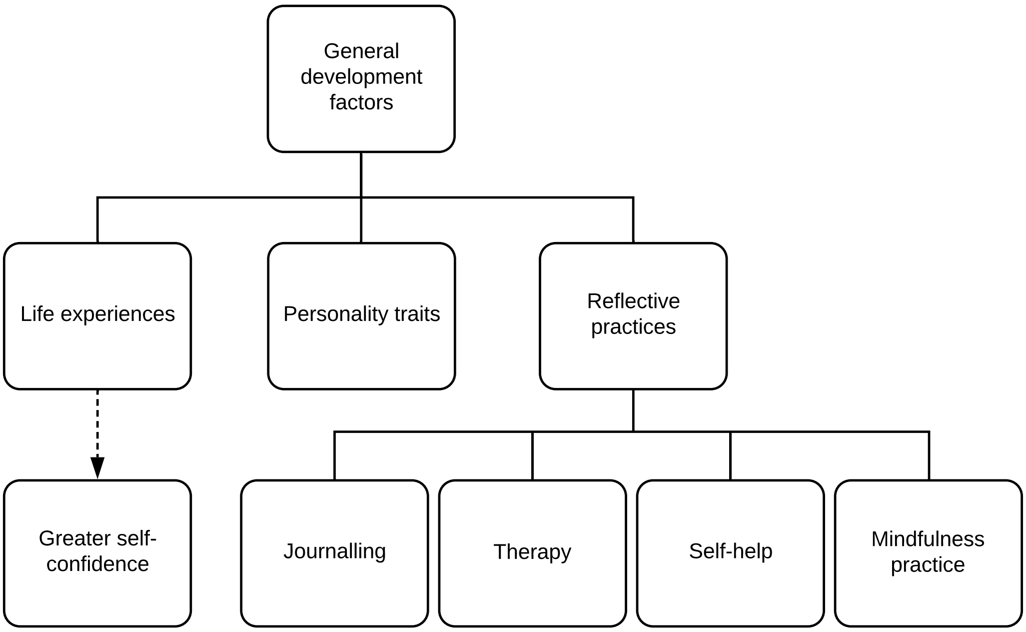
4.3.3.1 General Factors

General development factors were those that were not specifically related to skin conditions. Participants had been able to transfer learning from other types of experiences to help them deal with the difficulties associated with their skin conditions. Figure 4.3 shows the organisation of these general factors.

Life Experiences. For most participants, certain life experiences contributed to current ways of managing skin-related difficulties. Some of these life experiences were positive, such as having been brought up to have robust self-esteem or being happily married, while others were negative, such as bereavements or being bullied. Increasing maturity with age and becoming a parent were also important for some participants.

> I think my attitude changed more when I had children as well, because I didn't want them to become aware that it [psoriasis] was something that really upset

Figure 4.3
General Developmental Factors



> me.... Because if you show them it's a frightening and horrible thing, they're gonna be frightened, and if it happens to them how do you tell them to take it in their stride and you know, you've got to accept yourself for yourself. (Claire)

A common theme was that all of these experiences had changed the participants' perspectives on life (see also 'perspective-taking', page 87). Sometimes participants had also learned coping strategies during challenging experiences that they could apply to their current difficulties.

> But I've kind of, as a parent you learn, and I was a teacher for ten years, so you kind of learn how to breathe through and manage when you start to feel overwhelmed. (Joanne)

Often, participants reported having greater self-confidence than they had in the past as a result of these important life experiences.

Personality Traits. For some participants, the way that they managed their skin-related difficulties partly came from longstanding personality traits, such as optimism and pragmatism.

> I would definite[ly say I have the] personality trait of being like glass half-full and I think that plays out quite well with eczema because you have to just sort of shrug your shoulders and get on with it. (Helen)

Having such personality traits seemed to have given these participants a helpful basis from which to tackle their skin-related difficulties. One participant came across as having always been low in neuroticism, which seemed to play a large role in the way he managed potential problems associated with his skin condition.

> I think a lot of it's how you are anyway I think as a person. . . I think I've been quite laid back about things as well naturally, I think [that]'s a good thing. . . [Psoriasis is] not something that I've dwelled on, or worried about. (Steve)

Reflective Practices. One theme that emerged was that of increased self-reflection/ insight, arising as a result of various reflective practices. For one participant, this was reflective journalling, for another, it was psychotherapy, and two participants used self-help resources (mindfulness and positive self-affirmations) to good effect. Four participants had been introduced to mindfulness by a friend or through work and went on to practice this regularly. These reflective practices were not originally intended to help with skin-related difficulties, but the learning from them could now be applied across a range of difficulties, including the skin condition.

> I went on quite a big holiday in the summer and I journalled quite a bit about my psoriasis although, I would have said looking back I didn't think about it that much on my holiday, but then reading back in the journal, I thought about it every day. Mentioned it every day. (Claire)

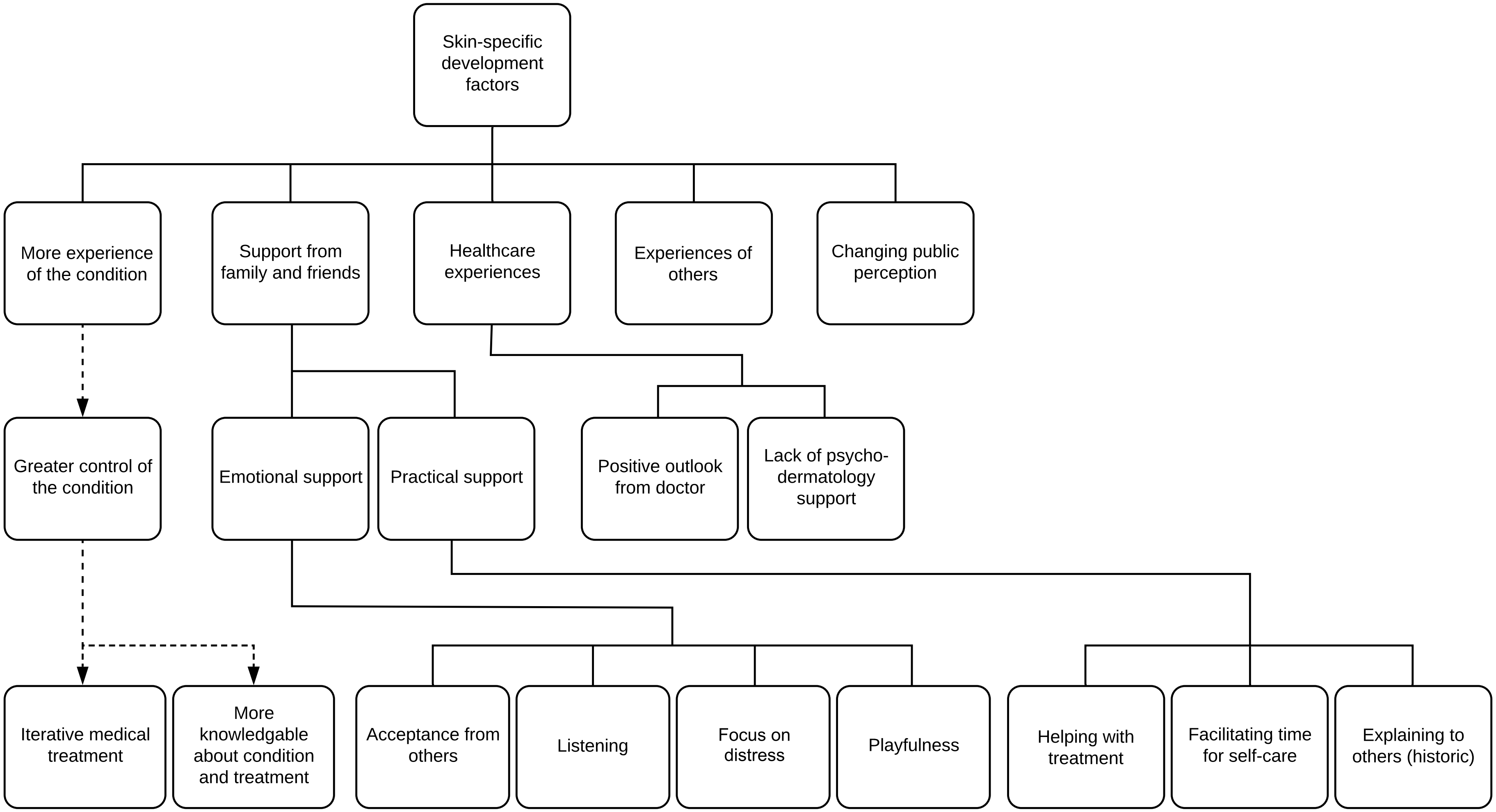
The insights gained from these reflective practices led to participants making changes in their lives, and subsequently fed into the way they managed the difficulties of living with a skin condition.

4.3.3.2 Skin-Specific Factors

Skin-specific development factors were experiences that were directly related to skin conditions that had influenced participants' difficulty-management strategies. Many of the skin-specific factors involved connections with others. The organisation of the skin-specific factors is shown in Figure 4.4.

More Experience of the Condition. All participants felt that their ways of managing their skin-related difficulties had improved over time. Participants generally became less self-conscious about their affected skin the longer they had the condition. They also gained confidence in dealing with others' reactions with having more experience of this. Having more experience of the condition also meant that participants had had more opportunity to reflect on the best ways forwards for them, having been able to iterate on choices between physical management of the skin condition and getting on with life.

Figure 4.4
Skin-Specific Developmental Factors



> Yeah so it's all been sort of self-learnt, through experience, through like a long-term managing a condition which has hidden psychological implications, . . . I've just realised the things that work for me. (Helen)

Greater Control of the Condition. Most participants felt that as a result of having more experience of the skin condition, they now had greater physical control of the condition. For some, this arose from iteratively trying different medical treatments and lifestyle changes.

> [I]t's better than it used to be I think and it's sort of being managed. . . I've been to the doctors loads of times and tried all the different creams and potions and that so I think I've settled on ones that sort of suit me and they're all right. (Steve)

In other cases, it was being more knowledgeable about the condition and its treatment that led to greater control of it.

> So I've had two horrific flares and they were within two years of each other and it was the same trigger, strep [a streptococcus infection], so when I got it the second time I knew *exactly* what was gonna happen. (Joanne)

Knowing more about the condition and treatment meant that participants could better manage their skin and so limit the severity of the skin condition. Greater physical control of the condition meant that participants had fewer other difficulties to manage (e.g., dealing with others' reactions), which likely contributed to other improvements over time such as feeling less self-conscious.

Support from Family and Friends. As noted for 'using social support' (page 95), all participants had supportive family/friends. For many participants, the ways in which family and friends were supportive had helped the participants' difficult-management strategies to develop as well as facilitating their ongoing use. Family and friends provided both emotional and practical support.

Emotional Support. Feeling accepted by others was the most common way that participants were supported by family and friends. Often this came across as others taking no notice of the condition: not making comments about it or treating the person differently because of their skin condition or the treatment for it.

> So, kind of, the people I'm friends with now, if I'm having an outbreak, it doesn't register on the radar. . . nobody comments on it, nobody seems to notice it whereas when I was younger you would get people asking what was up with your hands and that's embarrassing. (Emily)

Family and friends also showed their acceptance by accompanying participants in public despite the skin condition being visible, and being understanding when participants felt too unwell to carry on with desired activities. Some participants had family and friends who were good listeners, and some reported that when family/friends did comment on the skin condition, it was with a focus on the participant's distress.

> So, I mean my wife's brilliant, . . . she's just sort of there for me and she listens too. . . . [O]ther people will let me know that they know how bad it is, like my closest friends, . . . I know that they're feeling for me and that is good, so just some sort of acknowledgement and recognition that I'm really struggling. (Martin)
>
> [L]ike if my skin actually splits open, he's like "ooh that looks really painful" rather than "ooh that looks really horrible", so the emphasis on something being painful rather than abhorrent I think is really good. (Helen)

Another aspect of emotional support for some participants was playfulness: family and friends being able to make participants laugh, appropriately, about their skin condition.

> You know, he'll wake up in the morning and go (laughing) "has your leg dropped off?" and it sounds awful but it does make me giggle. Er and if he quotes Monty Python's "it's only a flesh wound" once more (laughing). . . . (Claire)

This light-hearted approach helped participants think more positively about their skin condition and implied acceptance of the condition from the other person. All forms of emotional support that participants received were consistent with the difficulty-management strategies that they used themselves, such as acceptance of their own condition and getting on with life.

Practical Support. Some participants also received practical support from their family and friends. For some, this was family/friends helping with treatment, such as encouraging the participant to seek (further) medical help, collecting prescriptions, washing laundry and even helping to apply creams in hard-to-reach areas. Facilitating time for participants' self-care was another way that family/friends provided practical support.

> [S]o my partner obviously lives with it like I live with it and he enables me to have the time to bathe and to do the full routine and within a couple of days I'm back under control of it again. (Helen)

In the past, the partners of two participants also helped to explain/destigmatise the skin condition to their children, which helped the children accept the person's skin condition. As with emotional support, the practical support that family and friends provided was consistent with, and facilitated, the ways that the participants themselves managed the difficulties of living with their skin condition.

Healthcare Experiences. Some participants had benefited from seeing a doctor with a particularly positive outlook or approach to managing their skin condition. In some cases, this was a GP, and in others, a dermatologist. From these doctors, participants were able to pursue further medical investigations and gained confidence in managing the condition themselves, including using holistic/stress-management approaches.

> I think that a turning point was seeing Dr [R] 'cos she, her approach were just, helped me to take control of it really, ...so I think she gave me a different perspective, you know, about taking control myself instead of, you know, running to doctor and saying, "what can I do?", to be able to do it myself, you know, feel as though I had some control over it myself. (Julie)

Although participants were generally happy with the current medical management of their skin conditions, some participants highlighted the lack of psychodermatology support in health services, and felt that if they had had some psychological input at an earlier stage of having their skin condition, they would have managed their skin-related difficulties better in the past.

> I feel that I would have benefited...from someone acknowledging at the start that eczema is a difficult condition to manage over your lifetime and that there is support available.... I've never really been asked in any meaningful way about the impact it's having on my mental health. (Helen)

Experiences of Others. Some participants had benefited from learning from others with the same skin condition, either people online or family members. The experiences of others provided normalising information and ideas of how to manage the skin.

> [T]here's other people's very personal experiences accessible online, other people have been brave enough to share that and that's been really helpful...that was *really* helpful to me last year like I said, to read other people's accounts was very helpful, how they got through things... (Martin)

Sometimes participants also learnt what not to do from others' experiences: they were able to reflect on how they would do things differently and could act on these reflections.

Changing Public Perception. Two participants felt that the stigma surrounding skin conditions was reducing and that this made it easier for them to get on with their lives despite the skin condition. They cited increasing public understanding about different skin conditions and positive role models, such as a supermodel with vitiligo, as important for this changing public perception.

4.4 Discussion

This study sought to investigate how high self-compassion operates and develops in people with chronic skin conditions. Being high in self-compassion did not mean that participants did not experience difficulties/psychological distress in connection with their skin conditions: participants still had negative automatic thoughts in connection with their skin conditions from time to time. However, none of them *tried* to think this way, or accepted these thoughts as true without challenge: when they spoke of subsequently ‘talking to themselves’ it was with helpful, compassionate thoughts. Compassionate thoughts about the skin condition can therefore occur in (at least) two contexts: as compassionate automatic thoughts and as deliberate compassionate ‘self-talk’ after noticing distress. Many participants had arrived at their current level of self-compassion after overcoming difficulties with anxiety, depression or habitual self-criticism, indicating that such difficulties can provide opportunities for personal growth.

All of the difficulty-management strategies were built upon sensitivity to distress and care for wellbeing, either explicitly or implicitly (e.g., if a participant was choosing to rest, this implies a) an awareness of one’s physical needs, and b) the desire to look after oneself). This is perhaps unsurprising, given the definition of compassion as “a sensitivity to suffering in self and others, with a commitment to try to alleviate and prevent it” (Gilbert, 2014b, p.19). However, the findings of this study demonstrate the special importance of these two theorised attributes of compassion as described by Gilbert (2009a, 2010). Three other attributes in this model, non-judgement, empathy, and distress tolerance were also apparent in participants’ strategies for managing their skin-related difficulties. However, the final attribute of compassion described by Gilbert (2009a, 2010), sympathy, did not contribute to difficulty-management strategies. Participants never talked about feelings of sympathy for their own distress; rather their focus was on managing the problem or looking after themselves. It is possible that being sympathetic to one’s own distress is implied through care for wellbeing, but sympathy did not translate to any practical strategies for these participants. Therefore, in clinical contexts with people who struggle with self-compassion, attempting to increase individuals’ sympathy for themselves may be of limited benefit. However, it is also possible that developing sympathy for previous suffering (e.g., being bullied in childhood) is a more important therapeutic target that developing sympathy for one’s current suffering, and this issue requires further investigation.

Neff’s (2003b) model was less relevant to participants’ experiences than the model of compassion proposed by Gilbert (2009a). This was despite participants being screened for high self-compassion using the SCS–SF (Raes et al., 2011) and the interview schedule being devised from Neff’s (2003b) conceptualisation of self-compassion, consisting of mindfulness, self-kindness and common humanity. First, the concept of mindfulness as described by Neff, "holding painful thoughts and feelings in balanced awareness rather than over-identifying with them" (2003b, p. 85), had limited resonance with participants' experiences. Participants' statements relating to mindfulness were more reminiscent of Kabat-Zinn's conceptualisation: "Mindfulness means paying attention in a particular way: on purpose, in the present moment, and non-judgementally" (1994, p. 4). In contrast with the limited relevance of Neff's (2003b) 'mindfulness' component, the 'non-judgement' attribute of compassion described by Gilbert (2009a) was readily apparent in participants' experiences. Furthermore, non-judgement operated in specific ways to promote adaptation to life with a skin condition: personal acceptance of the condition and lack of self-consciousness were important subordinate themes of non-judgement and these further facilitated the strategy of getting on with life.

Second, self-kindness was relevant to participants' experiences, but was one of four higher-order cognitive themes, the others being empathy and non-judgement, attributes of Gilbert's (2009a) model, and perspective-taking. Self-kindness did also play a large role in participants' compassionate self-talk, in which individuals consciously and deliberately directed their thoughts in helpful ways. However, self-kindness had a much more limited role than care for wellbeing, which was one of the foundations for all of the difficulty-management strategies. It should also be noted that compassion and kindness are conceptually different, although overlap exists between them (Gilbert et al., 2019). Kindness tends to be associated with more joy and can occur in the absence of suffering. In contrast, compassion is associated with emotions that vary with context and, by definition, is a response to encountering suffering. However, in the psychological literature on self-compassion, and in common usage, the terms 'kindness' and 'compassion' are sometimes used interchangeably. In the current study, the name of the concept being encapsulated by 'self-kindness' would perhaps be better described as 'supportive automatic thoughts'. This raises the issue of the appropriateness of the term 'self-kindness', which is well established in the psychological literature. An alternative concept that is also well established is *self-reassurance*: the "ability to focus on one's positives and be reassuring to self when things go wrong" (Gilbert et al., 2004, p. 35). This is highly similar to the description of the *a priori* 'self-kindness' code (see Table 4.3), but avoids the confusion between the terms 'kindness' and 'compassion'. Future research on self-compassion needs to carefully consider the terminology being used.

Third, common humanity was part of a higher-order theme of perspective-taking. While participants often spontaneously talked about concepts relating to mindfulness and self-kindness, common humanity seemed to be less salient. In Gilbert's (2009a, 2010) work, the higher-order ability to take other perspectives with ease is not specifically described as a compassion attribute, although ‘reasoning’ is described as a compassionate skill that can include taking other perspectives. In contrast, perspective-taking is a concept central to Relational Frame Theory (Hayes et al., 2001), which forms the basis of Acceptance and Commitment Therapy (ACT; Hayes et al., 1999). Psychological flexibility, which ACT aims to increase, has been shown to mediate the benefits of an ACT intervention for depression, including increasing self-compassion (Yadavaia et al., 2014). The current finding, that people who were high in self-compassion were also skilled in perspective-taking (including, but not limited to, common humanity), suggests that future research could usefully investigate whether explicitly including perspective-taking techniques in compassion-based approaches would increase the therapeutic benefits.

The current study also found another conceptual overlap between (self-)compassion and ACT. The theme of ‘getting on with life’, which depended on distress tolerance, was resonant of the ‘values’ process of ACT: making life choices based on values rather than attempting to escape or avoid difficult experiences. When participants had accepted their skin condition as something that they had to live with, they chose to do activities that were important to them despite negative, or potentially negative, consequences relating to their skin condition. Their ability to tolerate distress led to them choosing valued actions. These findings support Gilbert’s view that “In ACT terms compassion aids commitment” (2010, p. 193).

Wisdom has been described as one of the qualities of compassion (Gilbert, 2010, 2014b), and this was frequently used by participants. Wisdom was explicitly incorporated into the ‘problem-solving approach’ subtheme of ‘self-talk’, as at times participants deliberately considered options when faced with a problem: they were prepared to consider “how to turn intention into effective action” (Gilbert, 2014b, p. 28). However, wisdom also seemed to be used in a more implicit way, when participants spoke about costs and benefits of different activities and being prepared to accept negative consequences when the choice would be helpful overall. Often, finding the right balance evolved over time and with more experience of dealing with different skin-related difficulties. Wisdom also seemed to be involved in participants’ abilities to respond flexibly to situations according to changing circumstances. The findings of the current study support the notion that wisdom is not specifically an attribute of compassion, but using wisdom does make it more likely that the compassionate motivation will have its desired effect (Gilbert, 2010, 2014b). Given that wisdom seemed to be involved in negotiating tensions between different difficulty-management strategies, more attention should be paid to this concept in clinical and research settings.

It is worthy of note that all the participants had lived with their skin condition for a significant amount of time, the shortest duration of skin condition in the sample being 3–4 years and the mean being 26.4 years. This supports the transferability of the findings, as people's reactions to having a skin condition can be expected to be changeable in the period immediately following diagnosis but stabilise over time as they adjust to the condition (Schulman-Green et al., 2012). However, the relationship between developing a skin condition and developing self-compassion varied between participants. For some, self-compassion seemed to have been present from an early age, and was therefore adaptive for learning how to deal with the skin condition, whether as a child or an adult. For other participants, self-compassion seemed to have developed later in life, in response to life difficulties and, in some cases, this included the development of the skin condition. However, in cases where developing high self-compassion was independent of the skin condition, participants could now transfer their self-compassionate abilities to their skin-related difficulties. Furthermore, living with a skin condition for longer had given participants more opportunity to refine their personal difficulty-management strategies and had time for their use of these to stabilise.

Participants' self-compassionate ways of managing their skin-related difficulties had developed through a variety of means, but two key areas offer potential for intervention. First, support from others (family, friends, healthcare professionals and others with skin conditions) had been important. By definition, this support meant that participants had received compassion from others, that is, others had noticed their distress and attempted to help. Receiving support from others had given participants the emotional experience of being cared for and/or the more practical aspects of physical healthcare, including learning how to effectively self-care. It appeared that self-compassion and receiving compassion from others were mutually reinforcing, as self-compassion led to participants seeking support from others, while receiving support from others led to participants adopting self-compassionate ways of managing difficulties. It has previously been found that experiences of receiving compassion from others are positively associated with self-compassion (Gilbert et al., 2017), and findings of the current study were consistent with this.

Second, for participants who had previously struggled with self-criticism, reflective practices had been an important means to becoming more self-compassionate. The most common of these practices was mindfulness, which is in keeping with existing compassion-based interventions including mindfulness practice initially, as noted in Chapter 2. However, self-help, psychotherapy and reflective journalling had also been helpful for some participants. What each reflective practice had in common was that participants reported increased insight as a result of it, and consequently a more self-compassionate approach to their difficulties. This is consistent with research suggesting that insight may be a mechanism of change in psychotherapy, acting to increase personal mastery and enable more adaptive solutions to be found (Jennissen et al., 2018). Moreover, in Gilbert's (2009a) conceptualisation of compassion, the development of compassion is linked with development of insight through the quality of wisdom, discussed above, and with the use of compassionate attention, thinking and reasoning skills. For people who are self-critical, any intervention—self-help or therapist-led—that increases insight may therefore facilitate increased self-compassion to some extent, although interventions that focus on compassion are likely to have the largest effects on self-compassion.

4.4.1 Limitations

Participants in this study had a relatively small range of skin conditions: eczema ($n = 5$), psoriasis ($n = 3$), Darier's disease ($n = 1$, although the participant viewed this as a form of psoriasis) and urticaria ($n = 1$). A notable absence was acne, which is one of the most prevalent health conditions in the world (Hay et al., 2014; Vos et al., 2012), and along with eczema and psoriasis, one of the most common conditions seen by dermatologists in the UK (Schofield et al., 2009). No suitable individuals with acne were available to participate in the study.[5] It is possible that high self-compassion operates differently in individuals with acne, as there is some evidence that psychological experiences may vary with skin condition: a large study by Dalgard et al. (2015) found acne patients to be more anxious than controls but not more depressed, whereas eczema and psoriasis patients were more anxious and depressed than controls. As such, the findings of the current study need to be further investigated with people with acne.

As previously noted, the interviewer decided against disclosing her own skin condition to participants, in an effort to avoid unduly influencing participants' responses and to better provide consistency between interviews, as some participants had the same skin condition as the interviewer (atopic eczema) and others did not. As such, the decision not to self-disclose was expected to enhance the credibility of the findings (Lincoln & Guba, 1986) and can be considered a strength of the study. Despite this, it remains possible that the interviewer's non-verbal responses to statements made by participants with atopic eczema conveyed greater understanding than responses to similar statements made by participants with other conditions, which is a potential limitation. This may have differentially influenced the rapport that developed during each interview and, consequently, increased participants' disclosures. Conversely, the understanding conveyed implicitly during certain interviews could have actually reduced participants' verbal reports and resulted in less codable data in the transcripts. The impact of this potential limitation was lessened through the use of a reflexive diary, debriefing via supervision and the audit trail of the codebook and iterative templates.

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[5] Thirteen people with acne completed the screening questionnaire, of whom, two scored too highly on the PHQ-2 and an additional ten did not score highly enough on the SCS–SF to be invited for interview. The one potentially suitable participant with acne opted out of the study at the screening stage.

These processes helped to guard against the data analysis being overly influenced by the interviewer's personal experience of the topic.

This study used the SCS–SF to identify individuals who were high in self-compassion. However, there is ongoing debate over whether it is more valid to use the overall score from the SCS–SF (and its longer version, the Self-Compassion Scale; Neff, 2003a) or two positively and negatively valenced subscales within it, which reflect compassionate and uncompassionate self-responding. The overall score was used in this study based on the assertion that the overall score reflects the dynamic balance of compassionate and uncompassionate self-responding (Neff, 2016; Neff et al., 2019). When an individual is high in self-compassion, they respond to their suffering with more compassionate than uncompassionate behaviours. However, among people with overall high self-compassion, the balance between the presence of compassionate and absence of uncompassionate behaviours can also vary. Logically, a high self-compassion score ($\geq 45/60$) can be achieved by: 1) strongly endorsing all of the compassionate items while somewhat rejecting the uncompassionate items; 2) somewhat endorsing the compassionate items while strongly rejecting all of the uncompassionate items; or 3) responding somewhere in between these two positions, with a more even balance between endorsing the compassionate items and rejecting the uncompassionate items. There could be qualitative differences between these different ways of being highly self-compassionate. Subscale scores were not explored during data analysis to avoid biasing the findings through the researcher being aware of participants' scores on the different components of self-compassion.[6] Similarly, although the researcher knew that participants had scored at least 45 on the SCS–SF, at the time of the interviews and during data analysis the researcher was unaware of individual participants' self-compassion scores, to prevent this knowledge from biasing the interviews and interpretation of the data. The different components of self-compassion were allowed to emerge—or not—inductively from the data. However, future research could investigate whether there are differences between the ways that people who are high in compassionate self-responding and people who are low in uncompassionate self-responding deal with skin-related difficulties.

4.4.2 Implications

Findings of the current study have theoretical implications for the construct of self-compassion. Conceptual issues relating to the terms 'mindfulness' and 'self-kindness'

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[6] After analysis of the interview data, subscale scores from the screening survey were inspected. Five participants endorsed compassionate self-responding more strongly than the lack of uncompassionate self-responding, and for the other five participants this pattern was reversed, with a median absolute difference of 3.5 scale points (range = 1–8) between each participant's subscales.

have already been discussed. Furthermore, as noted in Chapter 1, Gilbert's (2009a) and Neff's (2003b) models of compassion are organised around different frameworks. Some elements of the two models overlap, while others do not. The current study provided an opportunity to compare how salient the elements of these two models were to people living with skin conditions. One particularly important theme that emerged was distress tolerance, which is specified in Gilbert's model but not in Neff's. Distress tolerance encompassed a substantial amount of data and underpinned another important theme, 'getting on with life'. In contrast, the common humanity theme, which is specified in Neff's model but not in Gilbert's, encompassed relatively little of the data. The findings of the current study therefore suggest that Gilbert's model of (self-)compassion provides a more comprehensive account of how self-compassion operates in people with skin conditions than Neff's model. However, further research would be needed to investigate this issue fully, particularly with different populations.

The current study also has clinical implications both for individuals with skin conditions and for health services. For individuals, it appears that high self-compassion can be achieved at any point in life, and therefore current self-criticism need not be indicative of interminable difficulties. In common with previous research, social support was found to be extremely important to participants, as previously noted. However, reflective practices had also been very helpful in helping participants reach their difficulty-management strategies, and these are practices that individuals can use independent of the social relationships they may or may not have.

The findings of the current study indicate that health services could take specific steps to improve the psychological wellbeing of people with skin conditions. Many participants reported that the emotional wellbeing of people with skin conditions was neglected by health services, which is consistent with previous research (Magin et al., 2009). In line with clinical guidelines for treatment of depression (NICE, 2010), dermatology services should be aware of the increased likelihood of depression and anxiety problems among their patients (Dalgard et al., 2015) and the consequent need to recognise such problems and consider onwards referral. Given the importance of social support in managing skin-related difficulties, health services should also routinely signpost patients to relevant skin condition organisations that can provide information and support, including online and peer support services.

Finally, the findings of the current study indicate that self-compassion plays a role in adjustment to chronic skin conditions and is therefore an appropriate therapeutic target for alleviating psychological distress in this population. As discussed in Chapter 2 and Kirby (2017), several different compassion-based interventions exist and self-help resources based on these have also been developed. The use of compassion self-help interventions with people with chronic skin conditions is addressed in Chapter 5.

4.4.3 Conclusions

Overall, the findings of the current study suggest that sensitivity to distress and care for wellbeing are the necessary components of self-compassion, but there are many possible ways in which high self-compassion can operate when living with a skin condition, and individuals can and do vary regarding the other attributes in which they have strengths. The findings also suggest that high self-compassion can develop through a variety of routes, such as receiving social support or using reflective practices, even if individuals have experienced significant psychological distress associated with their skin conditions. The following chapter presents a study of the acceptability and feasibility of a compassion-based intervention specifically designed for people with skin conditions.

Chapter 5

Acceptability and Feasibility of an Online Compassion-Based Intervention for Depression in People with Skin Conditions

5.1 Introduction

5.1.1 Psychological Treatments for People with Skin Conditions

As outlined in Chapter 1, skin conditions can impact people's lives in a number of ways. Common areas of difficulty include work, leisure, socialising and relationships (e.g., Auker et al., 2020; de Aruda & de Moraes, 2001). Skin conditions can also have a detrimental impact on self-image and mental health (Wahl et al., 2002). Studies of dermatology patients have found overall psychiatric morbidity of 25.2% (Picardi et al., 2000), and significantly higher rates of depression, anxiety and suicidal ideation than people without skin conditions (Dalgard et al., 2015). Therefore, in addition to addressing the physical aspects of skin conditions, there is a need to address the psychological aspects. However, there are few psychological treatments available specifically for people with skin conditions: the ones most used are habit reversal, CBT, arousal reduction and combined techniques (Lavda et al., 2012). Habit reversal focuses on reducing itch/scratch cycles, to improve the condition of the skin in pruritic conditions. CBT focuses on changing unhelpful thoughts and behaviours associated with the skin condition, while arousal reduction focuses on reducing physiological arousal through techniques such as relaxation or meditation. Skin condition-specific educational interventions that aim to improve health-related quality of life have been also been developed, but it is uncertain whether these are effective (Pickett et al., 2015) and effects of these on mental health have often not been assessed.

Psychological treatments for people with skin conditions often focus on anxiety rather than depression (for example, Clarke et al., 2013), as it has been noted that people with conditions that affect their appearance can experience similar difficulties to people with social anxiety disorder, such as fear/avoidance cycles about public scrutiny (Bessell & Moss, 2007). However, not all people with skin conditions experiences difficulties with (social) anxiety as their primary psychological problem. Clinical depression has been found to be present in 10.1% of dermatology patients (Dalgard et al., 2015). Although anxiety problems were more common in this population (17.2%), the odds ratio for depression was higher (Dalgard et al., 2015). Furthermore, depression is associated with a higher average level of disability than anxiety disorders (James et al., 2018), and so there is a need to develop psychological interventions for people with skin conditions that focus on depression.

5.1.2 Treatment of Depression and Physical Health Conditions

Guidelines for the treatment of depression recommend the use a stepped care approach (NICE, 2009, 2010), in which the least restrictive treatment that is likely to improve health is first recommended, and then more intensive treatment is provided as necessary if the patient fails to improve with the lower intensity treatment (Bower & Gilbody, 2005). Low intensity interventions require the least resources and so can be provided to more patients than the higher intensity interventions. One type of low intensity intervention is *guided self-help*, in which patients receive self-help materials and limited support from a trained practitioner. Research has shown that guided self-help is more effective for depressive symptoms than *pure* self-help (without support), and that different modes of guidance (face-to-face support and other methods such as email) are equally effective (Gellatly et al., 2007). As well as being cost-effective, guided self-help can enable patients to access an intervention despite geographic or time restrictions, particularly if the guidance is provided remotely, for example, by telephone or email. Currently, clinical guidance for the treatment of depression recommends individual CBT-based guided self-help, computerised CBT (cCBT), individual CBT, interpersonal therapy (IPT) and mindfulness-based cognitive therapy as psychological interventions (NICE, 2009).

It is recognised that depression and chronic physical health problems can adversely affect each other: the impacts of chronic physical health problems increase the risk of depression, while depression can exacerbate pain and distress in people with physical illnesses (NICE, 2010). Given this relationship between depression and chronic physical health problems, interventions for depression ideally need to acknowledge the presence and impact of chronic physical health conditions when co-morbidity occurs. Individual therapies for depression involve the therapist and client developing a shared understanding of the client's problems and so can readily take the complexities of co-morbid physical health problems into account. However, CBT-based self-help and guided self-help interventions typically use ready-made resources for depression (e.g., written case examples, psychoeducation materials, worksheets). It is important that these resources are tailored for people with specific health conditions to help them engage with the intervention. For example, including normalising information about the common impacts of the individual's physical health condition is likely to be de-shaming and increase the perceived credibility of the intervention. Indeed, previous qualitative research has noted that generic computerised interventions for depression need to be adapted for people with chronic physical conditions (Hind et al., 2010). There is therefore a need to develop specific resources for the treatment of depression in people with skin conditions. Skin-specific self-help resources are likely to be particularly valuable as many people with skin conditions manage alone or with the help of their GP only, and even for people who are referred to dermatology services, access to psychological support is limited (APPGS, 2013, 2020).

5.1.3 Skin-Specific CBT-Based Self-Help

As previously noted, psychological interventions for people with skin conditions tend to focus on anxiety rather than depression, and this includes existing CBT-based self-help. As skin conditions can affect appearance, interventions for people with visible differences can potentially be suitable for those with skin conditions. Indeed, two such CBT-based, self-help interventions have been investigated in RCTs that included participants with skin conditions (Bessell et al., 2012; Newell & Clarke, 2000). Although both interventions focused on addressing social anxiety, improvements in depression were also found. However, most of the interventions' content would not be relevant for people with skin conditions who have depression as their primary psychological problem. Other RCTs have investigated specially-developed cCBT programmes for people with psoriasis (Bundy et al., 2013; van Beugen et al., 2016). However, neither of these studies found the intervention to reduce depression. Both sets of authors suggested that the relatively low level of depression in the sample could have contributed to this lack of significant effect. It is also possible that, as people with skin conditions can experience negative reactions from others (Johnston et al., 2018) and barriers to desired activities (e.g., Sampogna et al., 2012), some of the 'negative' thoughts they have may reflect real experiences, and thus may not be amenable to traditional CBT thought challenging. Overall, existing CBT-based self-help for people with skin conditions either does not focus on depression or is not effective for depression (see also Muftin & Thompson, 2013, for a review). This indicates a need to develop more effective interventions for depression in people with skin conditions.

5.1.4 The Development of Compassion-Based Self-Help

As noted in Chapter 1, in recent years there has been increasing interest in the use of compassion as a therapeutic tool, with several compassion-based interventions having been developed (see literature review, Chapter 2; also Kirby, 2017). Being self-compassionate may be a particularly adaptive strategy for people with skin conditions, as for some people, skin symptoms and/or negative social reactions can trigger negative self-evaluations (Thompson et al., 2010; Wahl et al., 2002). Furthermore, Study 1 (Chapter 3, also Clarke et al., 2020) found that, in people with skin conditions, self-compassion explained significant variance in depression, both cross-sectionally and prospectively, suggesting that self-compassion may protect against depression. Findings of Study 2 (Chapter 4) showed that high self-compassion plays an important role in living well with a skin condition, as it facilitates a variety of difficulty-management strategies, and that high self-compassion can be developed through various means. The results of these studies suggest the potential effectiveness of compassion-based therapies for people with skin conditions. A meta-analysis of compassion-based interventions ($k = 9, N = 470$) reported that compassion-based interventions are effective for treating depression, with an average effect size of $d = 0.64$ (Kirby et al., 2017). Of the various interventions that have been investigated, CFT (Gilbert, 2010) is the only intervention that was specifically developed for use in clinical populations, and therefore self-help based on this is expected to be particularly meaningful for people with depression.

While there are many published studies on CFT (see Beaumont & Hollings-Martin, 2015; Leaviss & Uttley, 2015, for reviews), research on self-help based on CFT is in its infancy. Despite this, CFT-based self-help has been shown to improve depression in a variety of populations: students (McEwan & Gilbert, 2016), self-critical people (Krieger et al., 2016, 2018)[1], people with low–moderate wellbeing (Sommers-Spijkerman et al., 2018) and perinatal and intending-to-become-pregnant women (Kelman et al., 2018). Furthermore, two of these studies found that treatment gains were maintained at six-month follow-up (McEwan & Gilbert, 2016; Krieger et al., 2018), and one found that online CMT was superior to online CBT for depression (Kelman et al., 2018).

Although psychological interventions are intended to improve people's lives, negative emotions and distress are common side effects, for example, affecting around 27% of CBT patients (Schermuly-Haupt et al., 2018). As well as demonstrating benefits from their self-help interventions, three of the above studies investigated negative effects. McEwan and Gilbert (2016) concluded that compassion-focused imagery could safely be practised using online instructions without clinical supervision, as only two participants

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[1] Krieger et al. (2016) and Krieger et al. (2018) investigated an online version of the 'Mindfulness-Based Compassionate Living' programme, which, although not explicitly based on CFT, also uses Gilbert's (2010) theoretical framework of three affect regulation systems.

(4.4%) reported experiencing negative emotions (pity and sadness) while trying to feel compassion. Contrary to concerns that people who were highly self-critical might show adverse responses, the higher self-critics showed the largest improvements. Similarly, in Krieger et al.'s (2016) pilot study only four participants (10.3%) experienced negative emotions (sadness and shame) during the programme—but the three people who felt sadness said that this then helped them to become more self-compassionate. In the subsequent randomised trial, four participants (6.8%) in the compassion group experienced negative emotions during the intervention (loneliness, impatience, anxiety, sadness and emotional instability), most of which were perceived as transient (Krieger et al., 2018). These findings suggest that compassion-based self-help interventions can be used with few adverse effects for participants.

5.1.5 Compassion Self-Help for Skin Conditions

To date, five studies have investigated compassion-based self-help for people with skin conditions. In the earliest, Kelly et al. (2009) investigated two techniques based on Compassionate Mind Training (Gilbert & Irons, 2005) with people with acne. Both self-soothing and attack-resisting self-help reduced shame at two weeks compared to the control, but only the attack-resisting intervention reduced depression. Another study compared the use of compassionate imagery and soothing breathing self-help materials with people with psoriasis (Muftin et al., 2018). Depression was not measured, but both interventions were effective in reducing shame over four weeks. Hudson et al. (2019) subsequently compared the soothing breathing self-help with a wait list control among people with heterogenous skin conditions, finding that the soothing breathing led to reduced depression two weeks later. Similarly, a recent study found that, compared to an expressive writing control, a single-dose compassionate writing intervention led to immediate improvements in negative affect in people with visible skin conditions (Sherman et al., 2019). In contrast, D'Alton et al. (2019) found that a self-help version of mindfulness-based self-compassion therapy had no significant effect on depression over eight weeks among people with psoriasis. However, neither of the other interventions in the study (mindfulness-based cognitive therapy and mindfulness-based self-compassion therapy) were effective for depression, contrary to expectations, and the authors suggested that a floor effect may have prevented significant results from any of the interventions. Despite this, participants reported finding all of the interventions satisfactory and beneficial, and that they would recommend them to others. Overall, evidence suggests that compassion-based techniques hold promise as a self-help treatment for depression in people with skin conditions, but that further research is needed.

One key area for further research is intervention development. In the studies that tested the effects of compassion self-help on depression (D'Alton et al., 2019; Kelly et al., 2009; Hudson et al., 2019), the interventions suffered from a number of shortcomings. Firstly, D'Alton et al. (2019) excluded people with suspected depressive disorders, which may have led to a floor effect, and the authors suggested that future studies consider only including participants who score above clinical cutoffs on psychopathology measures. Secondly, Kelly et al.'s (2009) self-soothing intervention comprised compassionate imagery, letter writing and self statements over only two weeks. It is possible that a multi-component compassion intervention cannot reduce depression in so short a time, as participants have not had the chance to practise any of the techniques sufficiently. Thirdly, participant retention and adherence to the intervention were lower than expected in Hudson et al.'s (2019) study. The self-help booklet, while designed for people with skin conditions, focused on appearance-related distress and did not mention other common impacts of skin conditions, such as pain, itch, treatment burden and restriction of valued activities. Only 35% of participants agreed that they would recommend the self-help materials to a friend or family member, which indicates that there is scope to improve the materials themselves. In addition, one of the problems noted in the study was that some participants had trouble accessing the materials. This was resolved by putting the materials online, but this only happened towards the end of recruitment and so may have reduced participant engagement in the study.

5.2 The Current Study

The Medical Research Council (MRC) recommends the use of feasibility studies as part of a systematic approach to developing, evaluating and implementing complex interventions (Craig et al., 2008). Feasibility studies are preliminary pieces of research that aim to explore certain aspects of the intervention that will inform future clinical trials (Arain et al., 2010; Donald, 2018). The current study sought to build on previously researched compassion-based self-help interventions for people with skin conditions (D'Alton et al., 2019; Hudson et al., 2019; Kelly et al., 2009), by addressing their limitations of including only participants who were not depressed, using self-help over a short (two-week) intervention period, and using self-help materials that were difficult to access and not perceived as acceptable to many participants. Therefore, the current study investigated a compassion-based guided self-help intervention, delivered online over six weeks[2], for people with skin conditions who were experiencing depressive symptoms. There were three main aims. First, the study aimed to explore whether the

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[2] No clear guidelines could be found regarding a recommended length of online self-help interventions for depression. However, based on the researcher's clinical experience of providing low intensity therapies, six weeks was chosen as being an appropriate balance between having long enough to introduce and practice multiple self-compassion techniques, and keeping participants engaged, as attrition is expected to increase with the length of any intervention.

intervention was perceived as acceptable to people with heterogeneous skin conditions, in terms of retention rates and explicit feedback. Second, the study aimed to investigate the feasibility of providing online compassion-based self-help and email guidance. Finally, the study aimed to assess changes in depression, self-compassion and skin-related quality of life to give an estimate of likely effect sizes for future research.

5.3 Method

5.3.1 Design

Given that the current study was a feasibility study of a novel intervention, an uncontrolled pre–post design was used.

5.3.2 Participants

Participants were adults who reported living with a diagnosed skin condition and experiencing symptoms of depression, as identified by scoring 10–20 on the depression subscale of the Depression Anxiety Stress Scales (DASS; Lovibond & Lovibond, 1995), which represents mild–moderate levels of depressive symptomatology. In addition, participants needed to be aged 18 or over and have sufficient English language ability to read self-help materials and complete self-report questionnaires. People who reported having concurrent psychological treatment (talking therapy) for a mental health condition, a diagnosed serious mental illness (e.g., bipolar disorder or psychosis) or a diagnosed drug/alcohol addiction were excluded, as it was expected that these factors might reduce participants' abilities to engage with the intervention. In addition, the inclusion of such participants would have raised ethical issues, as it could be considered unethical to offer an individual an intervention that was unlikely to benefit them.

5.3.3 Procedure

Participants were recruited online using adverts on the social media accounts and/or websites of organisations offering support for people with skin conditions: the British Association of Dermatologists, the British Skin Foundation, DEBRA (epidermolysis bullosa), Lupus UK, the National Eczema Society, Pem Friends (pemphigus and pemphigoid), the Psoriasis Association, and TalkHealth's acne forum. Social media adverts were also displayed on the lead researcher's social media accounts with the hashtags #acne, #eczema, #EpidermolysisBullosa, #HidradenitisSuppurativa, #psoriasis, #rosacea, #skindisease, and #skinproblems. In addition, email adverts were sent to student members of the University of Sheffield's volunteers list.

Data was collected using Qualtrics, an online survey provider. Interested individuals accessed the online participant information sheet, then completed the consent form, answered screening questions and completed the baseline measures, which consisted of demographic and clinical questions, and measures of depression, self-compassion and dermatology quality of life (see Appendix G for study materials). Individuals who did not consent or who did not fulfil the inclusion criteria based on their answers to the survey questions were automatically redirected to an 'end of study' webpage. Signposting information about mental health resources and emotional support for skin conditions was provided to all participants via the participant information sheet and end of study webpages. Individuals who gave consent and met the study's inclusion criteria were invited to provide their contact details. Participants who did so were then registered on the study website ('Compassion for Skin Conditions'; <enclarke.postgrad.shef.ac.uk>) by the researcher and sent login details by email, with instructions to begin the intervention by accessing the first session. Requiring participants to log in to the study website meant that engagement with the intervention could be monitored without involving any third parties for website traffic statistics (e.g., Google Analytics), and also meant that each participant's use of the website could be tracked over multiple devices. The homepage and contact page of the study website could be accessed without login details, so that any participants who lost their login details could contact the researcher for assistance.

At the end of the first session, participants were asked to provide feedback on the session, which was collected using Qualtrics. Participants received an automated email three days after completing the baseline measures to remind them to practise the homework exercise, or to go through the session if they had not already done so. One week after completing the baseline measures participants received an automated email with a link to the second session of the intervention. Automated emails continued to be sent in this way, with homework reminders and links to the subsequent sessions of the six-session programme. The emails also encouraged participants to contact the lead researcher if they required further support with the self-help materials. The lead researcher responded to any such emails individually. One week after the last session, participants were invited to provide feedback via Qualtrics about the guided self-help intervention overall, and to complete the depression, self-compassion and dermatology quality of life outcome measures again. One week later, a reminder email was sent to participants who had not yet completed the overall feedback and outcome measures.

5.3.4 Intervention

The guided self-help intervention, named ‘Compassion for Skin Conditions’, consisted of six online sessions of self-help information for participants to work through, plus activities to carry out in-between sessions. The starting point for development of the intervention was a self-help leaflet used in previous studies of compassion exercises for people with skin conditions (Hudson, 2015; Muftin, 2012) and explanations of the CFT approach as described by Gilbert (2009a). The information and exercises were packaged into six sessions based on the lead researcher’s experience of developing self-help materials and providing low intensity interventions for people with depression and anxiety disorders in primary care mental health services. The intervention contained psycho-education material, self-monitoring, and compassion-inducing exercises from CFT (Gilbert, 2010). Session 1 explained the three affect regulation systems and introduced soothing rhythm breathing as a way of activating the soothing/contentment system. Session 2 provided further explanation of how internally-generated thoughts (especially self-criticism) can keep the threat/protection system activated. Session 3 introduced the use of compassionate imagery and Session 4 presented an exercise for writing a self-compassionate letter. Session 5 then elaborated on the qualities of compassion (wisdom, strength and commitment) and the need for compassionate actions. It also included exercises for developing one’s compassionate self and addressing self-criticism. Planning for the future (relapse prevention) was the focus of Session 6. Further details of the intervention are shown in Table 5.1 and screenshots of the six online sessions are provided in Appendix G.

The self-help exercises in the intervention were evidence-based as being effective for depression: the compassion-focused imagery exercises were those used by McEwan and Gilbert (2016) and the letter-writing exercise was based on the one used by Shapira and Mongrain (2010). Other exercises, such as thought monitoring and relapse prevention planning, are commonly used in CBT and, as CFT is an adapted form of CBT, were included in the guided self-help intervention. The session content and homework exercises built on previous sessions and homework, to give a clear sense of progression through the intervention. In addition, imagery and written homework exercises were alternated, to provide variety and keep participants engaged in the intervention.[3] Examples relating to skin conditions were given throughout the self-help materials, including quotes from some participants in Study 2, under pseudonyms.

Expert feedback regarding the content of the website was sourced through personal contacts and social media. Feedback was gathered from four people with skin

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[3] It was anticipated that some participants may struggle with imagery exercises (Naismith et al., 2018) while others may prefer imagery to written exercises. Alternating these types of homework task meant that participants were never asked to do their less-preferred type of task for two consecutive weeks.

Table 5.1
Components of the Compassion for Skin Conditions Self-Help Intervention

Session number	Session content	Homework activity
1	Normalising the difficulties of living with skin conditions. Explanation of the three systems of emotions (threat/protection, drive/excitement, and soothing systems) and soothing system as regulator of threat/protection system. Audio recording (and text version) of soothing rhythm breathing practice.	Practise soothing rhythm breathing, e.g., five minutes daily.
2	Tricky brain explanation (emotions and cognitive abilities). Vicious cycle of thoughts and emotions. Example thought record.	Notice self-criticism: fill in own examples on thought record (situations, emotions and thoughts). Continue breathing practice.
3	Example of how emotional tone of self-talk can affect our feelings. Audio recording (and text version) of ‘compassionate other’ imagery.	Practise ‘compassionate other’ imagery, e.g., five minutes daily.
4	Compassionate writing instructions. Example compassionate letter to oneself.	Write compassionate letter (5–15 minutes).
5	Explanation of qualities of compassion (wisdom, strength/authority, and commitment). Audio recordings (and text versions) of ‘building the compassionate self’ imagery and ‘addressing self-criticism’.	Practise ‘compassionate self’ imagery, e.g., five minutes daily.
6	Explanation of why a written relapse prevention plan (summary of learning points) is helpful. Example relapse prevention worksheet.	Complete relapse prevention worksheet.

conditions, and changes to the website deemed necessary based on their feedback were made—these changes were mostly typographical and elucidating certain points more clearly. In addition, the lead researcher was able to discuss the content of the intervention with Prof. Paul Gilbert, the founder of CFT, by telephone, and his guidance was taken into account when designing the study materials. Ethical approval was granted from the Psychology Department Ethics Sub-Committee at the University of Sheffield.

5.3.5 Measures

5.3.5.1 Demographics

As part of the baseline measures, participants were asked to provide demographic information about their age, gender, ethnicity, country of residence, employment status and education level.

5.3.5.2 Clinical Information

Participants reported the name of their skin condition(s) and how long they had had the condition. Participants also indicated whether they were taking any medication for a mental health condition, and if so, reported what medication(s) they were taking and how long they had been taking it.

5.3.5.3 Acceptability Measures

To assess the overall acceptability of the intervention, participant retention was calculated using Qualtrics data and user logins to the website. At least 66% of eligible participants were expected to log into the website during or after their sixth week of the study for the intervention to be deemed to be acceptable. This criterion was chosen as a meta-analysis of computerised CBT for depression and anxiety disorders reported a median retention rate of 66% (Andrews et al., 2018). In addition, at the end of the study, all participants were asked to provide feedback about which aspects of the intervention were helpful or unhelpful for them and if they could identify any areas for improvement. Open questions with spaces for text responses were used to collect this feedback, as well as an adapted version of the ‘Friends and Family Test’ used in the NHS (see Appendix G). Participants were also asked to indicate which (if any) of the homework activities they carried out. In line with recommendations that internet interventions monitor negative effects (Rozental et al., 2014), participants were asked whether the intervention exacerbated any existing symptoms or caused any novel symptoms to arise.

To assess the acceptability of the intervention components, each week, participants were asked for their feedback on the session they had just completed. Relevant items from the Website Evaluation Questionnaire (WEQ; Elling et al., 2012) and the Session Impacts Scale (SIS; Elliott & Wexler, 1994) were adapted to form this feedback survey (see Appendix G), which was the same each week. There were five website usability items and seven session impacts items. Items adapted from the WEQ used a five-point Likert scale to assess participants’ perceptions about the usability of the study website. Participants were asked to rate their agreement with statements from ‘strongly disagree’ (0) to ‘strongly agree’ (4), for example, ‘I found today’s session easy to use’. Items adapted from the SIS used a separate five point Likert scale to assess participants' perceptions of the personal impact of each self-help session. Participants rated the extent to which statements were true for them, from 'not at all' (0) to 'very much' (4), for example, 'As a result of this session, I have realised something new about myself'. In addition, participants had the opportunity to make other comments on the weekly sessions via open text responses.

5.3.5.4 Feasibility Measures

To assess the feasibility of providing the self-help programme online, the percentage of eligible participants who accessed the study website at least once was calculated using Qualtrics data and user logins. To demonstrate feasibility of providing online compassion-based self-help, at least 90% of eligible participants were expected to log into the study website during the study period. This criterion was chosen as more than one in ten people having difficulty accessing the website is analogous to experiencing a 'very common' side effect of a medication (NHS, 2018).

To assess the feasiblity of providing email guidance, the amount of time that the lead researcher spent facilitating the intervention was recorded. This included registering participants on the study website and responding to individual emails. To demonstrate feasibility of providing email guidance, researcher time spent was expected to be 120 minutes or less per participant over the study period. This criterion was derived from guidance on individual guided self-help interventions for people with depression, which typically consist of up to 240 minutes overall (up to eight sessions at 30 minutes each; NICE, 2010; National IAPT Programme, n.d.): if providing email guidance takes over half the amount of time needed for individual guided self-help programmes, then it cannot reasonably be argued to be "limited facilitation" (NICE, 2010, p. 23).

5.3.5.5 Outcome Measures

The depression subscale of the DASS (DASS–D; Lovibond & Lovibond, 1995) was used to measure participants' levels of depression. This consists of 14 items. Participants were asked to rate how much statements applied to them over the past week on a four-point scale from 'did not apply to me at all' (0) to 'applied to me very much, or most of the time' (3), for example, 'I couldn't seem to experience any positive feeling at all'. Higher scores indicate higher levels of depression. Internal consistency was excellent, with Cronbach's alpha of .96 at baseline.

The 26-item Self-Compassion Scale (SCS; Neff, 2003a) was used to measure participants' levels of self-compassion. Participants were asked to rate how often they behave in the manner described in the statements on a five-point scale from 'almost never' (1) to 'almost always' (5), for example, 'When I'm going through a very hard time, I give myself the caring and tenderness I need'. Half the items are negatively worded, and the total self-compassion score is obtained by reverse coding the negative items. Higher scores indicate higher levels of self-compassion. Internal consistency was acceptable–excellent, with Cronbach's alpha of .90 at baseline. The SCS can also be used to give subscale scores for its six components: self-kindness, self-judgement, common humanity, isolation, mindfulness and over-identification. Cronbach's alphas of the subscales were acceptable or good at baseline, being .82, .83, .78, .75, .70 and .77, respectively.

The Dermatology Life Quality Index (DLQI; Finlay & Khan, 1994) was used to measure the impact of participants' skin conditions. The DLQI was chosen as it is a dermatology-specific quality of life measure that can be used across different skin conditions. In addition, the DLQI is easily comprehensible and has a short completion time (Prinsen et al., 2013), thus reducing participant burden. Convergent validity of the DLQI has repeatedly been demonstrated by significant correlations with other dermatology-specific or disease-specific measures (see Basra et al., 2008, , for a review). Internal reliability of the DLQI has been found to be acceptable–excellent, with Cronbach's alphas ranging from 0.75 to 0.92 (Basra et al., 2008). In the DLQI, participants are asked to rate how much their skin condition had affected different areas of their life over the last week on a four point scale from 'not at all/not relevant' (0) to 'very much' (3), for example, 'Over the last week, how much has your skin affected any social or leisure activities?' Higher scores indicate more impaired quality of life. In the current study, Cronbach's alpha was good at baseline, at .89.

5.3.6 Sample Size

Although all clinical trials require sample size justification, formal sample size calculations are not necessarily appropriate for feasibility trials (Billingham et al., 2013). In this study, qualitative acceptability data were to be used for further development of the intervention as necessary. Quantitative data (such as feedback ratings and changes in depression) would be used to inform future research about the acceptability of the intervention in its current form and provide an estimate of the effect size for depression. A minimum sample size of 12 was justified based upon precision of the estimates to be used in future research (Julious, 2005), although extra participants needed to be recruited to allow for attrition. A meta-analysis of internet-based CBT found that attrition was 48% at the 75th percentile of studies (Andrews et al., 2018). To allow for up to 48% attrition, it was necessary to recruit 23 participants to provide the minimum sample size of 12.

The maximum sample size was dictated by the resources available to facilitate the intervention. Based on the researcher's clinical experience of providing email and telephone guidance to patients undertaking cCBT, it was expected that providing email support would take around 10 minutes per week per patient on average. Given the researcher's working pattern, up to nine hours per week could be allocated for directly facilitating the intervention (approximately half of the researcher's part-time hours). This led to a maximum of 54 ([9 x 60]/10) participants that could be provided with email support at any one time. Although it would have been possible to include more participants in the study due to the rolling nature of recruitment, there are diminishing returns on the value of increasing the sample size, as gains in the precision of estimates become less pronounced (Hertzog, 2008; Julious, 2005). It therefore seemed logical to set 54 participants as the maximum sample size for the study.

5.3.7 Data Analysis Strategy

Text responses from participants' feedback on the intervention overall were analysed using basic content analysis to identify helpful aspects of the intervention and areas for improvement. Descriptive statistics were calculated for the quantitative acceptability ratings (website evaluation and session impacts) of each intervention session. Means were also calculated for each acceptability item across the overall intervention, and for the website evaluation and session impacts of each session. To provide estimates of the intervention's effect sizes for future research, differences in participants' psychological outcome measures before and after the intervention were analysed using Wilcoxon signed rank tests. These analyses contained only data from participants who completed the intervention. To provide a conservative estimate of the effects across the wider sample, that is, if all the other participants experienced no change in psychological outcomes, last observations carried forward (LOCF) analyses were also performed using paired t-tests. Although LOCF has been subject to criticism as an imprecise technique when used in larger clinical trials (e.g., Streiner, 2008), its use can be justified in the current study due to the small scale and exploratory nature of the study.

5.4 Results

5.4.1 Participant Flow

Out of 189 people who followed the online link to the baseline survey, only 34 people (18.0%) completed the baseline survey and met the study's inclusion criteria, and hence were eligible to take part. The remaining 155 people were excluded from the study due to not consenting/completing the baseline survey or not meeting the inclusion criteria. Details are shown in Figure 5.1. The study website was accessed at least once by 25 participants: 21 participants logged in during their first week, 16 during Week 2, 14 during Week 3, four during Week 4, eight during Week 5, six during Week 6 and five after the end of their six weeks. Sixteen participants gave feedback for Session 1, 13 for Session 2, nine for Session 3, five for Session 4, seven for Session 5 and five for Session 6. Eight participants gave overall feedback on the intervention and completed the follow-up outcome measures.

5.4.2 Baseline Characteristics

The majority of participants who were registered on the study website ($N = 34$) were female (91.2%), located in the UK (91.2%), in employment (64.7%), and reported their ethnicity as 'white'. The mean age was 38.2 years (SD = 11.5, range 21–61) and the mean duration of skin condition was 23.9 years (SD = 15.1, range 1–51). Other demographic data are presented in Table 5.2. All participants who reported taking psychotropic medication were taking an anti-depressant, and the average duration of this medication was 5.74 years (SD = 5.84). The majority of participants (85.3%) had eczema or psoriasis, which are common, pruritic skin conditions. Self-reported skin condition diagnoses are shown in Table 5.3.

5.4.3 Acceptability Outcomes

5.4.3.1 Participant Retention

Out of the 34 participants registered on the study website, nine participants were still engaged with the self-help programme (i.e., logged into the study website) during or after their sixth week of the intervention. Six of these participants provided overall feedback via the follow-up survey. Overall feedback was also provided by two further participants, whose answers indicated that they had completed the exercises up to at least week five or printed all the webpages at an earlier date. These two participants were therefore also classed as treatment completers. Accordingly, the total number of treatment completers was 11, with follow-up data provided by eight of these. Retention of eligible participants ($N = 34$) was therefore 32.4%, while retention of participants who began the programme ($n = 25$) was 44%. In both cases, participant retention was less than the hoped-for 66%.

During the study, two participants informed the lead researcher that they were discontinuing the self-help programme. The reasons given were that it was “not for me” and that it was taking up too much time, but no further explanations were provided.

Figure 5.1
Flowchart of Participants through Study 3

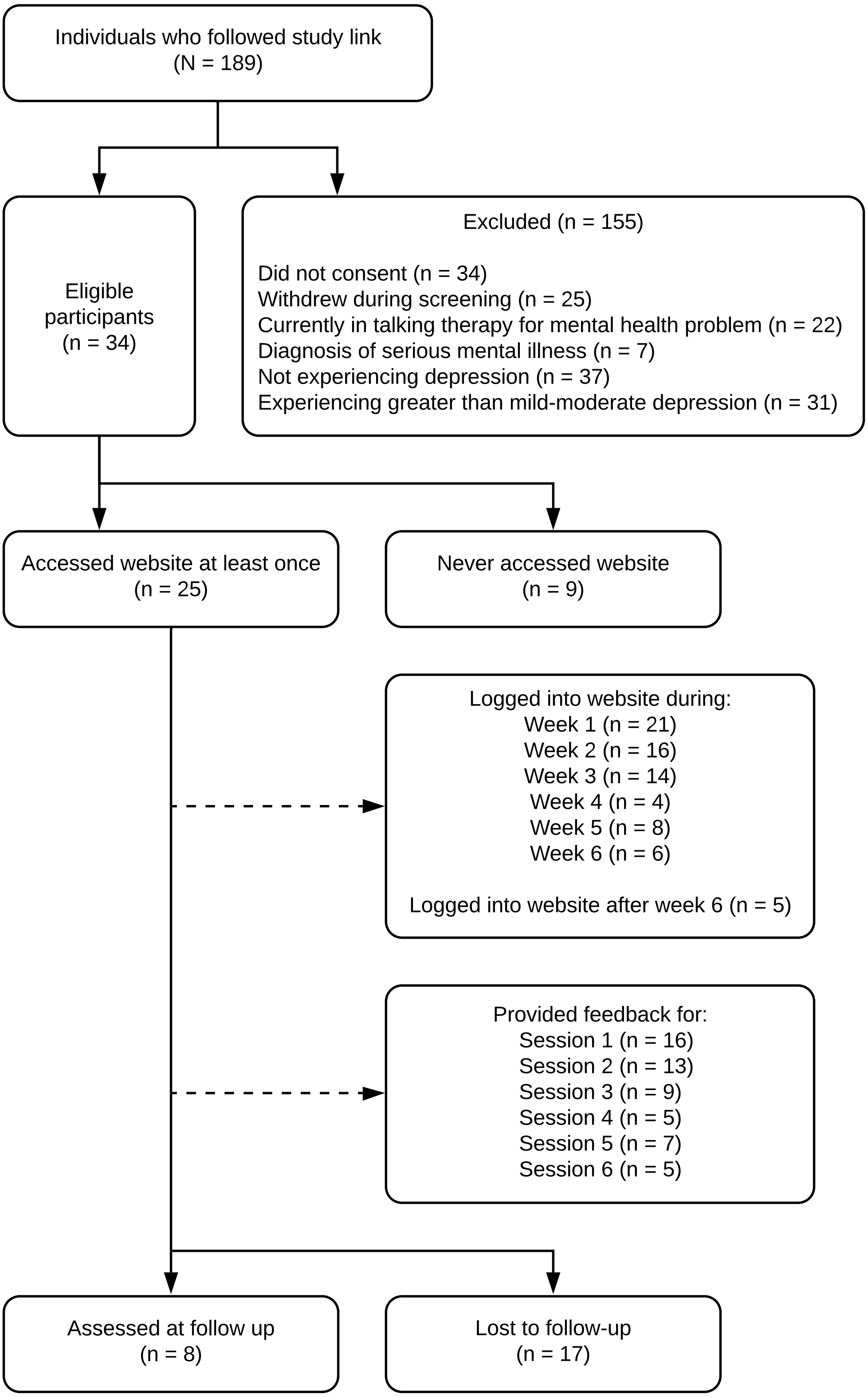


Table 5.2
Demographic Characteristics of Eligible Participants (N = 34)

Characteristic	n	%	Characteristic	n	%
Gender			Ethnicity		
Female	31	91.2	White	28	82.4
Male	3	8.8	British Pakistani	1	2.9
			British African	1	2.9
Employment status			Mixed heritage	2	5.9
Employed/self-employed	22	64.7	Japanese	1	2.9
Full time homemaker/carer	4	11.8	Not specified	1	2.9
Unable to work	3	8.8			
Student	2	5.9	Highest qualification level		
Retired	1	2.9	GCSE or equivalent	5	14.7
Unemployed	1	2.9	A–level or equivalent	4	11.8
Not specified	1	2.9	Level 4 or 5 qualification	2	5.9
			Bachelors' degree	14	41.2
Location			Masters' degree	7	20.6
UK	31	91.2	Postgraduate degree	2	5.9
Italy	1	2.9			
Malaysia	1	2.9	Psychotropic medication use		
Spain	1	2.9	No	22	64.7
			Yes	12	35.3

Note. Mean age of participants was 38.2 years (SD = 11.5).

5.4.3.2 Overall Feedback

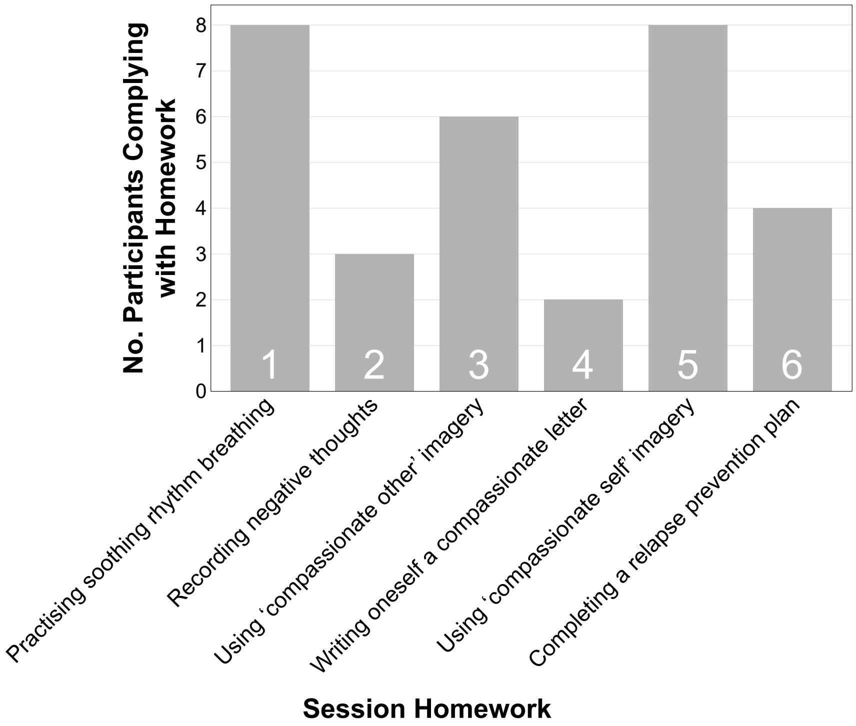
Outcome measures and overall feedback were completed by nine participants. However, user logins to the website indicated that one of these participants never successfully logged in, so this person's time two data was discounted. Of the eight remaining participants who provided overall feedback, three reported that they would be 'extremely likely' to recommend the Compassion for Skin Conditions self-help programme to family or friends if they needed similar help. Four more participants reported that they would be 'likely' to do so, and one reported that it was 'neither likely nor unlikely'. Therefore, 87.5% of participants who provided feedback would recommend this self-help programme to others in its current format.

Table 5.3
Self-Reported Skin Conditions (N = 34)

Skin condition	*n*
Eczema	16
Psoriasis	13
Autoimmune conditions	4
Actinic cheilitis	1
Contact allergies	1
Chronic urticaria	1
Lichen planus	1
Nodular prurigo	1
Pemphigus vulgaris	1
Vitiligo	1

Note. Six participants had more than one skin condition.

Figure 5.2
Self-Reported Homework Compliance by Session



Content analysis of open text responses indicated that treatment completers perceived the intervention as easy to use and that they appreciated the skin-specific nature of the programme. Participants were divided on whether they found the soothing rhythm breathing helpful and found noticing negative thoughts less helpful, or vice versa. The compassionate imagery was also noted as being challenging, but all participants perceived there to have been a benefit in taking part in the programme and most expressed gratitude at having been able to do so. Three participants noted a negative effect of taking part in the programme: one felt more self-conscious due to reading examples of worries that she had not had before, and two noted emotional discomfort due to an increased awareness of negative thoughts, but one of these participants further noted that this temporary discomfort had been beneficial overall. Further details of the overall feedback open text responses are provided in Appendix H.

Suggestions for improvement of the intervention were idiosyncratic. There was one suggestion for daily email prompts about homework activities, one suggestion for longer between sessions and a follow-up session at a later date, and one suggestion for even more skin-specific examples and advice, particularly around the physical aspects of living with a skin condition. One minor typographic change was also suggested.

Figure 5.2 shows participants' self-reported compliance with the recommended homework from each session. The breathing and imagery exercises (from sessions 1, 3 and 5) were practised by more participants than the written homework exercises (from sessions 2, 4 and 6).

5.4.3.3 Weekly Feedback Measures

Means for the website evaluation and session impacts items were computed for the self-help intervention as a whole. These are shown in Figure 5.3. Overall, participants evaluated the website positively: on average, agreeing with statements that it was easy to use and helpful. Participants were a little less positive about the visual appeal of the website. Participants mostly agreed that the intervention had had "somewhat" of an impact across the different items, with the exception of the item "I have realised something new about someone else", which was rated between "not at all" and "slightly".

Feedback scores were also examined by session to investigate differences between sessions. Weekly feedback grand means were calculated for each session by calculating the mean item score for each participant (item total/number of items answered) and then finding the average of these (sum of participant item means/number of participants who provided feedback for that session). Results are shown in Figure 5.4. Mean scores of the separate feedback items by session are shown graphically in Appendix H. Overall, website evaluations were fairly consistent across sessions, with grand means ranging from 2.97 to 3.44 on the 0–4 scale. Ratings of session impacts were less consistent, ranging from 1.74 to 2.63, and increasing across sessions.

Open text responses that were part of the weekly feedback survey indicated that participants were aware of finding some of the exercises challenging and needing to practise to get the benefit from them. The only negative comments about the programme reflected those that were captured in the overall feedback: one participant struggled with the breathing practice, one did not find the session on negative thoughts helpful, and one felt that more focus on the physical aspects of skin conditions would be helpful. Participants reported feeling more positive and being more aware of their difficulties and helpful strategies after the sessions. For some participants, the session content reminded them of previously learnt coping strategies, such as breath awareness or visualisations. Participants also commented that they liked the skin-specific nature of the programme and found the audio resources and links to further resources helpful.

5.4.4 Feasibility Outcomes

Logins to the study website showed that 25 of the 34 eligible participants (73.5%) successfully accessed the intervention, which was less than the desired minimum of 90%. However, of the nine participants who did not successfully log into the study website, only two attempted to do so: seven participants never tried to log in.

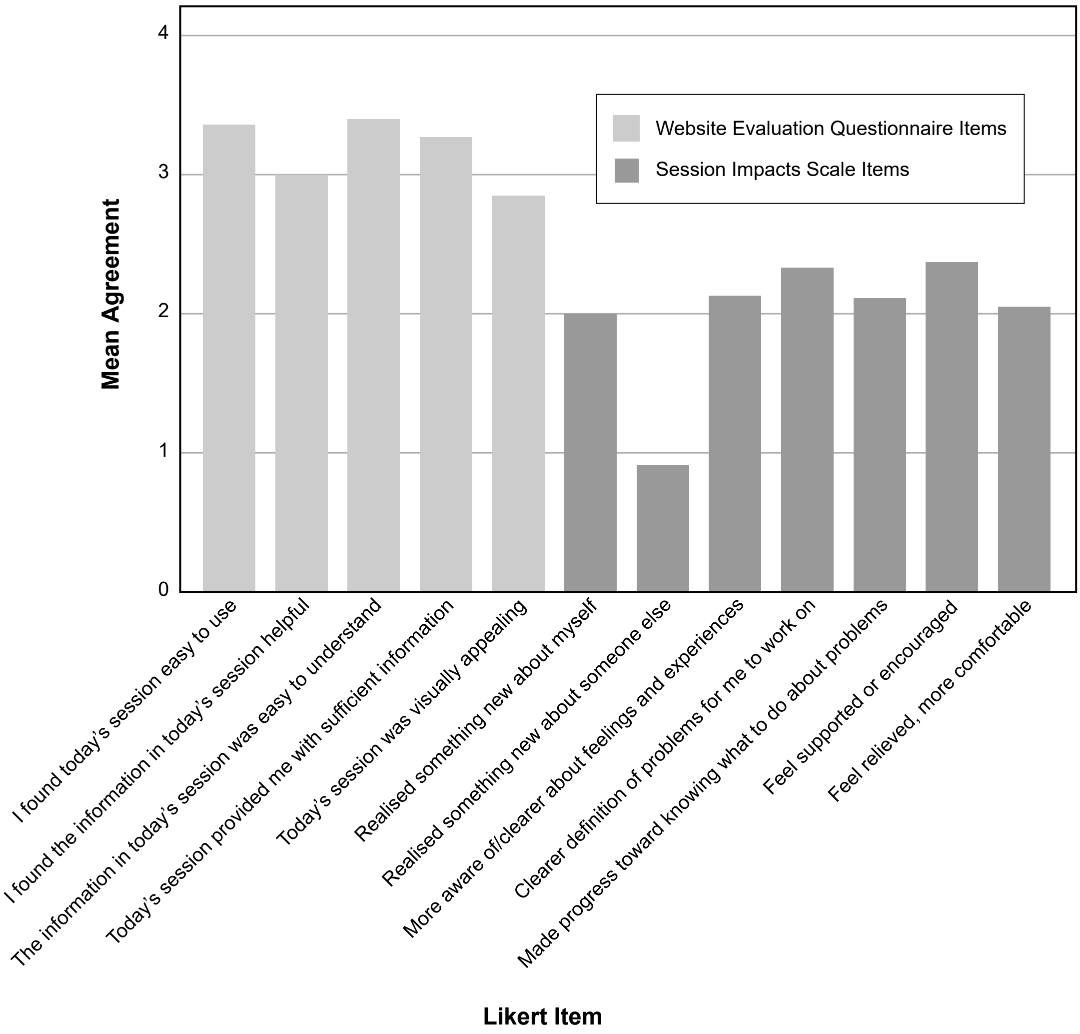
Facilitating the intervention required only around six and a half hours of the researcher's time: registering participants on the study website took a total of 68 minutes (17.7%), while supporting partcipants through the intervention took 5 hours and 17 minutes (82.3%). Approximately 60% of the time spent providing support consisted of dealing with difficulties logging into website (e.g., forgotten login details) and responding to emails from participants who wanted to withdraw from the study or defer their participation due to personal problems. The remaining time was spent sending standardised emails that could not be automated due to Qualtrics' limitations (i.e., reminder emails on days 32, 39 and 46). Dividing the total time spent facilitating the intervention by the number of eligible participants who began the study gave an average of 11.3 minutes of researcher time spent per participant across the study, considerably less than the 120 minutes criterion.

5.4.5 Depression, Self-Compassion and Quality of Life Outcomes

Outcome measure data from treatment completers was analysed with non-parametric tests, as the sample size was small ($n = 8$) and the pre-post differences were not normally distributed. Results are shown in Table 5.4. Wilcoxon signed-rank tests

Figure 5.3

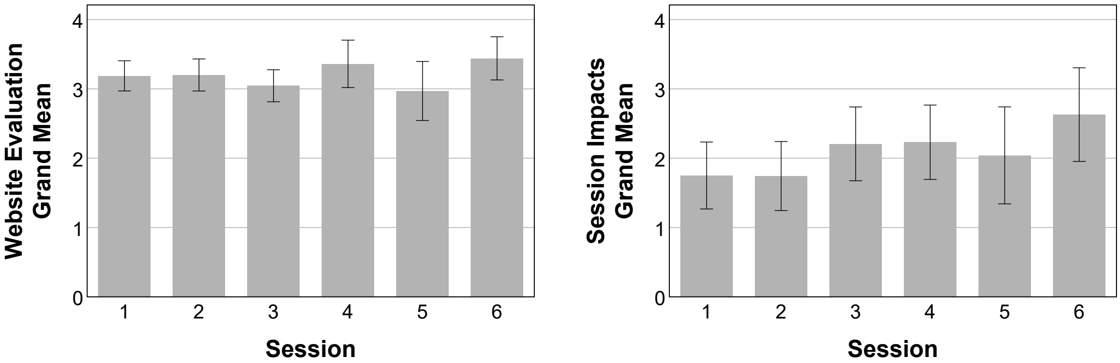
Average Agreement with Weekly Feedback Items for the Compassion for Skin Conditions Intervention



Note. For Website Evaluation Questionnaire items, 0 = "strongly disagree", 1 = "disagree", 2 = "neutral", 3 = "agree", 4 = "strongly agree". For Session Impact Scale items, 0 = "not at all", 1 = "slightly", 2 = "somewhat", 3 = "pretty much", 4 = "very much".

Figure 5.4

Grand Means of Weekly Feedback Items by Session



Note. Error bars represent one standard deviation.

showed that the intervention had beneficial effects for participants who completed it. Treatment completers showed large reductions in depression and impact of the skin condition on quality of life, and medium-sized improvements in self-compassion. Reductions in depression and impact on quality of life were statistically significant at $p < .05$. The increase in self-compassion approached, but did not reach, statistical significance, which may have been due to the test being underpowered because of the medium effect size and small sample.

Table 5.4

Pre–Post Changes on Outcome Measures for Treatment Completers ($n = 8$)

Measure	Pre-treatment median	Post-treatment median	T	z	p	Effect size (d_z)
DASS–D	14.5	8.5	3.0	-2.11^a	.04	−1.10
SCS	69.5	82.0	4.0	-1.97^b	.06	0.64
DLQI	14.0	8.0	1.5	-2.32^a	.02	−0.97

Note. DASS–D = Depression subscale of Depression Anxiety Stress Scales; SCS = Self-Compassion Scale; DLQI = Dermatology Life Quality Index.

[a] Based on positive ranks. [b] Based on negative ranks.

LOCF analyses were also performed for the psychological variables using data from participants who were eligible for the intervention ($N = 34$). In cases where follow-up data was missing due to attrition, baseline observations were carried forward. Paired t-tests were performed and results are shown in Table 5.5. A medium effect size was found for the reduction in depression and small effect sizes were found for the reduced impact of the skin condition on quality of life and the increase in self-compassion. As before, reductions in depression and impact on quality of life were statistically significant at $p < .05$, but the increase in self-compassion was not.

Further examination of the SCS data showed medium effect sizes for changes on the subscales, all of which were in the expected directions, given the overall increase in self-compassion: increases in self-kindness, common humanity and mindfulness, and decreases in self-judgement, isolation and over-identification over the study period. These data are shown in Table 5.6. None of the changes on the SCS subscales reached statistical significance at $p \leq .05$. LOCF analyses were also carried out for the SCS subscales. These are shown in Table 5.7. In these analyses, effect sizes for each subscale were small.

Table 5.5

Pre–Post Changes on Outcome Measures for Eligible Participants ($N = 34$)

Measure	Pre-treatment mean (SD)	Post-treatment mean (SD)	$t(33)$	p	Effect size (d)
DASS–D	14.65 (2.87)	12.82 (4.26)	−2.29	.03	−0.50
SCS	66.15 (12.31)	70.35 (15.16)	1.64	.11	0.30
DLQI	13.82 (7.21)	12.32 (7.12)	−2.13	.04	−0.21

Note. DASS–D = Depression subscale of Depression Anxiety Stress Scales; SCS = Self-Compassion Scale; DLQI = Dermatology Life Quality Index.

Table 5.6

Pre–Post Changes on Self-Compassion Subscales for Treatment Completers ($n = 8$)

Subscale	Pre-treatment median	Post-treatment median	T	z	p	Effect size (d_z)
SK	15.5	18.0	5.0	-1.53^a	.14	0.48
SJ	20.5	17.0	6.5	-1.61^b	.12	−0.57
CH	13.0	17.0	10.5	-1.07^a	.38	0.45
I	15.5	13.0	0.0	-2.02^b	.06	−0.71
M	12.0	15.5	6.0	-1.36^a	.22	0.55
OI	15.0	13.5	6.5	-1.27^b	.23	−0.52

Note. CH = Common humanity; I = Isolation; M = Mindfulness; OI = Over-identification; SJ= Self-judgement; SK = Self-kindness.

^{a} Based on negative ranks. ^{b} Based on positive ranks.

5.5 Discussion

This study aimed to investigate the acceptability and feasibility of a novel self-help intervention for depression in people with skin conditions. Feedback gathered suggested that the self-help programme was acceptable in its current format, although improvements could be made. This raises the question as to why the attrition rate was so high, at 67.6%, between eligible participants being registered on the study website and completing the intervention. Some attrition is to be expected for any intervention as changes in life circumstances, such as bereavement, ill health or competing demands on people's time, can prevent people from continuing with non-essential plans. However, in the absence of data about why people dropped out, it is impossible to know the

Table 5.7

Pre–Post Changes on Self-Compassion Subscales for Eligible Participants ($N = 34$)

Subscale	Pre-treatment mean (SD)	Post-treatment mean (SD)	$t(33)$	p	Effect size (d)
SK	12.12 (4.04)	12.74 (4.47)	1.30	.20	0.15
SJ	18.12 (4.63)	17.21 (4.42)	−1.49	.15	−0.20
CH	11.09 (3.59)	11.62 (4.23)	1.35	.19.	0.14
I	13.50 (3.48)	12.61 (3.70)	−1.76	.09	−0.25
M	10.76 (2.95)	11.41 (3.53)	1.46	.15	0.20
OI	14.21 (3.36)	13.59 (3.43)	−1.40	.17	−0.18

Note. CH = Common humanity; I = Isolation; M = Mindfulness; OI = Over-identification; SJ= Self-judgement; SK = Self-kindness.

proportion of participants for whom this was the case. It is worth noting that high attrition rates are common for internet-based interventions: results of a meta-analysis show that in 26 studies of cCBT for depression, the mean attrition rate was 40.8% (SD = 24.4%; Andrews et al., 2018)[4]. Also, a previous study of compassion-based self-help for people with skin conditions reported similar attrition to the current study (69.6% in the intervention arm; Hudson et al., 2019).

A number of treatment factors are known to affect engagement, adherence and attrition for online CBT interventions. Support from a practitioner improves adherence, particularly when the practitioner initiates contact rather than simply being available in case of problems (Cavanagh, 2010; Webster et al., 2014). In the current study, quasi-personal contact was provided by personalised, but automated, guidance emails. These contained the participant's name and related to the specific intervention session that they were due to complete that week, but were not linked to logins to the study website. The text of these emails is provided in Appendix G.12. However, no participants took up the offer of contacting the researcher because of difficulties with the intervention, although some participants contacted the researcher about login difficulties and needing to temporarily defer beginning the intervention. Therefore, most participants did not make use of the support available, which may have negatively impacted adherence. Future studies could include telephone contact with participants prior to beginning the intervention, which would increase the amount of support participants receive and also provide an opportunity to address any concerns, misunderstandings or barriers to treatment (Cavanagh, 2010). In the current study, reasons given by the two participants who provided a reason for their discontinuation suggest that details of the intervention

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[4] These figures were calculated from adherence results given by Andrews et al. (2018).

(e.g., length of time required, session content, possible areas of difficulty) should be made clearer before people begin the intervention, to manage expectations. These details were provided in the participant information sheet (see Appendix G.1), but this could be made more explicit in future studies. In addition, future studies could include information about what to expect from the intervention as part of a ‘cooling off’ period for eligible participants, that is, between screening and beginning the intervention. This could consist of a ‘taster’ session, information that addresses common concerns or misunderstandings about online self-help or quotes from previous participants to enhance treatment credibility and so increase engagement (Cavanagh, 2010). To improve understanding of attrition in online interventions, future studies could also contact people who have dropped out with a single ‘inline’ email question (where the survey question is in the body of the email itself) about the reason for their discontinuation. When it is easy to provide feedback participants are more likely to do so (Edwards et al., 2009), so it may be helpful to provide common reasons for discontinuation as multiple choice options.

Although all eligible participants were invited to provide overall feedback, regardless of how much of the programme they undertook, the only participants who chose to do so were those who remained engaged with the intervention until the end. This means that the overall feedback was likely to be positively biased, as it was only completed by participants who, presumably, perceived the programme to be beneficial. Weekly feedback measures, which avoid retrospective bias, were also used to gain a more accurate picture of how the intervention was perceived across participants. However, even these weekly feedback scores may have been affected by dropouts: the slight increase in impact scores across sessions probably reflects the attrition of participants who were perceiving less benefit from the intervention. Nevertheless, the weekly feedback for the earlier sessions indicates that the website was positively evaluated by and had at least some impact for all participants who began the intervention.

Website evaluation scores and open text comments showed that participants found the website easy to use and that the content was helpful and easy to understand. Future studies could further improve on the intervention by offering participants more flexibility about how they use the programme. This should include choices about how often email reminders are sent and at what pace participants go through the programme. It may also be beneficial to allow some choice about the order of sessions: as there was a divide between participants about whether they found the written vs. breathing/imagery exercises most helpful, allowing participants some flexibility about when (or even if, based on previous experiences) they do these exercises might help keep participants engaged with the intervention. The programme could also be amended to include information for people who are encountering blocks and resistances to the compassion-based exercises. In individual CFT, there are techniques that can be used to help people overcome such difficulties, for example, exercises to help people attend to their feelings or to explore meta-cognitions around becoming more compassionate (Gilbert, 2010). Such techniques could be adapted into a self-help format. However, these need not be presented as part of the main body of the intervention, but as optional extras, thus allowing participants to tailor the intervention to their needs. This would also be consistent with recommendations that internet interventions allow people to access more in-depth information as desired (Whitehead & Proudfoot, 2010).

The session impact scores showed that the intervention tended to have “somewhat” of an impact (around 2 on the 1–4 scale) on participants, which could be interpreted as indicating the need to improve the sessions’ content. However, the overall context of the intervention needs to be taken into account when interpreting these data. Firstly, in a single session of any clinical intervention, one would not expect high scores across the possible areas of impact. Some of the session impacts items relate to specific therapy tasks, such as increasing insight into problems and developing knowledge about solutions. These tasks were differentially targeted by different sessions of the intervention. However, participants’ previous experiences will also have affected session impacts scores; for example, someone who has previously had therapy may have had less possible gains in relation to increasing insight. These issues confer a more positive light on the fact that all sessions had, on average, “somewhat” of an impact in most areas. Secondly, internet-based interventions tend to have lower effect sizes for depression than face-to-face therapies (Cuijpers et al., 2013; Karyotaki et al., 2017), so it seems reasonable that the intervention sessions in the current study were perceived as having modest rather than high impacts. Thirdly, participants were asked to complete the session impacts measure at the end of each session, which meant that they had not yet carried out that week’s associated homework activity. Participants’ written feedback highlighted an awareness of the need to practice, so the modest impact scores may also reflect some uncertainty about the benefits of the exercises at the point that the feedback was given. If future studies allow flexibility in the self-help programme as described above, this might increase the session impact scores as participants will be able to choose the parts of the intervention that seem most meaningful to them.

Results showed that it was feasible to provide guidance for the self-help programme, requiring relatively little researcher time during the data collection period. It was surprising that no participants contacted the researcher about any difficulties with the self-help programme itself (e.g., not understanding or being otherwise unable to carry out the homework exercises), given that many participants dropped out of the intervention. It is possible that, even though the guided self-help emails aimed to use a warm and approachable tone, participants did not feel able to enter into a dialogue with the researcher about difficulties they were having with the programme. Nevertheless, the results show that the intervention would be feasible to facilitate as part of a future, larger-scale trial without requiring extensive resources.

The criterion for feasibility of providing an online intervention was not met, which could indicate some problem with participants being able to access the website. However, from the administrative side of the study website, it is known that no problems occurred during the study period that would have prevented participants' access. It is thought that the participants who never attempted to access the website ($n = 7$) either did not receive the study emails due to their email spam filters, or that they simply decided against taking part in the programme for personal reasons. Typographic errors in email addresses were unlikely to be responsible for these participants failing to access the study website, as email addresses were requested twice in the baseline survey, and no errors were found when these were cross-checked. These data suggest that future trials should advise participants to check their email settings at the point of screening, to ensure that they receive the study emails.

Effects of the intervention on outcome measures were promising, with treatment completers showing improvements in depression, self-compassion and dermatology quality of life. Although hypothesis-testing was not an aim of the current study, results suggest that the Compassion for Skin Conditions intervention has the potential to benefit people with skin conditions and depression, and should be investigated further in an sufficiently-powered trial.

Overall, the results of the current study imply that the Compassion for Skin Conditions guided self-help programme is worthy of further development and research attention. The feedback received was generally positive, and for the acceptability and feasibility criteria that were not met, changes to the intervention and study methods have been suggested to improve future studies. In addition, the observed improvements in depression, self-compassion and skin-related quality of life suggest that compassion-based self-help holds promise as a treatment for depression in people with skin conditions, which is in line with previous research (Hudson et al., 2019).

Along with the amending the self-help programme as described above, a logical step in the development of this intervention would be to test the programme against a control condition. The LOCF analysis found a medium effect size of the intervention on depression, $d = .50$. An *a priori* power analysis shows that to achieve 80% power with a one-tailed significance level of .05 and $d = 0.50$ for depression, a sample of 128 participants would be needed (64 participants per condition). However, in the current study, just 18.0% of participants who initially showed an interest in the study by accessing the study link ($n = 189$) were eligible to take part ($n = 34$). To recruit 128 eligible participants in a future study, if the study parameters remained the same (i.e., inclusion/exclusion criteria and recruitment strategy), approximately 712 people would be needed to show initial interest in the study. It would therefore be advisable to attempt to increase the initial uptake of the intervention, by changing the recruitment method to better target potentially eligible participants. This could be achieved by recruiting from clinical populations of patients accessing dermatological healthcare via outpatient clinics and/or general practice. As only a minority of people with skin conditions access healthcare services (APPGS, 2013, 2020), those that do are likely to be those whose skin condition has a greater impact on them, which is strongly correlated with depression ($r = .72$; Ali et al., 2018). Therefore, it may be easier to find people with skin conditions who also have mild-moderate depression in dermatology populations than among people who self-manage their skin conditions. Primary care mental health services could also recruit participants by identifying individuals with co-morbid skin conditions among their patients with mild-moderate depression. Given the proposed changes to the intervention and the study methods, a further feasibility study may be warranted before running a full-scale clinical trial.

5.5.1 Limitations

There are a number of limitations to the current study that need to be noted. First, the large majority of the eligible participants were female and all of the treatment completers were female. This suggests that the intervention appealed most to women, which limits generalisability. It is unclear whether the gender bias of the sample was something specific to the intervention, or if this was part of wider issues about the role of gender in help-seeking behaviour and treatment preferences: compared to women, men are less likely to seek help for depression (e.g., Kessler et al., 1981; Oliver et al., 2005) and tend to be less interested in the psychosocial aspects of online depression resources (Nimrod, 2012). Further research is required to investigate how to engage men in accessing self-help resources, and whether the intervention could be made more appealing to men.

Second, generalisability may also be limited as most participants had pruritic skin conditions, particularly psoriasis or eczema. A notable absence among participants' diagnoses was acne, which is a very common skin condition (Hay et al., 2014) often associated with psychological distress (Magin et al., 2006). Only four people out of the 189 potential participants reported having acne, two of whom reported too many depressive symptoms to be included in the study, and two of whom withdrew from the study before completing the screening measures. This small number of potential participants with acne is likely to reflect the difficulties in advertising the study to this population, as there is limited support available for acne compared with other skin conditions and so fewer avenues for recruitment. In the UK, there is currently no national charity or patient support group specifically for people with acne. Future studies will need to consider how best to recruit people with acne.

Third, although the use of the DASS–D as a screening tool made it likely that participants were drawn from the intervention's target population (people with mild-moderate depression), this was not guaranteed. The DASS–D is a measure of depressed mood state over one week and scores may therefore be overly affected by transient fluctuations in symptoms. The cutoffs used for the inclusion/exclusion criteria were based on research evidence (Crawford & Henry, 2003), but on an individual basis, a one-point difference on the DASS–D can be argued to be of little clinical importance. Individuals with scores that fell just outside of these cutoffs would have been excluded based on such a difference but may also have benefited from the intervention. If future studies also wish to restrict participation based on depressive symptoms, they could consider using a measure that assesses symptoms over a longer timescale, such as the PHQ-9 (Kroenke et al., 2001) or BDI-II (Beck et al., 1996).

Finally, while appropriate for a feasibility study, the uncontrolled pre–post design of the study limits the conclusions that can be made about the efficacy of the intervention. Outcome measures were used in the current study to provide estimates of effect sizes to inform future studies, and results indicated that participants who completed the intervention had improved depression, self-compassion and quality of life compared to baseline. However, without a control group and randomisation, strong causal inferences cannot be drawn.

5.5.2 Implications

Although the number of treatment completers was small, findings from the current study are consistent with the idea that therapeutic tasks that stimulate the soothing/contentment system can reduce depression. Participants were not asked to carry out any traditional CBT tasks for depression in the current study, such as behavioural activation or cognitive restructuring.[5] Despite this, depression scores reduced. The current study therefore provides support for the CFT model and how the affect regulation systems can be out of balance in depression, consistent with many other studies on compassion-focused therapies (see Kirby et al., 2017; Leaviss & Uttley, 2015; literature review in Chapter 2 for reviews).

The present results suggest that future studies should also investigate how the components of self-compassion are affected by compassion-based self-help, as effect sizes on the subscales varied between small (common humanity) and large (isolation) for treatment completers. This requires further exploration in an adequately-powered study, as it has been suggested that low levels of uncompassionate self-responding have

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[5] Participants were asked to record negative thoughts, to raise awareness of them, but not to challenge them.

greater implications for mental health than high levels of compassionate self-responding (Ullrich-French & Cox, 2020). Compassion-based interventions may therefore benefit from incorporating exercises that target uncompassionate self-responding as well as promoting compassionate self-responding. Indeed, as noted earlier, Kelly et al. (2009) demonstrated that brief attack-resisting self-help reduced depression in acne sufferers, whereas brief self-soothing techniques did not. Although the current study and Hudson et al. (2019) provide evidence that compassion self-help can reduce depression in people with skin conditions without the inclusion of attack-resistant techniques, it would be valuable for future studies to monitor the self-compassion subscales as this may inform further intervention development with this population. Future studies could also extend the current research by comparing the Compassion for Skin Conditions intervention with attack-resistant techniques with people with heterogeneous skin conditions.

The current study also has implications for further research on engagement and attrition in online compassion-based interventions. As previously noted, realistic pre-treatment expectations and support from a practitioner can improve engagement and adherence with online CBT interventions (Cavanagh, 2010), so future studies should be mindful of these factors. However, compassion-based work can face additional challenges, as for some individuals, compassion can elicit threat responses (Duarte et al., 2015; Gilbert, 2010; Rockliff et al., 2008). This may lead to adverse effects with compassion self-help interventions (Krasuska et al., 2017), and this may contribute to disengagement. There was no direct evidence that participants experienced threat responses to compassion in the current study, either in the limited feedback from those who dropped out or in the open text survey feedback. However, it is possible some participants who dropped out had experienced threat responses but did not disclose this. Further investigation of reasons for dropout, as suggested earlier, may shed more light on this issue in future studies.

Research on the effectiveness of interventions may also benefit from a better understanding of attrition and engagement: interventions that are perceived as beneficial are likely to keep people engaged with them, which will then maximise their potential effects. More work needs to be done to identify who is likely to benefit from, and remain engaged with, compassion practices in a self-help context. Possible moderators of intervention effectiveness include attachment style (Krasuska et al., 2017, 2018), fears of compassion (Gilbert et al., 2014), self-criticism and mood (Kelly et al., 2010), which can all be assessed with self-report measures. Ideally, research of this nature would lead to clinical recommendations and guidance for individuals about what type of compassion intervention would best suit their current needs.

5.5.3 Conclusions

The current study has demonstrated that an online, six-week, guided self-help intervention based on compassion can be provided to people with skin conditions and symptoms of depression. The intervention holds potential as a low-intensity treatment for depression in people with skin conditions, as feedback indicated it was generally perceived as acceptable and ideas for further improvement have been acknowledged. In addition, medium–large improvements in depression, self-compassion and skin-related quality of life were observed for treatment completers. However, changes to the study methods, particularly recruiting from healthcare settings and managing participants' expectations about the intervention, would be required for a future clinical trial.

Chapter 6

General Discussion

The research presented in this thesis sought to examine depression and self-compassion in people with chronic skin conditions. The aims were of the thesis were to review the existing literature on the effects of compassion-based interventions on depression; to investigate disgust traits as potential risk factors for depression in people with skin conditions and the role of self-compassion as a potential protective factor; to explore how high self-compassion operates and develops in people with skin conditions; and to assess the acceptability and feasibility of providing compassion-based self-help to people with skin conditions and depression. Discussion of the individual studies that make up this thesis are included in each chapter. This chapter presents a general discussion of three overarching themes that emerged from the research: 1) the relevance of self-compassion for people with skin conditions; 2) self-compassion as a therapeutic target for depression; and 3) the multifaceted nature of self-compassion. Strengths, limitations and future directions are also discussed.

6.1 The Relevance of Self-Compassion for People with Skin Conditions

All three empirical studies in this thesis showed that self-compassion is of particular relevance to people with skin conditions. Study 1 showed that in a sample of people with skin conditions, self-compassion explained significant variance in depression both cross-sectionally and prospectively. Self-compassion also appeared to moderate the effect of disgust propensity on concurrent depression. The findings of Study 2 showed that key compassionate attributes underpinned many different strategies for managing the difficulties of living with a chronic skin condition, and were therefore important for adjustment to skin conditions. Study 3 demonstrated that compassion self-help can be adapted for people with skin conditions: A novel, online, guided self-help intervention based on CFT was feasible to administer, and was broadly acceptable to participants assessed at follow-up. Furthermore, treatment completers reported improvements in depression, self-compassion and skin-related quality of life. As this was a feasibility study, no control group was used. However, all participants reported having chronic skin conditions, with a median duration of 23.5 years (range 1–51 years) for the treatment completers. It therefore seems reasonable to assume that changes reported by treatment completers over the study period occurred as a result of the intervention, especially given their positive qualitative feedback (see Table H.1 in Appendix H). Previous research has shown that compassionate practices are associated with parasympathetic nervous activity, particularly increased heart rate variability and reduced cortisol production (Rockliff et al., 2008). In contrast, there is evidence that hypothalamus-pituitary-adrenal (HPA) axis and sympathetic nervous system activity are involved in pruritic skin conditions (e.g., eczema and psoriasis; Hall et al., 2012). Therefore, if the self-compassion intervention in Study 3 increased parasympathetic nervous activity, this would act in opposition to sympathetic nervous activity and might explain some of the improvement in skin-related distress. It has been shown that salivary cortisol, a biomarker of psychological stress, was elevated in people with atopic dermatitis compared to healthy controls, and that this was significantly positively associated with clinician-assessed severity of the dermatitis (Mizawa et al., 2013). Salivary cortisol has also been shown to be similarly associated with clinician-assessed severity of psoriasis (Brunoni et al., 2014). Investigating the stress biomarkers of people with skin conditions who were undertaking a compassion-based intervention would be an intriguing avenue for future research.

6.1.1 Adjustment to Skin Conditions

Self-compassion interventions are those that, by definition, focus on learning to be compassionate to oneself as a therapeutic response to one's suffering. These may be particularly suitable for people with ongoing difficulties in life, such as chronic skin conditions, that can only be managed, not cured. The relevance of self-compassion to people with skin conditions that has been shown in this thesis is consistent with Thompson's (2005) framework of adjustment to skin conditions, which was introduced in Chapter 1. This model acknowledges the impact of early experiences (e.g., acceptance or rejection) on the development of other factors that affect adjustment to a skin condition, such as cognitive factors and coping strategies. As noted in Chapter 1, early experiences are expected to affect the development of self-compassion (Gilbert, 2000; Neff, 2003b), and, indeed, there is evidence to support this notion (Hou et al., 2020; Steindl et al., 2018; Vettese et al., 2011). Self-compassion fits within Thompson's (2005) framework of adjustment to skin conditions as being a factor that develops (or not) due to early experiences and that subsequently influences both cognitive factors and coping strategies. The findings of the research presented in this thesis can therefore be understood within several parts of this framework. First, self-compassion is expected to be associated with adaptive cognitive factors, such as core beliefs of self-worth (i.e., valuing oneself despite inadequacies and failures) and a non-judgemental, empathic stance towards oneself. This is in contrast to being shame-prone and alexithymic, factors that are positively linked with distress in people with skin conditions (Thompson, 2005). In Study 1, disgust propensity explained significant variance in depression in people with visible skin conditions except when self-compassion was high, which can be viewed within Thompson's (2005) framework as self-compassion acting in opposition to cognitive risk factors (disgust traits) for poor adjustment to skin conditions. Study 2 identified a range of adaptive cognitive factors (non-judgement, empathy, perspective-taking and self-kindness) in highly self-compassionate people with skin conditions, which also fits well within this framework.

Second, self-compassion is expected to facilitate adaptive coping strategies; indeed, Neff (2003b) proposed that self-compassion can be seen as an emotional-approach coping strategy. Self-compassion encourages engagement with distressing situations, in contrast to avoidance-based coping strategies, which are linked to poor adjustment to skin conditions (Thompson, 2005). For example, someone feeling sad because of the impact of their skin condition might use social support to help deal with their emotions. Self-compassion can therefore promote adaptive emotion-focused coping (Neff, 2003b). Self-compassion is also expected to encourage (adaptive) problem-focused coping, which involves taking action to directly address stressors (Lazarus & Folkman, 1984). Consistent with this notion, interventions to increase self-compassion have been found to be effective for improving the self-regulation of health behaviours, including self-care (see Biber & Ellis, 2019, for a review). As well as the findings about cognitive factors, described above, Study 2 also found that highly self-compassionate people routinely use both emotional-approach and problem-focused coping strategies to manage the difficulties of living with chronic skin conditions. This finding fits well with the idea that coping strategies are linked with adjustment to skin conditions (Thompson, 2005). Finally, the findings of Study 3 suggest that self-compassion techniques can be beneficial to people with skin conditions, which is consistent with the implications of Thompson's (2005) framework: that positive changes made in one or more areas can promote adjustment to a skin condition. Self-compassion is therefore compatible with existing models of coping and adjustment to skin conditions, and is thus an important target for research and clinical interventions for people with skin conditions.

6.2 Self-Compassion as a Therapeutic Target for Depression

The research in this thesis supports the notion that self-compassion is a therapeutic target for depression. The systematic literature review in Chapter 2 found evidence that compassion-based interventions can reduce depression. This finding is further supported by results of subsequently published meta-analyses, which found compassion interventions to have moderate effects on depression: an average effect size of $d = 0.64$ for interventions that aim to increase compassion for self or others (Kirby et al., 2017), and $g = 0.66$ for self-compassion interventions (Ferrari et al., 2019). Study 1 showed that self-compassion explained significant variance in depression, both concurrently and prospectively after accounting for depression at baseline. Although the follow-up period was short at only three months, the inclusion of longitudinal data was a strength of this study, as it allows the tentative conclusion that self-compassion is an antecedent of (lower) depression to be drawn. Self-compassion also weakened the positive relationship between disgust propensity and concurrent depression, therefore providing evidence that self-compassion might protect against depression through both main and moderation effects. Study 3 showed that a skin-specific, compassion-based, self-help intervention was perceived as beneficial by people with mild-moderate depression. It also provided preliminary evidence that the intervention reduced depression. Findings of Study 3 were therefore consistent with findings of the systematic review, that compassion-based self-help holds promise for people with depression.

Study 2 indirectly demonstrated the relevance of self-compassion to (lack of) depression, by exploring self-compassionate ways of responding to difficulties with people who were *not* depressed. This study extends the psychological literature on self-compassion, particularly as much of this research has used quantitative methods, which limit the findings that can be drawn to those based on the researchers' preconceptions of the phenomena under investigation. In contrast, qualitative research allows for exploration of phenomena in broader ways than hypothesis testing. There has been some previous qualitative research on self-compassion and depression: Pauley and McPherson (2010) explored the concept of self-compassion with people with depression or anxiety problems, finding that participants could appreciate the potential benefit of self-compassion. However, depression is known to be negatively associated with self-compassion (MacBeth & Gumley, 2012) and consistent with this, participants in Pauley and McPherson's (2010) study reported little experience of being self-compassionate. This study therefore provided little insight into how self-compassion was adaptive or how it could be developed. To understand how self-compassion may be protective against depression, research was needed to explore self-compassion in people with low levels of depression, particularly in a population who normally experience elevated levels of depression, such as people with skin conditions. This was the focus of Study 2, which investigated self-compassion with participants with skin conditions who were known to be highly self-compassionate. Despite not being currently depressed, many participants had overcome previous difficulties with self-criticism and/or depression. The differences between their past and present experiences provided insights about the negative association between self-compassion and depression, with participants' distress reducing as they increasingly used self-compassionate ways of managing their difficulties, such as making time for self-care or using supportive self-talk. These findings complement the substantial literature on the link between the lack of self-compassion and depression.

6.2.1 Mechanisms of Change

Although this thesis supports the idea that self-compassion is a therapeutic target for depression, an integrated model of the processes involved in the relationship between self-compassion and depression does not yet exist, despite there being considerable research interest in the subject. First, one area of research has investigated the role of self-compassion in the relationship between childhood experiences and later depression. Studies have shown that self-compassion partially mediates the relationship between early emotional memories and depression (Steindl et al., 2018), and that self-compassion fully mediates the relationship between childhood maltreatment and emotional dysregulation (Vettese et al., 2011). A more complex model has been proposed by Hou et al. (2020), who found that self-compassion moderated the indirect impact of childhood maltreatment on depression via negative automatic thoughts. These studies support the notion that early experiences affect the development of self-compassion (Gilbert, 2000; Neff, 2003b). However, each of these studies used retrospective reports of childhood experiences, which may be subject to biases or inaccuracies. Prospective cohort studies or studies that use validated reports of childhood maltreatment would be useful additions to this research area.

A second area of research has investigated the links between self-compassion, depression and certain cognitive or emotional traits. Some studies have investigated self-compassion as a mediator between cognitive/emotional traits (self-criticism and adult attachment styles) and depression (Joeng & Turner, 2015; Joeng et al., 2017), finding that self-compassion partially mediated these relationships. In contrast, other studies have investigated cognitive traits (negative automatic thoughts, rumination, and negative cognitive style) as mediators between self-compassion and depression (Arimitsu & Hofmann, 2015; Raes, 2010; Zhou et al., 2013), finding that the cognitive traits partially mediated this relationship. It has also been argued that self-compassion can be understood within an emotion regulation framework, as there is evidence that self-compassion is linked to affective experiences, emotion regulation capacities and use of specific emotion regulation strategies (Finlay-Jones, 2017). A systematic review supported this view, concluding that there is preliminary evidence that emotion regulation is a mechanism of change in the relationship between self-compassion and mental health (Inwood & Ferrari, 2018). However, this review also acknowledged that the relationship between self-compassion and emotion regulation may vary across populations and types of mental health problems. Specifically, in people with post-traumatic stress disorder, there was evidence that self-compassion influenced emotion regulation and that emotion regulation influenced self-compassion. In contrast, in people with depression, there was evidence that self-compassion influenced emotion regulation but there was not support for the reverse model. Self-compassion has also been found to be a moderator of the relationships between cognitive/emotional vulnerabilities and depression in other studies (e.g., Fonseca & Canavarro, 2018; Study 1, this thesis), as noted in Chapter 3. A diagrammatic summary of the existing research findings that have been noted above, on the proposed causal paths between self-compassion, depression and associated risk factors, is presented in Figure 6.1. A major limitation of this research area is the use of cross-sectional methods, which limits the inferences about causality that can be drawn. Longitudinal studies of self-compassion, cognitive/emotional factors and depression are needed to improve understanding of the causal paths between these variables. Study 1 in this thesis provided some such longitudinal data, showing self-compassion to predict depression three months later, but this finding needs replication and investigation over longer timescales.

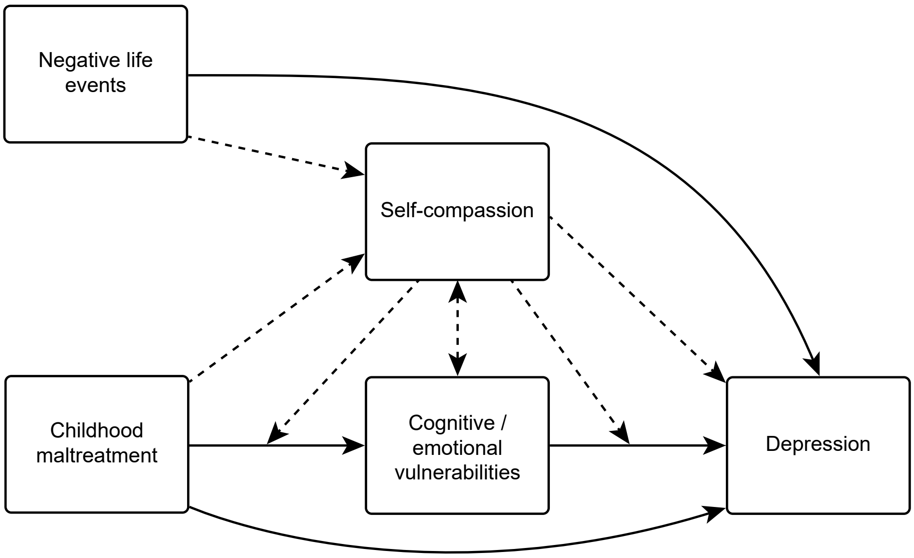
The third area of research on the relationship between self-compassion and depression has investigated whether change in self-compassion mediates change in depression for those undergoing a compassion-based intervention. The systematic review in Chapter 2 found a small amount of evidence to support this idea. Subjecting such results to meta-analysis would increase confidence in this effect, but as yet this has not been done (Ferrari et al., 2019; Kirby et al., 2017). The lack of data analysis on this issue has been a major limitation of intervention studies to date. Therefore, future studies of compassion-based interventions should investigate self-compassion as a mechanism of change in depression, and report sufficient details to allow meta-analysis of findings. The research in Study 3 could be extended into a fully-powered RCT to form one such study.

6.2.2 Models of Depression

This thesis investigated self-compassion and depression using Gilbert's (2009a) model of the three types of affect regulation systems. In this model, depression is proposed to involve an overactive threat/protection system and underactive drive/excitement and

Figure 6.1

Evidence-Based Paths connecting Self-Compassion and Depression



Note. Solid lines denote statistically significant positive relationships; dashed lines denote statistically significant negative relationships.

Paths shown were reported in studies by Arimitsu and Hofmann (2015); Chang et al. (2017); Clarke et al. (2020); Ferrari et al. (2018); Fonseca and Canavarro (2018); Homan and Tylka (2015); Hou et al. (2020); Joeng and Turner (2015); Joeng et al. (2017); Phillips et al. (2018); Podina et al. (2015); Raes (2010); Steindl et al. (2018); Vettese et al. (2011); Zhou et al. (2013).

soothing/contentment systems (Gilbert, 2014a). Study 1 directly tested hypotheses derived from this model: that depression would be positively associated with disgust traits and negatively associated with self-compassion. These hypotheses were fully supported by the cross-sectional data and largely supported by the follow-up data—the only exception being that disgust sensitivity was not significantly associated with depression at follow-up. Study 1 also tested the hypothesis that self-compassion would moderate the negative effects of disgust traits on depression, which was also derived from Gilbert's (2009a) model. This hypothesis was supported in the case of disgust propensity: the positive relationship between disgust propensity and depression weakened with increasing levels of self-compassion.

The negative relationship between self-compassion and depression can also be understood within other theoretical approaches to depression. As noted in Chapter 1, there are biological, evolutionary, cognitive and behavioural models of depression. First, taking a biological approach, compassionate practices have been found to be associated with parasympathetic nervous activity (Rockliff et al., 2008), as previously noted. This parasympathetic activity may serve to disrupt or attenuate the neuroendocrine changes of the sympathetic nervous system and hypothalamus-pituitary-adrenal (HPA) axis that are associated with depression (Goldstein et al., 2011). Furthermore, compassion practices have been shown to induce neurological activation in a number of frontal and subcortical regions involved in cognitive and emotional processing (Kim et al., 2020). Such activations may work in opposition to the neurological changes in the brain that have been noted in depression (Drevets et al., 2008), although studies with clinical samples are required to investigate this further (Kim et al., 2020).

Second, self-compassion can also be incorporated into evolutionary accounts of depression. Allen and Badcock's (2003) social risk hypothesis proposes that temporary depressed states evolved as an adaptive way of reducing social risk for individuals who were potentially facing ostracism by their social group. The depressed mood state reduces competition within the group and instead signals the need for the support of close friends and family. Receiving care from responsive others (those who notice the distress and wish to help, i.e., are compassionate) is proposed to help resolve the depressed mood state, and empirical evidence supports this (Allen & Badcock, 2003). In this account, then, receiving compassion serves to regulate negative, threat-based emotions—a notion that is also central to Gilbert's (2009a) model of affect regulation systems, which is based on evolutionary and neuroscience perspectives. As internally generated signals can stimulate the same physiological processes as externally generated signals (Gilbert, 2009a), self-compassion would be expected to fulfil the same role as receiving compassion from others in the social risk hypothesis of depression.

Finally, cognitive behavioural models of depression can also readily incorporate (the lack of) self-compassion; indeed, the integration of (self-)compassion into CBT led to the development of CFT (Gilbert, 2010). Within a cognitive behavioural approach, self-compassion would be expected to be associated with cognitions that are helpful and supportive towards the self and behaviours that promote self-care, even when these require distress tolerance in the short-term. Accordingly, self-compassion should work in opposition to cognitive behavioural processes that maintain depression, such as negative self-referential thoughts (Beck, 1967) and actions that serve to harm the self, either intentionally or unintentionally.

6.3 The Multifaceted Nature of Self-Compassion

The research presented in this thesis has shown that there are many facets to self-compassion. As noted in Chapter 1, in Gilbert's (2009a) model of compassion, the attributes of compassion are sensitivity to distress, care for wellbeing, non-judgement, empathy, sympathy and distress tolerance. These are further proposed to be enacted using the skills of compassion: imagery, attention, reasoning, feeling, bodily sensations and behaviour. Findings of Study 2 broadly aligned with Gilbert's model, as most of the theorised attributes of compassion were important in understanding how people with high self-compassion managed skin-related difficulties. The multifaceted nature of self-compassion is consistent with the idea used in CFT that there are many ways of being compassionate, for example, a firefighter rescuing someone from a burning building and a doctor performing surgery both have the intention to alleviate suffering in another person (e.g., Gilbert et al., 2017). Compassionate actions therefore vary depending on one's abilities and resources, and the findings of Study 2 suggest the same to be true of self-compassion. How someone is self-compassionate depends on their specific compassionate abilities, as well as the circumstances in which their distress arises.

Self-compassion being multifaceted also suggests that it can be increased by developing any facet(s) in which there are gains to be made. For example, someone who was lacking in distress tolerance could take active steps to improve this, such as gradually increasing their exposure to difficult situations. Someone else who lacked empathy could use reflective journaling to improve this. Both of these changes would be expected to increase self-compassion for those particular individuals, but would not be expected to be universally beneficial. Supporting this idea, in Study 3, investigation of a compassion-based, self-help intervention found that participants varied regarding which aspects of the intervention they perceived as most beneficial. Specifically, four participants found the soothing rhythm breathing the most helpful aspect while one participant found it the least helpful. Similarly, two participants found noticing negative thoughts the most helpful aspect but two others found this the least helpful. This shows that individuals vary in the compassion-based approaches that suit them, and is consistent with the findings of Study 2 that people can have strengths and weaknesses in different areas of self-compassion. The varied preferences for different approaches is also consistent with established compassion-based interventions including many different exercises to cultivate self-compassion, such as chair work, use of postures, letter-writing, imagery, breathing practices and meditation (Gilbert & Irons, 2005; Gilbert, 2010; Neff & Germer, 2013). These exercises may differentially target facets of self-compassion. For example, out of the aforementioned compassion attributes, meditation might be expected to promote non-judgement the most, while chair-work might be expected to promote care for wellbeing the most. As suggested in Chapter 5, having a choice of compassion-based exercises may therefore play a role in tailoring self-compassion interventions to individuals' needs.

6.3.1 Individual Differences in Self-Compassion

As noted in Chapter 1, Gilbert and Neff both propose that self-compassion is linked to early experiences of receiving care. Supporting this idea, research has shown that memories of warmth and safeness in childhood positively predict self-compassion as an adult, while memories of parental rejection and overprotection negatively predict self-compassion (Naismith et al., 2019; Pepping et al., 2015). However, while early experiences may form the basis for self-compassion, it can change over time, for better or worse. It has been shown that the effect of recent negative life events on depression is partially mediated by self-compassion, suggesting that negative life events increase depression by increasing people's tendencies to fixate on their problems and decreasing their abilities to see their difficulties as similar to others' and to be mindful of their distress (Chang et al., 2017). In contrast, the rationale for compassion-based interventions depends upon the notion that (self-)compassion can be improved in adulthood, and, indeed, the systematic review in Chapter 2 found evidence that these interventions can increase self-compassion. Subsequently published meta-analyses have also concluded that compassion interventions have moderate effects on self-compassion (Ferrari et al., 2019; Kirby et al., 2017).

Further investigation is required regarding the effects of different compassion-based interventions on self-compassion and its components. Different treatments, based on different models of compassion, may affect different aspects of self-compassion, and this may be particularly important given the multifaceted nature of self-compassion. No meta-analysis has yet conducted moderator analyses of this nature, that is, examining the effects of treatments grouped by conceptualisation of compassion. However, it is possible to make suggestions about the type of population who are most likely to benefit from certain compassion-based interventions. First, CFT is likely to be most suited for use in clinical populations, as it developed out of CBT (an evidence-based treatment for a variety of mental health problems) following the observation that the emotional tone of self-talk was particularly important (Gilbert, 2010)—attempts to challenge overly negative thinking that were still cold in tone were not experienced as helpful. CFT is based on Gilbert's (2009a) model, described above, and includes psychoeducation based on evolutionary neuroscience (i.e., why people experience the difficulties they do), a psychological formulation, and a range of experiential practices to develop compassionate abilities. CFT is a transdiagnostic approach that is particularly suited to helping people with high shame and self-criticism, who are likely to be found in clinical populations. In addition, the psychoeducation aspects of CFT may have less relevance for people who do not have mental health problems. Second, the MSC programme is likely to be most suited to non-clinical populations and clinical populations with mild mental health problems. The MSC programme was developed as a hybrid programme, for use in clinical and non-clinical populations (Neff & Germer, 2013). It teaches participants about self-compassion, based on Neff's (2003b) model, described above, and includes a rationale for increasing self-compassion, meditative practices and techniques to use during daily life (e.g., repeating self-compassionate phrases). However, as it is a taught, group programme, it may be less suitable for individuals with longstanding and/or more severe mental health problems, as it does not include psychological formulations of the presenting problems. Limiting the use of the MSC programme in this way would be consistent with the stepped care model of mental health treatments (see Chapter 5), in which low intensity interventions are reserved for individuals with less severe difficulties. These suggestions about the use of CFT and the MSC programme are also consistent with the results of the systematic review (Chapter 2) regarding the populations for whom they have an evidence-base. For people with skin conditions, it may be beneficial to provide an adapted MSC programme for health promotion (i.e., before mental health problems develop) and to treat mild depression, while CFT is likely to be more suitable for people with more severe depression.

6.4 Strengths and Limitations

The research presented in this thesis has a number of strengths and limitations. Issues relating to individual studies have already been discussed in the relevant chapters. Reflections on strengths and limitations across the research are presented here. One issue that gave rise to both strengths and limitations of the research was the heterogeneity of the included skin conditions. The use of participants with various skin conditions meant that the findings can be applied broadly across skin conditions. This is particularly valuable given that rarer skin conditions (e.g., epidermolysis bullosa or pyoderma gangrenosum) attract far less research attention than the more common ones (e.g., eczema and psoriasis). This may be partly because it is more difficult to recruit adequately-sized samples of people with rare skin conditions, and because research on common skin conditions can be generalised to more people and hence have greater impact. Heterogeneous skin conditions were included in the current programme of research based on the assumption that there will be more common phenomena across skin conditions than phenomena that are unique to specific skin conditions. However, including people with heterogeneous skin conditions meant that the researcher did not control which skin conditions were represented in the samples. As noted in earlier chapters, there was a limited range of skin conditions present in the samples of Studies 2 and 3, with most participants having pruritic skin conditions. There was also the notable absence of participants with acne, which is one of the most common skin conditions in the world (Hay et al., 2014). Findings of Studies 2 and 3 therefore require further investigation among people with acne and/or other non-pruritic skin conditions (e.g., hidradenitis supperativa or epidermolysis bullosa, which cause painful breaks in the skin but are not generally itchy). In contrast, Study 1 included people with acne and rarer skin conditions, so the findings from this study can be generalised across a wider range of skin conditions.

One of the limitations in Studies 1 and 2 was the use of the short form of the SCS, which prevented detailed analysis of the subscales owing to inadequate reliabilities in this version of the scale. Study 1 was planned with the intention to investigate the overall self-compassion score, not the subscales, so the short form of the scale was used to reduce participant burden. However, since Study 1 was conducted, further literature on the validity of the SCS and its components has been published (e.g., López et al., 2015; Muris & Petrocchi, 2017; Neff et al., 2019). In Study 2, the overall self-compassion score was used due to the desire not to be overly prescriptive about the purposive sample (e.g., by specifying the dimensions in which interviewees had to score highly), and therefore it was logical to again use the short form of the scale to reduce participant burden. However, this prevented any reliable inspection of participants' scores on the six subscales after the qualitative analysis was complete, which may have informed interpretation of the results. This limitation was addressed in Study 3, which used the full-length SCS and hence allowed examination of the subscale data. This showed changes in the expected directions following the compassion-based self-help, and provided estimates of effect sizes that can be used to inform future trials.

The use of a mixed methods approach was a strength of the research programme, as it meant that different kinds of research questions could be addressed. Quantitative methods provide opportunities to test hypotheses based on existing theories, while qualitative methods allow broader investigation of phenomena than that which is already included in theories. Using a mixture of methods was consistent with the researcher's philosophical perspective, which was to approach the research using a critical realist ontology and constructionist epistemology. It was assumed that people's experiences constitute meaningful knowledge, or 'truths' about the world, and that collecting reports of these experiences (i.e., using self-report scales and interviews) are valid ways to generate data on these truths. However, it was also acknowledged that there will be inevitable errors in science, particularly when it is conducted with/about people. Furthermore, it was assumed that knowledge is always filtered through the lenses of historical, cultural, social and personal experiences and therefore researchers can never be entirely objective or removed from the knowledge that is gained from their endeavours. Based on these assumptions, using a mixture of methods was seen as a valuable approach that allows qualitative and quantitative approaches to complement each other by providing a more comprehensive account of psychological phenomena. In addition, each approach has its own strengths and weaknesses so using mixed methods means that weaknesses are offset while strengths are retained (Bryman, 2016).

The mixed methods approach had a good fit with the overall research aim to explore compassion and depression in people with skin conditions. Mixed methods are increasingly common in health psychology, operating from a pragmatic philosophical perspective that focuses on the intended consequences of the research (Dures, Rumsey, et al., 2011). The current programme of research was underpinned by the intention to improve psychosocial outcomes for people with skin conditions. The quantitative method of Study 1 was used to establish the the nature of the relationship between self-compassion and depression in people with skin conditions, and produced the finding that high levels of self-compassion appear to be particularly adaptive in providing a buffer against the effect of disgust propensity. The qualitative method of Study 2 was used to explore how high self-compassion operates in people with skin conditions and the factors that had led to this, providing insights to inform skin-specific interventions. The combination of qualitative and quantitative feedback data in Study 3 also provided insights into the acceptability of both the content and processes of the guided self-help intervention, which could be incorporated into future research.

6.5 Future Directions

The research in thesis has investigated self-compassion and depression in people with skin conditions. The next step for this research would be to further develop the compassion-based, guided self-help intervention devised for Study 3, and test its effectiveness for depression in a dermatology population, using an RCT design with adequate power. Potential changes to the intervention and study methods have already been discussed in Chapter 5. In addition, future studies of compassion-based self-help for depression could allow other research questions to be addressed. First, an important area that needs research attention is understanding which features of a compassion-based intervention are required to reduce depression. Some such features might relate to the content of an intervention (e.g., breathing exercises, imagery) while others might relate to its structure (e.g., number and frequency of sessions). Second, further work is needed to establish who is likely to benefit from a compassion-based intervention, and compassion-based self-help in particular. This may depend on the presenting problem, previous psychotherapy and personal preferences. Future studies should consider gathering such information from participants at baseline to inform attrition analyses and interpretation of treatment effects. Gathering information on factors that are linked with difficulties with self-compassion, such as attachment orientation (Joeng et al., 2017; Krasuska et al., 2017), history of adverse childhood events (Hou et al., 2020), early emotional memories (Steindl et al., 2018; Vettese et al., 2011) and fear of self-compassion (Gilbert et al., 2011), may also provide valuable insights into who benefits most from compassion-based self-help for depression.

As previously noted, investigating compassion as mechanism of change in depression would also be a valuable avenue for future research. Understanding the processes involved should also link in with knowledge of which features of compassion-based interventions are necessary for therapeutic gains. If researchers and clinicians understand the processes through which self-compassion changes and affects the individual, they may be able to target these more directly and efficiently. Study 2 showed that reflective practices were important in helping participants become highly self-compassionate. However, these reports were retrospective, so future research could use longitudinal methods to disentangle the processes involved. As part of this, research could also investigate which types of negative cognitions are moderated by self-compassion, as Study 1 found that self-compassion did not moderate the effects of disgust sensitivity and self-focused disgust on depression, contrary to hypotheses and in contrast with previous research on dysfunctional cognitions (Ferrari et al., 2018; Fonseca & Canavarro, 2018; Phillips et al., 2018; Podina et al., 2015).

Another potential area for future research is to further investigate the measurement of self-compassion. The most widely-used self-report measures of self-compassion are the SCS (Neff, 2003a) and the SCS-SF (Raes et al., 2011). More recently, Gilbert et al. (2017) developed the compassionate engagement and action scales (CEAS) relating to self and others, based on Gilbert's (2009a) model. However, each of these self-report scales assess agreement with global statements (e.g., "I tolerate the various feelings that are part of my distress" Gilbert et al., 2017), which can require a high level of personal insight (Haeffel & Howard, 2010). As highlighted in Chapter 2, some people who lack self-compassion may find it difficult to rate this accurately using self-report scales, due to their unfamiliarity with the concepts involved. Given this potential limitation, future research would benefit from investigation of alternate methods of measuring self-compassion. One measure of state self-compassion has been developed; this provides example scenarios for participants to consider (Falconer et al., 2015). In addition, as noted in Chapter 2, analysing the degree to which compassionate strategies were present in participants' narratives (Braehler et al., 2013) and observational ratings of self-compassion (Sbarra et al., 2012) have also been used successfully. Investigating these the use of methods alongside the SCS/SCS-SF/CEAS may provide insights for future research, particularly in the context of clinical interventions, and therefore merit further research attention.

6.6 Conclusion

This thesis sought to investigate self-compassion as an adaptive response for people with skin conditions with particular regard to reducing depression. It aimed to review the effects of compassion-based interventions on depression; to establish the nature of the relationships between self-compassion, disgust traits and depression in people with skin conditions; to explore how self-compassion operates and develops in this population; and to develop a skin-specific, compassion-based intervention for depression. Links between self-compassion and depression were found throughout the research, and self-compassion was found to be a relevant, adaptive and flexible response for people with skin conditions. A compassion-based, guided self-help intervention to reduce depression in people with skin conditions was found to hold promise, being broadly acceptable, feasible, and beneficial for those who completed it. Research to further develop and assess the efficacy of this intervention in reducing depression is warranted.

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Appendices

Appendix A

NHS Research Ethics Committee Approval Letter

Ymchwil Iechyd
a Gofal Cymru
Health and Care
Research Wales

Gwasanaeth Moeseg Ymchwil
Research Ethics Service

Ariennir gan
Lywodraeth Cymru
Funded by
Welsh Government

Wales REC 6
Floor 8
36 Orchard Street
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Telephone : 01792 607416
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06 October 2015

Ms Elaine Clarke
PhD Research Student
The University of Sheffield
Department of Psychology
Western Bank
Sheffield
S10 2TP

Dear Ms Clarke

Study title: **Psychological Reactions to Living with a Visible Skin Condition.**
REC reference: **15/WA/0381**
Protocol number: **STH19061**
IRAS project ID: **186460**

The Proportionate Review Sub-committee of the Wales REC 6 reviewed the above application on 06 October 2015 by correspondence.

We plan to publish your research summary wording for the above study on the HRA website, together with your contact details. Publication will be no earlier than three months from the date of this favourable opinion letter. The expectation is that this information will be published for all studies that receive an ethical opinion but should you wish to provide a substitute contact point, wish to make a request to defer, or require further information, please contact the REC Manager Ms Penny Beresford, penny.beresford@wales.nhs.uk. Under very limited circumstances (e.g. for student research which has received an unfavourable opinion), it may be possible to grant an exemption to the publication of the study.

Ethical opinion

On behalf of the Committee, the sub-committee gave a favourable ethical opinion of the above research on the basis described in the application form, protocol and supporting documentation, subject to the conditions specified below.

Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

1. The consent form and information sheet should be version controlled with the version number on the information sheet linked to the consent form under point 3.

2. The details and rules for the £50 voucher should be clearly explained in the information sheet.

3. The name of the REC reviewing committee (Wales REC 6 Proportionate Review Sub-Committee) should be included under the heading Who is organising this research?

4. Confirmation that questionnaires have been validated.

You should notify the REC in writing once all conditions have been met (except for site approvals from host organisations) and provide copies of any revised documentation with updated version numbers. The REC will acknowledge receipt and provide a final list of the approved documentation for the study, which can be made available to host organisations to facilitate their permission for the study. Failure to provide the final versions to the REC may cause delay in obtaining permissions.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

Management permission ("R&D approval") should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements.

Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at http://www.rdforum.nhs.uk.

Where a NHS organisation's role in the study is limited to identifying and referring potential participants to research sites ("participant identification centre"), guidance should be sought from the R&D office on the information it requires to give permission for this activity.

For non-NHS sites, site management permission should be obtained in accordance with the procedures of the relevant host organisation.

Sponsors are not required to notify the Committee of approvals from host organisations.

Registration of Clinical Trials

All clinical trials (defined as the first four categories on the IRAS filter page) must be registered on a publically accessible database. This should be before the first participant is recruited but no later than 6 weeks after recruitment of the first participant.

There is no requirement to separately notify the REC but you should do so at the earliest opportunity e.g. when submitting an amendment. We will audit the registration details as part of the annual progress reporting process.

To ensure transparency in research, we strongly recommend that all research is registered but for non-clinical trials this is not currently mandatory.

If a sponsor wishes to request a deferral for study registration within the required timeframe, they should contact hra.studyregistration@nhs.net. The expectation is that all clinical trials will be registered, however, in exceptional circumstances non registration may be permissible with prior agreement from the HRA. Guidance on where to register is provided on the HRA website.

It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

Ethical review of research sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion").

Summary of discussion at the meeting

Informed consent process and the adequacy and completeness of research participant information

The consent process seemed adequate, allowing for the short consideration period. It was noted that although the Consent Form was not written in the usual HRA format, it was nonetheless appropriate, other than it should contain the version number and date for the PIS so that they can be linked together.

The information sheet should include the name of the REC reviewing committee.

Suitability of supporting information

The committee agreed that the questionnaires seemed adequate, but would like confirmation that they are validated.

Other general comments

It was noted that participants who return both questionnaires will be entered into a prize draw for a £50 shopping voucher. It was unclear whether one person will receive £50 and what the rules were. It was agreed that this should be made clear within the PIS.

Approved documents

The documents reviewed and approved were:

Document	*Version*	*Date*
Copies of advertisement materials for research participants [Poster to raise awareness of study at recruitment site]	1.0	22 September 2015
IRAS Checklist XML [Checklist_01102015]		01 October 2015
Letters of invitation to participant [Time Two Letter to Participants]	1.1	22 September 2015
Non-validated questionnaire [Demographic Information]	1.5	22 September 2015
Non-validated questionnaire [Skin Condition Information Time One]	1.1	21 September 2015

Non-validated questionnaire [Skin Condition Information Time Two]	1.1	21 September 2015
Participant consent form [Consent Form]	1.3	22 September 2015
Participant information sheet (PIS) [Participant Information Sheet]	1.5	22 September 2015
REC Application Form [REC_Form_01102015]		01 October 2015
Referee's report or other scientific critique report [Scientific review approval letter]	2	07 September 2015
Research protocol or project proposal [Project proposal]	2.2	22 September 2015
Summary CV for Chief Investigator (CI) [Elaine Clarke CV]	1	02 September 2015
Summary CV for supervisor (student research) [Dr Andrew Thompson CV]	1	07 July 2015
Validated questionnaire [Disgust Propensity and Sensitivity Scale- Revised]	1.1	21 September 2015
Validated questionnaire [Self-Compassion Scale- Short Form]	1.1	21 September 2015
Validated questionnaire [Depression Anxiety Stress Scale-21]	1.1	21 September 2015

Membership of the Proportionate Review Sub-Committee

The members of the Sub-Committee who took part in the review are listed on the attached sheet.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Reporting requirements

The attached document “After ethical review – guidance for researchers” gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

☐ Notifying substantial amendments
☐ Adding new sites and investigators
☐ Notification of serious breaches of the protocol
☐ Progress and safety reports
☐ Notifying the end of the study

The HRA website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

User Feedback

The Health Research Authority is continually striving to provide a high quality service to all applicants and sponsors. You are invited to give your view of the service you have received and the application procedure. If you wish to make your views known please use the feedback form available on the HRA website: http://www.hra.nhs.uk/about-the-hra/governance/quality-assurance/

HRA Training

We are pleased to welcome researchers and R&D staff at our training days – see details at http://www.hra.nhs.uk/hra-training/

With the Committee’s best wishes for the success of this project.

15/WA/0381 Please quote this number on all correspondence

Yours sincerely

Penny Beresford

pp
Roy L. Evans
Chair

Email: penny.beresford@wales.nhs.uk

Enclosures:	*List of names and professions of members who took part in the review*
	“After ethical review – guidance for researchers” [SL-AR2]
Copy to:	*Ms Aimee Card, Sheffield Teaching Hospitals NHS Foundation Trust*

Appendix B

Study 1 Materials

B.1 Participant Information Sheet

Study on Psychological Reactions to Living with a Visible Skin Condition

You are being invited to take part in a research study by filling in a set of questionnaires. Please read the following information carefully. It is important that you understand why the research is being carried out and what it will involve before you decide whether you wish to take part. You are welcome to ask the researcher for further information if you are unclear about anything relating to this study.

What is the purpose of this research?

People with skin conditions commonly experience symptoms of depression, but this varies greatly between individuals. The purpose of this research is to investigate psychological factors that could explain why some people with visible skin conditions experience depressive symptoms, while others do not. The questionnaires therefore ask about things that people do, think, or feel that are helpful for wellbeing and things that people do, think, or feel that are unhelpful. You do not need to be depressed or struggling with your skin condition to take part—we are interested in the whole range of people's experiences.

Why have I been chosen?

You have been invited to participate in this study as you have been diagnosed with a visible skin condition by a doctor.

Do I have to take part?

No. Taking part in this study is entirely voluntary. If you decide to take part, you can still withdraw from the study at any time, without giving a reason and without any negative consequences. You can do this by contacting the researcher, using the details given below.

What happens if I decide to take part?

First, we will ask you to complete some demographic questions, such as your age and gender, and provide some information about your skin condition. We will then ask you to complete a set of psychological questionnaires. You may find that you never or rarely have the experiences described in the questionnaries—that is fine, we are still interested in your responses. You can either complete these questionnaires while you are at the dermatology department and hand them to the researcher, or you can take them home with you and return your completed questionnaires by post. A freepost envelope will be provided if you would prefer to complete them at home. We expect the questionnaires to take around 10-15 minutes to complete.

If you would like to take part in the follow-up for this study, we will send you a second set of questionnaires to complete in approximately three months' time. We will send these by post or email, according to your preference. Completing the first set of questionnaires in no way obliges you to complete the second set—this is also entirely voluntary.

What are the possible risks of taking part?

Some people may find that completing the questionnaires makes them more aware of pre-existing psychological distress. The questionnaires ask about symptoms of depression, anxiety, stress, responses to distress, and feelings of disgust. As a result, some people may find completing the questionnaires distressing.

The researchers in this study will not be able to provide participants with ongoing psychological support. Information on how to access further support from appropriate services is provided at the end of this information sheet.

What are the possible benefits of taking part?

By taking part you will help to increase existing knowledge about psychological wellbeing and distress in people with visible skin conditions. We aim to build on this understanding in subsequent research by testing psychological interventions to reduce distress in people with skin conditions. Additionally, completing the questionnaires may prompt you to think about your own psychological health, to consider what does and does not help you, and to decide whether to seek further support from available sources.

As an additional incentive to complete and return the follow-up questionnaire, participants who do so will be entered into a prize draw to win a £50 shopping voucher (Love2shop voucher). One winner will be chosen at random from those participants who have returned a completed follow-up questionnaire. The draw will take place three weeks after all follow-up questionnaires have been sent out and the winner will be notified in writing.

Will my data be confidential?

Yes. Information that could identify you will not be disclosed to anyone except the researchers involved in this study. All the data you provide will be stored securely. Any identifying information will be stored separately from your questionnaire responses. Your demographic and questionnaire data will be anonymised before they are used in statistical analyses and you will not be identified in any future publication of the results.

What will happen to the results?

The results will be analysed statistically to see what factors increase or decrease depressive symptoms in people with visible conditions. The results will be written up as part of the researcher's PhD thesis at the University of Sheffield, for publication in academic journals and for use in presentations and teaching. A copy of the results will be available from the researcher on request.

Who is organising this research?

This study is being run by Elaine Clarke, a Psychology PhD research student at the University of Sheffield. The study is being supervised by Dr. Andrew Thompson and Prof. Paul Norman, who are academic staff in the Psychology Department at the University of Sheffield. The collaborating dermatologist for this research is Prof. Andrew Messenger, who is a consultant dermatologist at the Royal Hallamshire Hospital.

This study has been reviewed and approved by the NHS Wales Research Ethics Committee 6 Proportionate Review Sub-Committee.

How can I learn more?

If you have any questions about taking part in this study, please contact the researcher, Elaine Clarke, in the first instance. Contact details are as follows:
Elaine Clarke
Postgraduate Doctoral Candidate
Department of Psychology,
University of Sheffield,
Western Bank,
Sheffield
S10 2TP.
Email: e.n.clarke@sheffield.ac.uk

Concerns and complaints

If you have any concerns about the study you can contact the researcher directly using the contact details above. If you wish to make a complaint about any aspect of how you have been approached or treated during this study, you can contact the researcher's supervisors, Dr Andrew Thompson and Prof Paul Norman at The Department of Psychology, University of Sheffield, Western Bank, Sheffield S10 2TP or by email: a.r.thompson@sheffield.ac.uk and p.norman@sheffield.ac.uk. You can also use the normal National Health Service complaints mechanisms. To do this please contact the Patient Services Team on 0114 271 2400, at PST@sth.nhs.uk, or at the Patient Partnership Department on B Floor, Royal Hallamshire Hospital or the Huntsman main entrance on C Floor at the Northern General Hospital.

Thank you for taking the time to read this information.

Further support

If you feel that you need any support with your mental health you can arrange to see your GP in the first instance, or you can speak to your consultant at the Dermatology Department. You can also get further mental health information and support from the following organisations:

- Mind

  Mental health charity that provides advice and support to anyone experiencing a mental health problem.

  Tel 0300 123 3393 (Mon-Fri, 9-5), text 86463, email info@mind.org.uk or visit www.mind.org.uk.

- Rethink Mental Illness

  Charity offering information and advice for anyone affected by mental illness.

  Tel 0300 5000 927 (Mon-Fri, 10-2) or visit http://www.rethink.org.

- The Samaritans

  Confidential emotional support service for anyone in distress.

  Tel 08457 90 90 90 (24 hours), email jo@samaritans.org or visit www.samaritans.org to find your local branch.

- Skin Support

  Website developed by the British Association of Dermatologists containing emotional support resources and patient information leaflets for people with skin conditions.

  Visit www.skinsupport.org.uk.

B.2 Consent Form

Please initial the boxes below if you consent to take part in this research:

1) I understand that my participation in this research is voluntary and that I may withdraw from the research at any time, without giving a reason and without any negative consequences for me. ☐

2) I understand that taking part in this research will involve answering questions about disgust, responses to distress, and symptoms of depression. I am aware that this could increase my awareness of any pre-existing psychological distress. ☐

3) I confirm that I have read and understood the participant information sheet (version 2, dated 07.10.15) and that any questions I had about the research have been answered satisfactorily. ☐

4) I give my informed consent to participate in this research. ☐

5) I give my consent to be contacted with follow-up questionnaires in approximately three months. ☐

6) I give my consent for the research team to have access to my dermatological medical records for the purpose of this study. ☐

7) I give my consent to be contacted about future research. ☐

Name (participant) .... Signature .... Date ......

Name (researcher) .... Signature .... Date ......

If you do consent to being contacted with follow-up questionnaires and/or about future research, please provide your address or email address below.

Address/email ....

Do you want to be sent a summary of the results at the end of the study?

Please indicate: Yes / No

B.3 Debrief Sheet

Purpose of this Study

The study is investigating what kind of experiences contribute to and protect against depressive symptoms among people with visible skin conditions. Specifically we are looking at whether the ability to be self-compassionate protects people from developing depressive symptoms. There is lots of evidence that people who are high in self-compassion have fewer depressive symptoms. Self-compassion includes the ability to be kind to yourself when distressed, being accepting of your feelings rather than dwelling on them or avoiding them, and being aware that feeling distressed is a normal part of the human condition. We are also looking at whether experiences of disgust contribute to depressive symptoms. Prior research indicates that disgust may be involved in depression, and that some people with skin conditions might feel disgust towards their problematic skin. We are interested in finding out how disgust and self-compassion interact in relation to depressive symptoms, which is why we have asked you to complete the questionnaires you have done. We hope to build on this research in future by developing specific psychological interventions to treat depression in people with visible skin conditions.

Thank you very much for taking time to participate in this study.

B.4 Demographic Questions

Please answer the following questions:

Age	. . . .	
Gender	Male	☐
	Female	☐
Ethnicity	White	☐
	Black/Black British	☐
	Asian/Asian British	☐
	Other (please state)	☐
	. . . .	
Employment status	Employed full time	☐
	Employed part time	☐
	Unemployed	☐
	Unable to work	☐
	Full time homemaker/carer	☐
	Student	☐
	Retired	☐
Highest qualification level	No qualifications	☐
	School (GCSE or equivalent)	☐
	College (A-level or equivalent)	☐
	Apprenticeship	☐
	Degree or above	☐
Marital status	Single	☐
	Married/co-habiting	☐
	Divorced	☐
	Separated	☐
	Widowed	☐

B.5 Skin Condition Questions–Time One

These questions are about your skin condition. If you have more than one skin condition, please answer these questions about the condition that is most problematic for you.

1) What skin condition do you have? Please tick one.

Acne ☐
Dermatitis/eczema ☐
Psoriasis ☐
Rosacea ☐
Other (please state) ....

If you know which subtype of skin condition you have, please identify: ....
Leave blank if unsure.

2) How long have you had your skin condition? Please state ....

3) Which areas of your body are currently affected by your skin condition? Please tick all that apply.

Head/scalp ☐
Face ☐
Arms ☐
Hands ☐
Body/trunk ☐
Legs ☐
Feet ☐

4) How severe has your skin condition been over the last week? Please draw a line anywhere on the scale below.

B.6 Depression Anxiety Stress Scales–21

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you *over the past week*. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

0 Did not apply to me at all
1 Applied to me to some degree, or some of the time
2 Applied to me to a considerable degree, or a good part of time
3 Applied to me very much, or most of the time

1	I found it hard to wind down	0	1	2	3
2	I was aware of dryness of my mouth	0	1	2	3
3	I couldn't seem to experience any positive feeling at all	0	1	2	3
4	I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
5	I found it difficult to work up the initiative to do things	0	1	2	3
6	I tended to over-react to situations	0	1	2	3
7	I experienced trembling (eg, in the hands)	0	1	2	3
8	I felt that I was using a lot of nervous energy	0	1	2	3
9	I was worried about situations in which I might panic and make a fool of myself	0	1	2	3
10	I felt that I had nothing to look forward to	0	1	2	3
11	I found myself getting agitated	0	1	2	3
12	I found it difficult to relax	0	1	2	3
13	I felt down-hearted and blue	0	1	2	3
14	I was intolerant of anything that kept me from getting on with what I was doing	0	1	2	3
15	I felt I was close to panic	0	1	2	3
16	I was unable to become enthusiastic about anything	0	1	2	3
17	I felt I wasn't worth much as a person	0	1	2	3
18	I felt that I was rather touchy	0	1	2	3
19	I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat)	0	1	2	3
20	I felt scared without any good reason	0	1	2	3
21	I felt that life was meaningless	0	1	2	3

B.7 Self-Compassion Scale–Short Form

HOW I TYPICALLY ACT TOWARDS MYSELF IN DIFFICULT TIMES

Please read each statement carefully before answering. To the left of each item, indicate how often you behave in the stated manner, using the following scale:

Almost never				Almost always
1	2	3	4	5

_____1. When I fail at something important to me I become consumed by feelings of inadequacy.

_____2. I try to be understanding and patient towards those aspects of my personality I don't like.

_____3. When something painful happens I try to take a balanced view of the situation.

_____4. When I'm feeling down, I tend to feel like most other people are probably happier than I am.

_____5. I try to see my failings as part of the human condition.

_____6. When I'm going through a very hard time, I give myself the caring and tenderness I need.

_____7. When something upsets me I try to keep my emotions in balance.

_____8. When I fail at something that's important to me, I tend to feel alone in my failure

_____9. When I'm feeling down I tend to obsess and fixate on everything that's wrong.

_____10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.

_____11. I'm disapproving and judgmental about my own flaws and inadequacies.

_____12. I'm intolerant and impatient towards those aspects of my personality I don't like.

B.8 Disgust Propensity and Sensitivity Scale–Revised

Instructions: this questionnaire consists of 12 statements about disgust.
Please read each statement and think how often it is true for you, then place a 'x' in the box that is closest to this.

		Never	**Rarely**	**Some times**	**Often**	**Always**
1	I avoid disgusting things.					
2	When I feel disgusted, I worry that I might pass out.					
3	It scares me when I feel nauseous.					
4	I feel repulsed.					
5	Disgusting things make my stomach turn.					
6	I screw up my face in disgust.					
7	When I notice that I feel nauseous, I worry about vomiting					
8	I experience disgust.					
9	It scares me when I feel faint.					
10	I find something disgusting.					
11	It embarrasses me when I feel disgusted.					
12	I think feeling disgust is bad for me.					

B.9 Skin Condition Questions–Time Two

These questions are about your skin condition. If you have more than one skin condition, please answer these questions about the condition that is most problematic for you.

1) What skin condition do you have? Please tick one.

- ☐ Acne
- ☐ Dermatitis/eczema
- ☐ Psoriasis
- ☐ Rosacea
- ☐ Other (please state) ....

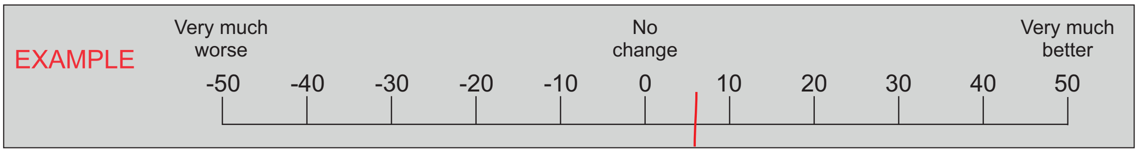
If you have a certain subtype of skin condition, please identify this below (e.g., acne vulgaris, atopic eczema, chronic plaque psoriasis). Leave blank if unsure.

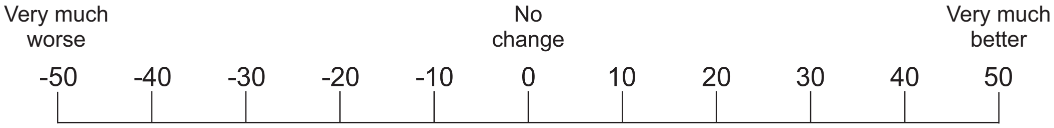
....

2) Which areas of your body are currently affected by your skin condition? Please tick all that apply.

- ☐ Head/scalp
- ☐ Face
- ☐ Arms
- ☐ Hands
- ☐ Body/trunk
- ☐ Legs
- ☐ Feet
- ☐ No areas currently affected

3) How has the severity of your skin condition changed over the last three months? Please place a mark anywhere on the scale below (see example).





Appendix C

Study 1 Supplementary Analyses

C.1 Exploratory Factor Analysis of the Disgust Propensity and Sensitivity Scale–Revised (DPSS–R)

Given the high correlation between disgust propensity and disgust sensitivity in Study 1 ($r(153) = .72, p < .001.$), it was decided to further explore these data with a factor analysis. Following Stevens (2002), an exploratory factor analysis was appropriate as the variables were free to load onto all factors. Principle axis factoring was conducted on the 12 DPSS–R items with oblique rotation (direct oblimin). The Kasier-Mayer-Olkin measure verified the sampling adequacy for the analysis, KMO $= .87$, and all KMO values for individual items were $\geq .83$, which is considerably higher than the acceptable limit of .5 (Field, 2013). Bartlett's test of sphericity $\chi^2(66) = 721.50, p < .001$, indicating that correlations between items were sufficiently large for principle axis factoring. An initial analysis was run to obtain eigenvalues for each component in the data. Three components had eigenvalues above Kasier's criterion of 1 and in combination explained 63.88% of the variance. The pattern of factor loadings were the same as found by Goetz et al. (2013) and reflect three disgust factors; namely, disgust propensity, disgust sensitivity and ruminative disgust. Cronbach's alphas were .82, .79, and .79, respectively. Rotated factor loadings are shown in Table C.1.

Table C.1

Pattern Matrix of Items from the Disgust Propensity and Sensitivity Scale–Revised (N = 147)

Item	Rotated factor loadings		
	Disgust propensity	Disgust sensitivity	Ruminative disgust
I screw my face up in disgust	**.74**	.04	.17
I experience disgust	**.64**	−.02	−.15
I find something disgusting	**.63**	−.06	−.27
Disgusting things make my stomach turn	**.52**	.25	−.08
I avoid disgusting things	**.38**	.09	−.19
I feel repulsed	**.33**	.29	−.23
It scares me when I feel nauseous	−.18	**.97**	−.10
When I notice that I feel nauseous, I worry about vomiting	.12	**.67**	.08
It scares me when I feel faint	.10	**.65**	.06
When I feel disgusted, I worry that I might pass out	.08	**.40**	−.22
It embarrasses me when I feel disgusted	.04	.13	**−.80**
I think feeling disgust is bad for me	.08	−.02	**−.72**

Note. The strongest factor loadings for each variable are indicated in bold type.

C.2 Exploratory Factor Analysis of the Self-Compassion Scale–Short Form (SCS–SF)

Principle axis factoring was conducted on the 12 Self-Compassion Scale–Short Form (SCS–SF) items with oblique rotation (direct oblimin). The Kasier-Mayer-Olkin measure verified the sampling adequacy for the analysis, KMO = .79, and all KMO values for individual items were ≥ .64, which is above the acceptable limit of .5 (Field, 2013). Bartlett's test of sphericity, $\chi^2(66) = 518.68, p < .001$, indicated that correlations between items were sufficiently large for principle axis factoring. An initial analysis was run to obtain eigenvalues for each factor in the data. SPSS attempted to extract three factors with eigenvalues above Kasier's criterion of 1, which in combination explained 47.66% of the variance. However, the third of these factors had an eigenvalue of just 1.01 and convergence was not achieved within 30 iterations, which suggested a problem with the three factor solution (Field, 2013). The scree plot indicated that two factors should be retained. Accordingly, the principal axis factoring was repeated with the specification that two factors be extracted. These two factors explained 40.64% of the variance, and convergence occurred in six iterations. Rotated factor loadings are shown in Table C.2. The items that clustered on the first factor were the negative items of the SCS–SF, whereas the items that clustered on the second factor were the positive items. For simplicity, these factors are hereafter referred to as 'self-coldness' and 'self-warmth', respectively, in line with Brophy et al. (2020). Cronbach's alpha was .86 for self-coldness and .71 for self-warmth.

Table C.2

Pattern Matrix of Items from the Self-Compassion Scale–Short Form (N = 147)

Item	Rotated factor loadings	
	Factor one	Factor two
I'm disapproving and judgemental about my own flaws and inadequacies.	**.75**	.09
When I'm feeling down I tend to obsess and fixate on everything that's wrong.	**.74**	−.14
When I fail at something important to me I become consumed by feelings of inadequacy.	**.73**	−.01
I'm intolerant and impatient towards those aspects of my personality I don't like.	**.72**	.02
When I fail at something that's important to me, I tend to feel alone in my failure.	**.72**	.04
When I'm feeling down, I tend to feel like most other people are probably happier than I am.	**.58**	−.05
When something painful happens I try to take a balanced view of the situation.	.03	**.68**
I try to see my failings as part of the human condition.	.15	**.57**
I try to be understanding and patient towards those aspects of my personality I don't like.	.02	**.55**
When something upsets me I try to keep my emotions in balance.	−.09	**.53**
When I'm going through a very hard time, I give myself the caring and tenderness I need.	−.15	**.50**
When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.	.00	**.39**

Note. The strongest factor loadings for each variable are indicated in bold type.

C.3 Supplementary Regression Analyses

As the exploratory factor analysis of the SCS–SF suggested the use of two factors, self-warmth and self-coldness, regression analyses were repeated as per the main study analyses using these factors instead of the overall self-compassion score. Correlations and descriptive statistics are presented in Table C.3. Self-coldness was significantly correlated with depression at times one and two, while self-warmth was not. Multivariate outliers were detected using a $p < .001$ criterion for Mahalanobis distance and an absolute value > 3 criterion for standardised residual. Resulting Ns are given for each analysis in Tables C.4 and C.5.

Table C.3

Supplementary Correlations and Descriptive Statistics of Main Study Variables ($N = 147^a$)

Variable		1	2	3	4	5	6	Mean	*SD*
1	Disgust propensity	-	-	-	-	-	-	2.49	0.74
2	Disgust sensitivity	$.71^{**}$	-	-	-	-	-	1.96	0.75
3	Ruminative disgust	$.58^{**}$	$.52^{**}$	-	-	-	-	1.90	1.00
4	Self-warmth	-.11	.02	.04	-	-	-	3.00	0.78
5	Self-coldness	$.37^{**}$	$.37^{**}$	$.40^{**}$	-.12	-	-	2.84	1.03
6	Time one depression	$.41^{**}$	$.33^{**}$	$.47^{**}$	-.10	$.51^{**}$	-	10.19	10.32
7	Time two depression	$.23^{*}$	.16	$.45^{**}$	-.09	$.50^{**}$	$.78^{**}$	11.21	10.57

^{a} For time two depression, $N = 80$.

$^*p \leq .05$, $^{**}p \leq .001$.

C.3.1 Supplementary Time One Regression Analyses

Results from the supplementary time one regression analyses are shown in Table C.4. In Model S1, disgust propensity, self-warmth, and the disgust propensity x self-warmth interaction term explained 21% of the variance in depression, $R^2 = .21$, $F(3, 140) = 12.63$, $p < .001$. Only disgust propensity was a significant independent predictor.

In Model S2, disgust sensitivity, self-warmth, and the disgust sensitivity x self-warmth interaction term explained 39% of the variance in depression, $R^2 = .39$, $F(3, 141) = 8.35$, $p < .001$. Disgust sensitivity and self-warmth were significant independent predictors.

In Model S3, ruminative disgust, self-warmth, and the ruminative disgust x self-warmth interaction term explained 28% of the variance in depression, $R^2 = .28$, $F(3, 138) = 17.71$, $p < .001$. Only ruminative disgust was a significant independent predictor.

In Model S4, disgust propensity, self-coldness, and the disgust propensity x self-coldness interaction term explained 38% of the variance in depression, $R^2 = .38$, $F(3, 140) = 28.58$, $p < .001$. Disgust propensity, self-coldness and the disgust propensity x self-coldness interaction terms were significant independent predictors. Simple slopes analyses were used to decompose the interaction, using the mean and one standard deviation above and below the mean for high and low levels of self-coldness. This showed that there was a significant positive relationship between disgust propensity and depression at high, $B = 6.91$, $t = 5.12$, $p <.001$, and at mean levels of self-coldness, $B = 3.57$, $t = 3.58$, $p <.001$. In contrast, at low levels of self-coldness (i.e., people who were *not* self-judgmental, feeling isolated, or over-identifying with their distress), there was a non-significant relationship between disgust propensity and depression, $B = 0.22$, $t = 0.17$, $p = 0.87$.

In Model S5, disgust sensitivity, self-coldness, and the disgust sensitivity x self-coldness interaction term explained 29% of the variance in depression, $R^2 = .29$, $F(3, 142) = 19.10$, $p < .001$. Self-coldness and the disgust sensitivity x self-coldness interaction terms were significant independent predictors. Simple slopes analyses showed that there was a significant positive relationship between disgust sensitivity and depression at high levels of self-coldness (i.e., people who were highly self-judgmental, feeling isolated, and over-identifying with their distress), $B = 3.68$, $t = 2.73$, $p <.01$. In contrast, at mean, $B = 1.55$, $t = 1.44$, $p = .15$, and at low levels of self-coldness, there was a non-significant relationship between disgust sensitivity and depression, $B = -0.58$, $t = 0.34$, $p = .73$.

In Model S6, ruminative disgust, self-coldness, and the ruminative disgust x self-coldness interaction term explained 39% of the variance in depression, $R^2 = .39$, $F(3, 140) = 29.48$, $p < .001$. Ruminative disgust and self-coldness were significant independent predictors.

Table C.4

Supplementary Regression Models for the Prediction of Time One Depression.

Model	*N*	R^2	Predictor	*B*	95% CI	*SE*	β	*p*
S1	144	.21	Disgust propensity	6.06	[4.04, 8.03]	1.04	.44	.001
			Self-warmth	-1.79	[-3.85, 0.27]	1.09	-.14	.103
			Disgust propensity x self-warmth	-1.01	[-3.64, -1.51]	1.30	-.06	.419
S2	145	.39	Disgust sensitivity	4.65	[2.15, 7.00]	1.23	.33	.001
			Self-warmth	-2.02	[-3.85, -0.16]	1.01	-.15	.049
			Disgust sensitivity x self-warmth	-2.80	[-6.05, 0.20]	1.65	-.14	.093
S3	142	.28	Ruminative disgust	5.25	[3.46, 6.71]	0.88	.51	.001
			Self-warmth	-1.77	[-3.80, -0.05]	1.04	-.14	.094
			Ruminative disgust x self-warmth	-0.50	[-3.08, 1.68]	1.34	-.03	.704
S4	144	.38	Disgust propensity	3.57	[1.71, 5.34]	0.93	.26	.001
			Self-coldness	4.34	[3.08, 5.53]	0.64	.45	.001
			Disgust propensity x self-coldness	3.34	[1.79, 4.98]	0.80	.25	.001
S5	146	.29	Disgust sensitivity	1.55	[-0.49, 3.75]	1.08	.11	.150
			Self-coldness	4.86	[3.49, 6.34]	0.77	.49	.001
			Disgust sensitivity x self-coldness	2.13	[0.34, 3.90]	0.96	.14	.031
S6	144	.39	Ruminative disgust	3.48	[2.09, 4.75]	0.76	.35	.001
			Self-coldness	3.53	[2.27, 4.86]	0.68	.37	.001
			Ruminative disgust x self-coldness	0.53	[-1.03, 1.97]	0.76	.06	.480

Note. Confidence intervals and standard errors based on 1000 bootstrap samples.

C.3.2 Supplementary Time Two Regression Analyses

Results from the supplementary time two regression analyses are shown in Table C.5. In Model S7, time one depression, disgust propensity, self-warmth, and the disgust propensity x self-warmth interaction term explained 74% of the variance in depression, $R^2 = .74$, $F(4, 73) = 51.60$, $p < .001$. Only time one depression was a significant independent predictor.

In Model S8, time one depression, disgust sensitivity, self-warmth, and the disgust sensitivity x self-warmth interaction term explained 74% of the variance in depression, $R^2 = .74$, $F(4, 73) = 54.73$, $p < .001$. Only time one depression was a significant independent predictor.

In Model S9, time one depression, ruminative disgust, self-warmth, and the ruminative disgust x self-warmth interaction term explained 74% of the variance in depression, $R^2 = .74$, $F(4, 72) = 51.77$, $p < .001$. Only time one depression was a significant independent predictor.

In Model S10, time one depression, disgust propensity, self-coldness, and the disgust propensity x self-coldness interaction term explained 75% of the variance in depression, $R^2 = .75$, $F(4, 73) = 55.82$, $p < .001$. Time one depression and self-coldness were significant independent predictors.

In Model S11, time one depression, disgust sensitivity, self-coldness, and the disgust sensitivity x self-coldness interaction term explained 75% of the variance in depression, $R^2 = .75$, $F(4, 73) = 55.82$, $p < .001$. Time one depression and self-coldness were significant independent predictors.

In Model S12, time one depression, ruminative disgust, self-coldness, and the ruminative disgust x self-coldness interaction term explained 75% of the variance in depression, $R^2 = .75$, $F(4, 72) = 54.20$, $p < .001$. Time one depression and self-coldness were significant independent predictors.

Table C.5

Supplementary Regression Models for the Prediction of Time Two Depression.

Model	*N*	R^2	Predictor	*B*	95% CI	*SE*	β	*p*
S7	78	.74	Time one depression	0.91	[0.71, 1.10]	0.10	.86	.001
			Disgust propensity	-0.19	[-1.64, 1.19]	0.88	-.01	.841
			Self-warmth	-0.94	[-2.83, 0.51]	0.92	-.07	.301
			Disgust propensity x self-warmth	0.63	[-1.26, 2.70]	1.07	.04	.515
S8	77	.75	Time one depression	0.89	[0.72, 1.08]	0.09	.84	.001
			Disgust sensitivity	0.42	[-1.44, 2.38]	0.95	.03	.645
			Self-warmth	-0.81	[-2.77, 0.55]	0.87	-.06	.346
			Disgust sensitivity x self-warmth	1.83	[-0.40, 4.17]	1.22	.09	.118
S9	77	.74	Time one depression	0.89	[0.69, 1.08]	0.10	.84	.001
			Ruminative disgust	0.03	[-1.76, 1.92]	0.92	<.01	.978
			Self-warmth	-1.01	[-2.68, 0.45]	0.89	-.08	.279
			Ruminative disgust x self-warmth	0.95	[-0.78, 2.30]	0.93	.07	.313
S10	78	.75	Time one depression	0.85	[0.62, 1.06]	0.10	.81	.001
			Disgust propensity	-1.03	[-2.65, 0.37]	0.83	-.08	.202
			Self-coldness	1.55	[0.37, 2.86]	0.61	.16	.017
			Disgust propensity x self-coldness	-0.37	[-2.09, 1.22]	0.74	-.03	.622
S11	78	.75	Time one depression	0.84	[0.63, 1.03]	0.10	.79	.001
			Disgust sensitivity	-0.15	[-1.86, 1.67]	0.93	-.01	.873
			Self-coldness	1.38	[0.05, 2.84]	0.64	.15	.043
			Disgust sensitivity x self-coldness	-0.59	[-2.29, 1.53]	0.86	-.04	.502
S12	77	.75	Time one depression	0.84	[0.61, 1.05]	0.11	.80	.001
			Ruminative disgust	-0.03	[-1.57, 1.61]	0.88	<.01	.976
			Self-coldness	1.43	[0.12, 2.64]	0.61	.15	.026
			Ruminative disgust x self-coldness	-0.49	[-1.85, 0.91]	0.65	-.05	.447

Note. Confidence intervals and standard errors based on 1000 bootstrap samples.

Appendix D

Study 2 Materials

D.1 Participant Information Sheet–Survey

How People Manage the Impact of Living with Skin Conditions

You are being invited to take part in research study, consisting of a short survey and a face-to-face interview in the Sheffield area. Please read the following information to help you decide whether to take part.

What is the purpose of this research?

Skin conditions are extremely common and some people cope well with them, but others struggle, experiencing depression or anxiety problems. The purpose of this research is investigate the helpful approaches to managing difficulties used by people with skin conditions.

Can I take part?

You are invited to participate if you:

- are aged 16 or over;
- have had a skin condition for the last six months or more;
- are able to manage the challenges of living with your skin condition without significant psychological distress;
- are willing and able to take part in a face-to-face interview in English, within the Sheffield area.

Do I have to take part?

No. Taking part in this study is voluntary. If you decide to take part, you can still withdraw from the study at any time, without giving a reason and without any negative consequences. You can withdraw from the survey section of the study by simply not completing the survey. If you wish to withdraw from the study after completing the survey please contact the researcher using the details below.

What happens if I decide to take part?

You will be asked to complete a survey, which is expected to take around five minutes. The survey will ask questions about your approach to managing difficulties and your recent moods. Certain participants will then be invited to attend an interview to discuss their experiences of having a skin condition in more detail. If your survey responses indicate that you are outside the inclusion criteria for an interview, we will inform you of this. If you are invited to an interview, we will contact you to arrange a suitable date and time for this. The interview can be at your home or a University of Sheffield location and we expect it to take 30–60 minutes. We will ask questions about your experiences of your skin condition, how you cope with difficulties associated with your skin condition, and how you developed these coping strategies.

What are the possible disadvantages or risks of taking part?

Participating in the study will require some of your time, although you can choose to take part at a time that is convenient for you. If you take part in an interview and choose to travel to a university location for this, we will pay for reasonable travel expenses.

For some people, completing the survey and/or taking part in the interview could be temporarily unsettling. This is because some of the questions are about distressing feelings and dealing with difficulties. It is possible that this may cause some distress during or after the study, although taking part in the study is not expected to cause any severe or lasting distress.

What are the possible benefits of taking part?

Whilst there are no immediate benefits for those people participating in the project, it is hoped that this work will increase existing knowledge about psychological wellbeing in people with skin conditions. In the future, we will use this knowledge to develop interventions to reduce psychological distress in people with skin conditions.

What will happen to the results?

The results will be analysed to understand the processes by which people cope with skin conditions. The results will be written up as part of the researcher’s PhD thesis at the University of Sheffield, for publication in academic journals and for use in presentations and teaching.

Will my data be confidential?

Yes. Information that could identify you will not be disclosed to anyone except the researchers involved in this study. Your survey and interview data will be anonymised for analysis and all your data will be stored securely. You will not be identified in any of the results.

Who is organising this research?

This study is being run by Elaine Clarke, a Psychology research student at the University of Sheffield. The study is being supervised by Dr Andrew Thompson and Prof. Paul Norman, who are academic staff in the Psychology Department at the University of Sheffield.

Who has ethically reviewed the project?

This study has been reviewed and approved by The University of Sheffield Department of Psychology Ethics Subcommittee.

What if something goes wrong?

If you have any concerns about the study you can contact the researcher directly using the contact details below. If you wish to make a complaint about any aspect of how you have been approached or treated during this study, in the first instance you can contact the researcher's supervisors, Dr Andrew Thompson and Prof. Paul Norman by email: a.r.thompson@sheffield.ac.uk and p.norman@sheffield.ac.uk.

How can I learn more?

If you have any questions about taking part in this study, please contact the researcher, Elaine Clarke, at e.n.clarke@sheffield.ac.uk.

D.2 Consent Form–Survey

Research study	How People Manage the Impact of Living with Skin Conditions
Researcher	Elaine Clarke

Please indicate yes/no for each statement.

I confirm that I have read and understood the information sheet explaining the above research project, and I have had the opportunity to ask questions about the project by contacting the lead researcher as necessary (at the above address or at e.n.clarke@sheffield.ac.uk).	Yes / No
I understand that my participation is voluntary and that I am free to withdraw at any time without giving a reason and without there being any negative consequences.	Yes / No
I understand that my data will be kept strictly confidential within the research team. I understand that I will not be identified in any future publication of the results of this research.	Yes / No
I agree to take part in the above research project.	Yes / No

Title Mr/Ms/Mrs/Miss/Other ....

First name ....

Last name ....

Signature ....

Date ....

To help us administrate the study, please create a unique ID code for yourself, using the first three letters of your mother's maiden name and the two digits from your day of birth.

For example, if your mother's maiden name was Clarke and you were born on 02 April 1991, your ID code would be CLA02.

ID code: ....

Please provide a daytime telephone number so that we can contact you to arrange an interview if you meet the interview inclusion criteria.

Telephone number: ....

D.3 PHQ-2

Over the last two weeks, how often have you been bothered by any of the following problems?	Not at all	Several days	More than half the days	Nearly every day
1 Having little interest or pleasure in doing things	0	1	2	3
2 Feeling down, depressed or hopeless	0	1	2	3

D.4 Participant Information Sheet–Interview

Research Study: How People Manage the Impact of Living with Skin Conditions

You are being invited to take part in a face-to-face interview as part of a research study. Please read the following information to help you decide whether to take part.

What is the purpose of this research?

Skin conditions are extremely common and some people cope well with them, but others struggle, experiencing depression or anxiety problems. The purpose of this research is to learn from people who have helpful approaches to dealing with difficulties. We would like to understand how these people cope with their skin condition, so that we can use this knowledge to help the people who are struggling.

Why have I been chosen?

You have been invited to participate in an interview because:

- you reported having a skin condition for the last six months or more;
- research questionnaires that you recently completed indicated that you have a helpful approach to managing problems and were not experiencing depression.

Do I have to take part?

No. Taking part in this study is voluntary. If you decide to take part, you can still withdraw from the study at any time until your data is anonymised, without giving a reason and without any negative consequences. You can do this by informing the researcher, either in person or using the details below.

What happens if I decide to take part?

We will contact you to arrange a suitable date and time for your interview. This can be at your home or a University of Sheffield location. We expect the interview to take around an hour. We will ask questions about your experiences of your skin condition, how you cope with difficulties associated with your skin condition, and how you developed these coping strategies.

The interview will be audio-recorded and later transcribed (typed up) so that the information can be analysed.

What are the possible disadvantages or risks of taking part?

Participating in an interview will require around an hour of your time. We will minimise inconvenience by arranging the interview for a time and place that suits you. If you would prefer to travel to a university location for the interview, we will pay for reasonable travel expenses.

For some people, taking part in the interview could be temporarily unsettling. This is because some of the interview questions will focus on the way people deal with difficulties, so difficult life events could be brought to mind. It is possible that this may cause some distress during the interview or afterwards, although taking part in the interview is not expected to cause any severe or lasting distress.

If that you find the interview distressing, the researcher will discuss with you how you would like to proceed. The researcher will be sensitive to any difficulties you experience and the interview can be ended at any time. The researchers in this study will not be able to provide participants with ongoing psychological support after the interview, but can provide information on suitable services as needed.

What are the possible benefits of taking part?

Whilst there are no immediate benefits for those people participating in the project, it is hoped that this work will increase existing knowledge about psychological wellbeing in people with skin conditions. In the future, we will use this knowledge to develop interventions to reduce psychological distress in people with skin conditions.

What will happen to the results?

The results will be analysed to understand the processes that help people cope with skin conditions. The results will be written up as part of the researcher's PhD thesis at the University of Sheffield, for publication in academic journals and for use in presentations and teaching. A copy of the results will be available from the researcher on request.

Will I be recorded, and what will happen to recorded media?

Interviews will be audio-recorded and later transcribed (typed up) so that the information can be analysed. No one outside the research project will have access to the original recordings. Once your interview has been transcribed the recording will be deleted, so you will not be able to request access to it after this point.

Will my data be confidential?

Yes. Information that could identify you will not be disclosed to anyone except the researchers involved in this study. Your interview data will be anonymised and all your data will be stored securely. You will not be identified in any of the results. Some excerpts (quotes of a few sentences) from your interview may be used in the researcher's thesis, for publication and for teaching. A pseudonym (false name) will be used for any such excerpts and they will not include any potentially identifying information.

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 (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'. Personal information will be destroyed no later than three years after publication of the research findings. 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 at https://www.sheffield.ac.uk/govern/data-protection/privacy/general.

Who is organising this research?

This study is being run by Elaine Clarke, a psychology research student at the University of Sheffield. The study is being supervised by Dr Andrew Thompson and Prof. Paul Norman, who are academic staff in the Psychology Department at the University of Sheffield.

Who has ethically reviewed the project?

This study has been reviewed and approved by The University of Sheffield Department of Psychology Ethics Subcommittee.

What if something goes wrong?

If you have any concerns about the study you can contact the researcher directly using the contact details below. If you wish to make a complaint about any aspect of how you have been approached or treated during this study, you can contact the researcher's supervisors, Dr Andrew Thompson and Prof. Paul Norman at the Department of Psychology, University of Sheffield, Floor D, Cathedral Court, 1 Vicar Lane, Sheffield S1 1HD or by email: a.r.thompson@sheffield.ac.uk and p.norman@sheffield.ac.uk.

How can I learn more?

You are welcome to ask for further information if you are unclear on any aspect of this study. To do so, please contact the lead researcher, Elaine Clarke, in the first instance. Address: Department of Psychology, University of Sheffield, Floor D, Cathedral Court, 1 Vicar Lane, Sheffield S1 1HD. Email: e.n.clarke@sheffield.ac.uk

Thank you for reading this information and for considering taking part in this study.

D.5 Consent Form–Interview

Title of research project	How People Manage the Impact of Living with Skin Conditions
Name of researcher	Elaine Clarke
Participant ID code	

Please write initials

1. I confirm that I have read and understood the information sheet dated 11/08/16 explaining the above research project. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason and without there being any negative consequences. In addition, should I not wish to answer any question(s), I am free to decline. ☐
3. I understand that my responses will be kept confidential within the research team. I understand that my name will not be linked with the research materials, and I will not be identified or identifiable in any reports that result from the research. ☐
4. I understand that taking part in this research will involve being interviewed, and that the interview will be audio-recorded and transcribed. I understand that excerpts from my interview may be included in the lead researcher's thesis and future publications and teaching. ☐
5. I agree to take part in the above study. ☐

Name (participant) ....

Signature ....

Date ....

Name (researcher) Elaine Clarke

Signature ....

Date ....

D.6 Interview Schedule

Interview Schedule

Topic	Questions
Exploring the effects and impact of skin condition (to provide context for later questions)	Can you tell me about the last time your [skin condition] was particularly bad? How did it affect your life at the time? Have there been times when your [skin condition] affected you in any other ways?
Participants' attitudes and responses towards skin-related difficulties; exploring self-kindness vs self-judgement	When things are difficult because of your [skin condition], how do you actually feel? When [X occurs] because of your [skin condition], what goes through your mind? What are you like with yourself when things are difficult because of your [skin condition]? When [X occurs] because of your [skin condition], what do you actually do? How does that affect you?
Exploring mindfulness vs overidentification	When you feel [X] because of your [skin condition], how do you respond to those feelings? How does that affect your feelings?
Exploring common humanity vs isolation	How do you think the problems you've had with your [skin condition] compare to other people's life experiences?
Exploring development of approach to managing skin condition	How do you think you developed that way of managing the feelings of [X] that come with your [skin condition]? Do you use the same sort of approach to deal with other problems in your life? Is there anything you would still like to change about the way you manage your skin-related problems?
Exploring interpersonal flows of compassion; context for what strategies participants value	How do you tend to respond when someone close to you is struggling with a problem in their life? How does that compare to the way you treat yourself? What have other people said or done when you've been struggling with your skin that you've found helpful?

Note. Participants' own words were substituted for [skin condition] and [X] during the interviews.

Appendix E

Developing Templates

In each template, codes are alphabetised within the nested hierarchical lists, with the exceptions of placing the ‘cognitive’ codes before the ‘behavioural’ codes, and ‘sensitivity to distress’ before ‘care for wellbeing’, in the ‘difficulty-management strategies’ sections. These deviations from alphabetical order follow logically from the phrase ‘cognitive behavioural therapy’ and Gilbert’s (2014b) definition of compassion.

Template 1

Template 1 was developed after the initial coding of all ten interviews. All codes that had been identified were put into hierarchical lists. Three distinct sections were used: the impact of skin condition, the strategies used to manage the difficulties of living with the skin condition and the development of the management strategies. No codes were re-named at this point.

Template 1—Impact of Skin Condition (Context)

1. Physical
    (a) Physical symptoms
    (b) Restricted movement
    (c) Tiredness/fatigue
    (d) Treatment side effects
    (e) Unusual experiences
2. Practical
    (a) Avoidance of physical triggers
        i. Activities
        ii. Clothes
        iii. Cosmetics or jewellery
        iv. Environmental factors
        v. Food or drink
    (b) Staying at home

    (c) Time off work
    (d) Treatment burden
        i. Frequent medical appointments

3. Psychological
    (a) Attentional burden
    (b) Concern about odour
    (c) Concern about visability
    (d) Concern for family's feelings
    (e) Negative emotions
    (f) Personal growth
4. Social
    (a) Reactions of others
    (b) Social isolation

Template 1—Difficulty-Management Strategies

Foundation themes:

- Sensitivity to distress
- Care for wellbeing

1. Cognitive
    (a) Empathy
        i. Going against advice
    (b) Non-judgement
        i. Acceptance of the condition
        ii. Lack of self-consciousness
    (c) Self-kindness
    (d) Wider perspective
        i. Common humanity
        ii. Downward social comparison
        iii. Fortune and gratitude
2. Behavioural
    (a) Concealment
    (b) Distress tolerance
        i. Allowing time to be upset
        ii. Giving simple explanations
        iii. Getting on with life

    (c) Idosyncratic coping strategies
        i. Researching
    (d) Mindfulness and meditation
    (e) Self-talk
    (f) Skin management strategies
        i. Addressing flares promptly
        ii. Avoiding scratching
        iii. Cooling skin
        iv. Daily treatment
        v. Exercise
        vi. Keeping skin covered
        vii. Moisturising
        viii. Phototherapy
        ix. Special diet
        x. Taking antihistamines
        xi. Taking immunosuppressants
        xii. Taking steroid tablets
        xiii. Using specialist cleansing products
        xiv. Using steroid creams
    (g) Using social support
        i. Talking to significant others
        ii. Using online support

Template 1—Development of Management Strategies

1. General
    (a) Journalling
    (b) Life experiences
        i. Greater self-confidence
    (c) Mindfulness practice
    (d) Personality traits
        i. Non-judgement
        ii. Optimism
    (e) Self-help
    (f) Therapy
2. Skin-specific
    (a) Changing public perception
    (b) Greater control of skin condition
        i. Iterative medical treatment

        ii. More experience of the condition
        iii. More knowledgeable about condition and treatment
    (c) Lack of psychodermatology support
    (d) Positive outlook from doctor
    (e) Support from family and friends
    (f) Support groups

Template 2

The most significant change in Template 2 was moving the code ‘avoidance of physical triggers’ from ‘impact’ to ‘self-care’. Although often there were negative consequences of what the participants were avoiding (e.g., not being able to eat in certain restaurants), overall they were accepting of these consequences in favour of looking after their skin better.

Template 2—Impact of Skin Condition (Context)

1. Physical
    (a) Physical symptoms
    (b) Restricted movement
    (c) Tiredness/fatigue
    (d) Treatment side effects
    (e) Unusual experiences
2. Practical
    (a) Staying at home
    (b) Time off work
    (c) Treatment burden
        i. Frequent medical appointments
3. Psychological
    (a) Attentional burden
    (b) Concern about odour
    (c) Concern about visability
    (d) Concern for family’s feelings
    (e) Negative emotions
    (f) Personal growth
4. Social
    (a) Reactions of others
    (b) Social isolation

Template 2—Difficulty-Management Strategies

Foundation themes:

- Sensitivity to distress
- Care for wellbeing

1. Cognitive
    - (a) Empathy
        - i. Going against advice
    - (b) Non-judgement
        - i. Acceptance of the condition
        - ii. Lack of self-consciousness
    - (c) Self-kindness
    - (d) Wider perspective
        - i. Common humanity
        - ii. Downward social comparison
        - iii. Fortune and gratitude
2. Behavioural
    - (a) Concealment
    - (b) Distress tolerance
        - i. Allowing time to be upset
        - ii. Giving simple explanations
    - (c) Getting on with life
    - (d) Idiosyncratic coping strategies
        - i. ASMR response
        - ii. Researching
    - (e) Improving environment
        - i. Cleaning and organising
        - ii. Rearranging work or study
    - (f) Mindfulness and meditation
    - (g) Self-care
        - i. Avoidance of physical triggers
            - *a*. Activities
            - *b*. Clothes
            - *c*. Food or drink
            - *d*. Cosmetics or jewellery
            - *e*. Environmental factors
        - ii. Diet (general)

        iii. Enjoyable activities
        iv. Exercise
        v. Rest
    (h) Self-talk
        i. Problem-solving approach
    (i) Skin management strategies
        i. Addressing flares promptly
            a. Cooling skin
            b. Keeping skin covered
            c. Phototherapy
            d. Taking antihistamines
            e. Taking steroid tablets
            f. Using steroid creams
        ii. Daily treatment
            a. Avoiding scratching
            b. Moisturising
            c. Special diet
            d. Taking immunosuppressants
            e. Using specialist cleansing products
    (j) Using social support
        i. Spending time with others
        ii. Talking to significant others
        iii. Using online support

Template 2—Development of Management Strategies

1. General
    (a) Journalling
    (b) Life experiences
        i. Greater self-confidence
    (c) Mindfulness practice
    (d) Personality traits
        i. Non-judgement
        ii. Optimism
        iii. Pragmatism
        iv. Self-reliance
    (e) Self-help
    (f) Therapy
2. Skin-specific

    (a) Changing public perception
    (b) Healthcare experiences
        i. Lack of psychodermatology support
        ii. Positive outlook from doctor
    (c) More experience of the condition
        i. Greater control of skin condition
            a. Iterative medical treatment
            b. More knowledgeable about condition and treatment
    (d) Support from family and friends
        i. Emotional support
            a. Acceptance from others
            b. Focus on distress
            c. Listening
            d. Playfulness
        ii. Practical support
            a. Explaining to others (historic)
            b. Facilitating time for self-care
            c. Helping with treatment
    (e) Support groups

Template 3

In Template 3, the skin management codes were amalgamated into two categories: addressing flares promptly and daily treatment, based on the observation that the individual codes added little to the analysis. The role of social support in the difficulty-management strategies and the development of these strategies was also more clearly specified. In addition, the codes that solely categorised subsequent lower-order codes (i.e., nodes with no interview data directly coded to them) were written in bold font. Template 3 was the final template.

Template 3—Impact of Skin Condition (Context)

1. **Physical**
    (a) Physical symptoms
    (b) Restricted movement
    (c) Tiredness/fatigue
    (d) Treatment side effects
    (e) Unusual experiences

2. **Practical**
    (a) Treatment burden
    (b) Time off work or study
    (c) Staying at home
3. **Psychological**
    (a) Attentional burden
    (b) Concern about odour
    (c) Concern about visability
    (d) Concern for family's feelings
    (e) Negative emotions
    (f) Personal growth
4. **Social**
    (a) Reactions of others
    (b) Social isolation

Template 3—Difficulty-Management Strategies

Foundation themes:

- Sensitivity to distress
- Care for wellbeing

1. **Cognitive**
    (a) Empathy
        i. Going against advice
    (b) Non-judgement
        i. Acceptance of the condition
        ii. Lack of self-consciousness
    (c) Self-kindness
    (d) **Perspective-taking**
        i. Common humanity
        ii. Fortune and gratitude
2. **Behavioural**
    (a) Concealment
    (b) Distress tolerance
        i. Allowing time to be upset
        ii. Getting on with life
            a. Giving simple explanations

- (c) Idiosyncratic coping strategies
- (d) Mindful attention
    - i. Present moment focus
- (e) **Self-care**
    - i. **Physical health care**
        - *a*. **Avoidance of physical triggers**
            - Activities
            - Clothes
            - Cosmetics or jewellery
            - Environmental factors
            - Food or drink
        - *b*. Diet (general)
        - *c*. **Skin management strategies**
            - Addressing flares promptly
            - Daily management
    - ii. **Leisure activities**
        - *a*. Enjoyable activities
        - *b*. Exercise
        - *c*. Rest
            - Rearranging work or study
- (f) Self-talk
    - i. Problem-solving approach/wisdom
- (g) **Using social support**
    - i. Spending time with others
    - ii. Talking to significant others
    - iii. Using online support

Template 3—Development of Management Strategies

1. **General**
    - (a) Life experiences
        - i. Greater self-confidence
    - (b) Personality traits
    - (c) **Reflective practices**
        - i. Journalling
        - ii. Mindfulness practice
        - iii. Self-help
        - iv. Therapy
2. **Skin-specific**

(a) Changing public perception
(b) Experiences of others
(c) **Healthcare experiences**
    i. Lack of psychodermatology support
    ii. Positive outlook from doctor
(d) More experience of the condition
    i. Greater control of skin condition
        a. Iterative medical treatment
        b. More knowledgeable about condition and treatment
(e) **Support from family and friends**
    i. **Emotional support**
        a. Acceptance from others
        b. Focus on distress
        c. Listening
        d. Playfulness
    ii. **Practical support**
        a. Explaining to others (historic)
        b. Facilitating time for self-care
        c. Helping with treatment

Table E.1
Participants that Contributed to each Theme in the Final Template

Theme	Total sources (*n*)	Participant number									
		1	2	3	4	5	6	7	8	9	10
Impact of skin condition											
Physical impact	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Physical symptoms	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Restricted movement	1		✓								
Tiredness and fatigue	7	✓		✓	✓	✓	✓	✓		✓	
Treatment side-effects	5			✓	✓		✓	✓		✓	
Unusual experiences	1			✓							
Practical impact	9		✓	✓	✓	✓	✓	✓	✓	✓	✓
Staying at home	3		✓				✓		✓		
Time off work or study	5		✓	✓	✓	✓	✓				

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Table E.1
Continued

Theme	Total sources (n)	Participant number									
		1	2	3	4	5	6	7	8	9	10
Treatment burden	8		✓		✓	✓	✓	✓	✓	✓	✓
Psychological impact	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Attentional burden	4	✓	✓				✓		✓		
Concern about odour	1									✓	
Concern about visibility	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Concern for family’s feelings	6			✓		✓	✓	✓	✓		✓
Negative thoughts and emotions	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Personal growth	5		✓	✓	✓		✓	✓			
Social impact	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Reactions of others	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Social isolation	4		✓	✓			✓	✓			
Difficulty-management strategies											
Sensitivity to distress	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Care for well-being	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cognitive	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Empathy	9	✓	✓	✓	✓	✓	✓	✓	✓		✓
Going against advice	6			✓	✓		✓	✓	✓		✓
Non-judgement	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Acceptance of condition	9		✓	✓	✓	✓	✓	✓	✓	✓	✓
Lack of self-consciousness	8	✓	✓	✓		✓		✓	✓	✓	✓
Self-kindness	7	✓		✓	✓	✓		✓	✓	✓	
Perspective-taking	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Common humanity	7	✓	✓			✓	✓	✓	✓	✓	
Fortune and gratitude	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Behavioural	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Concealment	8	✓			✓	✓	✓	✓	✓	✓	✓

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Table E.1
Continued

Theme	Total sources (*n*)	Participant number									
		1	2	3	4	5	6	7	8	9	10
Distress tolerance	9	✓		✓	✓	✓	✓	✓	✓	✓	✓
Allowing time to be upset	2						✓			✓	
Getting on with life	9	✓		✓	✓	✓	✓	✓	✓	✓	✓
Giving simple explanations	4	✓				✓	✓			✓	
Idosyncratic coping strategies	8	✓	✓	✓			✓	✓	✓	✓	✓
Mindful attention	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Present moment focus	7		✓	✓	✓	✓	✓			✓	✓
Self-care	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Physical health care	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Avoidance of physical triggers	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
∼ activities	7	✓	✓	✓	✓	✓	✓	✓			
∼ clothes	5				✓		✓		✓	✓	✓
∼ cosmetics and jewellery	3				✓		✓	✓			
∼ environmental factors	7	✓	✓	✓	✓	✓	✓		✓		
∼ food and drink	2						✓		✓		
Diet	3			✓				✓	✓		
Skin management strategies	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Addressing flares promptly	8	✓			✓	✓	✓	✓	✓	✓	✓
Daily treatment	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Leisure activities	9	✓	✓	✓	✓	✓	✓	✓		✓	✓
Enjoyable activities	7	✓	✓	✓	✓	✓	✓			✓	
Exercise	4	✓	✓		✓			✓			
Rest	7	✓	✓	✓			✓	✓		✓	✓
Rearranging work or study	3	✓	✓					✓			
Self-talk	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	

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Table E.1
Continued

Theme	Total sources (*n*)	Participant number									
		1	2	3	4	5	6	7	8	9	10
Problem-solving approach/ wisdom	7	✓		✓	✓	✓	✓	✓	✓		
Using social support	8		✓	✓		✓	✓	✓	✓	✓	✓
Spending time with others	3		✓				✓			✓	
Talking to significant others	7		✓	✓		✓	✓	✓	✓		✓
Using online support	4		✓	✓				✓			✓
Development of management strategies											
General	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Life experiences	8	✓		✓	✓		✓	✓	✓	✓	✓
Greater self-confidence	5	✓			✓		✓		✓		✓
Personality traits	5			✓	✓			✓	✓		✓
Reflective practices	7	✓	✓	✓	✓	✓		✓	✓		
Journalling	1								✓		
Mindfulness practice	4	✓	✓	✓		✓					
Self-help	3				✓	✓		✓			
Therapy	2	✓						✓			
Skin-specific	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Changing public perception	2						✓		✓		
Experiences of others	3			✓	✓		✓				
Healthcare experiences	5				✓	✓		✓	✓		✓
Lack of psychodermatology support	3				✓			✓	✓		
Positive outlook from doctor	4					✓		✓	✓		✓
More experience of condition	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Greater control of skin condition	8	✓	✓		✓	✓	✓	✓	✓		✓
Iterative medical treatment	4				✓		✓	✓			✓

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Table E.1
Continued

Theme	Total sources (*n*)	Participant number									
		1	2	3	4	5	6	7	8	9	10
More knowledgeable about condition and treatment	3	✓	✓					✓			
Support from family and friends	9	✓		✓	✓	✓	✓	✓	✓	✓	✓
Emotional support	8	✓		✓	✓	✓	✓		✓	✓	✓
Acceptance from others	7	✓		✓	✓	✓	✓			✓	✓
Focus on distress	3			✓	✓						✓
Listening	4			✓		✓	✓			✓	
Playfulness	3	✓							✓	✓	
Practical support	6				✓	✓		✓	✓	✓	✓
Explaining to others	2								✓		✓
Facilitating time for self-care	3				✓			✓			✓
Helping with treatment	4				✓	✓				✓	✓

Appendix F

Template Analysis Codebook

Tables F.1, F.2 and F.3 show the descriptions of each code as used in the final template (Template Three). The three tables relate to the different sections of the template: 1) impact of the skin condition, 2) difficulty-management strategies, and 3) development of the management strategies. Codes are displayed alphabetically within each of these three tables (i.e., removed from the nested hierarchical lists of the template), with the exceptions of the foundation codes, ‘sensitivity to distress’ and ‘care for wellbeing’, which are presented at the beginning of Table F.2. Each code has been given an identifier that refers back to the template hierarchy. Codes that are solely used for categorising other themes (e.g., ‘cognitive’) are not included in the codebook.

Table F.1
Codes for Impact of Skin Condition

Code	Description	When to use	Template identifier
Attentional burden	Attention frequently being on the skin condition and related problems; intrusive thoughts/sensations, e.g., itch.	Trouble concentrating/being distracted due to skin condition. Significant time spent thinking about the skin condition.	3/a
Concern about odour	Concern about the skin condition causing an unpleasant odour.	Worry/concern that the skin condition has a noticable odour. Associated checking or seeking reassurance.	3/b
Concern about visibility	Concern about visible signs of the condition and/or visible attempts at concealment or treatment; concern about visibility of behaviours linked to the skin condition (e.g., scratching).	Worry/concern about ways in which the skin condition is visible to self and others.	3/c

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Table F.1
Continued

Code	Description	When to use	Template identifier
Concern for family's feelings	Concern about the impact that the skin condition has on family.	Concern that the visibility of the skin condition may cause embarrassment to family; concern that the restrictions created by the skin condition negatively impact the lives of family members.	3/d
Negative thoughts and emotions	Negative psychological impact of having the skin condition.	Negative emotions linked with the skin condition, e.g., anxiety, sadness, horror, guilt, annoyance, frustration. Negative automatic thoughts about the skin condition and/or its impact.	3/e
Personal growth	A positive impact of having the skin condition being the opportunity for personal growth.	Having developed resilience or empathy for others as a result of living with the skin condition.	3/f
Physical symptoms	Physical symptoms directly due to the skin condition.	E.g., Itch, pain, weeping, scaling, flaking, dryness, redness, blisters, bumps.	1/a
Reactions of others	How other people (not significant others) respond to the skin condition.	Others' reactions: unwanted advice, intrusive comments, teasing, staring, unconsciously scratching.	4/a
Restricted movement	Not being able to move as normal due to skin condition.	Not being able to move body parts as normal due to the skin condition, e.g., turning head, extending arms.	1/b
Social isolation	Socialising less frequently than desired because of the skin condition, either because of the physical symptoms themselves, associated fatigue or concern about visibility.	Not socialising as much as would be preferred, missing the company of others.	4/b
Staying at home	Staying at home rather than going out as planed as a direct result of the skin condition.	The skin being so bad that the person doesn't want to concern themselves at all with getting ready and going out in public, being in so much pain that the person wishes to limit movement by staying at home.	2/c

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Table F.1
Continued

Code	Description	When to use	Template identifier
Time off work or study	Having to take time off work/study as a result of the skin condition (or associated fatigue).	Reactive time off i.e., being too unwell to continue with work or study at that time. **When not to use:** Proactively making arrangements to better manage the skin condition around work or study, e.g., reducing working hours.	2/b
Tiredness and fatigue	Tiredness and fatigue arising as a result of skin flare-ups and/or treatment.	Tiredness/fatigue associated with the skin condition, e.g., due to involvement of immune system or resulting from treatment for the skin condition.	1/c
Treatment burden	Costs of treating the skin condition in terms of time, effort and money. Any non-medicinal side-effects (consequences) of treatment.	Spending considerable time/effort/money treating the condition, e.g., applying creams, frequent medical appointments, buying expensive skin products, creams sticking to clothes and having to wash them specifically for this.	2/a
Treatment side-effects	Side-effects of medications or other treatments for the skin condition.	Side-effects, or potential side-effects of treatments for the skin condition, e.g., liver damage, teratogenic effects, cancer risk.	1/d
Unusual experiences	Unusual experiences as a result of the skin condition (and associated pain).	E.g., super-saturated colours in vision, feelings of unreality.	1/e

Table F.2

Codes for Difficulty Management Strategies

Code	Description	When to use	Template identifier
Sensitivity to distress	Being able to notice and pay attention to one's distress and needs; being attentive to changes in physical feelings, emotions and thoughts (in distressing situations).	Noticing thoughts/feelings/needs, labelling emotions, reciting thoughts.	Foundation
Care for wellbeing	Believing that being compassionate towards oneself is a desirable attribute. Wanting to care for, nurture and support oneself to promote one's well-being.	Valuing compassion (alleviation of suffering). Statements about wanting to care for/nurture/support oneself. Descriptions of actions that clearly demonstrate the same.	Foundation
Acceptance of condition	Believing that skin condition is to be managed rather than cured; is part of life now.	Comments denoting a lack of desire to eliminate the condition; appreciating the futility of wishing things were different.	1/b/i
Addressing flares promptly	Additional use of medicines, moisturisers or other strategies to reduce severity of the skin condition once a flare up has been recognised.	Using strategies such as: increased use of moisturisers or steroid creams; taking antihistamines or steroid tablets; using phototherapy (UVA, UVB, PUVA treatments); cooling the skin.	2/e/i/*c*/*(1)*
Allowing time to be upset	Allowing oneself time to feel temporarily upset by the skin problems.	Deliberately choosing to have time alone, having a cry.	2/b/i
(Avoidance of certain) activities	Deliberately choosing to avoid activities that will trigger or worsen the skin condition.	E.g., not rock climbing when eczema is flaring, not swimming indoors due to chlorine.	2/e/i/*a*/*(1)*
(Avoidance of certain) clothes	Not wearing certain fabrics/types of clothing because they physically aggrevate the skin condition.	E.g., avoiding clothes made of wool, nylon.	2/e/i/*b*/*(2)*
(Avoidance of certain) cosmetics and jewellery	Not using cosmetic products or wearing jewellery because they physically aggrevate the skin condition.	E.g., not wearing make-up.	2/e/i/*c*/*(3)*

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Table F.2
Continued

Code	Description	When to use	Template identifier
(Avoidance of certain) environmental factors	Making changes in physical environment to limit/eliminate contact with irritants.	E.g using a chlorine filter; replacing carpets with hard floors; moving house to avoid pollution/hard water; using clothing or bandages to keep the skin covered to retain moisture; keeping skin covered to avoid sun on the affected areas. **When not to use:** When purpose of covering skin is for concealment of skin condition (use 'concealment').	2/e/i/*d*/*(4)*
(Avoidance of certain) food and drink	Not eating/drinking specific (isolated) things that trigger or worsen the skin condition.	E.g., not eating raw tomatoes. **When not to use:** When there are whole categories of foods that the person is not eating, e.g., dairy (use 'special diet' under 'skin management strategies/daily treatment').	2/e/i/*e*/*(5)*
Common humanity	Viewing suffering and personal failures as normal parts of life, and believing that feelings of failure and inadequacy are shared by most people.	Everyone having difficulties/problems; sense of normality about difficulties. **When not to use:** Purely downward social comparison; comparison with a specific individual unless this is an example relating to 'everyone' or 'lots of people'.	1/d/i
Concealment	Concealing the visible signs of the skin condition.	Using clothes, hairstyles, makeup or other measures to conceal the skin condition or other signs of it (skin flakes etc). E.g., covering the affected skin, choosing clothes that lessen the visibility.	2/a
Daily treatment	Regular use of medicines, moisturisers or other stategies (at least daily) as proactive means to reduce severity of skin condition.	Using strategies such as: moisturising, using emollients; using specialist cleansing products; avoiding scratching; following a special diet (e.g., not eating sulphates, dairy, gluten); taking immuno-suppressants. **When not to use:** Changing diet to be general healthy eating, e.g., increasing fruit/veg.	2/e/i/*c*/*(2)*

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Table F.2
Continued

Code	Description	When to use	Template identifier
Diet	Making changes to diet with the aim of improving health (and therefore skin condition).	Making changes to diet to be generally healthier, e.g., eating more fresh food, more fruit/veg. **When not to use:** Specific diet for medical reasons (use ‘special diet’).	2/e/i/*b*
Distress tolerance	Being able to accept and tolerate distressing feelings as they occur; being familiar with and unafraid of distressing emotions and thoughts.	Actively engaging with distressing activities/situations; accepting distressing feelings as they are. E.g., going into situations despite anticipated distress.	2/b
Empathy	Understanding one’s thoughts and feelings in distressing situations (or those of others)	Thoughts and feelings making sense, being understandable. Understanding what affects them in what ways, including anticipating effects of different situations. **When not to use:** Simple reporting of distressing thoughts and feelings (use ‘sensitivity to distress’).	1/a
Enjoyable activities	Doing enjoyble activities specifically as a way of reducing the distress caused by the skin condition.	“Making time for myself” and similar. Relaxing activities e.g., reading, knitting, puzzles, lookings at maps, baths, massage, and fun activities e.g., games, cooking, trips out.	2/e/ii/*a*
Exercise	Exercising as a method of coping with difficulties of living with the skin condition.	Using exercise to feel better-stress management and/or feeling positive about the self. In some cases has additional effect of improving skin condition via reduced stress or immuno-suppressant effect.	2/e/ii/*b*
Fortune and gratitude	Expressing a sense of being fortunate in some way and/or a sense of gratitude for the good things in life that one has.	“Being lucky because. . . ”, including downward social comparisons; gratitude about positive aspects of life (e.g., good job, loving family).	1/d/ii

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Table F.2
Continued

Code	Description	When to use	Template identifier
Getting on with life	Doing valued activities despite having a skin condition; not letting thoughts/feelings about the condition have a detrimental effect on valued activities.	Carrying on doing usual activities despite skin condition and difficulties this causes, e.g., social anxiety, sore skin. Requires finding a balance between pros and cons of the activity. **When not to use:** When the person is describing activities they do specifically to help them feel better (use 'enjoyable activities' or another in 'self-care' category).	2/b/ii
Giving simple explanations	Using stock responses to briefly explain the appearance of the skin condition.	E.g., "it's just a rash".	2/b/ii/*a*
Going against advice	Managing condition in ways that go against conventional advice: understanding what works for them.	Idiosyncratic ways of managing the skin that contravene medical advice or general opinion.	1/a/i
Idiosyncratic coping strategies	Strategies used by only one or two participants to help them manage the difficulties of living with the skin condition.	Researching the skin condition using scientific articles. Using ASMR response to temporarily reduce sensation of itching. Cleaning/tidying/organising other spaces or aspects of life to reduce stress in general.	2/c
Lack of self-consciousness	Being not too bothered by appearance of skin condition; not overly concerned with it showing or what others might think	Favourable comparisons with others who are more conscious of their appearance or with self at other points in life, examples of leaving skin condition visible to others without getting distressed, statements about lack of self-consciousness.	1/b/ii
Mindful attention	Paying attention in a particular way (on purpose, in the present moment, and non-judgementally) either in normal daily life, during a distressing event or through meditating. Sense of watching events/ thoughts/ feelings pass by.	Specific mention of mindfulness; reflection that reactions to distressing situations used this type of paying attention; reflection that thoughts about the problem are let go (once problem dealt with) and attention refocused; specific mention of using meditation techniques.	2/d

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Table F.2
Continued

Code	Description	When to use	Template identifier
Non-judgement	Accepting and not condemning oneself for real or perceived failures or inadequacies.	Meta-cognitions about thoughts and feelings: comments about distressing thoughts and feelings without condemnation of them. Factual talk of perceived failures/inadequacies, non-emotive language, decriptions of failures/inadequacies given in warm/neutral tones of voice rather than condemning tones, statements about lack of self-criticism or blame. **When not to use:** For purely 'noticing' comments (use 'sensitivity to distress').	1/b
Present moment focus	Focusing on everyday things on other than the skin condition. Relatively low salience of the skin condition.	Comments about having other things to do/think about, generally not paying too much attention to the skin condition. Doing this automatically. **When not to use:** When the person is deliberately using mindful activity or other forms of mindfulness (use 'mindful attention').	2/d/i
Problem-solving approach/ wisdom	Using a strategic, problem-solving approach to difficulties caused by the skin condition. Considering options for improving the situation and giving them a try.	Thinking "what do I need to do?" or "what will make this better?" Making changes/choices based on this analysis.	2/f/i
Rearranging work or study	Making changes to work/study schedule with the aim of improving the skin condition, possibly via increased rest or less stress.	Proactive time management and choices made to improve the skin condition, e.g., arranging late starts or early finishes, deferring the course of study. **When not to use:** Time off work/study sick, i.e., reactive.	2/e/ii/*c*/*(1)*
Rest	Increasing the amount of rest and/or sleep they are getting.	Making changes to routine to allow extra time for rest/sleep, e.g., arranging childcare, reallocating chores.	2/e/ii/*c*

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Table F.2
Continued

Code	Description	When to use	Template identifier
Self-kindness	Responding to one's suffering and personal failure with thoughts that demonstrate care, support, tenderness, patience, tolerance and understanding towards oneself.	Kind/supportive thoughts/ opinions regarding suffering and failure.	1/c
Self-talk	Deliberately directing thoughts to oneself to help manage the impact of the skin condition. May be from an almost-outside perspective, wise-mind.	Statements about "having a word with myself" or similar; deliberately trying to think about certain things as a coping strategy, e.g., keeping perspective "I try to remember that it's better than it used to be". **When not to use:** Reports of automatic thoughts; reflections on impact of skin condition that are not reported as being used as a coping strategy.	2/f
Spending time with others	Spending time with family and friends with the awareness that this is helpful for mood and intention to use this to improve/maintain mood.	Spending time with family or friends where the focus is on other things than the skin condition. **When not to use:** Talking about the skin condition (use 'talking to significant others').	2/g/i
Talking to significant others	Getting emotional support from talking to significant other(s) about the skin itself and/or the impact of the condition.	Being able to talk to friends/family about the skin condition and/or its impact; finding talking to others helpful.	2/g/ii
Using online support	Talking to others who have skin conditions online, or reading about their experiences.	Using dedicated skin condition forums, or informal support via social media or Reddit. **When not to use:** Online activity that does not involve contact with others (use 'idosyncratic coping strategies').	2/g/iii

Table F.3

Codes for Development of Management Strategies

Code	Description	When to use	Template identifier
Acceptance from others	Family and friends accepting the person's skin condition and treatments, feeling safe to be oneself even with the skin condition.	Family and friends being understanding and accepting of the skin condition and any treatment needed, needing to apply creams.	2/e/i/*a*
Changing public perception	Improved public perception of skin conditions, less stigma, more familiarity.	Being aware of positive role models, e.g., supermodel with vitiligo.	2/a
Experiences of others	Learning from others' experiences of managing skin conditions.	Learning skin management strategies from other people with skin conditions, e.g., family members or people in support groups (including online).	2/b
Explaining to others (inc. historic)	Family or friends explaining to others (e.g., the person's children) about the skin condition, or giving them helpful ways to think about it.	Helpful explanations that family or friends have given to others about the person's skin condition.	2/e/ii/*a*
Facilitating time for self-care	Family or friends doing other tasks for the person to faciliate them being able to look after themselves.	Family or friends doing things like childcare, cooking or housework to give the person more time for themselves.	2/e/ii/*b*
Focus on distress	Family and friends focussing on the distress caused by the skin condition rather than on the appearance or other aspects.	Comments from others such as "oh, that looks really painful". **When not to use:** Intrusive comments from strangers or acquaintences.	2/e/i/*b*
Greater control of skin condition	Increased control over the skin condition, through medical treatment/daily management.	Finding the condition easier to manage because of better physical management, e.g., "I've got better at managing it".	2/d/i
Greater self-confidence	Increased confidence over time, generally or in relation to a specific experience.	Favourable comparisons with previous self-confidence and/or related actions, e.g., letting skin condition show in public. Comments about changes due to growing up, being more mature.	1/b/i

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Table F.3
Continued

Code	Description	When to use	Template identifier
Helping with treatment	Family or friends helping with treatment of skin condition.	Family or friends helping the person treat their skin condition, either directly, e.g., applying creams in hard to reach areas, or indirectly, e.g., collecting medication or attending medical appointments with them.	2/e/ii/*c*
Iterative medical treatment	Trial and error of medicines, moisturisers and other methods of improving skin condition. Eventually finding the products/treatment that works for them.	Trying various strategies and products to manage skin over time.	2/d/i/*a*
Journalling	Using reflective journalling to notice patterns in thoughts, feelings, behaviour and make changes accordingly.	Journalling about the skin condition or about other events, from which the person has reflected on their coping strategies or mental health.	1/c/i
Lack of psycho-dermatology support	(Development of management strategies despite) gap in dermatology services about identifying and treating mental health needs.	Comments about not having been asked about mental health or emotional impact of skin condition, or lack of treatment/support for these problems being available.	2/c/ii
Life experiences	Having had life experiences that forced the person into learning ways of coping, or ways of thinking, that are helpful for dealing with the difficulties of living with a skin condition.	Examples of bereavements, serious illnesses, becoming a parent. Comments relating to a wider perspective because of these.	1/b
Listening	Family and friends listening to the person's experience of living with the skin condition.	Family or friends making time or being emotionally available to listen to the person's problems.	2/e/i/*c*
Mindfulness practice	Attending training on mindfulness or using self-help resources, and devoting time to practising the techniques.	When previous mindfulness training/practice has influenced current coping strategies.	1/c/ii
More experience of condition	Having had more experience of dealing with the condition over time.	Finding the condition easier to manage because of more experience over time (including implied, e.g., "I'm used to it now", "it doesn't bother me now").	2/d

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Table F.3
Continued

Code	Description	When to use	Template identifier
More knowledgeable about condition and treatment	Having greater knowledge about the condition and how to treat it, through own research, medical advice or simply practice.	Doing own research about the condition or of being given medical advice that relates to management strategies that the person uses. Also managing the condition better due to own experiences, e.g., learning about own triggers and how to best use treatments. **When not to use:** Statements about accepting that the condition cannot be cured (use 'acceptance of condition').	2/d/i/*b*
Personality traits	Personal characteristics that contribute to current strategies for managing skin/related difficulties, e.g., being generally laid back, not tending to worry or ruminate over problems, being optimistic or pragmatic.	General reflections about one's personality, e.g., being laid back/ positive/pragmatic. Descriptions of traits that clearly demonstrate the same.	1/d
Playfulness	Family or friends using playfulness (appropriately) to help the person think positively about their skin. Includes gentle teasing (implied acceptance from others).	Things that family or friends say about their skin that makes them laugh.	2/e/i/*d*
Positive outlook from doctor	Seeing a doctor who was particularly supportive and had a positive outlook about managing the skin condition.	E.g., having a GP with a special interest in dermatology, having a supportive dermatologist. Interactions with doctors that improved the person's view of the skin condition.	2/c/ii
Self-help	Having used self-help (in any format) to gain understanding that contributes to current management strategies. Not skin-specific, e.g., general mindfulness self-help, positive affirmations, CBT-based self-help.	Descriptions of what the person learnt through self-help. Explicit statements of self-help being personally helpful for coping with difficulties. **When not to use:** Using online support/ information for people with skin conditions (use 'experiences of others').	1/c/iii

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Table F.3
Continued

Code	Description	When to use	Template identifier
Therapy	Receiving therapy, for any reason, if this contributed to current management strategies.	Descriptions of what the person learnt in therapy, how they now relate to themselves. Explicit statements of therapy being personally helpful for coping with difficulties.	1/c/iv

Appendix G

Study 3 Materials

G.1 Participant Information Sheet

You are being invited to take part in research study investigating a novel self-help intervention for people with skin conditions. Please read the following information to help you decide whether to take part.

What is the purpose of this research?

Skin conditions are extremely common and some people cope well with them, but others struggle, experiencing depression or anxiety problems. The purpose of this research is to investigate a compassion-based self-help intervention designed to reduce distress in people with skin conditions.

Can I take part?

You are invited to participate if you:

- are aged 18 or over;
- have had a diagnosed skin condition for the last six months or more;
- are currently experiencing mild–moderate symptoms of depression;
- are able to read self-help information and answer questionnaires written in English.

Do I have to take part?

No. Taking part in this study is voluntary.

What happens if I decide to take part?

You will be asked to complete a survey that asks questions about your skin condition and mental health, as well as demographic information. If it appears that the self-help programme would be suitable for you based on your answers, then you will be given a link to a self-help website. This website forms the basis of a six-week self-help programme, which focuses on learning to be more compassionate towards yourself and your difficulties. You will be asked to read through one session of self-help information per week and complete activities in-between sessions (for example, practising calming breathing or writing down different ways of thinking about your difficulties). Each online session should take no longer than 20 minutes to read through, and the other activities should take around 30 minutes per week (for most weeks it will be a few minutes per day). You will also receive reminders and guidance from the researcher about using the self-help materials via email. At the end of the programme, you will be asked to repeat the survey questions about your mental health and skin condition. Each week you will be asked to provide brief feedback about the online session (2-3 minutes) and at the end of the study you will be asked to give overall feedback about the website, materials and email guidance.

What happens if I change my mind?

You can stop taking part in the study at any time, without giving a reason and without any negative consequences. You can also withdraw your data from the study up until the point the data has been anonymised, which is expected to be around 1st February 2020. To do this, or to stop receiving further emails relating to the study, please contact the researcher by email: e.n.clarke@sheffield.ac.uk.

What are the possible disadvantages or risks of taking part?

Participating in the study will require some of your time, both for the self-help exercises and the surveys involved in the study. However, you can choose to do all of these at times that are convenient for you.

For some people, completing the surveys and/or working through the self-help information could raise awareness of pre-existing psychological distress, which can feel upsetting. This is because some of the questions are about distressing feelings and parts of the self-help programme involve thinking about your own difficulties. It is possible that this may cause some distress during or after the study, although taking part in the study is not expected to cause any severe or lasting distress.

What are the possible benefits of taking part?

The self-help website and activities have been developed to help you think in a more positive way about yourself, so there may be a direct benefit to you from taking part.

This study will also increase our understanding of what aspects of an online self-help intervention are valued by people with skin conditions, and how these relate to changes in their wellbeing. In the future, we will use this understanding to further develop self-help interventions for people with skin conditions that could be used within healthcare services. We hope that this will lead to better access to psychological treatment and therefore reduced distress for people with skin conditions.

What will happen to the results?

The results will be analysed to understand how the self-help intervention affected participants, what they liked about it and how it could be improved in the future. The results will be written up as part of the researcher's PhD thesis at the University of Sheffield, for publication in academic journals and for use in presentations and teaching.

Will my data be confidential?

Yes. Information that could identify you will not be disclosed to anyone except the researchers involved in this study and you will not be identified in any of the results. Survey data will be collected via Qualtrics, an online survey provider. Your survey data will be anonymised for analysis and the reporting of results. All of your data will be stored securely and protected using appropriate firewalls, passwords and authentication procedures.

In order to monitor participants' use of the study website over time, you will be allocated login details that will allow the lead researcher to see when you have logged into the website. However, you will not be asked to provide any personal information via the study website (enclarke.postgrad.shef.ac.uk).

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 we must have a basis in law to do so, which 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 (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'. Personal information will be destroyed no later than three years after publication of the research findings.

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.

Who is organising this research?

This study is being run by Elaine Clarke, a Psychology PhD student at the University of Sheffield. The study is being supervised by Dr Andrew Thompson and Prof. Paul Norman, who are academic staff in the Psychology Department at the University of Sheffield.

Who has ethically reviewed the project?

This study has been reviewed and approved by The University of Sheffield Department of Psychology Ethics Subcommittee.

What if something goes wrong?

If you have any concerns about the study you can contact the researcher directly using the contact details below. If you wish to make a complaint about any aspect of how you have been approached or treated during this study, in the first instance you can contact the researcher's supervisors, Dr Andrew Thompson and Prof. Paul Norman by email: a.r.thompson@sheffield.ac.uk and p.norman@sheffield.ac.uk. If you wish to make a complaint outside of the research group, you can contact the Head of Department, Prof. Glenn Waller: G.Waller@sheffield.ac.uk.

Where can I get more help?

If you need more help with your skin condition or with your mental health, please see your GP in the first instance. You can also get further information and support from the following organisations:

- Mind
  Advice and support for anyone experiencing a mental health problem.
  Tel 0300 123 3393 (Mon-Fri, 9-6), text 86463, email info@mind.org.uk or visit www.mind.org.uk.

- Rethink Mental Illness
  Information and advice for anyone affected by mental illness.
  Tel 0300 5000 927 (Mon-Fri, 9.30-4) or visit http://www.rethink.org.

- The Samaritans
  Confidential emotional support service for anyone in distress.
  Tel 116 123 (24 hours), email jo@samaritans.org or visit www.samaritans.org to find your local branch.

- Skin Support
  Self-help website providing emotional support and information for people living with skin conditions.
  www.skinsupport.org.uk

How can I learn more?

If you have any questions about taking part in this study, please contact the lead researcher, Elaine Clarke, at e.n.clarke@sheffield.ac.uk.

Thank you for taking the time to read this information.

If you would like a copy of this information sheet, please use the 'print' function on your browser or email the lead researcher.

G.2 Consent Statement

	Agree	Disagree
I confirm that I am over the age of 18 and that I have been diagnosed with a skin condition by a medical professional.	○	○
I have read and understood the participant information sheet and have had the opportunity to ask questions of the researcher by email.	○	○
I understand that taking part in this study will involve answering questions about my mental health and skin condition and carrying out activities that may increase my awareness of pre-existing psychological distress.	○	○
I understand that my participation in this study is voluntary and that I may withdraw from the study at any time, without giving a reason and without any adverse consequences.	○	○
I am aware that this study will be administered online and that I will be contacted regularly by email during the study period, but that my personal details will not be disclosed to any third parties nor will I be identified or identifiable in any of the results.	○	○

G.3 Screening Questions

Are you currently receiving a psychological treatment (talking therapy) for a mental health problem?

❍ Yes

❍ No

Do you currently have a diagnosed serious mental illness (e.g., psychosis or bipolar disorder)?

❍ Yes

❍ No

Do you currently have a diagnosed drug/alcohol addiction?

❍ Yes

❍ No

G.4 Demographic Questions

Please provide the following demographic information:

Age

Gender

- ○ Male
- ○ Female
- ○ Other/prefer not to say

Ethnicity

Employment status

- ○ Employed/self-employed
- ○ Homemaker/carer
- ○ Retired
- ○ Student
- ○ Unable to work
- ○ Unemployed

Highest qualification levels achieved (or studying towards)

- ○ No formal qualifications
- ○ GCSEs or equivalent e.g., apprenticeship, NVQ up to level 2, high school diploma
- ○ A-levels or equivalent e.g., advanced apprenticeship, level 3 NVQ, advanced placement
- ○ Level 4 or 5 qualification e.g., certificate/diploma of higher education, foundation/associate degree
- ○ Bachelor’s degree
- ○ Master’s degree
- ○ Postgraduate or professional degree e.g., PhD, MD

Country of residence

Selected from list of countries provided by Qualtrics

G.5 Clinical Questions

What skin condition(s) do you have?

How long have you had this skin condition (in years)?

Are you currently taking any medication for a mental health condition (e.g., an antidepressant or anti-anxiety medication)?

○ Yes

○ No

[If yes,] What mental health medication(s) are you taking?

How long have you been taking this medication (in months/years)?

G.6 Depression Anxiety Stress Scales–Depression Subscale

Please read each statement and select an answer which indicates **how much the statement applied to you *over the past week*.** There are no right or wrong answers. Do not spend too much time on any statement.

	Did not apply to me at all	Applied to me to some degree, or some of the time	Applied to me to a considerable degree, or a good part of the time	Applied to me very much, or most of the time
I couldn't seem to experience any positive feeling at all	○	○	○	○
I just couldn't seem to get going	○	○	○	○
I felt that I had nothing to look forward to	○	○	○	○
I felt sad and depressed	○	○	○	○
I felt that I had lost interest in just about everything	○	○	○	○
I felt I wasn't worth much as a person	○	○	○	○
I felt that life wasn't worthwhile	○	○	○	○
I couldn't seem to get any enjoyment out of the things I did	○	○	○	○
I felt down-hearted and blue	○	○	○	○
I was unable to become enthusiastic about anything	○	○	○	○
I felt I was pretty worthless	○	○	○	○
I could see nothing in the future to be hopeful about	○	○	○	○
I felt that life was meaningless	○	○	○	○
I found it difficult to work up the initiative to do things	○	○	○	○

G.7 Self-Compassion Scale

How I typically act towards myself in difficult times.

Please read each statement carefully before answering. Select an answer that indicates how often you behave in the stated manner.

	Almost never				Almost always
	1	2	3	4	5
I'm disapproving and judgemental about my own flaws and inadequacies.	○	○	○	○	○
When I'm feeling down I tend to obsess and fixate on everything that's wrong.	○	○	○	○	○
When things are going badly for me, I see the difficulties as part of life that everyone goes through.	○	○	○	○	○
When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world.	○	○	○	○	○
I try to be loving towards myself when I'm feeling emotional pain.	○	○	○	○	○
When I fail at something important to me I become consumed by feelings of inadequacy.	○	○	○	○	○
When I'm down and out, I remind myself that there are lots of other people in the world feeling like I am.	○	○	○	○	○
When times are really difficult, I tend to be tough on myself.	○	○	○	○	○
When something upsets me I try to keep my emotions in balance.	○	○	○	○	○

Continued on next page

	Almost never				Almost always
	1	2	3	4	5
When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.	○	○	○	○	○
I'm intolerant and impatient towards those aspects of my personality I don't like.	○	○	○	○	○
When I'm going through a very hard time, I give myself the caring and tenderness I need.	○	○	○	○	○
When I'm feeling down, I tend to feel like most other people are probably happier than I am.	○	○	○	○	○
When something painful happens I try to take a balanced view of the situation.	○	○	○	○	○
I try to see my failings as part of the human condition.	○	○	○	○	○
When I see aspects of myself that I don't like, I get down on myself.	○	○	○	○	○
When I fail at something important to me I try to keep things in perspective.	○	○	○	○	○
When I'm really struggling, I tend to feel like other people must be having an easier time of it.	○	○	○	○	○
I'm kind to myself when I'm experiencing suffering.	○	○	○	○	○
When something upsets me I get carried away with my feelings.	○	○	○	○	○
I can be a bit cold-hearted towards myself when I'm experiencing suffering.	○	○	○	○	○
When I'm feeling down I try to approach my feelings with curiosity and openness.	○	○	○	○	○

Continued on next page

	Almost never				Almost always
	1	2	3	4	5
I'm tolerant of my own flaws and inadequacies.	○	○	○	○	○
When something painful happens I tend to blow the incident out of proportion.	○	○	○	○	○
When I fail at something that's important to me, I tend to feel alone in my failure.	○	○	○	○	○
I try to be understanding and patient towards those aspects of my personality I don't like.	○	○	○	○	○

G.8 Dermatology Life Quality Index

The aim of this questionnaire is to measure how much your skin problem has affected your life OVER THE LAST WEEK. Please select one answer for each question.

Over the last week, how itchy, sore, painful or stinging has your skin been?

Not at all	A little	A lot	Very much
○	○	○	○

Over the last week, how embarrassed or self conscious have you been because of your skin?

Not at all	A little	A lot	Very much
○	○	○	○

Over the last week, how much has your skin interfered with you going shopping or looking after your home or garden?

Not at all	A little	A lot	Very much	Not relevant
○	○	○	○	○

Over the last week, how much has your skin influenced the clothes you wear?

Not at all	A little	A lot	Very much	Not relevant
○	○	○	○	○

Over the last week, how much has your skin affected any social or leisure activities?

Not at all	A little	A lot	Very much	Not relevant
○	○	○	○	○

Over the last week, how much has your skin made it difficult for you to do any sport?

Not at all	A little	A lot	Very much	Not relevant
○	○	○	○	○

Over the last week, has your skin prevented you from working or studying?

Yes	No	Not relevant

Continued on next page

○	○	○

If “No”, over the last week how much has your skin been a problem at work or studying?

Not at all	A little	A lot
○	○	○

Over the last week, how much has your skin created problems with your partner or any of your close friends or relatives?

Not at all	A little	A lot	Very much	Not relevant
○	○	○	○	○

Over the last week, how much has your skin caused any sexual difficulties?

Not at all	A little	A lot	Very much	Not relevant
○	○	○	○	○

Over the last week, how much of a problem has the treatment for your skin been, for example by making your home messy, or by taking up time?

Not at all	A little	A lot	Very much	Not relevant
○	○	○	○	○

G.9 Weekly Feedback Questions

Please answer the following questions about the self-help session you have just completed (<title of webpage>).

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I found today's session easy to use.	❍	❍	❍	❍	❍
I found the information in today's session helpful.	❍	❍	❍	❍	❍
The information in today's session was easy to understand.	❍	❍	❍	❍	❍
Today's session provided me with sufficient information.	❍	❍	❍	❍	❍
Today's session was visually appealing.	❍	❍	❍	❍	❍

As a result of this session:

	Not at all	Slightly	Somewhat	Pretty much	Very much
I have realised something new about myself.	○	○	○	○	○
I have realised something new about someone else.	○	○	○	○	○
I am more aware of / clearer about feelings and experiences.	○	○	○	○	○
I have a clearer definition of problems for me to work on.	○	○	○	○	○
I have made progress toward knowing what to do about problems.	○	○	○	○	○
I feel supported or encouraged.	○	○	○	○	○
I feel relieved, more comfortable.	○	○	○	○	○

Are there any specific comments you would like to make about today's session?

G.10 Overall Feedback Questions

We would like you to think of your recent experience with using the Compassion for Skin Conditions self-help programme (website, downloadable resources, and email support over six weeks).

How likely are you to recommend the Compassion for Skin Conditions self-help programme to friends and family if they needed similar help?

Extremely likely	Likely	Neither likely nor unlikely	Unlikely	Extremely unlikely	Don’t know
○	○	○	○	○	○

What was good about the Compassion for Skin Conditions self-help programme?

What would have made the Compassion for Skin Conditions self-help programme better?

Has taking part in the Compassion for Skin Conditions self-help programme been beneficial for you? If yes, in what way(s)?

Did you experience any negative effects while taking part in the Compassion for Skin Conditions self-help programme (e.g., worsening of existing difficulties or new difficulties arising)? If yes, what negative effect(s) occurred?

During the self-help programme, which of the following activities did you do in addition to the website sessions (i.e., homework activities)? Tick all that apply.

Practising soothing rhythm breathing ○
Recording negative thoughts ○
Using ‘compassionate other’ imagery ○
Writing a compassionate letter to yourself ○
Using ‘compassionate self’ imagery ○
Completing a relapse prevention plan ○

Which part of the Compassion for Skin Conditions programme was the most helpful/valuable for you?

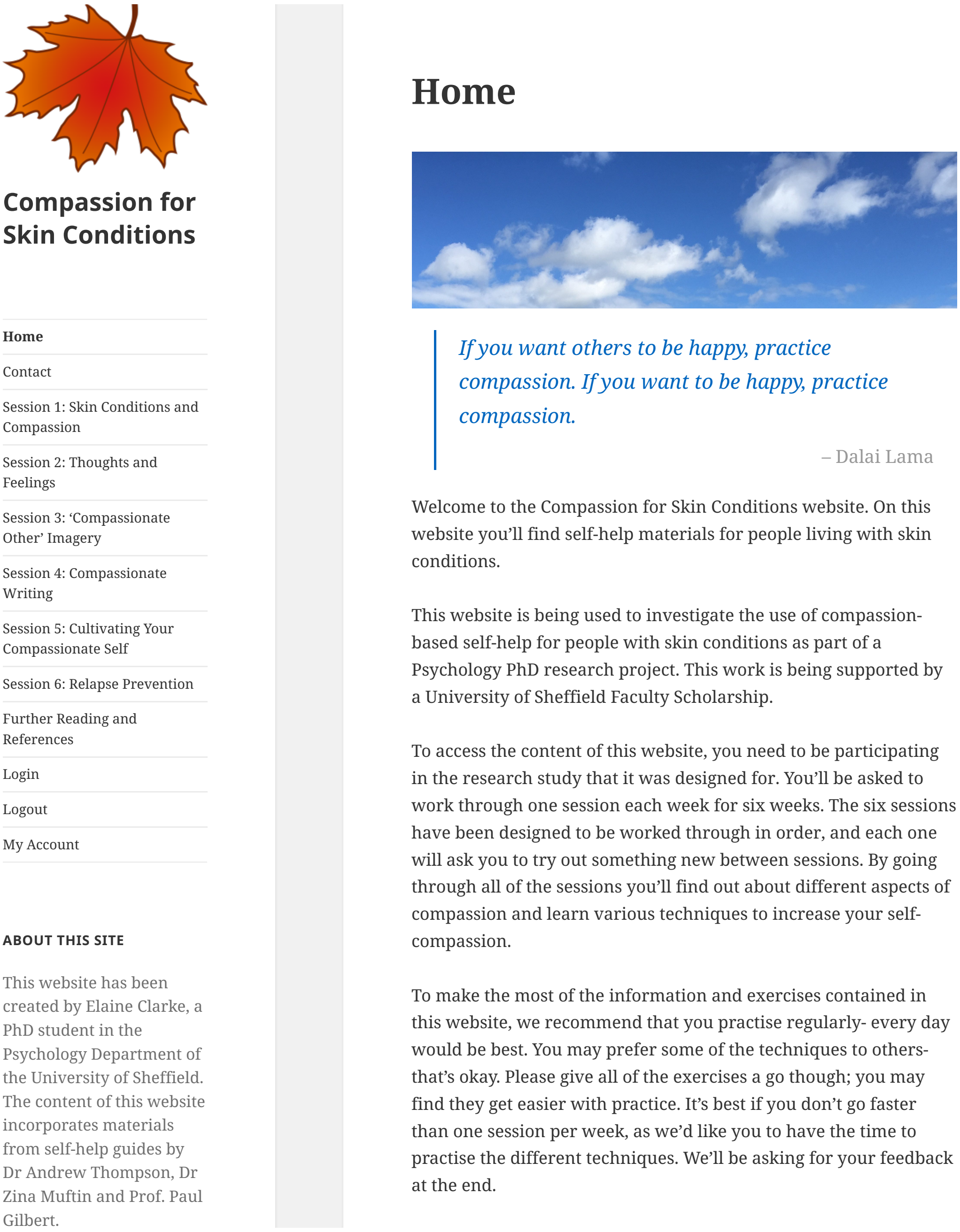
Which part of the Compassion for Skin Conditions programme was the least helpful/valuable for you?

Is there anything else you would like us to know about your experience of using the Compassion for Skin Conditions self-help programme?

G.11 Screenshots from the Compassion for Skin Conditions Website

Figure G.1

Screenshot of Compassion for Skin Conditions Home Page



Compassion for Skin Conditions

ABOUT THIS SITE

This website has been created by Elaine Clarke, a PhD student in the Psychology Department of the University of Sheffield. The content of this website incorporates materials from self-help guides by Dr Andrew Thompson, Dr Zina Muftin and Prof. Paul Gilbert.

Home

> *If you want others to be happy, practice compassion. If you want to be happy, practice compassion.*
>
> – Dalai Lama

Welcome to the Compassion for Skin Conditions website. On this website you’ll find self-help materials for people living with skin conditions.

This website is being used to investigate the use of compassion-based self-help for people with skin conditions as part of a Psychology PhD research project. This work is being supported by a University of Sheffield Faculty Scholarship.

To access the content of this website, you need to be participating in the research study that it was designed for. You’ll be asked to work through one session each week for six weeks. The six sessions have been designed to be worked through in order, and each one will ask you to try out something new between sessions. By going through all of the sessions you’ll find out about different aspects of compassion and learn various techniques to increase your self-compassion.

To make the most of the information and exercises contained in this website, we recommend that you practise regularly- every day would be best. You may prefer some of the techniques to others- that’s okay. Please give all of the exercises a go though; you may find they get easier with practice. It’s best if you don’t go faster than one session per week, as we’d like you to have the time to practise the different techniques. We’ll be asking for your feedback at the end.

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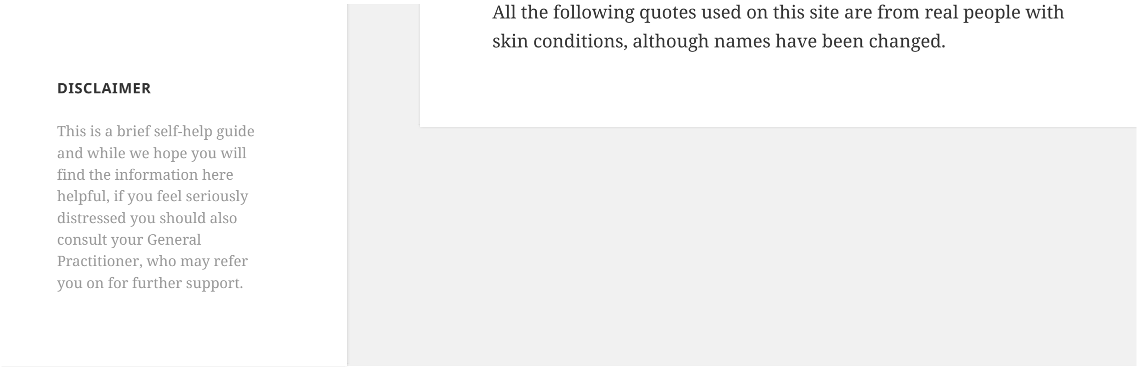
Home Page Screenshot Continued



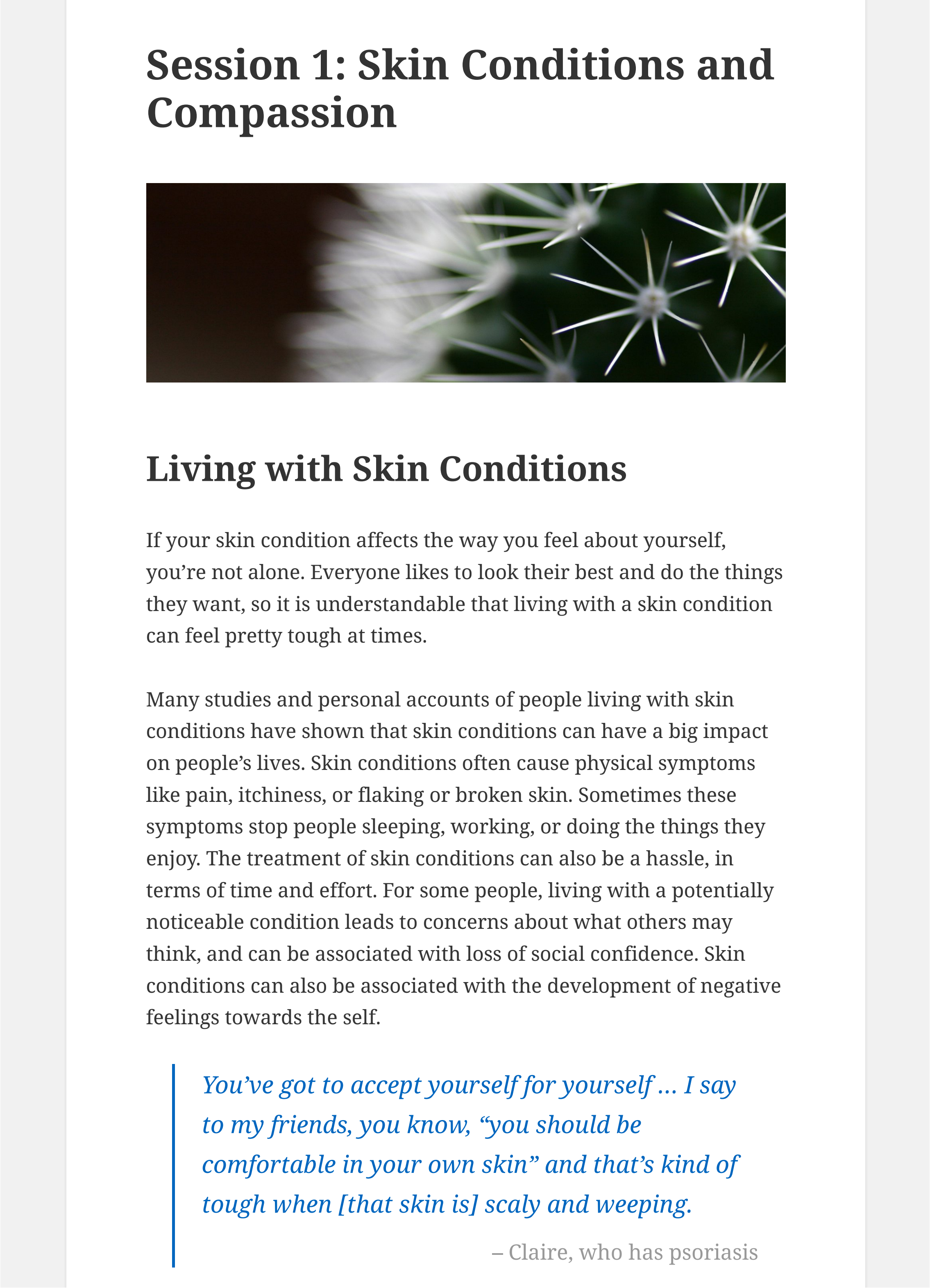
All the following quotes used on this site are from real people with skin conditions, although names have been changed.

DISCLAIMER

This is a brief self-help guide and while we hope you will find the information here helpful, if you feel seriously distressed you should also consult your General Practitioner, who may refer you on for further support.

Note. Side bar with navigation, information and disclaimer were displayed on each page of the website, but have not been included in Figures G.2–G.7 for clarity.

Figure G.2
Screenshot of Compassion for Skin Conditions Session 1



Session 1: Skin Conditions and Compassion

Living with Skin Conditions

If your skin condition affects the way you feel about yourself, you're not alone. Everyone likes to look their best and do the things they want, so it is understandable that living with a skin condition can feel pretty tough at times.

Many studies and personal accounts of people living with skin conditions have shown that skin conditions can have a big impact on people's lives. Skin conditions often cause physical symptoms like pain, itchiness, or flaking or broken skin. Sometimes these symptoms stop people sleeping, working, or doing the things they enjoy. The treatment of skin conditions can also be a hassle, in terms of time and effort. For some people, living with a potentially noticeable condition leads to concerns about what others may think, and can be associated with loss of social confidence. Skin conditions can also be associated with the development of negative feelings towards the self.

> *You've got to accept yourself for yourself … I say to my friends, you know, "you should be comfortable in your own skin" and that's kind of tough when [that skin is] scaly and weeping.*
>
> – Claire, who has psoriasis

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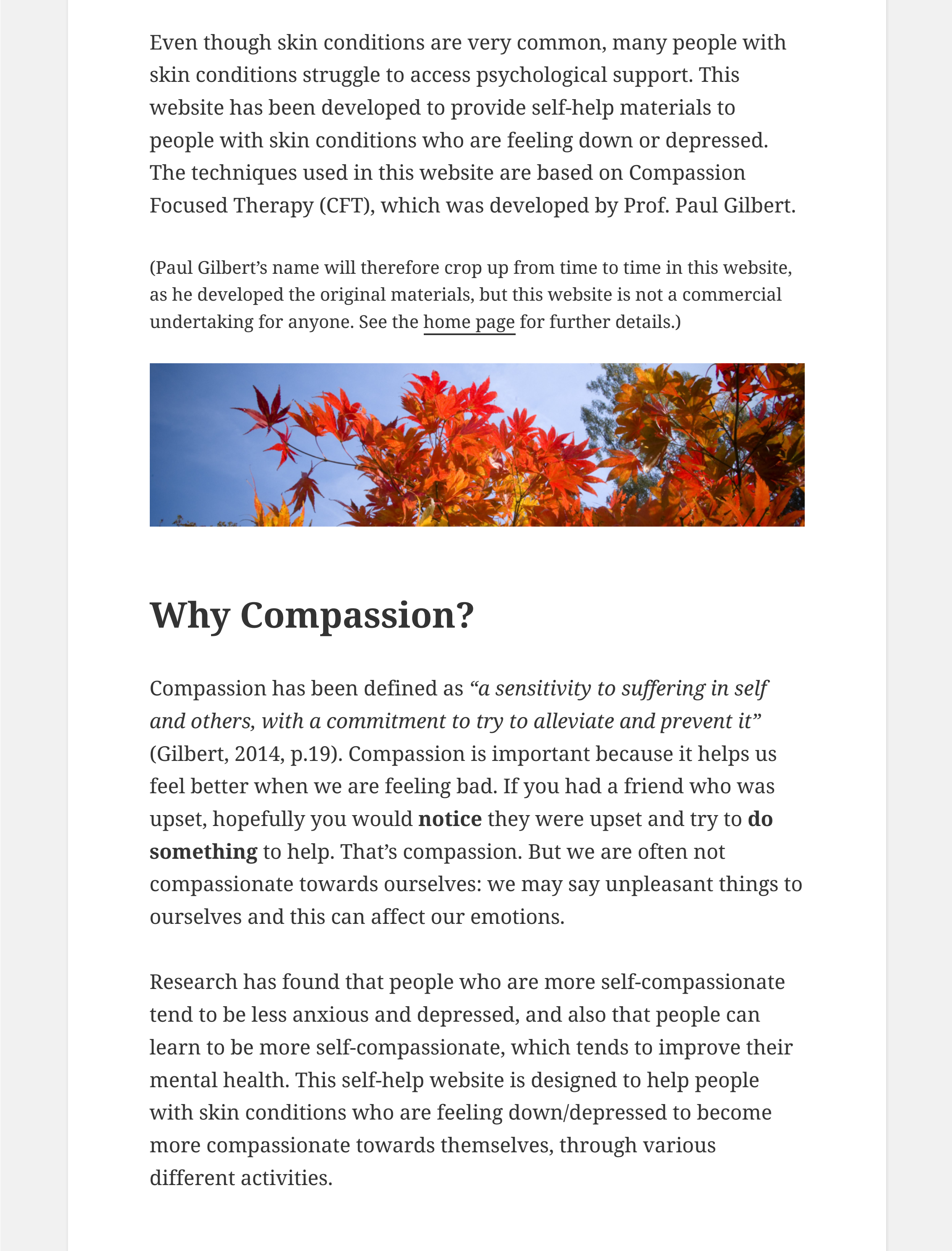
Session 1 Screenshot Continued



Even though skin conditions are very common, many people with skin conditions struggle to access psychological support. This website has been developed to provide self-help materials to people with skin conditions who are feeling down or depressed. The techniques used in this website are based on Compassion Focused Therapy (CFT), which was developed by Prof. Paul Gilbert.

(Paul Gilbert's name will therefore crop up from time to time in this website, as he developed the original materials, but this website is not a commercial undertaking for anyone. See the home page for further details.)

Why Compassion?

Compassion has been defined as *"a sensitivity to suffering in self and others, with a commitment to try to alleviate and prevent it"* (Gilbert, 2014, p.19). Compassion is important because it helps us feel better when we are feeling bad. If you had a friend who was upset, hopefully you would **notice** they were upset and try to **do something** to help. That's compassion. But we are often not compassionate towards ourselves: we may say unpleasant things to ourselves and this can affect our emotions.

Research has found that people who are more self-compassionate tend to be less anxious and depressed, and also that people can learn to be more self-compassionate, which tends to improve their mental health. This self-help website is designed to help people with skin conditions who are feeling down/depressed to become more compassionate towards themselves, through various different activities.

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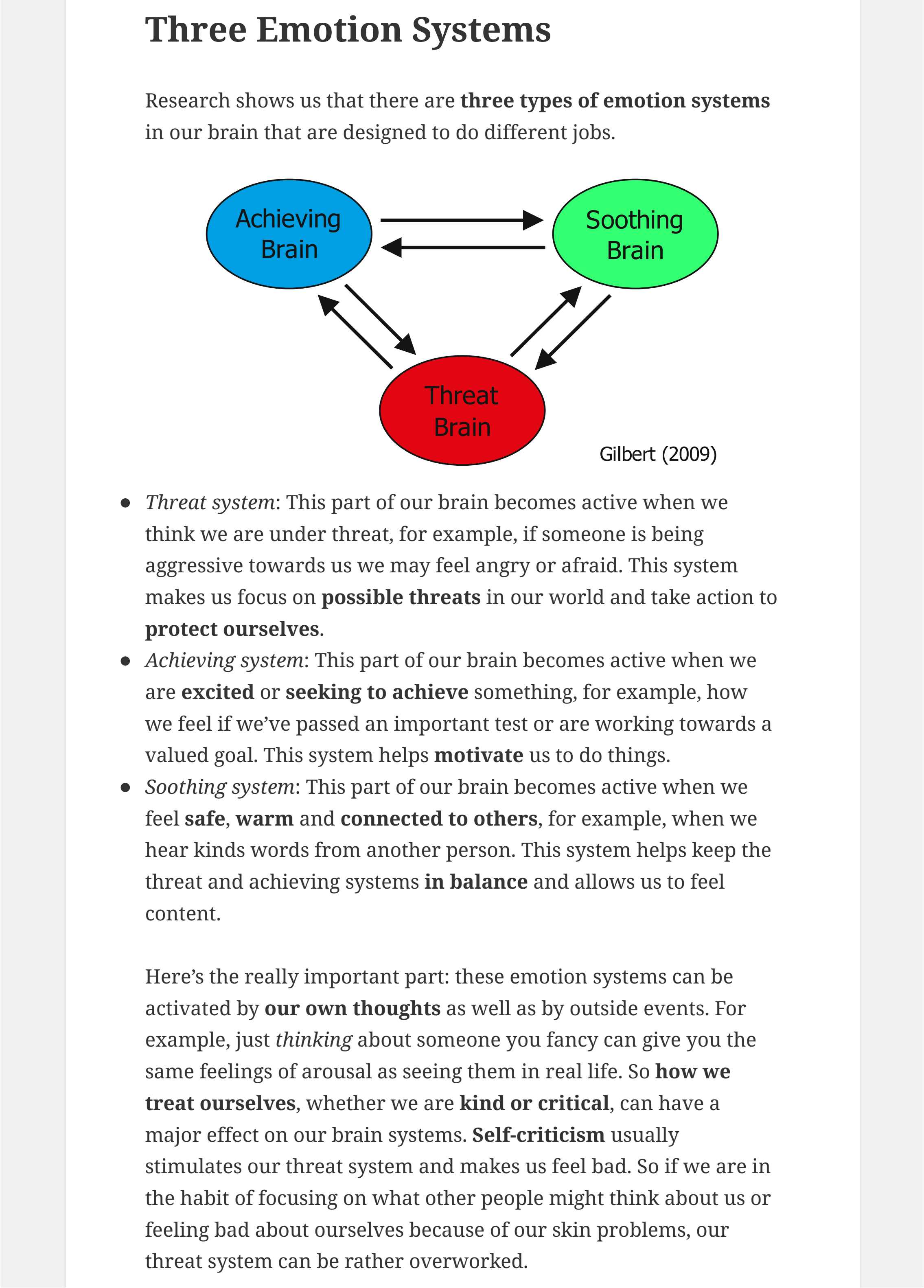
Session 1 Screenshot Continued



Three Emotion Systems

Research shows us that there are **three types of emotion systems** in our brain that are designed to do different jobs.

Gilbert (2009)

- *Threat system*: This part of our brain becomes active when we think we are under threat, for example, if someone is being aggressive towards us we may feel angry or afraid. This system makes us focus on **possible threats** in our world and take action to **protect ourselves**.
- *Achieving system*: This part of our brain becomes active when we are **excited** or **seeking to achieve** something, for example, how we feel if we've passed an important test or are working towards a valued goal. This system helps **motivate** us to do things.
- *Soothing system*: This part of our brain becomes active when we feel **safe**, **warm** and **connected to others**, for example, when we hear kinds words from another person. This system helps keep the threat and achieving systems **in balance** and allows us to feel content.

Here's the really important part: these emotion systems can be activated by **our own thoughts** as well as by outside events. For example, just *thinking* about someone you fancy can give you the same feelings of arousal as seeing them in real life. So **how we treat ourselves**, whether we are **kind or critical**, can have a major effect on our brain systems. **Self-criticism** usually stimulates our threat system and makes us feel bad. So if we are in the habit of focusing on what other people might think about us or feeling bad about ourselves because of our skin problems, our threat system can be rather overworked.

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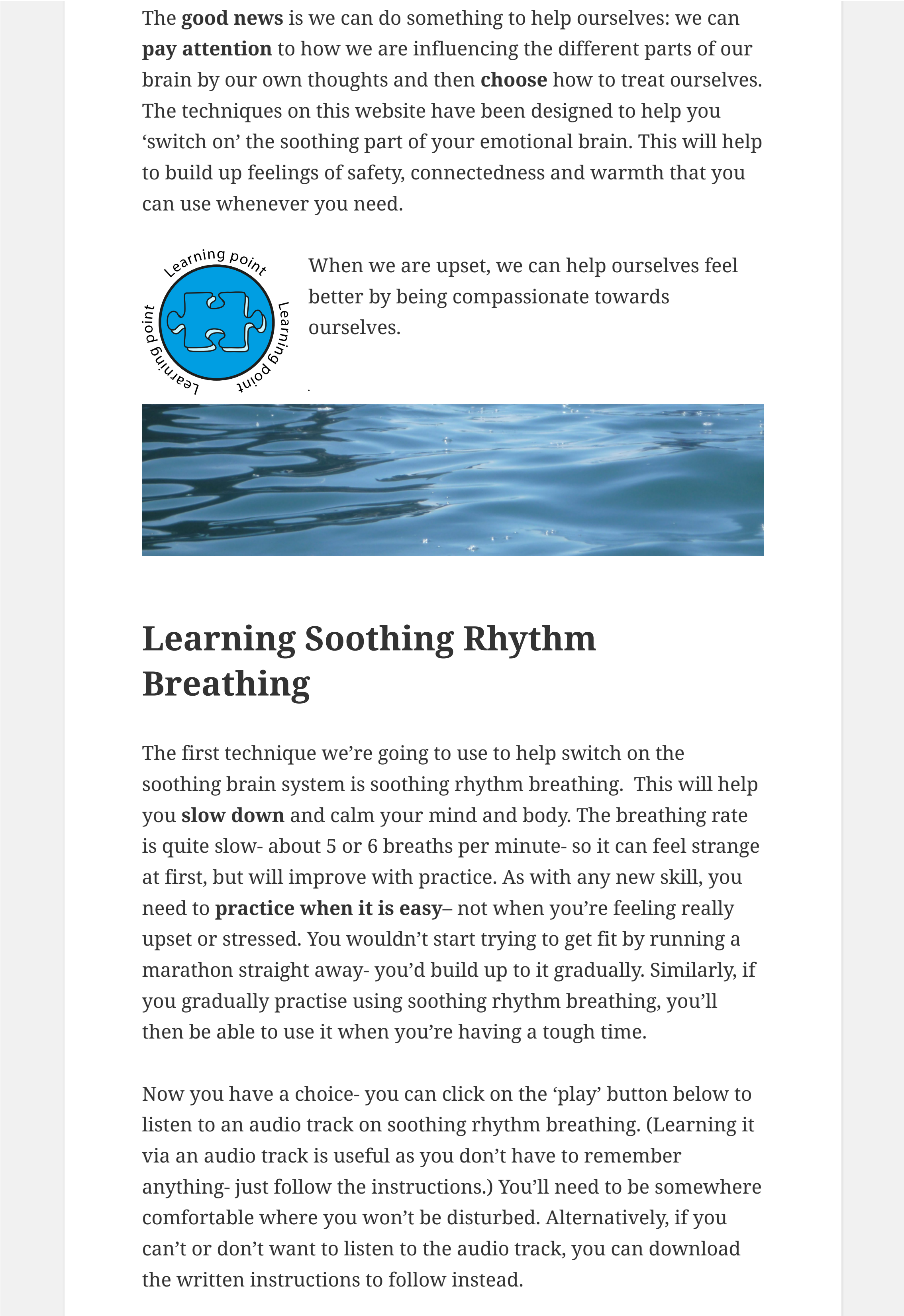
Session 1 Screenshot Continued



The **good news** is we can do something to help ourselves: we can **pay attention** to how we are influencing the different parts of our brain by our own thoughts and then **choose** how to treat ourselves. The techniques on this website have been designed to help you 'switch on' the soothing part of your emotional brain. This will help to build up feelings of safety, connectedness and warmth that you can use whenever you need.

When we are upset, we can help ourselves feel better by being compassionate towards ourselves.

Learning Soothing Rhythm Breathing

The first technique we're going to use to help switch on the soothing brain system is soothing rhythm breathing. This will help you **slow down** and calm your mind and body. The breathing rate is quite slow- about 5 or 6 breaths per minute- so it can feel strange at first, but will improve with practice. As with any new skill, you need to **practice when it is easy**– not when you're feeling really upset or stressed. You wouldn't start trying to get fit by running a marathon straight away- you'd build up to it gradually. Similarly, if you gradually practise using soothing rhythm breathing, you'll then be able to use it when you're having a tough time.

Now you have a choice- you can click on the 'play' button below to listen to an audio track on soothing rhythm breathing. (Learning it via an audio track is useful as you don't have to remember anything- just follow the instructions.) You'll need to be somewhere comfortable where you won't be disturbed. Alternatively, if you can't or don't want to listen to the audio track, you can download the written instructions to follow instead.

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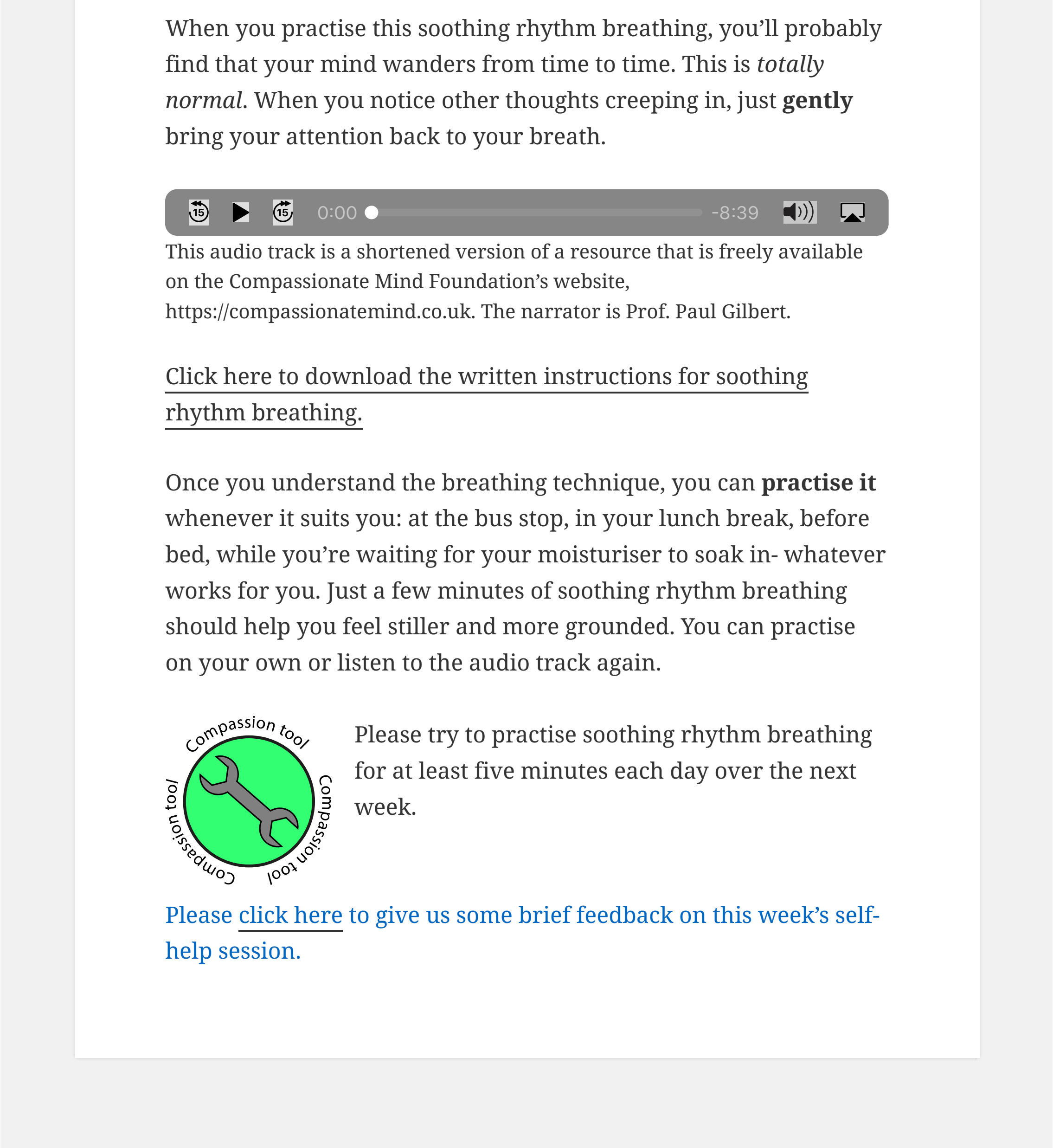
Session 1 Screenshot Continued



When you practise this soothing rhythm breathing, you'll probably find that your mind wanders from time to time. This is *totally normal*. When you notice other thoughts creeping in, just **gently** bring your attention back to your breath.

This audio track is a shortened version of a resource that is freely available on the Compassionate Mind Foundation's website, https://compassionatemind.co.uk. The narrator is Prof. Paul Gilbert.

Click here to download the written instructions for soothing rhythm breathing.

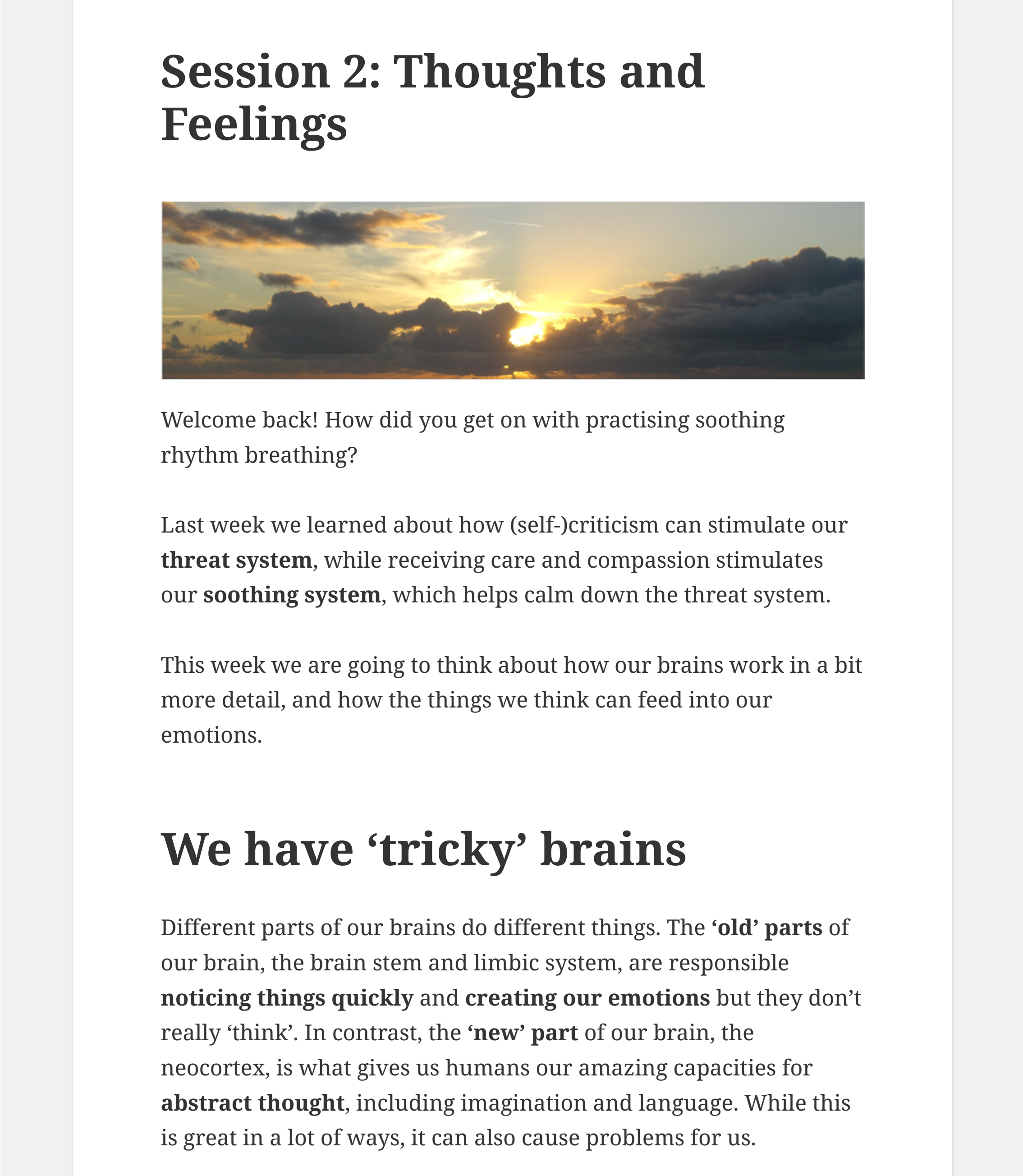
Once you understand the breathing technique, you can **practise it** whenever it suits you: at the bus stop, in your lunch break, before bed, while you're waiting for your moisturiser to soak in- whatever works for you. Just a few minutes of soothing rhythm breathing should help you feel stiller and more grounded. You can practise on your own or listen to the audio track again.

Please try to practise soothing rhythm breathing for at least five minutes each day over the next week.

Please click here to give us some brief feedback on this week's self-help session.

Figure G.3

Screenshot of Compassion for Skin Conditions Session 2



Session 2: Thoughts and Feelings

Welcome back! How did you get on with practising soothing rhythm breathing?

Last week we learned about how (self-)criticism can stimulate our **threat system**, while receiving care and compassion stimulates our **soothing system**, which helps calm down the threat system.

This week we are going to think about how our brains work in a bit more detail, and how the things we think can feed into our emotions.

We have ‘tricky’ brains

Different parts of our brains do different things. The **‘old’ parts** of our brain, the brain stem and limbic system, are responsible **noticing things quickly** and **creating our emotions** but they don’t really ‘think’. In contrast, the **‘new’ part** of our brain, the neocortex, is what gives us humans our amazing capacities for **abstract thought**, including imagination and language. While this is great in a lot of ways, it can also cause problems for us.

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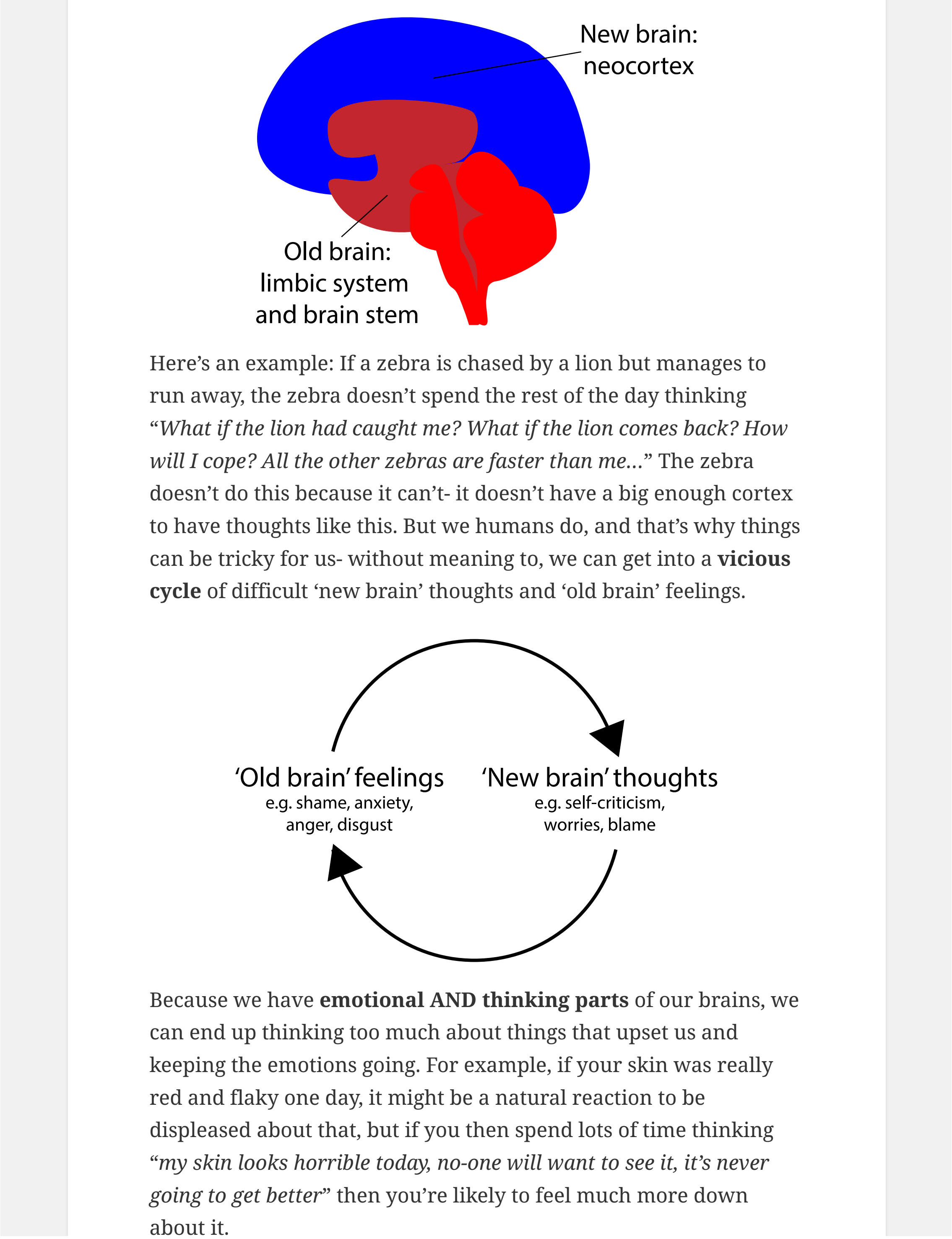
Session 2 Screenshot Continued



Here’s an example: If a zebra is chased by a lion but manages to run away, the zebra doesn’t spend the rest of the day thinking “*What if the lion had caught me? What if the lion comes back? How will I cope? All the other zebras are faster than me…*” The zebra doesn’t do this because it can’t- it doesn’t have a big enough cortex to have thoughts like this. But we humans do, and that’s why things can be tricky for us- without meaning to, we can get into a **vicious cycle** of difficult ‘new brain’ thoughts and ‘old brain’ feelings.

Because we have **emotional AND thinking parts** of our brains, we can end up thinking too much about things that upset us and keeping the emotions going. For example, if your skin was really red and flaky one day, it might be a natural reaction to be displeased about that, but if you then spend lots of time thinking “*my skin looks horrible today, no-one will want to see it, it’s never going to get better*” then you’re likely to feel much more down about it.

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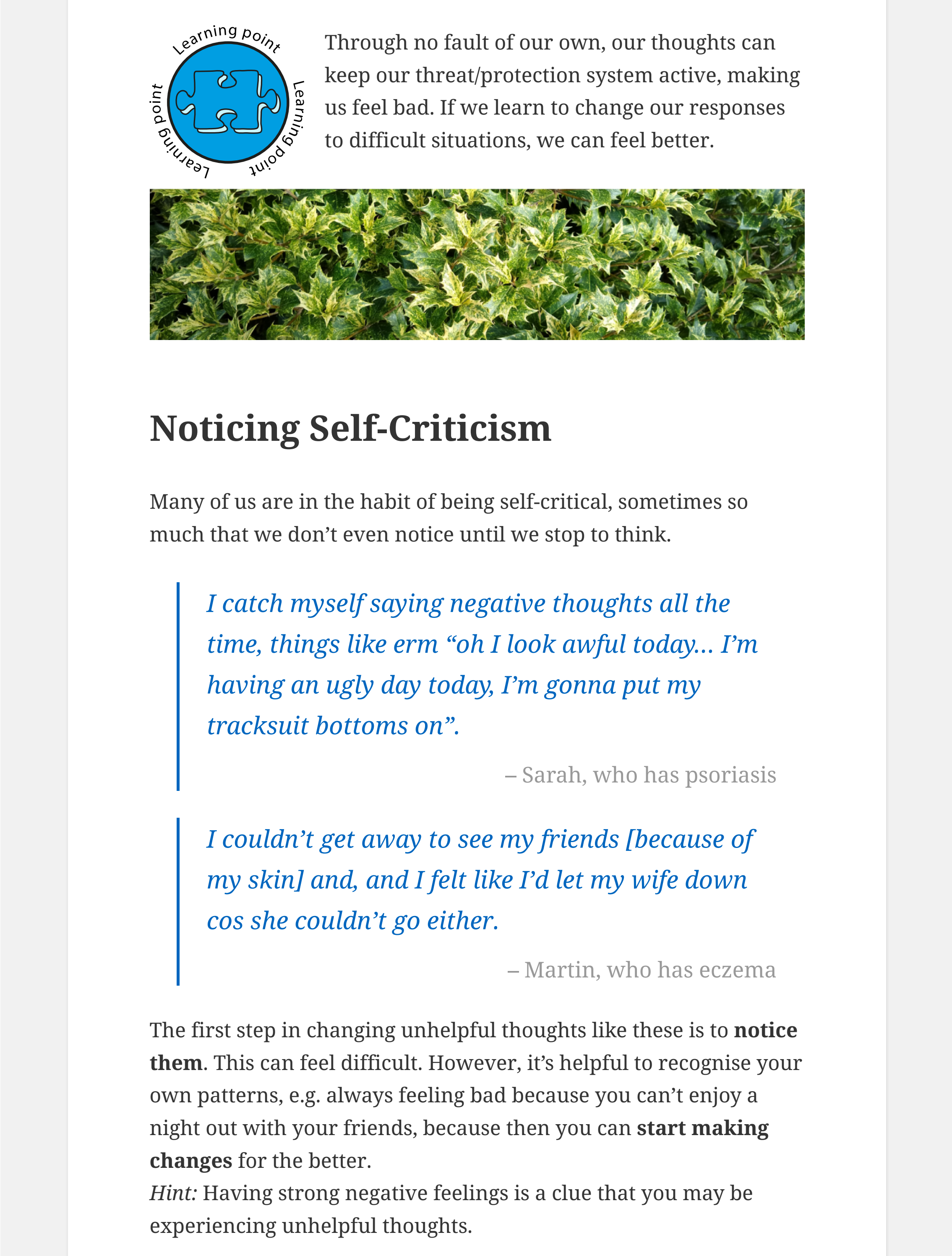

Through no fault of our own, our thoughts can keep our threat/protection system active, making us feel bad. If we learn to change our responses to difficult situations, we can feel better.

Noticing Self-Criticism

Many of us are in the habit of being self-critical, sometimes so much that we don't even notice until we stop to think.

> *I catch myself saying negative thoughts all the time, things like erm "oh I look awful today… I'm having an ugly day today, I'm gonna put my tracksuit bottoms on".*
>
> – Sarah, who has psoriasis

> *I couldn't get away to see my friends [because of my skin] and, and I felt like I'd let my wife down cos she couldn't go either.*
>
> – Martin, who has eczema

The first step in changing unhelpful thoughts like these is to **notice them**. This can feel difficult. However, it's helpful to recognise your own patterns, e.g. always feeling bad because you can't enjoy a night out with your friends, because then you can **start making changes** for the better.

Hint: Having strong negative feelings is a clue that you may be experiencing unhelpful thoughts.

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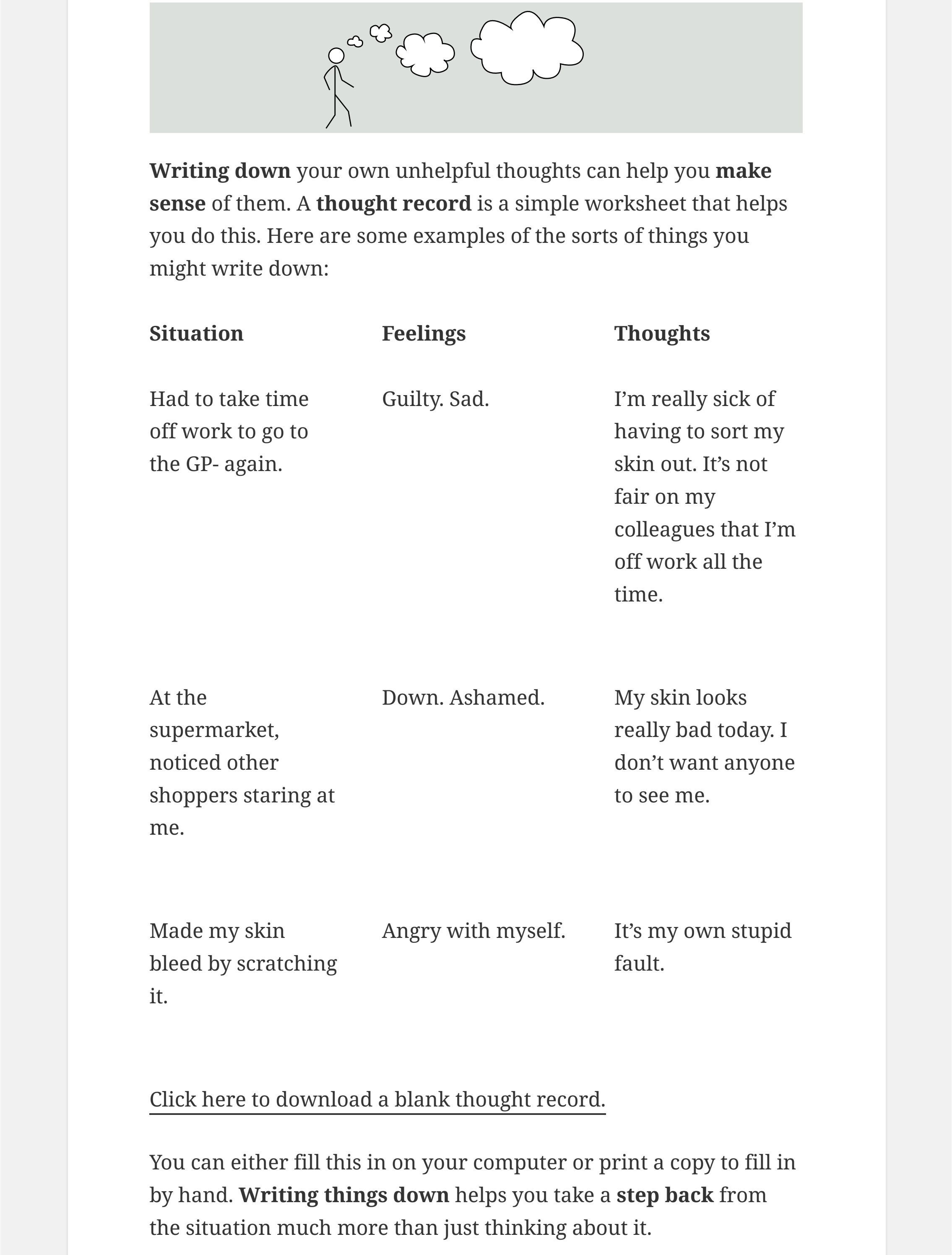
Session 2 Screenshot Continued



Writing down your own unhelpful thoughts can help you **make sense** of them. A **thought record** is a simple worksheet that helps you do this. Here are some examples of the sorts of things you might write down:

Situation	**Feelings**	**Thoughts**
Had to take time off work to go to the GP- again.	Guilty. Sad.	I’m really sick of having to sort my skin out. It’s not fair on my colleagues that I’m off work all the time.
At the supermarket, noticed other shoppers staring at me.	Down. Ashamed.	My skin looks really bad today. I don’t want anyone to see me.
Made my skin bleed by scratching it.	Angry with myself.	It’s my own stupid fault.

Click here to download a blank thought record.

You can either fill this in on your computer or print a copy to fill in by hand. **Writing things down** helps you take a **step back** from the situation much more than just thinking about it.

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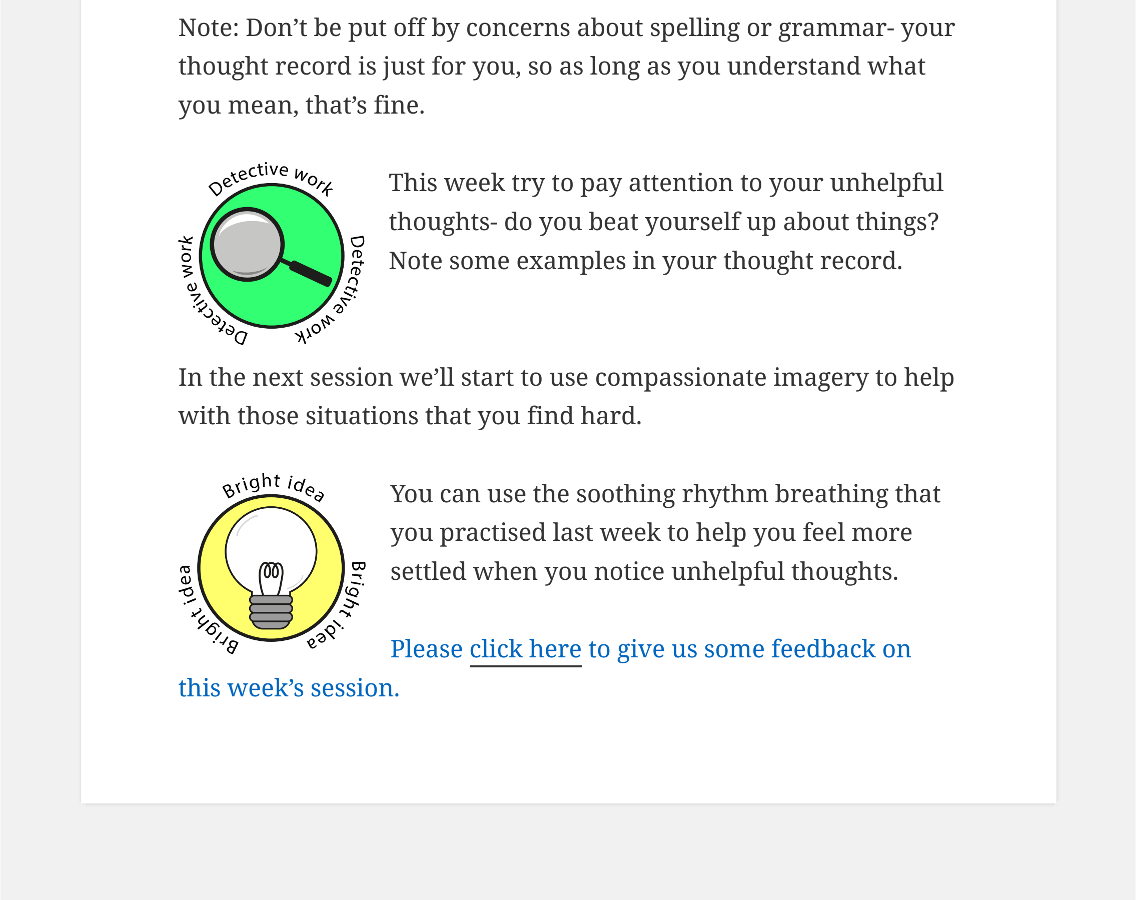
Session 2 Screenshot Continued



Note: Don't be put off by concerns about spelling or grammar- your thought record is just for you, so as long as you understand what you mean, that's fine.

This week try to pay attention to your unhelpful thoughts- do you beat yourself up about things? Note some examples in your thought record.

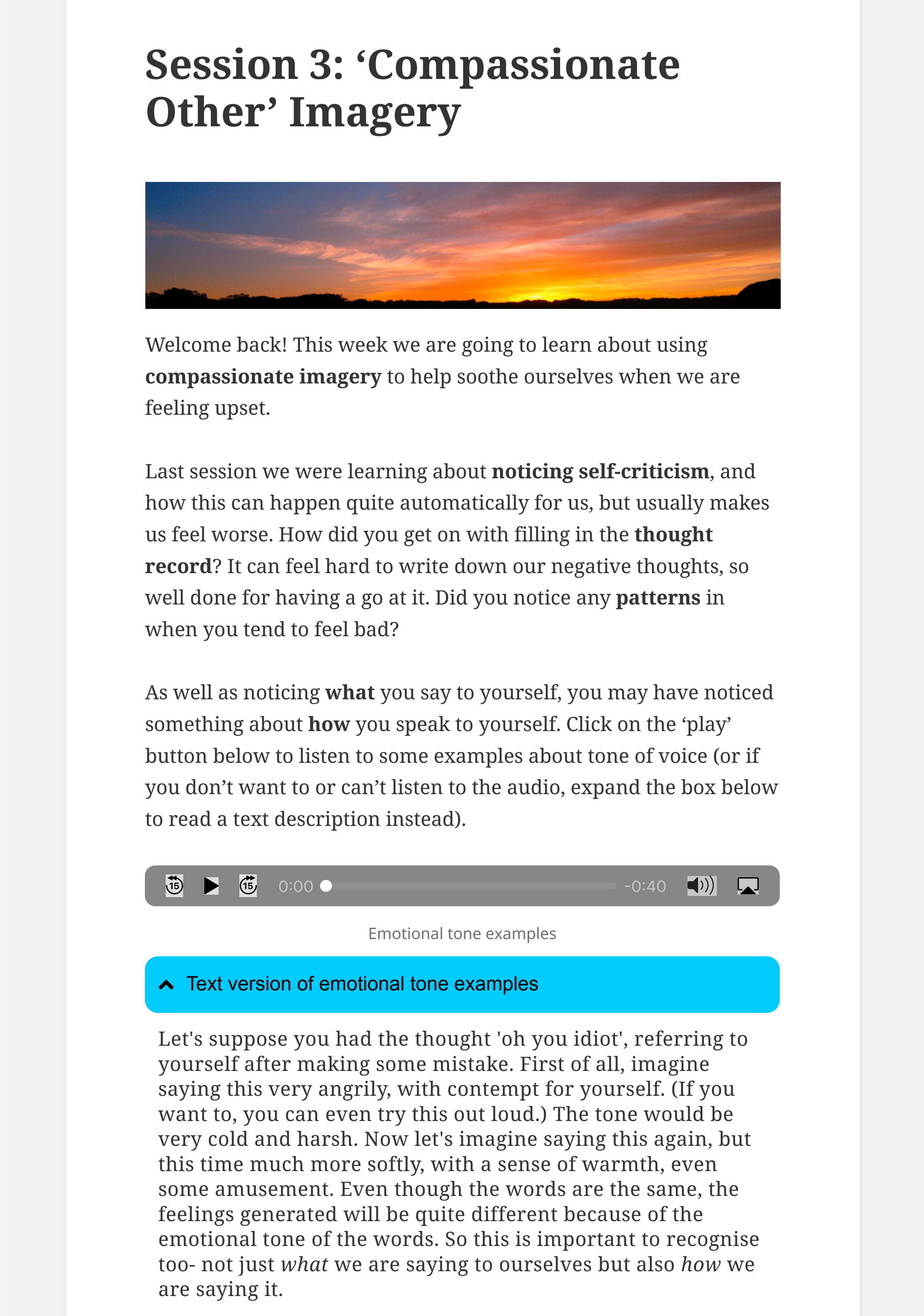
In the next session we'll start to use compassionate imagery to help with those situations that you find hard.

You can use the soothing rhythm breathing that you practised last week to help you feel more settled when you notice unhelpful thoughts.

Please click here to give us some feedback on this week's session.

Figure G.4

Screenshot of Compassion for Skin Conditions Session 3



Session 3: ‘Compassionate Other’ Imagery

Welcome back! This week we are going to learn about using **compassionate imagery** to help soothe ourselves when we are feeling upset.

Last session we were learning about **noticing self-criticism**, and how this can happen quite automatically for us, but usually makes us feel worse. How did you get on with filling in the **thought record**? It can feel hard to write down our negative thoughts, so well done for having a go at it. Did you notice any **patterns** in when you tend to feel bad?

As well as noticing **what** you say to yourself, you may have noticed something about **how** you speak to yourself. Click on the ‘play’ button below to listen to some examples about tone of voice (or if you don’t want to or can’t listen to the audio, expand the box below to read a text description instead).

Emotional tone examples

Text version of emotional tone examples

Let's suppose you had the thought 'oh you idiot', referring to yourself after making some mistake. First of all, imagine saying this very angrily, with contempt for yourself. (If you want to, you can even try this out loud.) The tone would be very cold and harsh. Now let's imagine saying this again, but this time much more softly, with a sense of warmth, even some amusement. Even though the words are the same, the feelings generated will be quite different because of the emotional tone of the words. So this is important to recognise too- not just *what* we are saying to ourselves but also *how* we are saying it.

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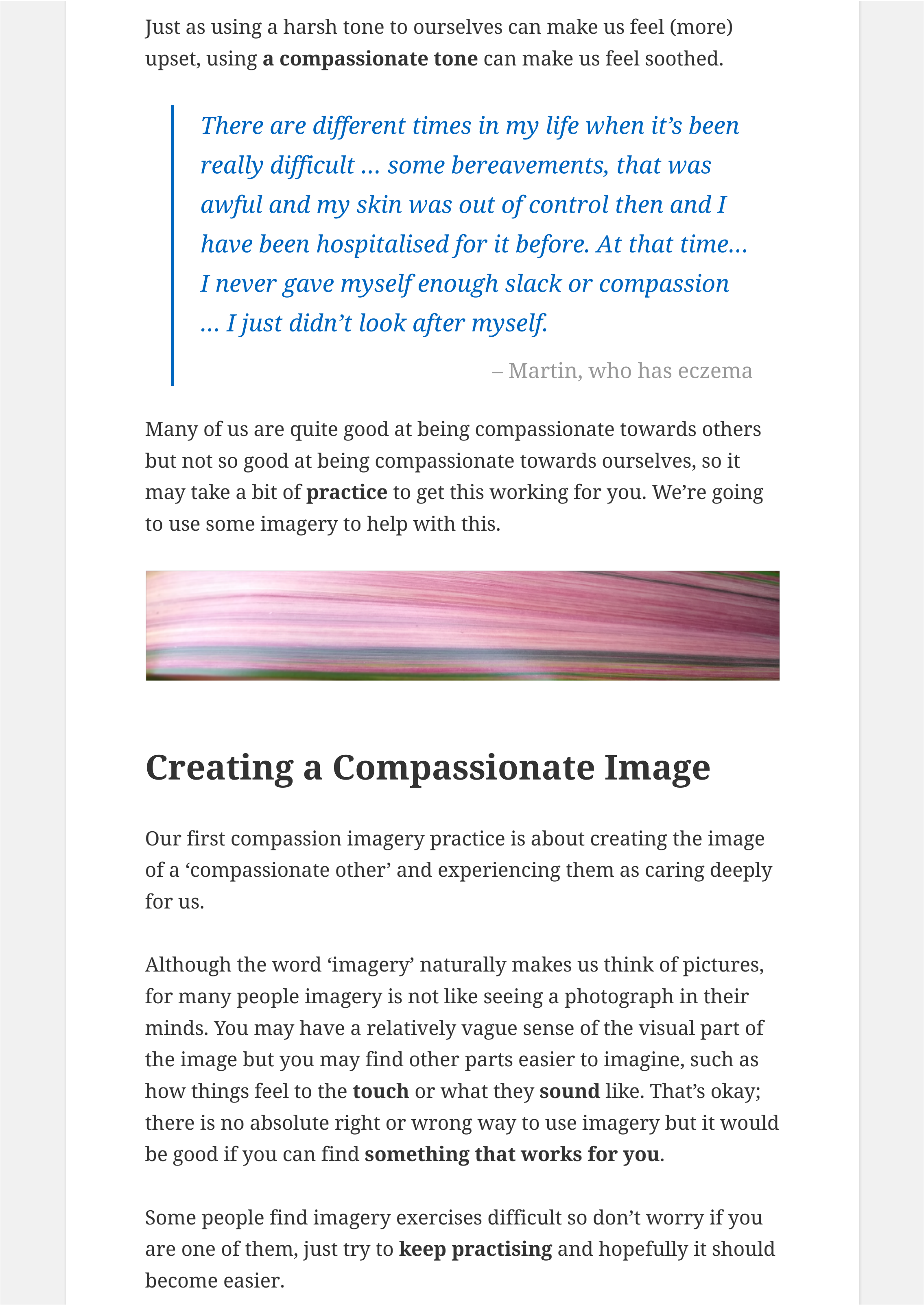

Just as using a harsh tone to ourselves can make us feel (more) upset, using **a compassionate tone** can make us feel soothed.

> *There are different times in my life when it's been really difficult … some bereavements, that was awful and my skin was out of control then and I have been hospitalised for it before. At that time… I never gave myself enough slack or compassion … I just didn't look after myself.*
>
> – Martin, who has eczema

Many of us are quite good at being compassionate towards others but not so good at being compassionate towards ourselves, so it may take a bit of **practice** to get this working for you. We're going to use some imagery to help with this.

Creating a Compassionate Image

Our first compassion imagery practice is about creating the image of a 'compassionate other' and experiencing them as caring deeply for us.

Although the word 'imagery' naturally makes us think of pictures, for many people imagery is not like seeing a photograph in their minds. You may have a relatively vague sense of the visual part of the image but you may find other parts easier to imagine, such as how things feel to the **touch** or what they **sound** like. That's okay; there is no absolute right or wrong way to use imagery but it would be good if you can find **something that works for you**.

Some people find imagery exercises difficult so don't worry if you are one of them, just try to **keep practising** and hopefully it should become easier.

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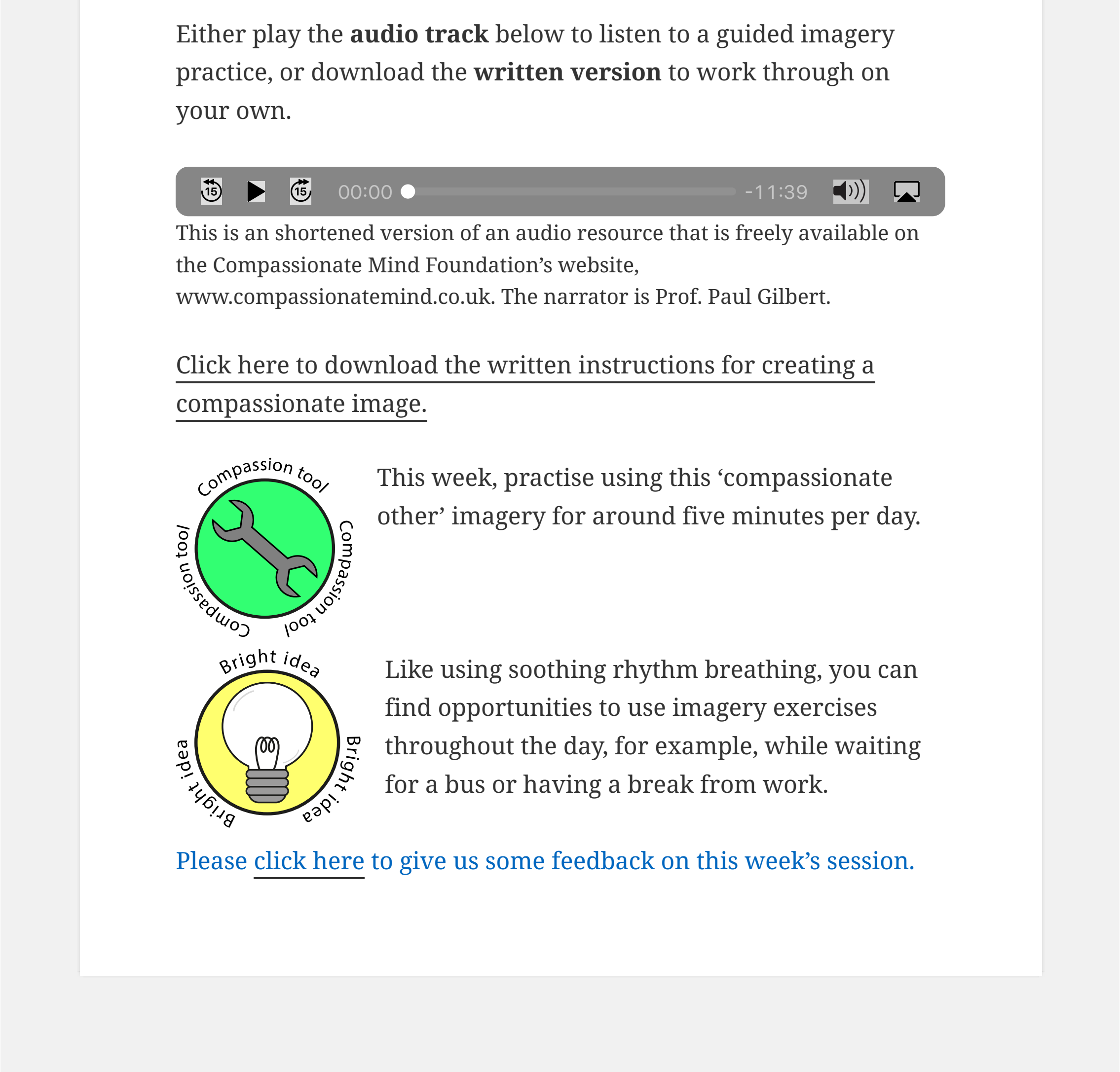
Session 3 Screenshot Continued



Either play the **audio track** below to listen to a guided imagery practice, or download the **written version** to work through on your own.

This is an shortened version of an audio resource that is freely available on the Compassionate Mind Foundation's website, www.compassionatemind.co.uk. The narrator is Prof. Paul Gilbert.

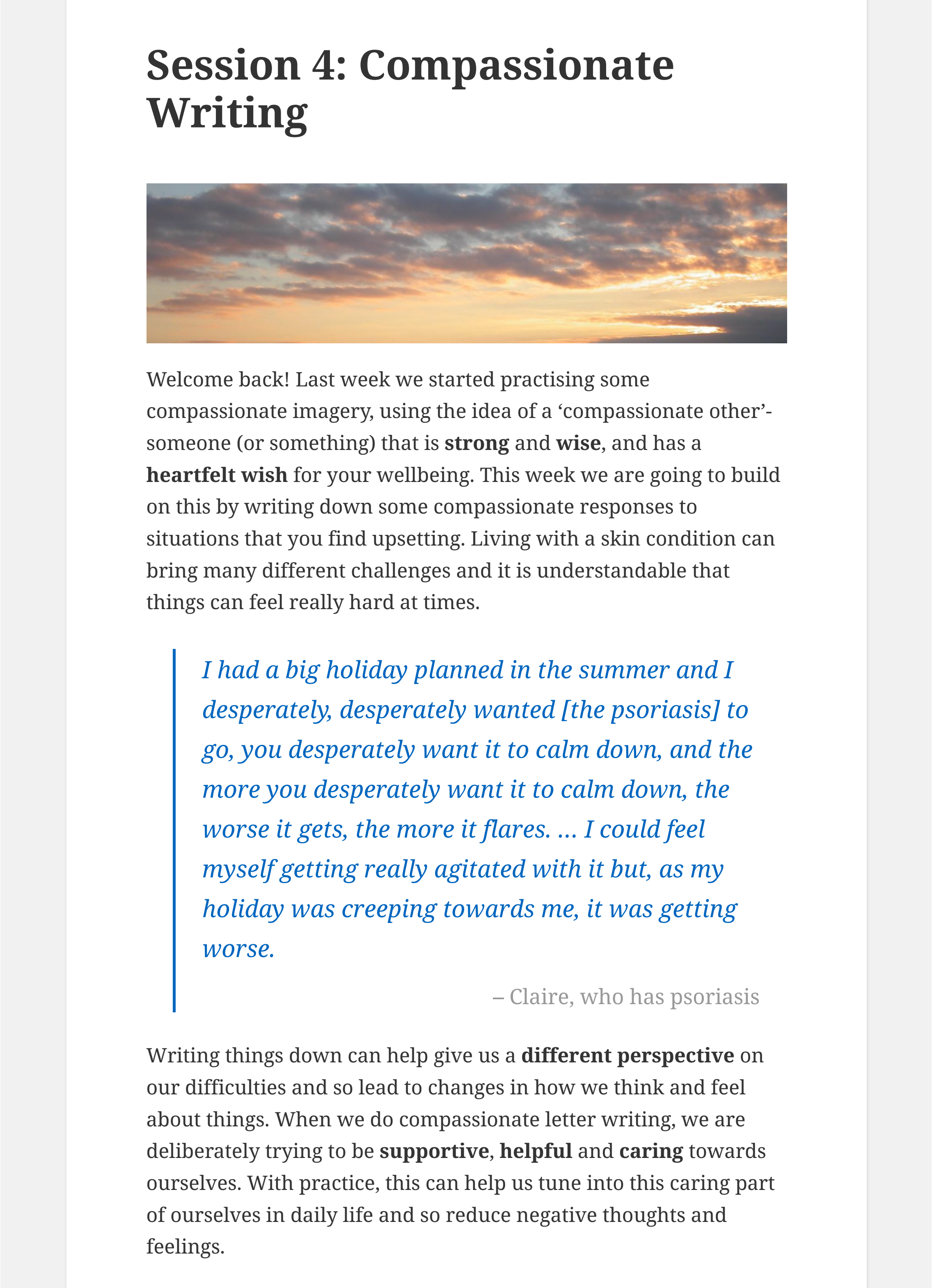
Click here to download the written instructions for creating a compassionate image.

This week, practise using this 'compassionate other' imagery for around five minutes per day.

Like using soothing rhythm breathing, you can find opportunities to use imagery exercises throughout the day, for example, while waiting for a bus or having a break from work.

Please click here to give us some feedback on this week's session.

Figure G.5
Screenshot of Compassion for Skin Conditions Session 4



Session 4: Compassionate Writing

Welcome back! Last week we started practising some compassionate imagery, using the idea of a ‘compassionate other’- someone (or something) that is **strong** and **wise**, and has a **heartfelt wish** for your wellbeing. This week we are going to build on this by writing down some compassionate responses to situations that you find upsetting. Living with a skin condition can bring many different challenges and it is understandable that things can feel really hard at times.

> *I had a big holiday planned in the summer and I desperately, desperately wanted [the psoriasis] to go, you desperately want it to calm down, and the more you desperately want it to calm down, the worse it gets, the more it flares. … I could feel myself getting really agitated with it but, as my holiday was creeping towards me, it was getting worse.*
>
> – Claire, who has psoriasis

Writing things down can help give us a **different perspective** on our difficulties and so lead to changes in how we think and feel about things. When we do compassionate letter writing, we are deliberately trying to be **supportive**, **helpful** and **caring** towards ourselves. With practice, this can help us tune into this caring part of ourselves in daily life and so reduce negative thoughts and feelings.

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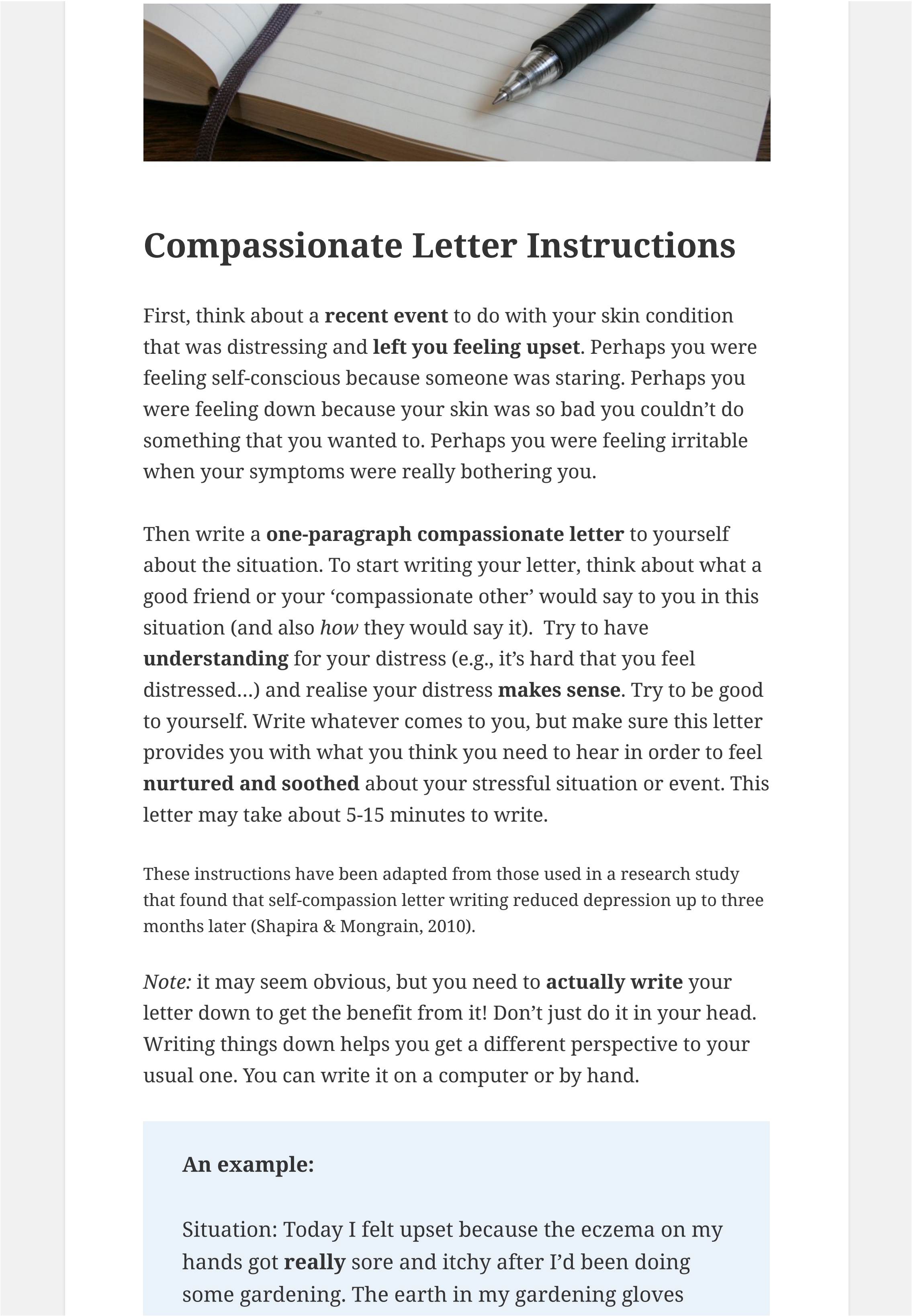
Session 4 Screenshot Continued



Compassionate Letter Instructions

First, think about a **recent event** to do with your skin condition that was distressing and **left you feeling upset**. Perhaps you were feeling self-conscious because someone was staring. Perhaps you were feeling down because your skin was so bad you couldn't do something that you wanted to. Perhaps you were feeling irritable when your symptoms were really bothering you.

Then write a **one-paragraph compassionate letter** to yourself about the situation. To start writing your letter, think about what a good friend or your 'compassionate other' would say to you in this situation (and also *how* they would say it). Try to have **understanding** for your distress (e.g., it's hard that you feel distressed…) and realise your distress **makes sense**. Try to be good to yourself. Write whatever comes to you, but make sure this letter provides you with what you think you need to hear in order to feel **nurtured and soothed** about your stressful situation or event. This letter may take about 5-15 minutes to write.

These instructions have been adapted from those used in a research study that found that self-compassion letter writing reduced depression up to three months later (Shapira & Mongrain, 2010).

Note: it may seem obvious, but you need to **actually write** your letter down to get the benefit from it! Don't just do it in your head. Writing things down helps you get a different perspective to your usual one. You can write it on a computer or by hand.

An example:

Situation: Today I felt upset because the eczema on my hands got **really** sore and itchy after I'd been doing some gardening. The earth in my gardening gloves

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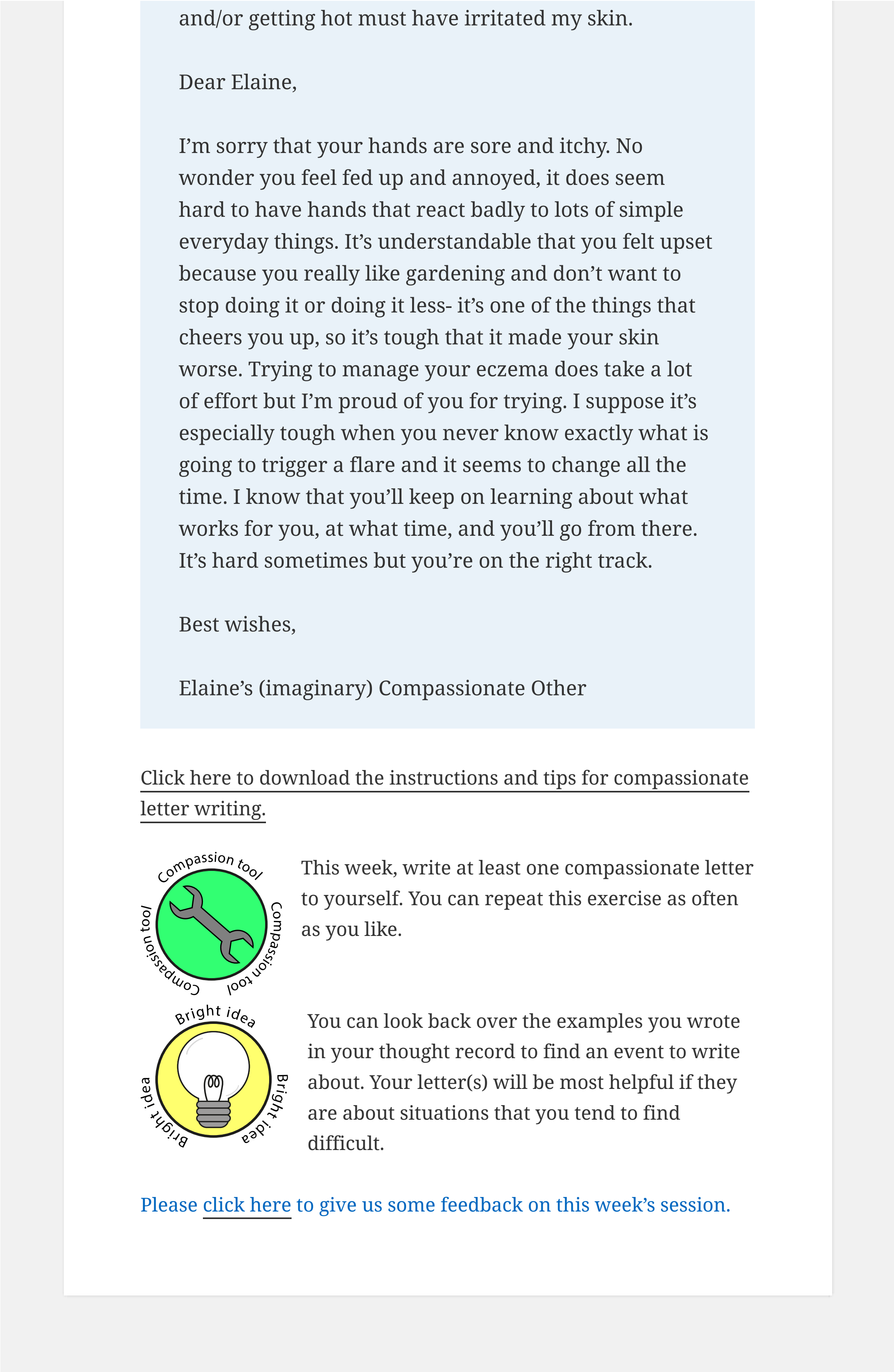
Session 4 Screenshot Continued



and/or getting hot must have irritated my skin.

Dear Elaine,

I'm sorry that your hands are sore and itchy. No wonder you feel fed up and annoyed, it does seem hard to have hands that react badly to lots of simple everyday things. It's understandable that you felt upset because you really like gardening and don't want to stop doing it or doing it less- it's one of the things that cheers you up, so it's tough that it made your skin worse. Trying to manage your eczema does take a lot of effort but I'm proud of you for trying. I suppose it's especially tough when you never know exactly what is going to trigger a flare and it seems to change all the time. I know that you'll keep on learning about what works for you, at what time, and you'll go from there. It's hard sometimes but you're on the right track.

Best wishes,

Elaine's (imaginary) Compassionate Other

Click here to download the instructions and tips for compassionate letter writing.

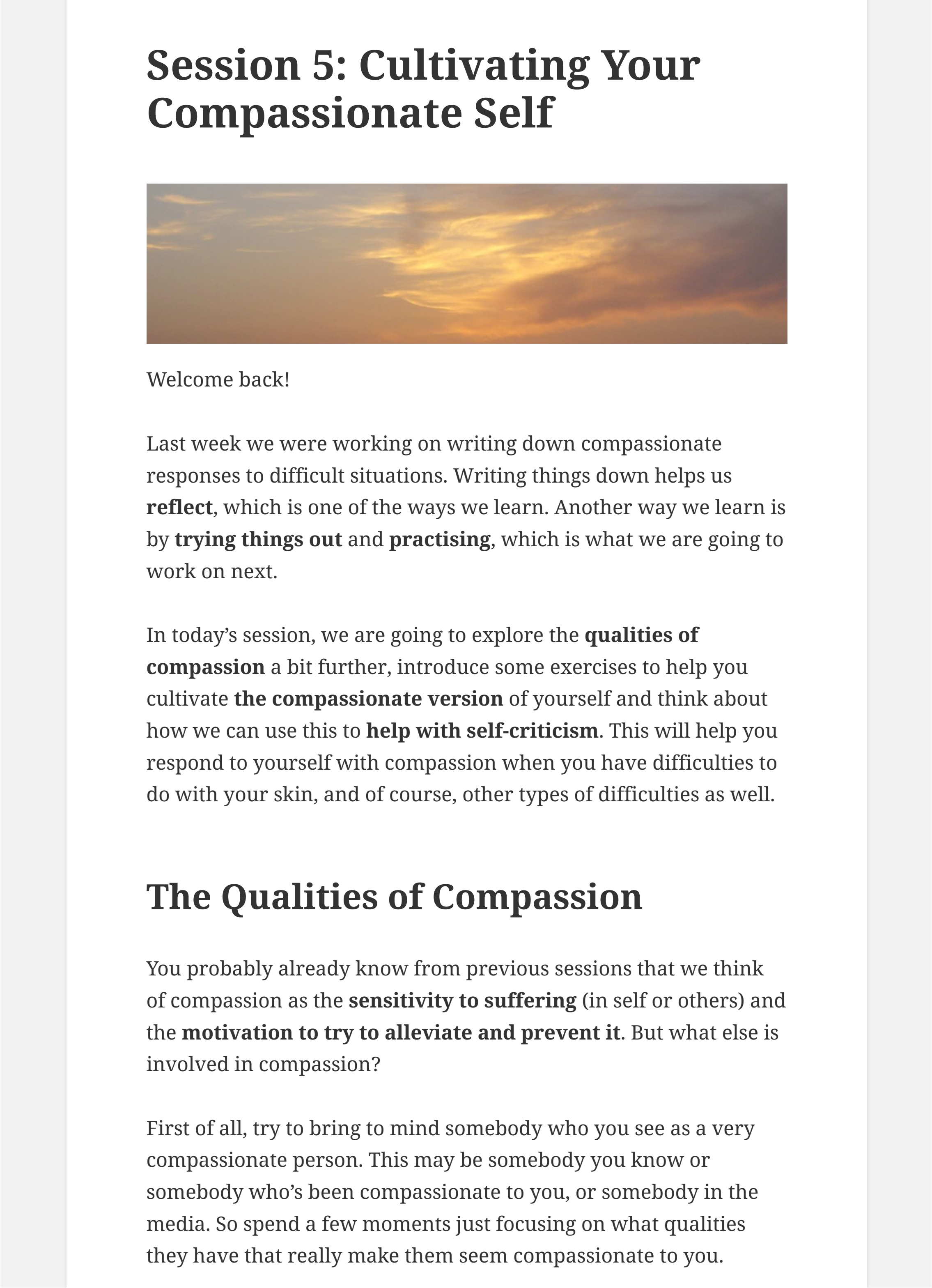
This week, write at least one compassionate letter to yourself. You can repeat this exercise as often as you like.

You can look back over the examples you wrote in your thought record to find an event to write about. Your letter(s) will be most helpful if they are about situations that you tend to find difficult.

Please click here to give us some feedback on this week's session.

Figure G.6

Screenshot of Compassion for Skin Conditions Session 5



Session 5: Cultivating Your Compassionate Self

Welcome back!

Last week we were working on writing down compassionate responses to difficult situations. Writing things down helps us **reflect**, which is one of the ways we learn. Another way we learn is by **trying things out** and **practising**, which is what we are going to work on next.

In today's session, we are going to explore the **qualities of compassion** a bit further, introduce some exercises to help you cultivate **the compassionate version** of yourself and think about how we can use this to **help with self-criticism**. This will help you respond to yourself with compassion when you have difficulties to do with your skin, and of course, other types of difficulties as well.

The Qualities of Compassion

You probably already know from previous sessions that we think of compassion as the **sensitivity to suffering** (in self or others) and the **motivation to try to alleviate and prevent it**. But what else is involved in compassion?

First of all, try to bring to mind somebody who you see as a very compassionate person. This may be somebody you know or somebody who's been compassionate to you, or somebody in the media. So spend a few moments just focusing on what qualities they have that really make them seem compassionate to you.

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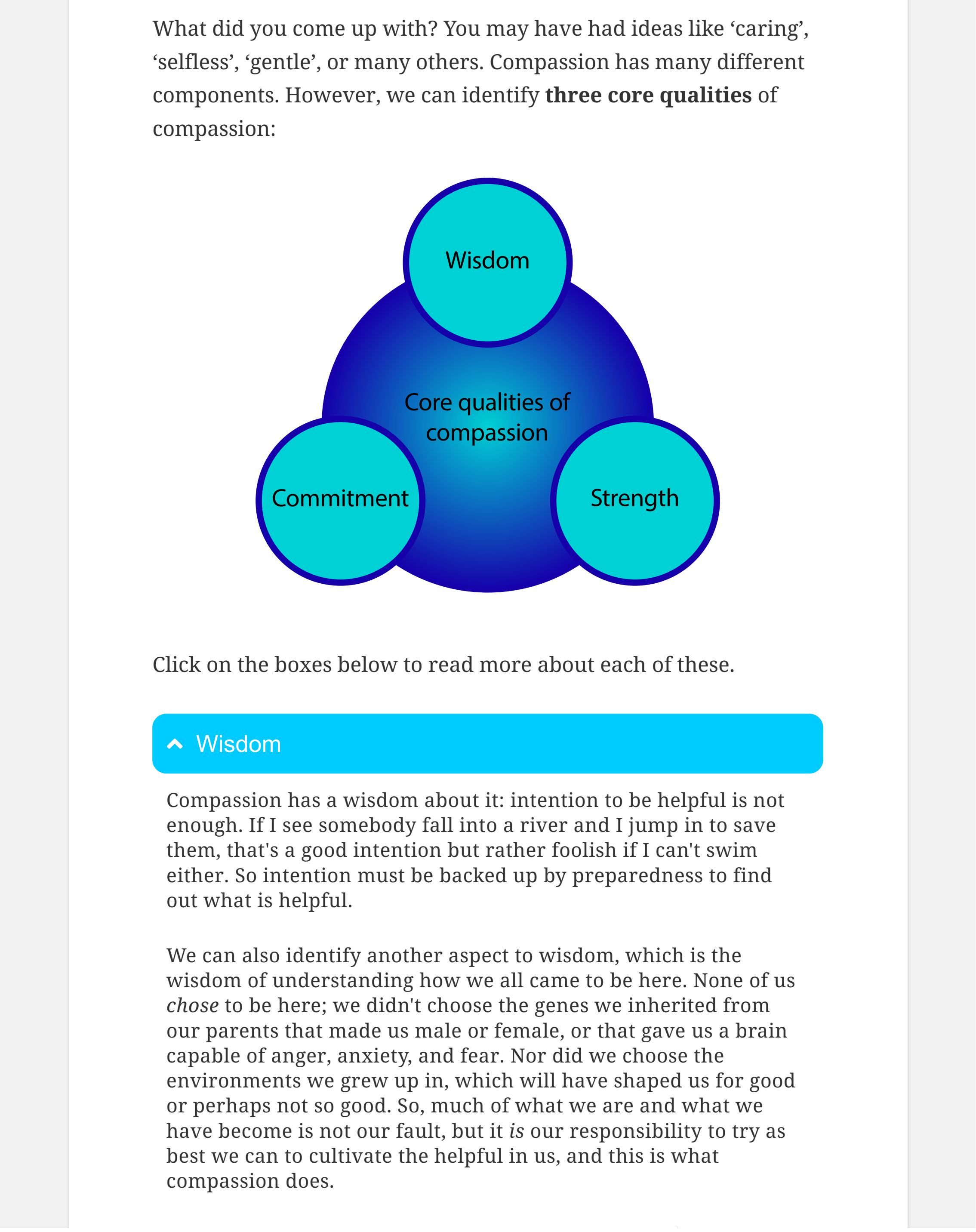
Session 5 Screenshot Continued



What did you come up with? You may have had ideas like ‘caring’, ‘selfless’, ‘gentle’, or many others. Compassion has many different components. However, we can identify **three core qualities** of compassion:

Click on the boxes below to read more about each of these.

Compassion has a wisdom about it: intention to be helpful is not enough. If I see somebody fall into a river and I jump in to save them, that's a good intention but rather foolish if I can't swim either. So intention must be backed up by preparedness to find out what is helpful.

We can also identify another aspect to wisdom, which is the wisdom of understanding how we all came to be here. None of us *chose* to be here; we didn't choose the genes we inherited from our parents that made us male or female, or that gave us a brain capable of anger, anxiety, and fear. Nor did we choose the environments we grew up in, which will have shaped us for good or perhaps not so good. So, much of what we are and what we have become is not our fault, but it *is* our responsibility to try as best we can to cultivate the helpful in us, and this is what compassion does.

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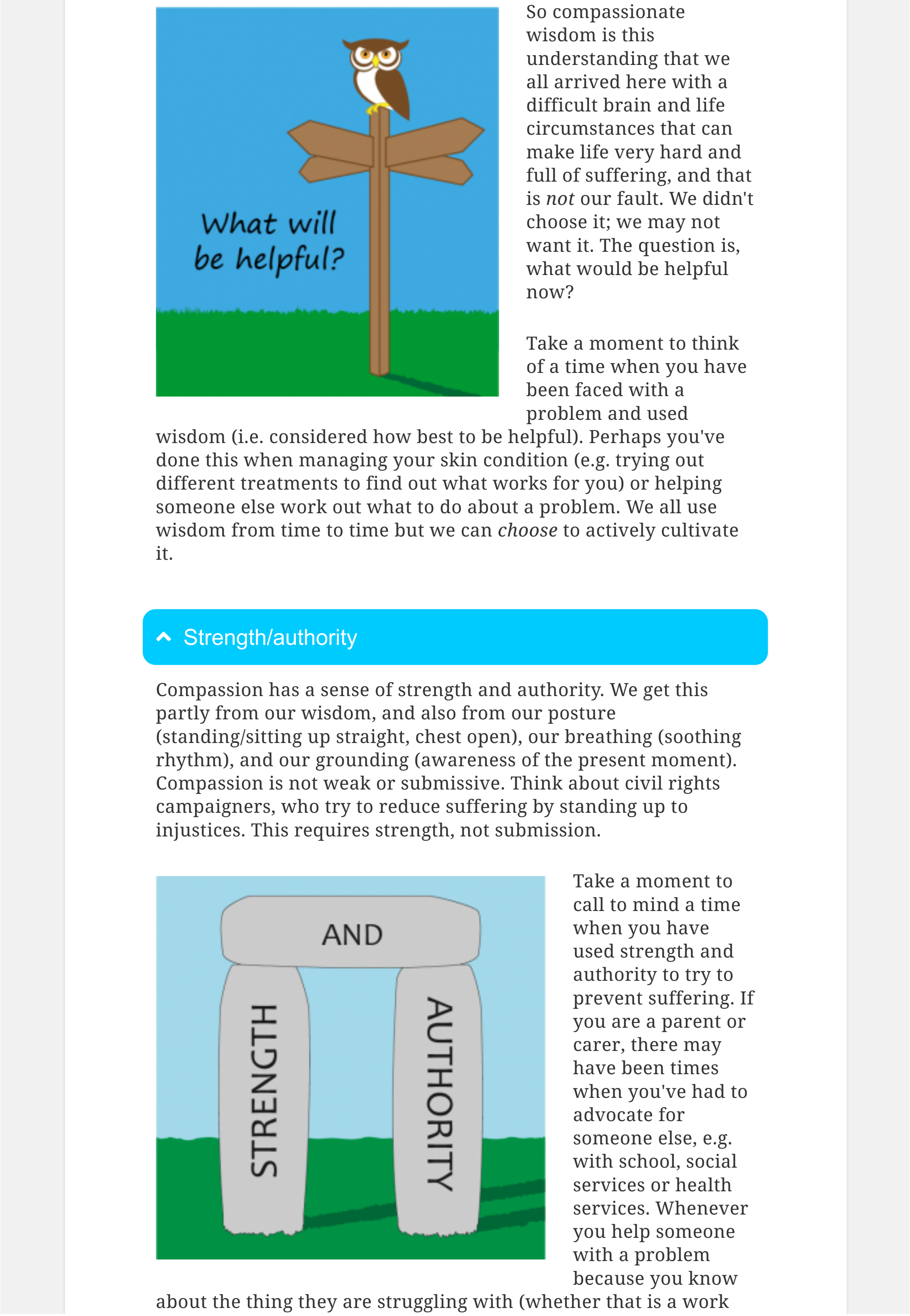

So compassionate wisdom is this understanding that we all arrived here with a difficult brain and life circumstances that can make life very hard and full of suffering, and that is *not* our fault. We didn't choose it; we may not want it. The question is, what would be helpful now?

Take a moment to think of a time when you have been faced with a problem and used wisdom (i.e. considered how best to be helpful). Perhaps you've done this when managing your skin condition (e.g. trying out different treatments to find out what works for you) or helping someone else work out what to do about a problem. We all use wisdom from time to time but we can *choose* to actively cultivate it.

Compassion has a sense of strength and authority. We get this partly from our wisdom, and also from our posture (standing/sitting up straight, chest open), our breathing (soothing rhythm), and our grounding (awareness of the present moment). Compassion is not weak or submissive. Think about civil rights campaigners, who try to reduce suffering by standing up to injustices. This requires strength, not submission.

Take a moment to call to mind a time when you have used strength and authority to try to prevent suffering. If you are a parent or carer, there may have been times when you've had to advocate for someone else, e.g. with school, social services or health services. Whenever you help someone with a problem because you know about the thing they are struggling with (whether that is a work

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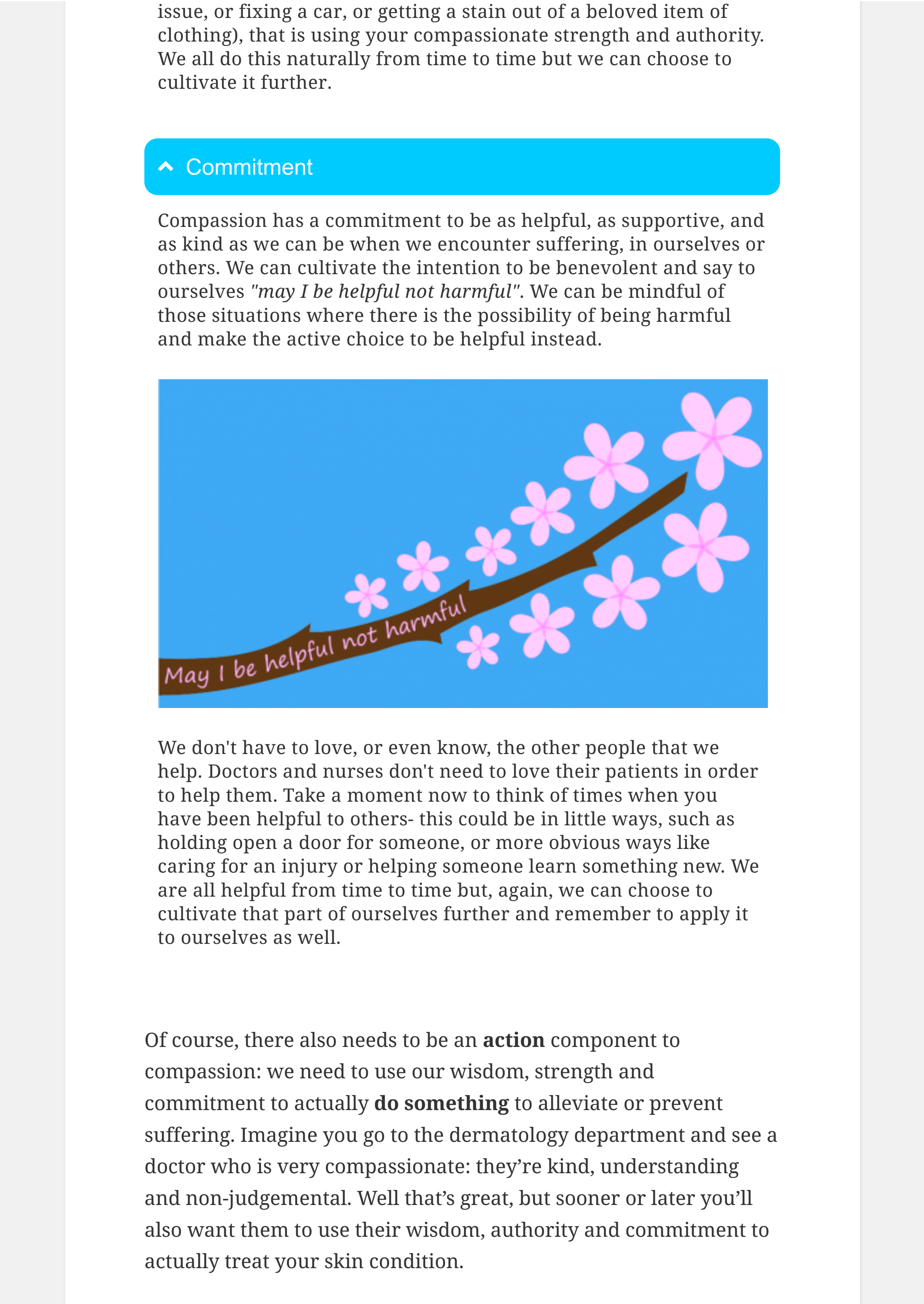

issue, or fixing a car, or getting a stain out of a beloved item of clothing), that is using your compassionate strength and authority. We all do this naturally from time to time but we can choose to cultivate it further.

Commitment

Compassion has a commitment to be as helpful, as supportive, and as kind as we can be when we encounter suffering, in ourselves or others. We can cultivate the intention to be benevolent and say to ourselves *"may I be helpful not harmful"*. We can be mindful of those situations where there is the possibility of being harmful and make the active choice to be helpful instead.

We don't have to love, or even know, the other people that we help. Doctors and nurses don't need to love their patients in order to help them. Take a moment now to think of times when you have been helpful to others- this could be in little ways, such as holding open a door for someone, or more obvious ways like caring for an injury or helping someone learn something new. We are all helpful from time to time but, again, we can choose to cultivate that part of ourselves further and remember to apply it to ourselves as well.

Of course, there also needs to be an **action** component to compassion: we need to use our wisdom, strength and commitment to actually **do something** to alleviate or prevent suffering. Imagine you go to the dermatology department and see a doctor who is very compassionate: they're kind, understanding and non-judgemental. Well that's great, but sooner or later you'll also want them to use their wisdom, authority and commitment to actually treat your skin condition.

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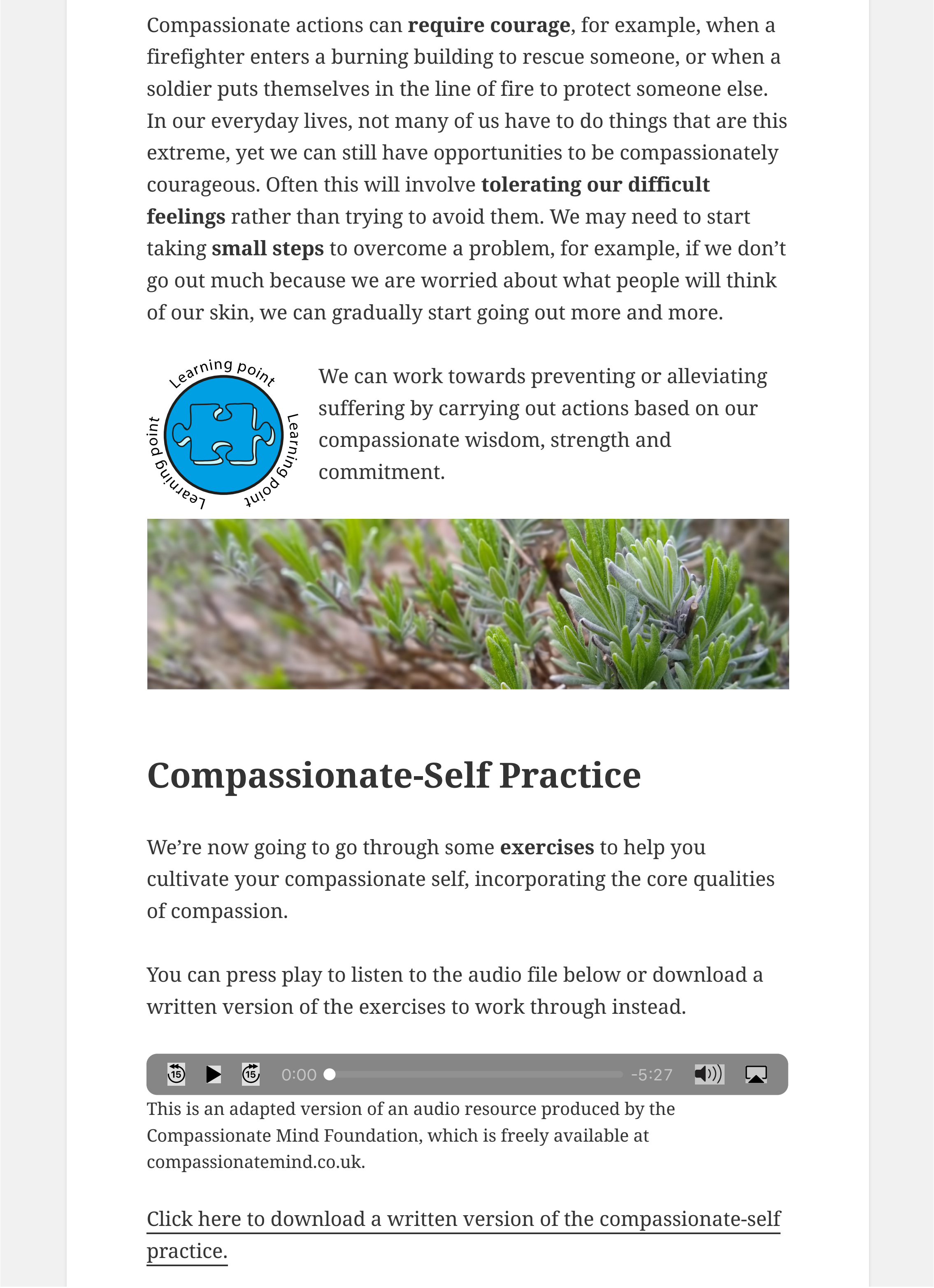
Session 5 Screenshot Continued



Compassionate actions can **require courage**, for example, when a firefighter enters a burning building to rescue someone, or when a soldier puts themselves in the line of fire to protect someone else. In our everyday lives, not many of us have to do things that are this extreme, yet we can still have opportunities to be compassionately courageous. Often this will involve **tolerating our difficult feelings** rather than trying to avoid them. We may need to start taking **small steps** to overcome a problem, for example, if we don't go out much because we are worried about what people will think of our skin, we can gradually start going out more and more.

We can work towards preventing or alleviating suffering by carrying out actions based on our compassionate wisdom, strength and commitment.

Compassionate-Self Practice

We're now going to go through some **exercises** to help you cultivate your compassionate self, incorporating the core qualities of compassion.

You can press play to listen to the audio file below or download a written version of the exercises to work through instead.

This is an adapted version of an audio resource produced by the Compassionate Mind Foundation, which is freely available at compassionatemind.co.uk.

Click here to download a written version of the compassionate-self practice.

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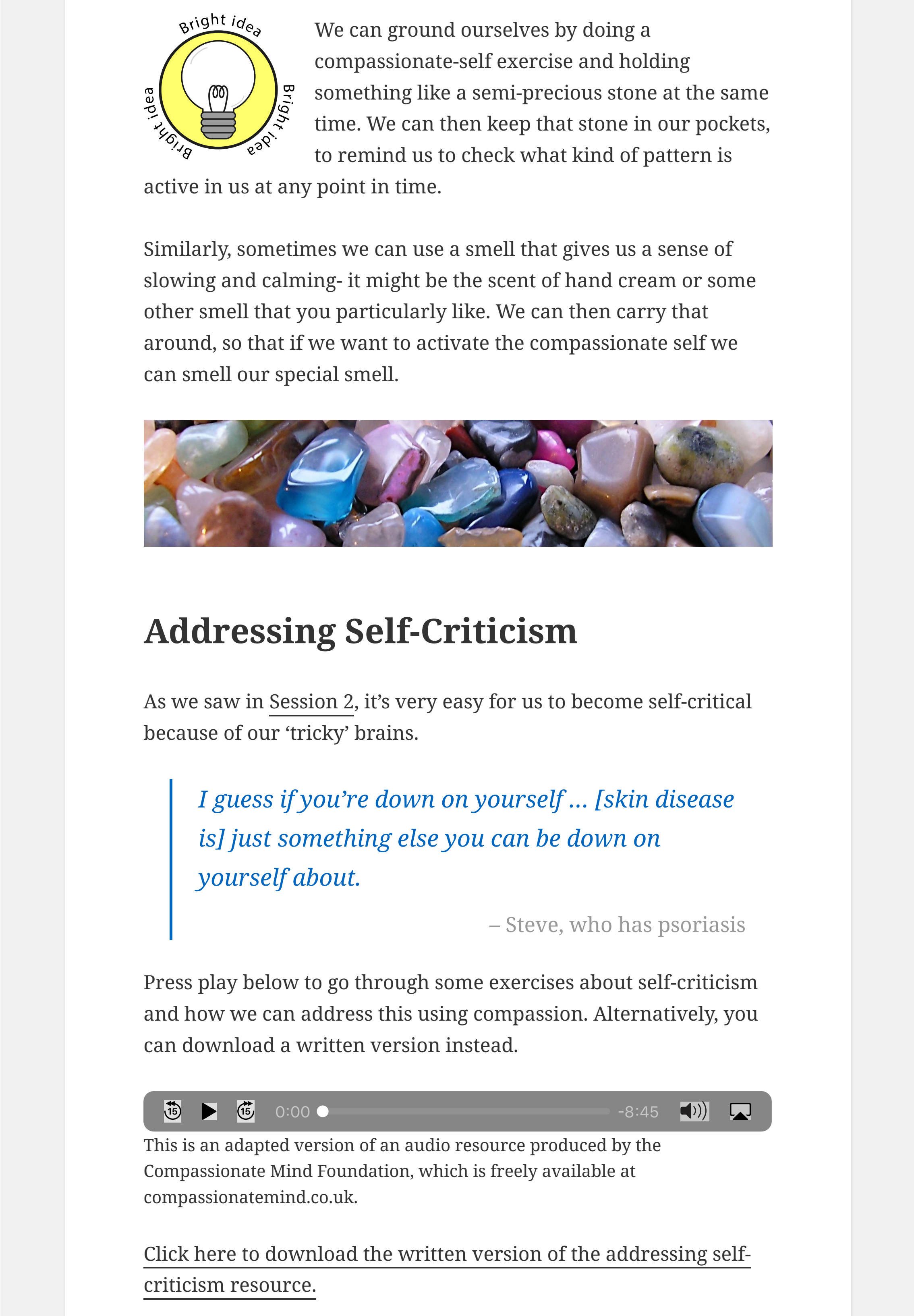

We can ground ourselves by doing a compassionate-self exercise and holding something like a semi-precious stone at the same time. We can then keep that stone in our pockets, to remind us to check what kind of pattern is active in us at any point in time.

Similarly, sometimes we can use a smell that gives us a sense of slowing and calming- it might be the scent of hand cream or some other smell that you particularly like. We can then carry that around, so that if we want to activate the compassionate self we can smell our special smell.

Addressing Self-Criticism

As we saw in Session 2, it's very easy for us to become self-critical because of our 'tricky' brains.

> *I guess if you're down on yourself … [skin disease is] just something else you can be down on yourself about.*
>
> – Steve, who has psoriasis

Press play below to go through some exercises about self-criticism and how we can address this using compassion. Alternatively, you can download a written version instead.

This is an adapted version of an audio resource produced by the Compassionate Mind Foundation, which is freely available at compassionatemind.co.uk.

Click here to download the written version of the addressing self-criticism resource.

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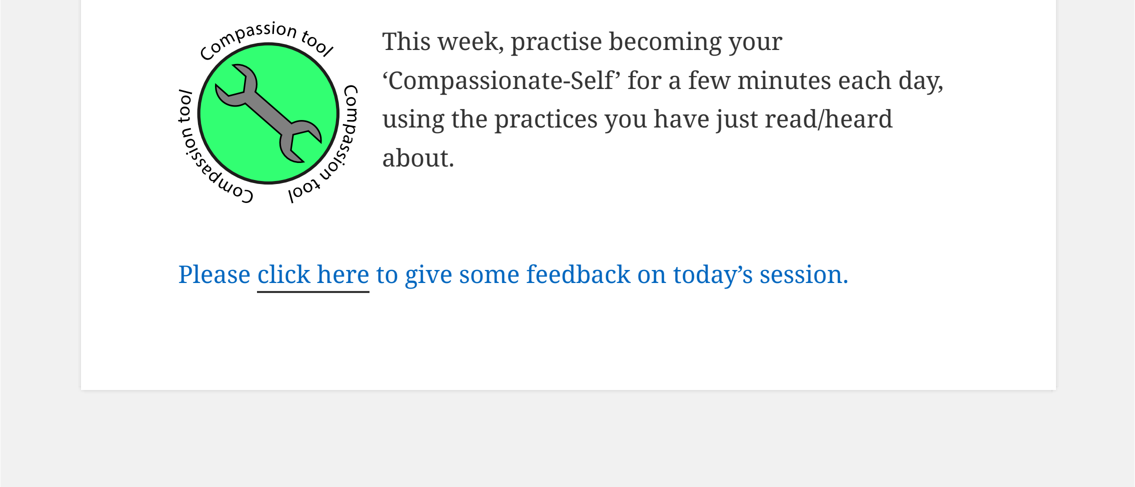
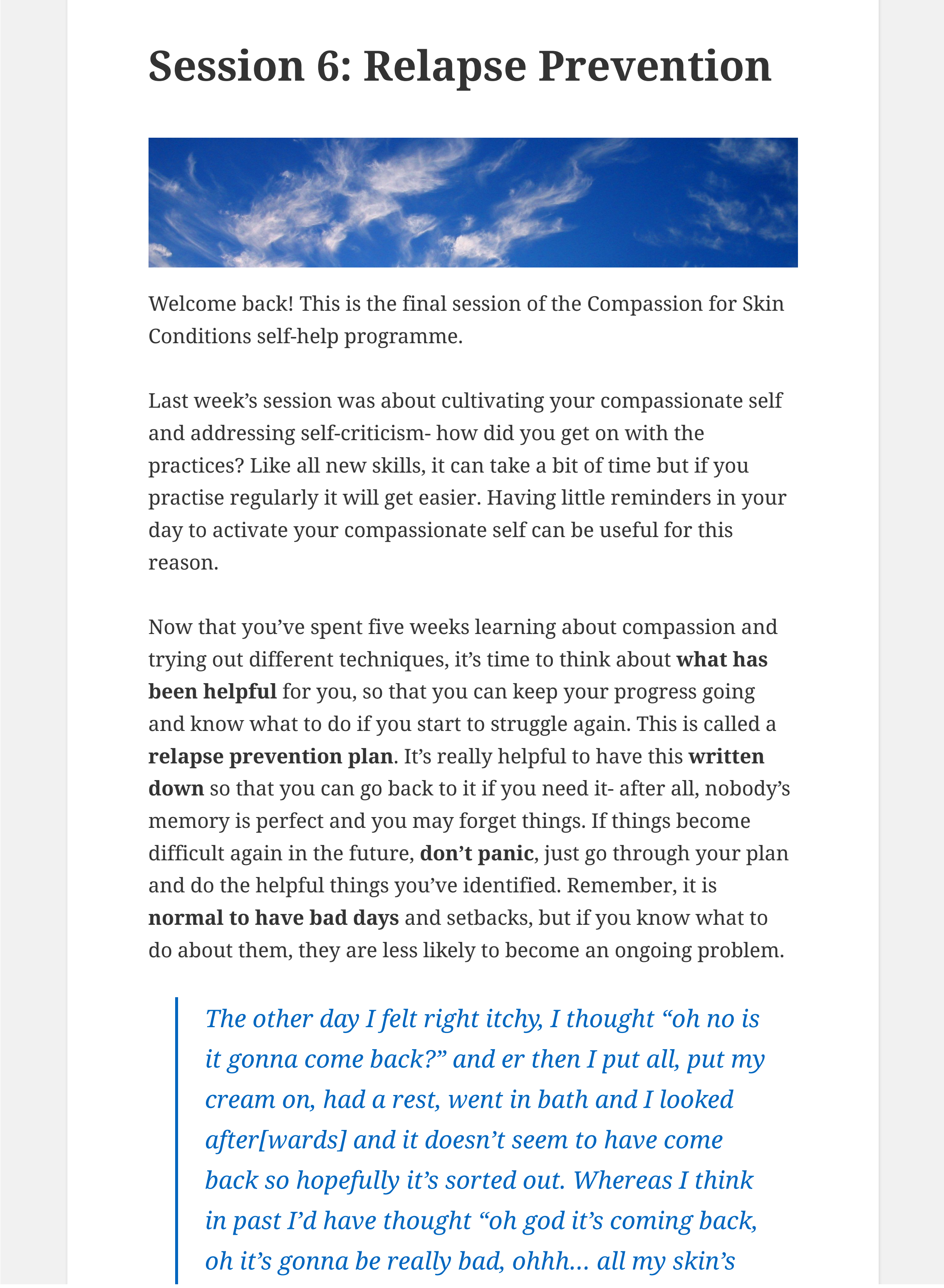
Session 5 Screenshot Continued



This week, practise becoming your 'Compassionate-Self' for a few minutes each day, using the practices you have just read/heard about.

Please click here to give some feedback on today's session.

Figure G.7
Screenshot of Compassion for Skin Conditions Session 6



Session 6: Relapse Prevention

Welcome back! This is the final session of the Compassion for Skin Conditions self-help programme.

Last week's session was about cultivating your compassionate self and addressing self-criticism- how did you get on with the practices? Like all new skills, it can take a bit of time but if you practise regularly it will get easier. Having little reminders in your day to activate your compassionate self can be useful for this reason.

Now that you've spent five weeks learning about compassion and trying out different techniques, it's time to think about **what has been helpful** for you, so that you can keep your progress going and know what to do if you start to struggle again. This is called a **relapse prevention plan**. It's really helpful to have this **written down** so that you can go back to it if you need it- after all, nobody's memory is perfect and you may forget things. If things become difficult again in the future, **don't panic**, just go through your plan and do the helpful things you've identified. Remember, it is **normal to have bad days** and setbacks, but if you know what to do about them, they are less likely to become an ongoing problem.

> *The other day I felt right itchy, I thought "oh no is it gonna come back?" and er then I put all, put my cream on, had a rest, went in bath and I looked after[wards] and it doesn't seem to have come back so hopefully it's sorted out. Whereas I think in past I'd have thought "oh god it's coming back, oh it's gonna be really bad, ohhh… all my skin's*

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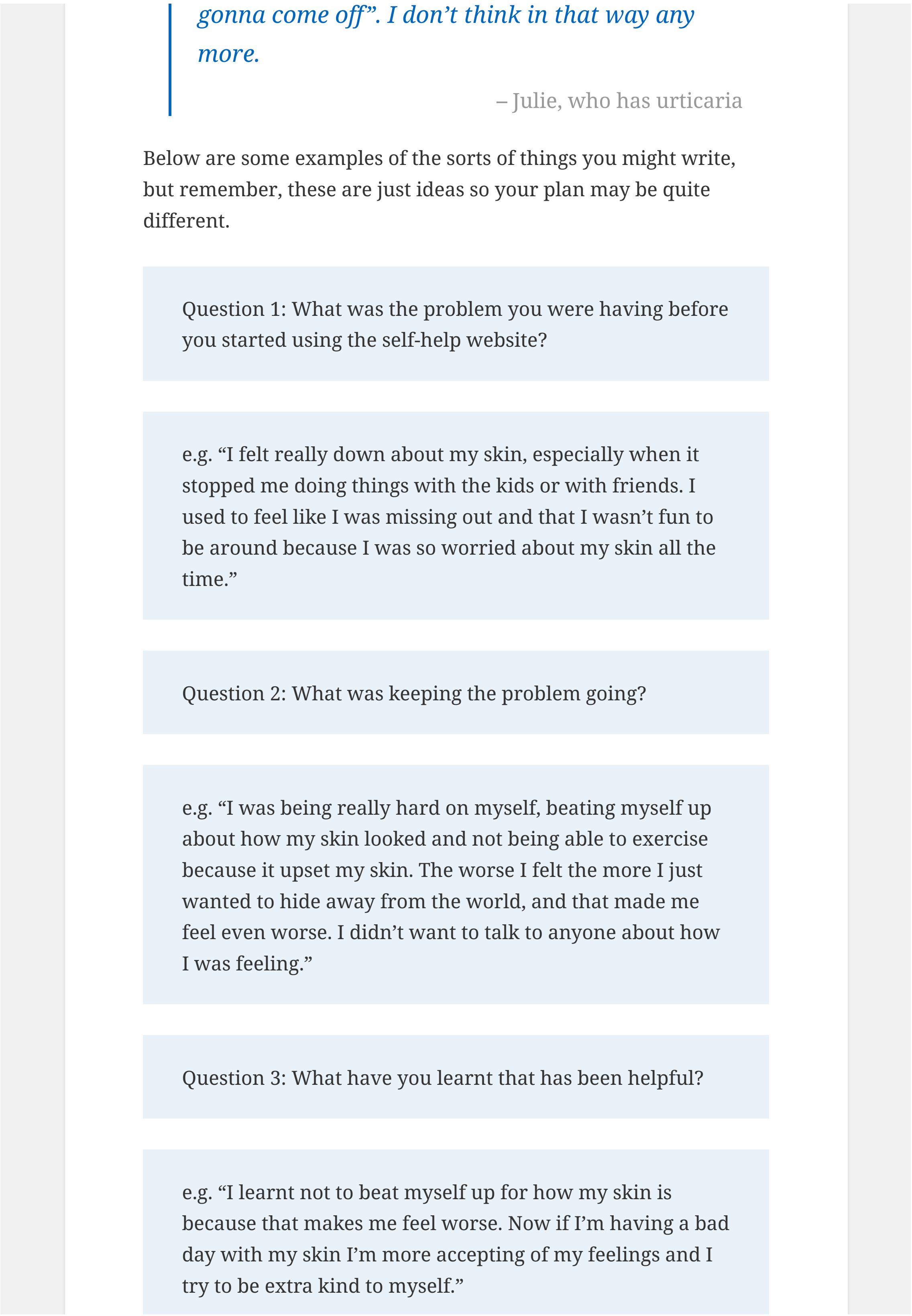
Session 6 Screenshot Continued



> *gonna come off". I don't think in that way any more.*
>
> – Julie, who has urticaria

Below are some examples of the sorts of things you might write, but remember, these are just ideas so your plan may be quite different.

Question 1: What was the problem you were having before you started using the self-help website?

e.g. "I felt really down about my skin, especially when it stopped me doing things with the kids or with friends. I used to feel like I was missing out and that I wasn't fun to be around because I was so worried about my skin all the time."

Question 2: What was keeping the problem going?

e.g. "I was being really hard on myself, beating myself up about how my skin looked and not being able to exercise because it upset my skin. The worse I felt the more I just wanted to hide away from the world, and that made me feel even worse. I didn't want to talk to anyone about how I was feeling."

Question 3: What have you learnt that has been helpful?

e.g. "I learnt not to beat myself up for how my skin is because that makes me feel worse. Now if I'm having a bad day with my skin I'm more accepting of my feelings and I try to be extra kind to myself."

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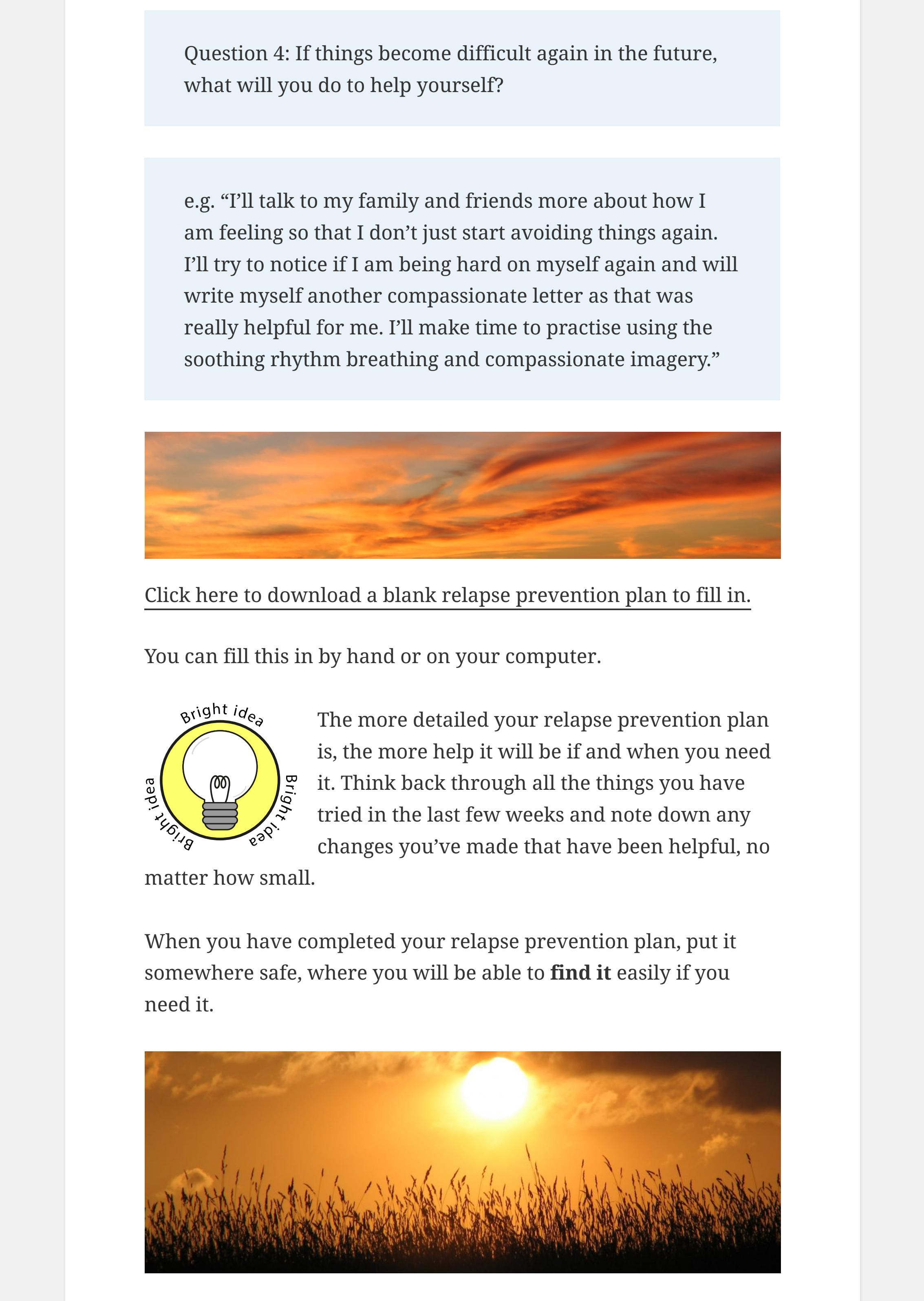
Session 6 Screenshot Continued



Question 4: If things become difficult again in the future, what will you do to help yourself?

e.g. “I’ll talk to my family and friends more about how I am feeling so that I don’t just start avoiding things again. I’ll try to notice if I am being hard on myself again and will write myself another compassionate letter as that was really helpful for me. I’ll make time to practise using the soothing rhythm breathing and compassionate imagery.”

Click here to download a blank relapse prevention plan to fill in.

You can fill this in by hand or on your computer.

The more detailed your relapse prevention plan is, the more help it will be if and when you need it. Think back through all the things you have tried in the last few weeks and note down any changes you’ve made that have been helpful, no matter how small.

When you have completed your relapse prevention plan, put it somewhere safe, where you will be able to **find it** easily if you need it.

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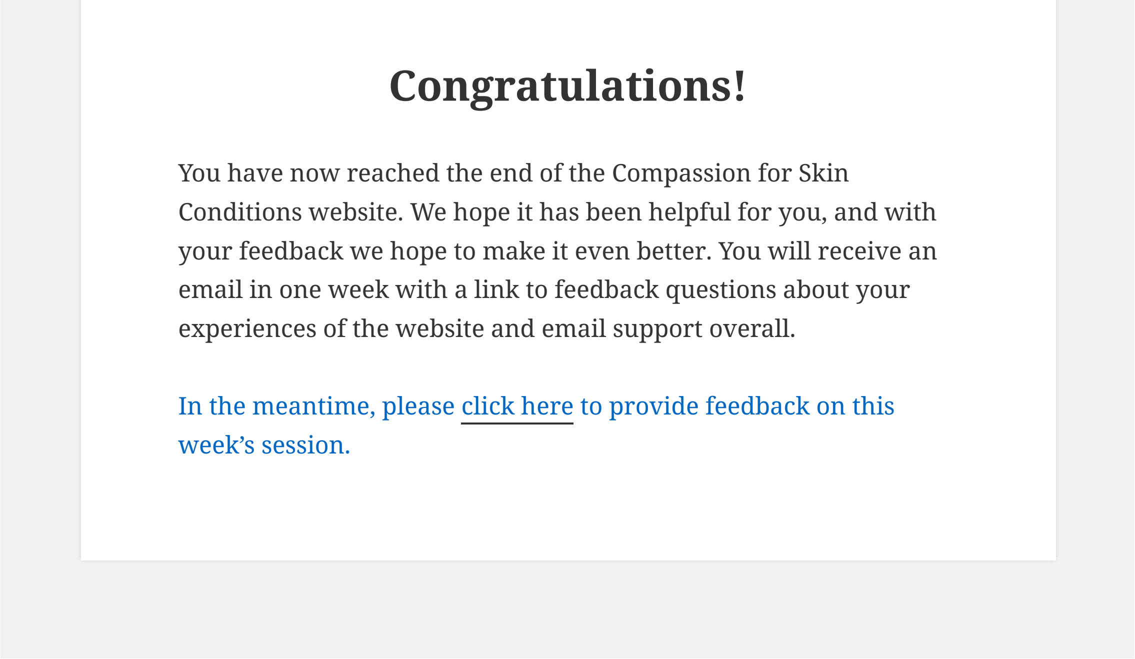
Session 6 Screenshot Continued



Congratulations!

You have now reached the end of the Compassion for Skin Conditions website. We hope it has been helpful for you, and with your feedback we hope to make it even better. You will receive an email in one week with a link to feedback questions about your experiences of the website and email support overall.

In the meantime, please click here to provide feedback on this week's session.

G.12 Guided Self-Help Email Text

Day 4 Session 1 Reminder

Hi <name>,

I hope you are well. How are you getting on with the Compassion for Skin Conditions self-help? This week's session was about understanding how what we think about affects our feelings, and what sort of things help us feel better when we are upset. I hope you've been able to have a go at practising the soothing rhythm breathing. Please let me know if you are having any problems with the self-help materials.

If you haven't already done so, please follow the link at the bottom of the Session 1 webpage to give us some feedback on the session or click here- this will only take a few minutes and will be really valuable to us.

All the best,

Elaine

Day 11 Session 2 Reminder

Hi <name>,

Have you been back on the Compassion for Skin Conditions website this week? This week's session was about understanding our self-criticism and trying out alternative perspectives. I hope it's going okay. It would also be great if you could keep practising the soothing rhythm breathing- hopefully you'll find that it feels easier to get into the more you do it. If you are struggling with the exercises please do let me know.

If you haven't already done so, please follow the link at the bottom of the Session 2 webpage to give us some feedback on the session or click here- this will only take a few minutes and will be really valuable to us.

All the best,

Elaine

Day 18 Session 3 Reminder

Hi <name>,

I hope you are well. This week's session on the Compassion for Skin Conditions website introduced the use of imagery exercises to create soothing feelings within ourselves. How are things going with using the 'compassionate other' imagery? I hope you've been able to find time to practise. It can feel strange at first but do let me know if you're having trouble with the imagery exercises.

If you haven't already done so, please follow the link at the bottom of the Session 3 webpage or click here to give us some feedback on the session- this will only take a few minutes and will be really valuable to us.

All the best,

Elaine

Day 25 Session 4 Reminder

Hi <name>,

I hope you got on okay with this week's session on the Compassion for Skin Conditions website, which was about using compassionate letter writing to help us get a compassionate perspective on the difficulties we face. Writing things down can really help you think differently about them so I hope you've been able to have a go at it. If you haven't done it yet, there's still time! Try to write at least one compassionate letter to yourself this week. As always, do get in touch if you'd like any additional help with the exercises.

If you haven't already done so, please follow the link at the bottom of the Session 4 webpage or click here to give us some feedback on the session- this will only take a few minutes and will be really valuable to us.

All the best,

Elaine

Day 32 Session 5 Reminder

Hi <name>,

How are you getting on this week with the Compassion for Skin Conditions self-help programme? I hope it's going okay for you. This week's session was about cultivating a compassionate version of yourself and addressing self-criticism. These are the final activities for you to try out before we put it all together next session, so do try to practise them this week. Feel free to let me know if you are finding the exercises hard and we'll have a think together about what might help.

If you haven't already done so, please follow the link at the bottom of the Session 5 webpage or click here to give us some feedback on the session- this will only take a few minutes and will be really valuable to us.

All the best,

Elaine

Day 39 Session 6 Reminder

Hi <name>,

I hope you are well. The last session of the Compassion for Skin Conditions programme was about planning for the future- making a plan of how you will keep your progress going. If you haven't gone through the session yet, or completed your relapse prevention plan, I'd encourage you to do so. Sometimes people are tempted to skip this step, but it's actually really helpful for if/when things get tough again in the future. We all go through difficult times and a personalised action plan can be a really good tool to have at those times. It can also be nice to spend a bit of time reflecting on what has changed since you started using the self-help programme.

If you've already finished the Compassion for Skin Conditions programme, well done! You'll get an email in a few days that will ask for your overall feedback.

As always, if you haven't already done so, please follow the link at the bottom of the Session 6 webpage or click here to give us some feedback on the last session- thanks so much for this.

All the best,

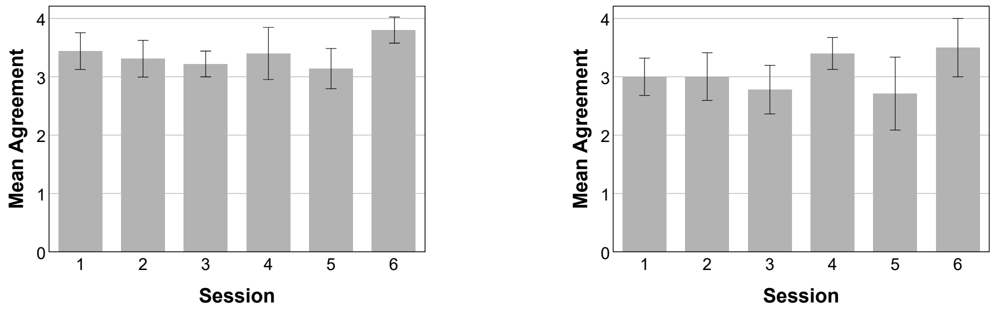
Elaine

Appendix H

Feedback on the Compassion for Skin Conditions Self-Help Programme

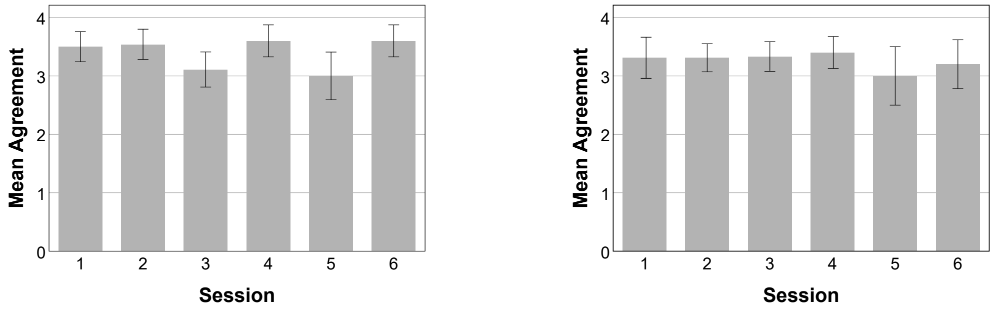
Figure H.1

Website Evaluation Item Means by Session



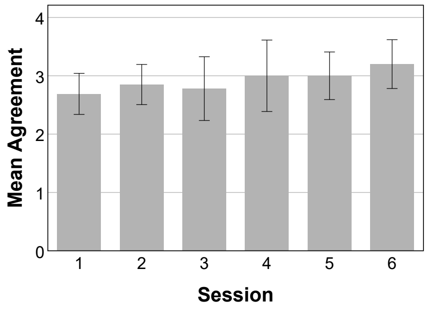
(a) *I found today's session easy to use.*

(b) *I found the information in today's session helpful.*



(c) *The information in today's session was easy to understand.*

(d) *Today's session provided me with sufficient information.*

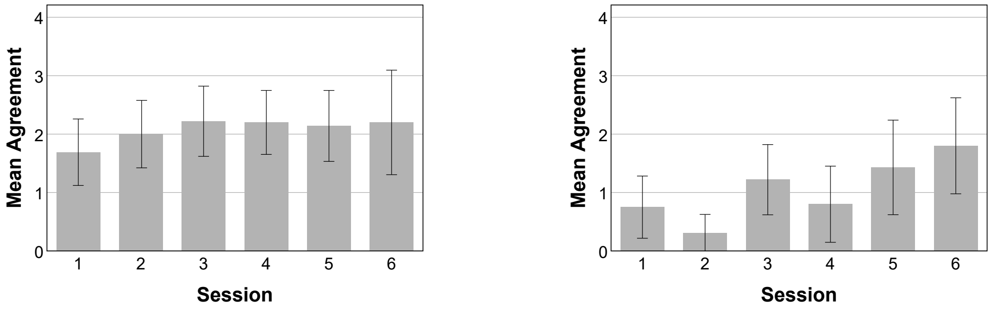


(e) *Today's session was visually appealing.*

Note. Error bars represent one standard deviation.

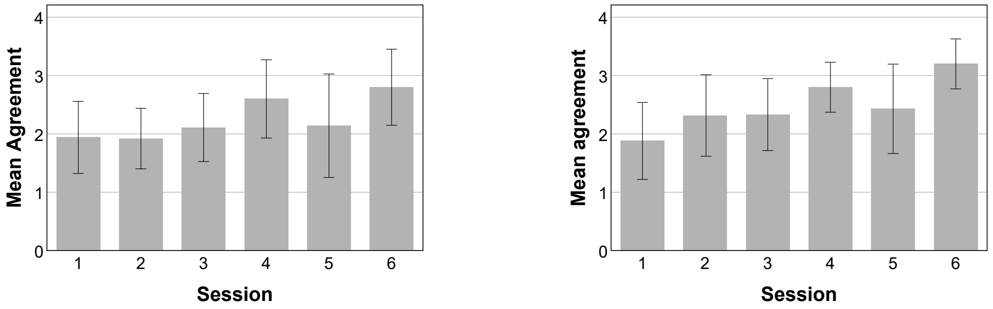
Figure H.2

Session Impacts Item Means by Session



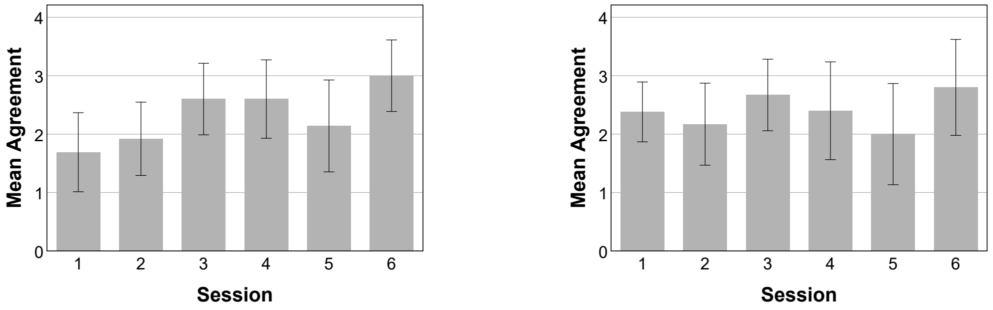
(a) *I have realised something new about myself.*

(b) *I have realised something new about someone else.*



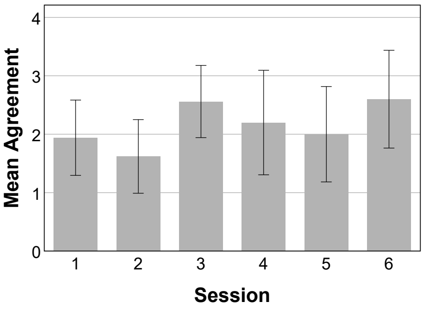
(c) *I am more aware of/clearer about feelings and experiences.*

(d) *I have a clearer definition of problems for me to work on.*



(e) *I have made progress toward knowing what to do about problems.*

(f) *I feel supported or encouraged.*



(g) *I feel relieved, more comfortable.*

Note. Error bars represent one standard deviation.

Table H.1

Qualitative Feedback Given by Treatment Completers (n = 8)

Feedback	Frequency	Example comment
Good aspects		
Easy to use	5	The programme was easy to use, well-written, concise and the website was easy to navigate. The aims of the programme seemed very clear.
Normalising	2	The whole thing was helpful and to know your (*sic*) not alone with it.
Mind-skin link	1	It reminded me how much of a role stress plays in my eczema and that looking after my mental health is a core part of looking after my skin
Raises awareness and changes thinking patterns	1	Makes you think about the way you think about your skin condition. Highlights the problems you have with your skin which you may not have realised before. Changes your way of thinking about your skin condition.
Variety of exercises	1	Really easy to follow with lots of great exercises to do!
Areas for improvement		
None	3	Nothing really, it was very easy to access.
Daily emails	1	I printed off all the sheets but maybe would have found daily email prompts of specific things to do helpful
Longer between sessions/follow-up	1	2 weeks apart between sessions, difficult to keep up when other things are going on in your life. 6 weeks doesn't seem long enough to make a lasting difference. May be good to revisit and have a refresher session a few weeks after the end.
More focus on impact of physical symptoms	1	More advice on how to cope with physical aspects damaging any positive thoughts
Skincare samples	1	Some free samples of creams or ointments
Typography changes	1	Slightly less text or split over the page slightly more so it wasn't as grouped together
Benefits of taking part		
Raised awareness of attitude towards oneself	4	Yes, made me think of my thinking in a different way

Continued on next page

Table H.1
Continued

Feedback	Frequency	Example comment
Acceptance of skin condition	2	Yes it has made me more accepting of my skin condition
Increased self-care and improved skin	1	Yes, I am focusing much more on looking after my overall wellbeing and I think that's reducing my skin flares
Raised awareness of mind-skin link	1	I understand my skin and how I am feeling can make it worse
Reduced isolation and increased hope	1	Yes realising I'm not alone and things can change
Negative effects of taking part		
None	5	No
Emotional discomfort	2	No not really. It can be uncomfortable when negative feelings arise but I feel overall these have been beneficial. I'm more aware of how I treat myself and how I've had the tendency to focus on negative issues to do with my skin, getting stressed and quite likely, making things worse.
Increased self-consciousness	1	Sometimes I hadn't thought about the worries before like what other people are thinking while I'm out in general/at work/etc and made me feel a bit conscious that people are looking at me.
Most helpful aspect		
Soothing rhythm breathing	4	I really loved the rhythm breathing, I use it all the time now
All/unspecified	2	Learning about how to be kind to yourself
Noticing negative thoughts	2	Session 2, Thoughts & Feelings. As I've said, this session really made me think & it was quite a shock to appreciate how harshly I've been treating myself.
Least helpful aspect		
None	2	All of the programme was helpful!
Compassionate imagery	2	The imagery but that's just because I found it difficult to do

Continued on next page

Table H.1
Continued

Feedback	Frequency	Example comment
Recording negative thoughts	2	Recording negative thoughts - I know in the past that has made me dwell on them if I write them down.
Audio tracks	1	listening to the recordings
Soothing rhythm breathing	1	Breathing. Can never get the hang of it.
Other comments		
Gratitude	6	It was great to be part of something simple but so effective, thank you.