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# Effectiveness of a Brief Self-Compassion Group Intervention for Students in London University

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Submitted in fulfilment of the requirements for the Professional Doctorate in Counselling Psychology (DPsych)

City, University of London

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# Table of Contents

**Table of Contents**

*Table of Contents* ........ 2

*Table of Tables* ........ 6

*Table of Figures* ........ 6

*Acknowledgements* ........ 7

*Declarations of Powers of Discretion* ........ 8

*PREFACE* ........ 9

*PART A: DOCTORAL RESEARCH* ........ 14

*Abstract* ........ 15

*Abbreviations* ........ 16

*CHAPTER 1: INTRODUCTION* ........ 17

*1.1 Overview* ........ 17

*1.2 Compassion Focused Therapy and Philosophical underpinnings* ........ 19

**1.2.1 Threat and Protection System** ........ 19

**1.2.2 Drive and achievement system** ........ 20

**1.2.3 The Soothing and Contentment System** ........ 22

*1.3 Self-compassion* ........ 24

*1.4 Compassion-based therapy evidence-base* ........ 27

*1.5 University students and mental health* ........ 30

*1.6 University counselling services challenges* ........ 32

*1.7 University students and self-compassion* ........ 35

*1.8 Literature review of self-compassion intervention in students' population* ........ 37

*1.9 Summary* ........ 45

*1.9 Research aims and questions* ........ 46

*CHAPTER 2: METHODOLOGY* ........ 48

*2.1 Overview* ........ 48

*2.2 Theoretical Position* ........ 48

**2.2.1 Epistemological positioning** ........ 48

**2.2.2 Mixed methods research** ........ 51

*2.3 Research Design* ........ 54

*2.4 Part I- Quantitative design* ........ 56

*2.4.1 Participants, sampling and recruitment* ........ 56

2.4.1.1 Sample size ........ 56

2.4.1.2 Participant Eligibility ........ 57

2.4.1.3 Recruitment and research strategy ........ 58

*2.4.2 Quantitative data collection* ........ *61*

**2.4.2.1 Demographics** ........ **62**

**2.4.2.2 Outcome Measures** ........ **63**

**2.4.2.3 Self-compassion Intervention Specification** ........ **66**

*2.4.3 Quantitative data analysis strategy* ........ *69*

**2.4.3.1 Missing data** ........ **69**

**2.4.3.2 Outlier analysis** ........ **69**

**2.4.3.3 Main analyses** ........ **70**

*2.5 Part II-Qualitative data collection* ........ *70*

*2.5.1 Rationale for Thematic Analysis* ........ *70*

*2.5.2 Participants, sampling and recruitment* ........ *73*

2.5.2.1 Sample size ........ 73

2.5.2.2 Participant Eligibility ........ 73

2.5.2.3 Recruitment ........ 73

*2.5.3 Qualitative data collection and Research strategy* ........ *75*

**2.5.3.1 Semi-structured interview designs** ........ **75**

**2.5.3.2 Semi-structured interviews** ........ **75**

*2.5.4 Qualitative data analysis strategy* ........ *76*

**2.5.4.1 Data analysis** ........ **76**

**2.5.4.2 Transcribing** ........ **78**

*2.6 Mixed analysis and integration strategy* ........ *79*

*2.7 Ethical Considerations* ........ *79*

*2.8 Reflexivity* ........ *82*

*CHAPTER 3: ANALYSIS* ........ *85*

*3.1 Part I- Quantitative Analyses* ........ *85*

**3.1.1 Demographics** ........ **85**

**3.1.2 Univariate and multivariate assumptions** ........ **86**

**3.1.3 Testing hypotheses** ........ **87**

*3.2 Quantitative results* ........ *88*

*3.2.1 PANAS* ........ *90*

**3.2.1.1 Positive affect** ........ **90**

**3.2.1.2 Negative affect** ........ **90**

*3.2.2 Self-compassion Scale (SCS)* ........ *91*

**3.2.2.1 SCS Total** ........ **91**

**3.2.2.2 SCS Subscales** ........ **92**

*3.2.3 SWLS* ........ *94*
*3.2.4 PGI* ........ *96*
*3.3 Quantitative finding summary* ........ *96*
*3.4 Part II-Qualitative Analyses* ........ *97*
**3.4.1 Semi-structured interviews data** ........ **97**
*3.5 Qualitative results* ........ *98*
**3.5.1 Theme one: Development of self-compassion** ........ **98**
**3.5.2 Theme two: Group** ........ **107**
**3.5.3 Theme 3: Relationships** ........ **111**
*3.6 Qualitative- Summary of findings* ........ *114*
*3.7 Data Quality and Validity* ........ *115*
*CHAPTER 4 DISCUSSION* ........ *117*
*4.1 Overview* ........ *117*
*4.2 Main Discussion* ........ *118*
**4.2.1 Interpretation of quantitative hypothesis with qualitative themes integration** **118**
4.2.1.1 Self-compassion ........ 120
4.2.1.2 Positive and negative affect ........ 127
4.2.1.3 Life Satisfaction ........ 128
4.2.1.4 Personal growth ........ 130
**4.2.2 Discussion of Qualitative Findings** ........ **131**
4.2.2.1 Development of self-compassion ........ 132
4.2.2.2 Group ........ 134
4.2.2.3 Relationships ........ 135
*4.3 Research limitations* ........ *137*
*4.4 Research strengths* ........ *142*
*4.5 Implications* ........ *143*
**4.5.1 Clinical implications** ........ **143**
**4.5.2 Research implication** ........ **146**
*4.6 Future* ........ *148*
*4.7 Final Research Reflections* ........ *150*
*4.8 Conclusion* ........ *152*
*5 REFERENCES* ........ *153*
*6 Appendices* ........ *177*
**Appendix A: Ethical Application** ........ **177**
**Appendix B: Recruitment flyer** ........ **186**
**Appendix C: Participant Information Sheet** ........ **187**
**Appendix D: Consent Form** ........ **190**
**Appendix E: Debrief Information Sheet** ........ **191**

**Appendix F: Preliminary Interview Schedule for Post Intervention Group .......192**
**Appendix G: Brief Self-compassion group outline .......193**
**Appendix H: Power analysis on G*power software .......194**
**Appendix I: Email Templates .......195**
**Appendix J: Participant Demographic and Pre-screen questions (Qualtrics) .......201**
**Appendix K: Positive And Negative Affect Scale (PANAS) .......204**
**Appendix L: Self-Compassion Scale (SCS) .......205**
**Appendix M: Satisfaction with Life Scale (SWLS) .......206**
**Appendix N: Personal Growth Initiative Scale (PGIS) .......207**
**Appendix O: SPSS output .......208**
***PART B: COMBINED CLIENT PROCESS REPORT .......217***
***1 INTRODUCTION .......217***
**1.1 Client's demographics .......217**
**1.2 The service context .......218**
**1.3 Theoretical Framework .......218**
***2 CLIENT STUDY .......221***
**2.1 Referral .......221**
**2.2 Assessment .......221**
**2.3 Formulation and treatment plan .......224**
**2.4 Contract and Treatment Plan .......226**
**2.5 Interventions .......226**
**2.6 Outcome and ending .......227**
***3 PROCESS REPORT .......229***
**3.1 Overview .......229**
**3.2 Transcript and commentary (Starts at 9m55s) .......230**
**3.3 Reflective Discussion .......242**
***4 REFERENCES .......244***
***PART C: PUBLISHABLE JOURNAL ARTICLE .......247***
***ABSTRACT .......249***
***Public Significance State .......250***
***INTRODUCTION .......250***
***METHOD .......255***
**Participants .......255**
**Procedure .......255**
**Study Design .......255**

**Self-compassion intervention** ........ **256**
**Outcome measures** ........ **258**
**Data Analyses** ........ **259**
***RESULTS*** ........ ***259***
**PANAS positive affect** ........ **260**
**Negative affect** ........ **261**
**Total Self-compassion** ........ **261**
**Self-compassion subscales** ........ **261**
**Life Satisfaction** ........ **263**
**Personal Growth** ........ **264**
***DISCUSSION*** ........ ***268***
***REFERENCES*** ........ ***273***

## Table of Tables

**Table 1** Sample Demographics for quantitative part ........ 62
**Table 2** Sample Demographics for qualitative part ........ 74
**Table 3** Shapiro-Wilk Test of Normality values for all outcome measures with their associated degrees of freedom and P value ........ 86
**Table 4** Baseline scores comparison between intervention and control group and p-value ... 88
**Table 5** Means and Standard Deviations for Outcome Measures at Pre-Intervention, Post-Intervention and Follow-up, includes pre-post effect size for intervention group ........ 89
**Table 6** Mean and Standard Deviations for Outcome measures at Timepoint 1, 2 (n=30) and 3 (n=28) ........ 89

## Table of Figures

**Figure 1** Description of the mixed methods design ........ 54
**Figure 2** Recruitment and attrition rates through the research process ........ 60
**Figure 3** PANAS positive affect mean scores at pre-/T1, Post-/T2 and 1-month follow up/T3 ........ 90
**Figure 4** PANAS negative affect mean scores at pre-/T1, Post-/T2 and 1-month follow up/T3 ........ 91
**Figure 5** SCS total mean scores at pre-/T1, Post-/T2 and 1-month follow up/T3 ........ 91
**Figure 6** SWLS mean scores at pre-/T1, Post-/T2 and 1-month follow up/T3 ........ 95
**Figure 7** PGI mean scores at pre-/T1, Post-/T2 and 1-month follow up/T3 ........ 96
**Figure 8** Final master themes with sub-themes map and the relevant codes ........ 97

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## PREFACE

*"Our sorrows and wounds are healed only when we touch them with compassion." Gautama Buddha*

### Introduction

This doctoral portfolio consists of three components: an empirical research project, a client case study, and a publishable journal article. Each of these components reflects the clinical and research skills I have developed throughout the Professional Doctorate in Counselling Psychology programme, as well as my development as a reflective scientist-practitioner. These parts are all connected and linked together by my personal and professional ethos, influenced by the central tenants of the counselling psychology profession. This portfolio reflects my journey onto becoming a counselling psychologist and my hopes to take a holistic approach in my practice.

One of the challenges counselling psychologists faces in the role of research is to bring together counselling and psychology. Counselling seeks to access meaning through describing and understanding subjective experiences, whereas psychology is built on the scientific method that aims for objective understandings. Holding this in mind, my research attempted to overcome the tension by employing a mixed methods design that includes both quantitative and qualitative research. Research is hugely important in shaping the profession. Therefore, the empirical research in this portfolio not only seek to inform my own practice by exploring a research topic that I am interested in, but also to produce the practice-based research to wider field of applied psychology. This is especially relevant to my role within the university

counselling service, to contribute to the knowledge working with a diverse student population and improve professional practice.

**Part A: Empirical Research**

The empirical research project investigated the effectiveness of a brief self-compassion group intervention on a London university student population. A convergent mixed-methods design was adopted. The quantitative part of the study consisted of a set of outcome measures investigating wellbeing, being administered to participants via an online survey software at three timepoints: Pre-group/Timepoint 1, Post-group/Timepoint 2 and 1-month follow-up/Timepoint 3. The sample consisted of 30 students and a waitlist control group was included in this study in the hope that all participants might benefit from the research. The quantitative data collected was analysed to examine whether the group is effective in promoting students' mental health, therefore included between- and within-group analysis.

The final sample consists of 30 university students, with a high attrition rate that is typical for a study on student population. Despite low retention rates, it is argued that the brief group intervention in this study may serve a small but significant group of university students who may not normally access psychological support, with the hope to alleviate pressure on university services. It was decided to focus on a self-compassion intervention, given that I resonate with the principles of the approach both personally and professionally, and the effectiveness of this intervention as shown for university students in other countries. This research will be discussed in detail in the literature review in Chapter 1, especially on how it informs the current study and the research questions.

Given my professional interest in finding ways to prevent individuals from developing mental health problems, especially for a younger population, this research offered an opportunity to develop my scientific knowledge base. It is hoped that it can inform my clinical practice as a counselling psychologist.

**Part B: Client Case study**

I am grateful for the chance to work with people with different mental health issues in different settings within the NHS and higher education. From primary care to specialist service and secondary care working alongside a wide range of healthcare professionals; community and outpatient settings, these experiences have opened my eyes to a more multifaceted and holistic understanding of clinician practice and has allowed me to appreciate different ways of working and build my ability by extending my current knowledge and gaining exposure to other therapeutic approaches, at the same time develop critical skills to take a reflective position on the application of theories. Throughout the training, I have identified my clinical interest in working with a younger population, this also explained my choice of the target population in my research project. Interestingly, I chose to present a case study and process report of my work with an adult 'Alan' (not his real name) who has triggered a lot of compassion in me. I worked with Alan whilst I was on a placement at a Primary Care Psychotherapy Service using a psychodynamic approach. He was referred following a few courses of Cognitive Behavioural Therapy (CBT) that he did not find helpful. Despite this is not a piece of work with a 'young person', Alan and I spent a lot of time working with his 'inner child' using a psychodynamic approach. This therapeutic space enabled him to explore his emotional pain through 'going back' and exploring his childhood, which was a space that he found beneficial and tailored to his needs and was not provided by his previous CBT sessions. Interestingly, CBT is one of the recommended evidence-based treatments for PTSD. This raised an important question to

consider- to what extent research should influence clinical practice and therapeutic decision-making? Working with this client incited me to keep in mind that practice should be evidence informed but not evidence driven and that decisions in therapy should not be dictated by evidence. This has also allowed me to be increasingly comfortable with my clinical skills and confident with the humanistic ethos counselling psychologists adopt.

**Part C: Publishable Journal Article**

The journal article presents the quantitative findings of the empirical research study in Part A, highlighting our findings regarding the effectiveness of a brief self-compassion group intervention for London university students. While not all the results were significant as hypothesized, it is important to publish these findings to contribute to the literature for self-compassion-based intervention and avoid publication bias. Furthermore, the overall results were encouraging, future researcher could consider using the recommendations to inform the research design and development of such intervention. Journal of Counseling Psychology was chosen as the journal for publication, in order to promote brief self-compassion interventions within the field of counselling psychology. Moreover, according to the American Psychological Association, the journal has a good impact factor of 5.088.

At the early stage of my career, I received a comment from one of my managers- ‘‘your integrity and resilience will stand you in good stead in years to come in mental health work’’, to which I did not fully understand at the time. After now working in mental health for a few years, I realise being able to remain honest and show consistent ethical principles and values has been very beneficial when working as a counselling psychologist, allowing me to be transparent with my work and the conflicts I am constantly negotiating within my roles. When

I hold up a mirror to my profession, I am proud by what I see whilst acknowledging my own limitations and vulnerabilities.

**PART A: DOCTORAL RESEARCH**

# Effectiveness of a Brief Self-Compassion Group Intervention for Students in London University

**Debbie Sze Pui Li**

**Supervisors**

Dr Seraphine Clarke, Dr Jacqui Farrants

**Abstract**

**Objectives**

To date, there is limited evidence suggesting a brief self-compassion intervention is effective in a more diverse student population. The aim of the present study was to examine the effectiveness of a brief self-compassion group intervention in promoting mental wellbeing in London university students.

**Methods**

A mixed-method study was conducted. Thirty participants were assigned to either an intervention that introduce self-compassion ($n$ = 18) or a waitlist control group ($n$ = 12). The intervention consisted of three weekly sessions. To measure improvements in mental wellbeing, participants completed a set of outcome measures at 3 timepoints. Semi-structured interviews were conducted following the group intervention.

**Results**

Results indicated that the self-compassion intervention led to significant improvements in life satisfaction, self-kindness, self-judgement, isolation and overidentification in comparison to the waitlist control group. Participants reported positive experiences with the intervention, especially being in a group and highlighted the key mechanism of action in the process of developing self-compassion.

**Conclusions**

The findings suggested that the brief self-compassion intervention was effective in promoting wellbeing in a diverse student population.

**Abbreviations**

CBT Cognitive Behavioural Therapy

CFT Compassion Focused Therapy

MSC Mindful Self-Compassion

PMR Progressive Muscle Relaxation

RCT Randomised Controlled Trial

SC Self-compassion group

WLC Waitlist Control Group

# CHAPTER 1: INTRODUCTION

## 1.1 Overview

The aim of this study is to evaluate the effectiveness of a brief self-compassion group intervention in the promotion of mental health and self-compassion in students enrolled at London Universities. Self-compassion is becoming an area of research with growing interest and has been suggested as a way to develop a healthy attitude towards oneself (Neff, 2003a). Self-compassion consists of three main components: how individuals emotionally respond to sufferings (kindness or judgement), how individuals cognitively understand their predicament (Common humanity or isolating), and how individuals pay attention to suffering (mindfulness or overidentified) (Neff, 2003a; Neff, 2022), and is suggested to be an important predictor of wellbeing and helpful for individuals to develop resilience to adverse events (Neff, 2010). Due to recent research that have consistently suggested that self-compassion is positively associated with student wellbeing, self-compassion-based intervention may be particularly promising in benefitting the London student population and helping them better adjust to university life.

A primary aim of counselling psychology is to reduce psychological distress and to promote the wellbeing of individuals (British Psychological Society [BPS], 2019). The urgent need to support students' mental health is well evidenced with five times more university students disclosing a mental health issue today than 10 years ago (Thorley, 2017); an increasing number of students reported mental health problems or mental health diagnoses (The Insight Network, 2019). Students often report both feelings of loneliness and worries, and students who are homesick or isolated likely to be vulnerable to mental health problems (Thurber & Walton, 2012). Students with mental health conditions were found to have lower continuation, attainment and progression rates (OFS, 2019). It is crucial to address mental health issues in this population to avoid leading to issues such as poor academic performance, substance abuse

and suicide (Fong & Loi, 2016). Addressing mental health problems in students and intervening early could potentially bring a positive effect on student's academic and social functioning and avoid long-term risks associated with poor mental health (Bruffaerts et al., 2018) or avoid any unresolved psychological distress in affecting psychosocial functioning in adult life (Rickwood et al., 2005).

One possible solution to the university student mental health crisis is to deliver a brief self-compassion intervention (Smeets et al., 2014; Dundas et al., 2017; Arimitsu, 2016). This study will investigate the effectiveness of a brief self-compassion intervention as established by Neff and colleagues (2013). The Mindful self-compassion (MSC) programme was evaluated in a few studies and has been conducted in a single case study, which indicated successful results in increasing self-compassion, mindfulness, and well-being outcomes (Germer & Neff, 2013). Yet, at the time of writing, no published research has investigated this intervention for London-based university students. In line with previous research, this study will investigate the effectiveness of this intervention on primary outcomes and explore students' experience attending the group intervention. It is hoped that doing so will further understand the mechanism of change in the development of self-compassion in a diverse university student population, thus contributing to counselling psychology literature, and providing further evidence to inform our practices and for service development. Given the growing number of people going to university and students requiring support, it is essential for psychologists to feel informed and comfortable in working with this population, as well as to develop the skills that enable us to work with the clinical symptoms and facilitate a successful transition to adulthood.

## 1.2 Compassion Focused Therapy and Philosophical underpinnings

Compassion focused therapy (CFT) was first developed by Paul Gilbert (2010), aiming to help individuals address shame and self-criticism and their difficulties in generating kind and self-supporting inner voices when engaging in traditional therapy. CFT has received growing interest as an intervention for a range of psychological disorders. CFT has its origin from the scientific and theoretical neuroscience models of emotion, and evolutionary psychology models of human motivation. According to Gilbert (2014a), the biological explanation underpinning compassion is based on the principle of evolutionary biology and he explained the way we instinctively regulate our response to threats is through the three affect regulation systems. Furthermore, it was found that certain hormones (i.e., Oxytocin) are linked to affiliation and can enable us to lower threat processing- in the way kindness and self-compassion soothe us when we're fearful (Gilbert, 2010). Research also shows that practicing self-compassion can allow the regions of the brain that involve self-soothing and positive emotions to be activated more easily (Gilbert, 2010). According to evolutionary analysis, there are three main emotional regulation systems: drive, safety and threat. CFT is centered on the relationship and interactions between these systems.

### *1.2.1 Threat and Protection System*

Our threat and self-protection systems function to detect threats quickly for us to respond, such as fight, flight and freeze (LeDoux, 1998). Activation of this system may result in attention focusing/bias, and we may experience negative emotions such as anger, anxiety and disgust, which can manifest as physical symptoms in our bodies to remind us to take action against the threat. The threat system operates with particular brain systems- the amygdala and the hypothalamic-pituitary-adrenal (HPA) axis (LeDoux, 1998). Amygdala is one of the most

important parts of the brain that underpins the threat system. It is a cluster of nerve cells, that lies deep in the brainstem in the limbic system, which consists of the hippocampus that is responsible for memory and the hypothalamus that secrets hormones to regulate bodily functions (i.e., the fight-flight response). Amygdala has a primary role to process information gathered by our 5 senses (sight, hearing, smell, taste, and touch) and determining whether to send signals to the limbic system for the brain to take action. When the amygdala is activated, it sends information to the hypothalamus that communicates with the adrenal gland. The body will then produce adrenaline and cortisol, to prepare us in responding to stress. For example, when the amygdala senses 'threat', it will stimulate the hypothalamus to trigger a 'flight-fight response' to get us out of danger. The threat system helps protect us from danger, yet it can be triggered without an actual threat and can also be activated when threats happen to people who are important to us. Furthermore, when individuals are worried about certain things continuously, it will stimulate the threat detection system and eventually get locked into stimulating the threat-response system. As the amygdala is responsible for body memory and the hippocampus remembers events that mature and become active much later, it was suggested that we can experience body-memory anxieties before we can pinpoint them in time and place (Gilbert, 2010). This could potentially explain why some people report anxiety without being able to identify any triggers.

#### *1.2.2 Drive and achievement system*

The drive and achievement system primarily functions as a 'go-getting' system in order to give us positive feelings to guide, motivate and encourage us to gain the resources we need to survive (Depue & Morrone-Strupinsky, 2005). A neurochemical in our brain called dopamine is governing this system to help us focus on the activated positive feelings and motives. Many human activities can generate an increase in dopamine that can enable us to feel excitement

and pleasure, such as winning competitions; go out on dates; or winning a lottery. These positive feelings will drive us in seeking out these activities to help us survive or enhance our experiences (Gilbert, 2009). Activation of dopamine is crucial for human survival, yet it can become problematic when the system is too dominant. For example, this system can pose problems for individuals with manic episodes, as their lives can be dominated by excessively elevated moods. These individuals would seek out intense pleasure despite high risks to maintain their sense of self and 'drives' (Gilbert, 2010). Emotion and motivational systems can direct us towards important rewards and resources. The function of the drive and excitement system in humans is to give us positive feelings that energise and guide us to seek out things (Depue & Morrone-Strupinsky, 2005). Furthermore, when the drive system is balanced it can guide us towards our life goals. In Buddhist psychology, positive feelings associated with the system of achievement and satisfying desires can provide us pleasure but not happiness because our pleasure feelings are based on acquiring rewards, resources and achievements (Lama, 2002).

However, blocks to our drive and goals can become 'threats', in which the threat system will be activated and cause us to feel anxious, frustrated and angry until we overcome the block or disengage from the goal (Klinger, 1977). Yet, not being able to achieve when we disengage or give up on our goals can lead to low mood. For example, individuals who fail to achieve goals may experience symptoms of low mood or anxiety (Gilbert, 1984; Klinger, 1977). Therefore, CFT is not about relying on one emotion-regulation system to function but encouraging us to work towards achieving a better balance among these different emotion-regulation systems for flexible, healthy and adaptive functioning.

### *1.2.3 The Soothing and Contentment System*

The contentment system was suggested to be developed with the evolution of attachment behaviour (Depue & Morrone-Stupinsky, 2005). CFT integrates findings and concepts from attachment research. (Bowlby, 1969; Gilbert, 2005; Mikulincer & Shaver, 2007; Porges, 2007). This system functions as a way for us to protect ourselves through caring, kind and supportive attachment bonds (Wang, 2005). It was suggested that when we are not defending ourselves against threats and issues or when we do not need to achieve, we can be 'content' (Depue & Morrone-Strupinsky, 2005). Contentment is when we are happy with the way things are, feel safe and do not feel the need to strive and achieve. This is different from the feelings of excitement or needing to achieve as in the drive-achievement system. The contentment system is complicated by 'compassion', which is found to be linked to affection and kindness. Our compassion for ourselves and others evolved from the affiliations that enable us to soothe and feel safe when we are stressed (Gilbert, 2009). The hormone oxytocin plays a crucial role in the creation and organization of affiliative behaviour (Kirsch et al. 2005). These feelings of soothing and safety work through brain systems that are similar to endorphins, which create peaceful feelings associated with fulfilment and contentment. Endorphins, together with the hormone oxytocin are involved in our feelings of social safeness, and facilitate the feeling of being loved, wanted and safe with others (Carter, 1998; Wang, 2005). Furthermore, when we are in certain states of mind (i.e. Calming presence of a beloved family member), our soothing and contentment system is activated and would allow the body to release neurochemicals to support and enable the sense of soothing, peacefulness, clarity of mind and insight. This system is the main focus of compassion training. Additionally, evidence suggested that oxytocin is associated with social support and buffers stress; individuals with lower oxytocin have higher stress responsiveness (Heinrichs et al., 2003). Oxytocin also impacts threat processing in the amygdala.

In CFT, compassionate mind training aims to enable us to focus on and to easily access our experience of contentment, self-soothing and safety. Methods such as visualization, meditation or change in behaviour attempt to deliberately activate the soothing and contentment system, which allow individuals to greater self-care and cultivate their capacity for compassion. The evolutionary and neurophysiology concepts underpinning CFT as outlined above provide a summary of the complex processes that form the foundation for CFT, in which the therapist's formulation and thoughts are structured around the three affect regulation systems (Panksepp, 2007; Depue & Morrone-Strupinksy, 2005). It is believed that the goal of therapy is to balance and unbalance these three systems. As a third wave approach, CFT offers to build on the techniques from CBT. It continues to incorporate CBT techniques such as attention, emotions, utilizing therapeutic relationship, Socratic dialogues etc. What CFT adds is to deliver CBT and emotion work with a compassion focus (i.e., the use of compassion imagery). Furthermore, CFT places more focus on the affect-regulation model and intervention is used to improve specific patterns of affect regulation; brain states and self-experiences that underpin change processes. This is particularly helpful for individuals who are self-critical or may lack the experience of caring and affiliative behaviours from others and that the soothing system is less accessible to them.

Gilbert (2014b) highlighted a potential connection between self-compassion, anxiety, depression and wellbeing using this model. It was suggested that practicing self-compassion improves wellbeing as it may activate the safety and contentment system, helping people who have difficulties accessing this system under stressful situations. Hence, the three regulation systems may start responding to situations differently through practicing self-compassion.

### 1.3 Self-compassion

Self-compassion is becoming an area of research with growing interest. Self-compassion is mostly defined by Buddhist philosophy, practitioners, and teachers of compassion meditation (Feldman & Kuyken, 2011; Neff, 2003a; Salzberg, 2012). Self-compassion, a concept that originated from Buddhist psychology has been suggested as a way to develop a healthy attitude towards oneself (Neff, 2003a; 2015). According to Neff (2003a, 2022), self-compassion consists of three main components: Self-kindness, common humanity and mindfulness. Self-kindness is when we treat ourselves with empathy, acknowledge our problems and shortcoming instead of being critical and judgmental. Common humanity involves understanding that the human condition is not perfect, and we are not the only ones suffering. As part of human experiences, we cannot always get what we want or be whom we want to be. Instead of feeling isolated from our struggles and failures, we share the experience of life with others and acknowledge that it's normal for humans to experience failure and imperfection. Mindfulness requires individuals to recognise painful thoughts and feelings, rather than suppressing and avoiding them (Neff, 2003a). To feel compassion, we cannot ignore or deny our pain. Often when we face difficulties, we problem-solve immediately without realising we are in pain or recognising the need to comfort ourselves. Hence to have self-compassion, it is essential for us to be mindful of our sufferings, at the same time not overly identify with negative thoughts or feelings that could create an overly negative self-concept.

According to previous research, self-compassion enhances emotional resilience by deactivating the threat system that is associated with insecure attachment, defensiveness and autonomic arousal (Gilbert, 2014b). It also activates the caregiving system that is linked to feelings of secure attachment, safety and the oxytocin-opiate system. This was supported by studies that found practicing a brief self-compassion exercise allowed individuals to lower their levels of

stress hormones cortisol (Rockcliff et al., 2008); increased heart rate variability that is linked to the increased ability to self-soothe when stressed (Porges, 2007).

When investigating the link between attachment styles and self-compassion, previous research compared individuals who lack self-compassion to self-compassionate individuals and found that individuals who lack self-compassion are more likely to have critical mothers, come from dysfunctional families and exhibit insecure attachment patterns (Neff & McGeehee, 2010; Wei et al., 2011). Tanaka and colleagues (2011) also found that childhood emotional abuse is linked with lower self-compassion. More findings suggested that self-compassion appears to be the mediator of childhood maltreatment and later emotional dysregulation, implying that a higher level of self-compassion would allow abused individuals to better cope with upsetting events (Vettese et al., 2011). This evidence suggested that self-compassion is based on the foundation of a secure attachment style. Furthermore, self-compassion is suggested to be an important predictor of wellbeing and is helpful for individuals to develop resilience to adverse events (Neff, 2010). It allows individuals to develop the ability to recognise their needs and motivate themselves in making meaningful changes. By focusing on helping individuals to understand that one is not alone in distress and to acknowledge the distressing feelings, self-compassion allows us to respond to the negative feelings by self-directed kindness without getting lost in them (Binder et al., 2019). In other words, self-compassion helps individuals to manage difficult emotions with a greater degree of understanding and acceptance.

There is increasing evidence suggesting that self-compassion is associated with psychological wellbeing (Bluth, et al., 2016; Brodar et al., 2015; Crocker & Canevello, 2008; Neff, 2003a; Neff & Beretvas, 2013; Yarnell & Neff, 2013). A meta-analysis by Macbeth and Gumley (2012) has shown that higher levels of self-compassion is related to decreased psychopathology, such

as depression, anxiety and stress. Other studies have indicated that self-compassion facilitates resilience by moderating people's reactions to negative events. A study recruited undergraduates to recall unpleasant events, imagine hypothetical situations about failure, loss and humiliation, or perform an embarrassing task (Leary et al., 2007). According to their findings, participants with higher levels of self-compassion had fewer extreme reactions, fewer negative emotions, more accepting thoughts and a greater tendency to put their difficulties into perspective while acknowledging their own responsibility. Sbarra and colleagues (2012) investigated the role of self-compassion in adjustment to marital separation. The result indicated that participants who are self-compassionate when thinking about their breakup showed better psychological adjustment and the effect was maintained over nine months. This finding has been supported by other studies that indicated greater self-compassion is associated with lower levels of depression and anxiety (Smeets et al., 2014). Further research has also noted a correlation between self-compassion and positive social relationships (Neff & McGehee, 2009). Taken together, these findings suggested that self-compassion can be beneficial when promote mental wellbeing.

Currently, Self-compassion Scale (SCS) developed by Neff (2003b) is the only available self-report measurement of self-compassion, which measures various components of self-compassion as defined by Neff (2003b). It involves 26-item to measure how often people respond to feelings of inadequacy or sufferings with self-kindness, self-judgement, common humanity, isolation, mindfulness, and overidentification. SCS was developed using an undergraduate sample and found good reliability and validity, including high associations with positive mental health outcomes. It is worth noting that there were debates around the generalisability of the hierarchical six-factor structure. Whilst the majority of studies support the correlated six-factor structure of the SCS, there have been mixed findings on the higher

order factor. The contrasting findings appear to be in different cultural populations, for example. a Chinese student sample (Chen et al., 2011) and a Portuguese clinical and community sample (Costa et al., 2015) support a higher order factor. Whereas no supporting evidence was found in a German student sample, an Italian student and community sample, and a Dutch community sample (Hupfield & Ruffieux, 2011; Lopez et al., 2015; Petrocchi et al., 2014). Neff (2015) suggested these findings should be interpreted with caution due to potential bias related to cultural factors and the quality of the translation. Furthermore, there were some research concerning the validity of the SCS translation in certain cultures, with a study conducted on the Chinese Buddhist population found that the six-factor model was not replicable and suggested Western and Eastern people have a different conceptualisation of self-compassion (Zeng, 2016). Further debate on where SCS should be a two-factor model, in which the three positive subscales of the SCS (self-kindness, common humanity, and mindfulness) should be included under a 'self-compassion' factor, and the negative subscales (self-judgement, isolation, and overidentification) should be under the 'self-criticism' factor (Lopez et al., 2015). Neff (2015) responded to this and concluded that the overall self-compassion factor accounted for at least 90% of the reliable variance in all populations examined. Nonetheless, the ongoing debates highlight the lack of coherent conceptualisation of self-compassion and a need for a more reliable and valid way of measuring self-compassion. Further exploration on the underlying mechanisms of the development of self-compassion may contribute to a better understanding of the construct.

### 1.4 Compassion-based therapy evidence-base

The consistence findings on self-compassion as a facilitator of mental health and resilience have led researchers to start exploring the effectiveness of compassion-based interventions on wellbeing, for both non-clinical and clinical populations. CFT has been studied in a number of

trials. In 2014, Leaviss and Uttley (2015) conducted a systematic review of 14 evaluation studies. Despite no meta-analytic techniques being used as there was a lack of available data, the review found that CFT was effective as an intervention for mood disorders, especially for self-critical individuals. It is important to note that the majority of studies on CFT have been uncontrolled studies as part of service delivery.

There were a few RCTs conducted to investigate the effectiveness of CFT that were included in both Leaviss & Uttley (2015) systematic review and Kirby et al. (2017) meta-analysis. Braehler et al. (2013) conducted a clinical study that recruited 40 individuals with a diagnosis of schizophrenia spectrum disorder with psychotic features and found CFT to decrease depression more than the control group, with an increase in compassion. Kelly et al. (2010) recruited a group of 119 smokers and found that the self-compassion intervention reduced daily smoking more quickly than a baseline self-monitoring condition but at the same rate as the control groups. Both studies looked at self-criticism and shame as important moderators in facilitating compassion. However, Kelly et al. (2010) did not measure compassion as an outcome. One of the reasons to the differences in findings can be due to the way CFT was delivered. Braehler et al.'s (2013) study was more in-depth, delivered by two psychologists and had a longer duration compared to Kelly et al. (2010), in which participants were introduced to CFT via self-help resources. Another RCT study recruited participants with binge eating disorder who were randomly assigned to either self-compassion strategies group or behavioural strategies group alongside food planning or wait-list control group. Their results indicated that compared to the other groups, self-compassion group reduced global eating disorder pathology, eating and weight concerns and increased self-compassion. This has once again, suggested enhancing self-compassion can be helpful in promoting mental wellbeing.

Overall, it was suggested that CFT may be more effective than no treatment or effective as Treatment-as-usual in treating psychological disorders.

With the growing evidence supporting the effectiveness of CFT, it is currently used in treatment for different clinical patients such as eating disorders, bipolar disorder, depression and other psychological conditions (Gilbert, 2010; Goss & Allan, 2010; Kelly et al., 2009; Lowens, 2010). Recently, research indicated a wider movement towards the integration of compassion in promoting psychological wellbeing outside of the clinical population (Hofmann et al., 2011; Jazaieri et al., 2013; Singer & Bolz, 2014). Non-clinical populations such as students could also benefit from an intervention that could enhance psychological resilience. Neff and Colleagues (2013) recognised this and developed a program called Mindful Self-Compassion (MSC) that aims to improve self-compassion for both the general public and some clinical populations. The theoretical underpinnings of this programme are not explicitly detailed. It appears to be developed based on Buddhist practices and existing literature on the benefits of mindfulness and self-compassion.

All existing compassion-based therapies have a common focus to cultivate compassion, with some similarities and differences between different intervention models. MSC as developed by Neff and Germer (2013) spends less time on mindfulness and focuses specifically on self-compassion. To date, there is limited evidence-based on MSC. The program has been evaluated in a single case study (Germer & Neff, 2013), an RCT (Neff & Germer, 2013), a clinical trial RCT (Gaiswinkler et al., 2020) and a non-RCT pilot study (Finlay-Jones et al., 2017). Neff and Germer (2013) recruited 51 participants who were randomly assigned to either MSC or a waitlist control group. They found MSC significantly increases self-compassion, mindfulness, and wellbeing outcomes. In a clinical trial, Gaiswinkler and colleagues (2020) recruited 200

psychiatric inpatients who were randomly assigned to either a 6-week MSC or a control intervention of progressive muscle relaxation (PMR). Their results indicated MSC group showed improvement in self-compassion and a greater amount of happiness after 6 weeks in comparison with the PMR group. An uncontrolled pilot study explored the effectiveness of MSC in a Chinese community sample (Finlay-Jones et al., 2017). Their results showed an increase in compassion, a reduction in psychological distress among Chinese females. Although existing literature have indicated MSC is beneficial for different population, further controlled evaluation studies are needed to investigate its effectiveness and benefits of the programme.

### 1.5 University students and mental health

University students are a unique population as students are prone to traits such as perfectionism and self-criticism (Harvey et al., 2015), which in theory, would benefit from self-compassion intervention. With approximately half of the young people in the UK now go to university and the increased awareness of mental health and wellbeing; there is a significant rise in students seeking support for their mental health. The institute for public policy research indicated that five times more university students disclosed mental health issues today than 10 years ago (Thorley, 2017). Likewise, a web-based survey across four UK Higher Education Institutions (HEIs) indicated around one-third of students reported psychological distress at clinical levels (Bewick et al., 2010). According to a recent survey of nearly 40,000 students in the UK, one in three students have experienced mental health problems and one in five students reported a mental health diagnosis (The Insight Network, 2019).

Moreover, nearly half of the students reported feeling anxious and a third of them are frequently lonely. The feelings of loneliness and worry were found to almost always appear together

McIntyre et al. (2018.) examined academic and non-academic predictors of distress among UK undergraduates and found that loneliness was the strongest overall predictor of distress, which was consistent with the results from other studies in the UK (Richardson et al., 2017). Furthermore, university students who spend their time away from home and transitioning to university were suggested to be more likely to represent a high risk of homesickness (Thurber & Walton, 2012). Intense homesickness can be triggered by the transition from living at home to living away from home, changes to new routines, diets, social environments, and perceived demands. Furthermore, cultural contrast between home and school settings can also lead to adjustment challenges, especially for international students who would need to adjust to differences such as language, culture, environment etc. This is particularly important as homesickness is commonly associated with anxiety (Flett et al., 2009), depression (Uslucan, 2005; Verschuur et al., 2004) and loneliness (Stroebe et al., 2002). Students who reported homesick or isolated are more vulnerable to mental health problems and are three times more likely to drop out of school than those who are not homesick (Thurber & Walton, 2012). More recently, the COVID-19 pandemic has affected the mental health and wellbeing of over 50% of students in higher education in England (Tinsley, 2020). A recent study examined the impact of lockdowns triggered by the COVID-19 pandemic on academic life. They found that the complete closure of high education has a negative impact on students' mental health and that social isolation has led to students experiencing problems such as lack of social interactions, motivations, and mental health problems such as boredom, loneliness and anxiety (Filho et al., 2021).

To date, there is still limited mental health research conducted on students of diverse backgrounds. A study indicated students of colour have a higher prevalence of depression and anxiety and a higher level of functional impairments when compared to white students

(Eisenberg et al., 2013). Remarkably, studies have found that help-seeking among students of colour is low (Herman et al., 2011; Masuda et al., 2009), which can be due to higher levels of stigma, especially among Asian (Eisenberg et al., 2009) and African American students (Masuda et al., 2012). A recent study conducted on the UK student population also found that international students experienced specific practical and emotional challenges during the pandemic and are at risk of mental-ill health. Yet, they did not actively seek support from university services. Despite limited research conducted on students of diverse backgrounds, existing evidence suggested a need for better mental health support for a more diverse population. Hence, more proactive and personalised approaches to student support can be crucial for positive student experiences and the retention of students who are studying abroad in the UK higher education system (Al-Oraibi et al., 2022)

Many students experience substantial distress, such as elevated levels of stress, negative affect, burnout and depression. A report found that students who reported a mental health condition have lower continuation, attainment and progression rates (OFS, 2019). These findings reflected mental health crisis on campus that needs to be managed properly to avoid leading to issues such as poor academic performance, substance abuse and suicide (Fong & Loi, 2016). Addressing mental health problems in students and intervening early could potentially bring a positive effect on students' academic and social functioning and avoid long-term risks associated with poor mental health (Bruffaerts et al., 2018). It is also important to note the pressing need in addressing the mental health needs of today's diverse student populations.

### 1.6 University counselling services challenges

University counselling services are experiencing an increase in help-seeking, with more students presenting with more severe problem (Brown, 2018). Due to an increase in mental

health needs among university students, university counselling services are reporting longer waiting times (Campbell, 2019). Furthermore, student newspapers and the press frequently raised concerns for better mental health services for university students. Counselling services in the UK have been challenged to address the mental health needs of students, provide evidence on the effectiveness of the therapeutic support offered (Randall & Bewick, 2016) and increase the development of practice guidelines for psychological disorders (Cooper & Reeves, 2012).

Surprisingly, students typically prefer to seek support from friends and family (Rickwood et al., 2005), with only about a third of students with mental health problems seek formal support from counselling in the UK (Macaskill, 2012). Stigma was suggested to be one of the major barriers to help-seeking behaviour (Chew-Graham et al., 2003), with other studies found that other key barriers to help-seeking may include believing that treatment is not needed, unsure where to seek professional help, lack of time, inclination to self-management and believing that stress is normal without the need for intervention (Arria et al., 2011; Czyz et al., 2013; Ebert et al., 2019). These findings highlight a number of issues preventing students from accessing appropriate mental health services. Therefore, in order to reduce mental health problems among university students, counselling services should look for more effective, scalable interventions that are attractive to students (Brown, 2018).

Typically, counselling services would offer support to meet the diverse needs of students, such as one-to-one support, guided self-help, peer-to-peer-support or online support (Mair, 2016), with therapeutic support provided via the internet or telephone (eTherapies) becoming increasingly popular. However, counselling services have limited capacity to offer individual support to a large number of students, and it was suggested that instead of offering individual

support as a first-line intervention, alternative ways of delivery should be considered (Brown, 2018). It is also worth noting that there is limited evidence on the benefits of support from student services on students. One of the reasons to limited evidence-based can be due to the challenge in comparing outcomes with different service sizes and education settings. Evidence-based intervention can be crucial to inform service development and request for funding (Sucala et al., 2012; Murray et al., 2016). Being able to bid for funding for counselling services is particularly important, especially with the new challenges posed by new policies to widen participation and raise tuition fees in higher education. Student debt, for example, has been associated with poorer psychological functioning and considerations for dropping out of education (Cooke et al., 2004; Walsemann et al., 2015). This has highlighted the importance in addressing mental health needs for university students and continuing to provide evidence base on the therapeutic support offered.

In conclusion, the difficulties that student counselling services face have continued to be a concern (Holm-Hadulla & Koutsoukou-Argyraki, 2015). Despite concerns around the effectiveness of short-term support (Mair, 2016), it was suggested that counselling services benefitted students in coping with academic challenges (McKenzie et al., 2015). The ongoing demands in student counselling services and the rise in students entering higher education have encouraged counselling services to find new ways of providing support, for example, offering short-term counselling sessions or group intervention. Perhaps alternative support should be developed in order to increase accessibility for students. Considering this, a brief self-compassion group as proposed in the current study could potentially alleviate some of the challenges student counselling services are facing as highlighted above. With studies suggesting a relatively short self-compassion intervention can successfully enhance levels of

self-compassion in students (Smeets et al., 2014), counselling services could consider providing a brief self-compassion intervention for students as a way to address the challenges.

### 1.7 University students and self-compassion

Prior studies among undergraduate students have linked self-compassion to motivation to grow and understand new materials (Neff et al., 2005); less afraid of failure and more confidence about their abilities; lower procrastination tendencies and less academic worry (Williams et al., 2008); and higher levels of self-efficacy (Iskender, 2009). Self-compassionate students were found to be using emotion-focused than avoidance-focused strategies to cope when facing academic failure (Neff et al., 2005). Recent research looking at the relationship between self-compassion and student wellbeing have consistently suggested that self-compassion is positively associated with student wellbeing, indicating self-compassion-based intervention could potentially benefit the student population and help them better adjust to transitioning to university life.

As mentioned, university students not only struggle with academic pressure but also experience difficulties transitioning to a new environment and moving away from home (Dyson & Renk, 2006; Pittman & Richmond, 2008; Bache & Burns, 2021). Students who move away from home to attend university may also struggle from losing connections to their existing social support networks, which can lead to homesickness (Fisher & Hood, 1987; Thurber & Walton, 2012). Students who experienced homesickness were found to have problems with concentration, low motivation, and linked to insomnia, losing appetite or other more serious health problems (Van Tilburg et al., 1996; Thurber & Walton, 2012); and are three times more likely to drop out of college as compared to students who are not homesick (Burt, 1993; Johnson et al., 2007). In a longitudinal study, Terry and colleague (2013) examined whether

self-compassion moderates feelings of homesickness, depression and decision satisfaction for first-year college students who experience social or academic difficulties. They found that self-compassionate students appear to manage social and academic struggles more effectively, and reported less homesickness and depression, indicating that self-compassion helps moderate students' reactions to academic and social difficulties in the transition from high school to college. Their results suggested that a self-compassion intervention may be beneficial for certain students to adjust to university life.

Despite promising results indicating enhancing self-compassion is effective in reducing negative emotions, evidence from previous research were mainly from independent cultures such as USA and UK. It is unclear whether self-compassion can be beneficial for other cultures. It has previously been suggested the underlying structure of the self-compassion construct can be depending on whether a culture is prone to perceive self-compassion in a positive or negative way (Neff et al., 2008). This is highly relevant to London Universities due to its diverse student population, with international students constituting a high proportion within the UK higher education institution (Al-Oraibi et al., 2022). Furthermore, it was suggested that the overall levels of self-compassion can be influenced by culture (Neff et al., 2008) and context-dependent characteristics influenced by group norms, values and practices (Gilbert et al., 2011). Bluff and Nefff (2018) suggested that interventions based on self-compassion are beneficial for a diverse population. Some studies suggested cultural differences in self-compassion, for example, Japanese are less compassionate than people in Thailand and the USA (Arimitsu, 2014) and more self-critical than people in Western culture (Kitayama et al., 1997). This raised a further question on whether individuals from cultures that are highly self-critical would benefit more from enhancing self-compassion. Hitokoto & Uchida (2015) found interdependent people are happy to maintain conformity, suggesting common humanity can be

influenced by interdependent culture. Furthermore, a study conducted in Hong Kong indicated individuals with a greater sense of common humanity reported a weaker association between self-criticism and depression (Wong & Mak, 2013). Findings from these studies imply cultural factor plays an important role in influencing individuals' responses to self-compassion. Hence, it is important to further understand how individuals respond to self-compassion across different cultural contexts.

### 1.8 Literature review of self-compassion intervention in students' population

Self-compassion-based interventions were found to be beneficial in different populations (clinical, community, clinical health populations and university populations), implying that self-compassion approaches are more widely accepted in society than other evidence-based treatments such as CBT that is typically delivered clinically and less frequently in a non-clinical population. However, most intervention studies on self-compassion have focused on community adult populations; only very few of them were conducted on the university student population (Huang et al., 2021; Arimitsu, 2016; Dundas et al., 2017; Johnson & O'Brien., 2013; Mosewich et al., 2013; Smeets et al., 2014; Wong & Mak, 2016), with Mosewich and Colleagues (2013) investigated the effects of self-compassion intervention in women athletes and not on the general university population. Current studies conducted on general university student population have shown evidence to support the role of self-compassion in moderating social and academic difficulties. Yet, evidence is still lacking and there is a need to further explore the benefits of compassion in the education system (Welford & Langmead, 2015). Among these studies, two studies attempted to investigate the effectiveness of self-compassion writing by introducing interventions in a self-directed rather than therapist-directed context (Wong & Mak, 2016; Johnson & O'Brien., 2013); with only one study exploring young adults' experience in the process of establishing a more compassionate way of treating themselves in difficult situations (Arimitsu, 2016).

Smeets et al. (2014) was one of the first RCT studies to examine the effectiveness of self-compassion intervention in enhancing resilience and wellbeing in students. They recruited 52 female college students, which were randomly assigned to either an intervention group that involved skills on self-compassion or a control group on time management skills. The intervention group consisted of 3 sessions over 3 weeks. Dundas et al. (2017), an RCT study implemented an intervention with a similar number and length of sessions, with 3 sessions over 2 weeks, 1.5 hours each. Their study aimed to examine the effects of a short self-compassion course on self-regulation and psychological health in 158 Norwegian university students and whether it would increase self-compassion and reduce depression and anxiety. With the aim to enhance the level of self-compassion in students, the interventions developed by Smeets et al. and Dundas et al. both involved introducing the key concept of self-compassion to participants. Their program incorporated experiential exercises for participants to practice in order for them to become more aware of their own sufferings. Informal self-compassion techniques such as self-compassion, loving-kindness meditation were introduced for participants to reprocess difficult experiences with a sense of kindness, common humanity and mindfulness and destruction of self-criticism. Throughout the intervention, participants were given space to discuss, share their experiences and reflect. Similarly, a mixed-method study conducted by Arimitsu (2016) was also looking at the effects of brief self-compassion intervention on self-compassion, self-esteem, negative automatic thoughts, negative and positive emotions, anxiety and depression on a Japanese university student population. The main difference as compared to the Smeets et al. and Dundas et al. interventions was that Arimitsu's intervention consisted of more number of sessions, with 7 weekly 1.5-hour sessions. Yet, Arimitsu's intervention shared a similar framework and provided participants with the space to ask questions and shared their experiences throughout the sessions, highlighting the importance of sharing

experiences as one of the key aspects to allow participants not only to understand the program more deeply but also helped recognise common humanity. The program also included an introduction to self-compassion, exercises and techniques on mindfulness and self-compassion such as loving-kind meditation, mindfulness training and compassionate imagery skills. The second half of their program focused on equipping participants with skills to be more kind to themselves in response to their self-critical thoughts; to be more aware and understand their difficulties, to be more able to accept and respond to themselves in a compassionate way. A recent RCT conducted by Huang and colleagues (2021) was looking at the effects of a group-based self-compassion intervention on future-oriented coping and psychological distress on a Chinese college students' population. They recruited 69 college students, which were randomly assigned to either an intervention group or a waitlist control group. Their intervention group consists of less number but lengthier sessions compared to Arimitsu's study, with 4 sessions over 5 weeks, 2 hours each, and was adapted from Mindfulness-Based Cognitive Therapy (Segal et al., 2018), Compassionate Mind Training (Gilbert & Procter, 2006), and the Mindful Self-Compassion Program (Germer & Neff, 2019). The exercises in their intervention were generally similar to practices of previous self-compassion programs, however they have made some minor modifications for the Chinese culture. The intervention programs developed by the four studies have provided a guide on the number of sessions and structure for future studies when conducting a brief self-compassion intervention and for student population of different cultures.

Overall, the results from Smeets et al. (2014) 3-week intervention indicated an increase in self-compassion, mindfulness, optimism, self-efficacy and a decrease in rumination. The intervention enabled students to approach themselves in a self-compassionate way and was found to be helpful in reducing some of the key components of self-compassion such as self-

judgment, isolation, and over-identification. It was suggested to be effective in preventing students from dwelling excessively on negative events. These findings suggested that a brief self-compassion intervention does not only benefit the adult population, but also enhances the level of self-compassion in students, validating its' effectiveness in buffering students from challenging situations. Dundas et al. (2017) findings corresponded well with Smeets' findings and reported an increase in self-compassion, self-efficacy and a decrease in negative thinking in students, following a brief, three-session self-compassion intervention. The follow-up measures by Dundas et al. showed that these changes remained at six-month and one-year follow-up, suggesting a brief intervention could lead to lasting psychological changes. These findings suggested that perhaps a brief intervention with 3 sessions is sufficient in promoting students' mental health and could potentially better suit the university student population as students are often busy with academic and social life. Furthermore, a brief intervention with fewer sessions could address some of the challenges student counselling services face as highlighted above, such as reducing waiting time.

Dundas et al. (2017) results showed a reduction in anxiety, which was not found in Smeets et al. (2014) study. It was unclear as to why this may be the case as both studies implemented interventions of similar content, with participants recruited from the non-clinical student population. It may be that Smeets' study only included female students whereas Dundas's study recruited students of both genders, with 85% females recruited for the study. Previous research showed that women are almost twice as likely to suffer from anxiety as men (McLean et al., 2011), and women and men tend to use different coping strategies when facing stressful situations. Furthermore, women show more biological stress reactivity than men (Olff et al., 2007) and anxiety is often triggered when individuals have less control over the environment; whereas men are more able to believe in their personal control over the situation (Barnett et al.,

2021). It is possible that the impact of the worrisome nature of the college experience could not be countered by a brief self-compassion intervention, especially when women are more likely to get anxious in stressful situations. These findings suggested that different gender may respond to self-compassion intervention differently. Therefore, future research may want to recruit both genders when exploring the effectiveness of a brief self-compassion intervention to better represent the general university student population.

Both findings from Smeets et al. (2014) and Dundas et al. (2017) suggested that brief self-compassion intervention is sufficient in enhancing the level of self-compassion in students, which was further supported by Arimitsu (2016). Their results indicated a 7-weekly self-compassion intervention could enhance self-compassion and reduce negative thoughts and emotions in students. Moreover, the results from the three-month follow-up have indicated that changes can be maintained following a brief intervention. Yet, their results showed no improvement in mindfulness, which may be due to the limited session on taught mindfulness with limited practice on mindfulness skills. Interestingly, Smeets' results indicated one session on mindfulness was sufficient in increasing mindfulness in their student sample. One way to explain this is that Arimitsu's study recruited participants with lower self-compassion. This may mean that people with lower self-compassion may require more practice and exercise in order to enhance the ability to become mindfully aware of their own suffering. These raised further questions on whether the clinical population or people with lower self-compassion require more mindfulness sessions for any meaningful psychological changes. This may not be relevant to the general student population, especially since the use of informal exercises was shown to be sufficient in enhancing students' ability to become mindfully aware of their personal sufferings (Smeets et al., 2014). Nevertheless, it is possible that mindfulness skills were improved but were not captured by the 26-item Self-Compassion Scale (SCS). In SCS,

mindfulness was measured as part of the subscales of self-compassion, hence focusing on a limited aspect of mindfulness. Whereas Smeets measured mindfulness using 2 subscales of the extended version Kentucky Inventory of Mindfulness Skills: Accept without Judgment and Nonreactivity to Inner Experience, which was more likely to capture a broader context of mindfulness. It is worth noting that both KIMS and SCS were found to have good validity and reliability in measuring self-compassion and showed good reliability in measuring Mindfulness (Neff, 2003; Baer et al., 2004).

Slightly different from previous studies that focus on the role of self-compassion in adjusting to ongoing stressors, Huang et al. (2021) study aimed at examining the contribution of self-compassion to future-oriented coping. They found that self-compassion group intervention significantly enhances future-oriented coping and reduce depression and stress. This finding is encouraging as it extends the previous literature on self-compassion in a sample of Chinese college student. Previous studies have suggested self-compassion in Chinese individuals may be influenced by the Chinese culture due to variations in its philosophical origins, such as Confucianism, a philosophy that considers moral perfection to be the ultimate life goal, posits extremely high behavioural standards and encourages self-criticism (Neff et al., 2008; Tang, 2015); or the use of shame as a way to perfection and motivate people to correct mistakes (Geaney, 2004; Neff et al., 2008). These philosophical origins contrast with the concept of self-compassion. Yet, certain Chinese cultural influences are consistent with the essence of self-compassion, such as Buddhism that emphasize the importance to compassion and Daosim that emphasizes gain and loss are both part of the endless cosmic change and inevitable part of life (Ho, 1995). Nevertheless, this study showed a 4-week group intervention led to an increase in self-compassion with a large effect size. They showed a different finding to a previous study on Chinese college students that found no significant improvement in self-compassion after an

individual intervention using self-compassion writing (Wong & Mak, 2016). The difference in their findings can be due to the different way of delivery, with Huang et al. study delivered a group intervention and Wong and Mak study introduce self-compassion through individual practice. Furthermore, a meta-analysis indicated that group-based delivery produced a larger effect on self-compassion (c et al., 2019), highlighting the training of self-compassion may be most appropriate being delivered in group, especially in cultures with a strong collectivistic orientating. Huang et al. (2021) findings are particularly important to the current study as not only it highlights self-compassion may be most appropriate to be delivered in group, but it also highlights potential cultural influence in the cultivation of self-compassion, which is highly relevant to the diverse population in London universities.

Despite all four studies showing an increase in self-compassion in students following a brief intervention, the size of the increase was different. Smeets et al. (2014) and Dundas et al. (2017) study with 3-session interventions obtained a 21% and 19% increase respectively in self-compassion, and Huang et al. (2021) study with a 4-session intervention for Chinese students indicated a 11% increase in self-compassion. Whereas Aritmitsu's (2016) study indicated a 35% increase in self-compassion with a more intensive 7-week intervention. These figures imply that a brief self-compassion intervention is sufficient in enhancing the level of self-compassion but may not be to the same extent as a longer intervention. Hence, future studies should consider the length of intervention carefully when replicating and modifying such brief interventions to maximise the size of the increase. When considering the length of intervention for the student population, it is helpful to take into account student's busy life and the challenges student counselling services are facing.

The qualitative feedback obtained from participants in Artimitsu's (2016) study suggested that the brief intervention program was positively experienced and well tolerated. Furthermore, they found that in the process of cultivating compassion, participants recognised that criticising the self and others caused a similar type of suffering, demonstrating that the intervention can improve not only self-kindness but also common humanity. In order to gain a better understanding of the lived experiences of the students who participated in the brief self-compassion group intervention, Binder et al. (2019) conducted a qualitative study as part of a multi-methods project (Dundas et al., 2017). They conducted a one-on-one in-depth semi-structured interview with 12 of the 97 participants. The qualitative part of the project corresponded well with findings from the quantitative study, supporting that brief intervention is effective for students to become more aware of the way they relate to themselves, by practicing resources provided during the course and applying them in their own life situations. Furthermore, all participants reported meaningful psychological changes and learned to be kinder to themselves, particularly when facing challenges. Another key finding was that attending to distress would reduce distress instead of increasing the frequency of those thoughts and emotions. This qualitative study once again confirmed that a short intervention is sufficient in enabling positive changes in non-clinical student samples and could potentially act as a preventive effect for student mental health problems. Despite positive findings, it is important to note that only one study has explored the lived experiences of students following a brief intervention. Therefore, this may not be a good representative of a more diverse population and especially as mentioned above, different cultures may respond differently to self-compassion intervention. Future research may want to understand more about the process and experience of a more diverse population following a brief intervention.

### 1.9 Summary

The present review has demonstrated that a relatively short self-compassion intervention program can effectively improve resilience and wellbeing among university students and indicates the potential of such a program in buffering students against the challenges of university life. Additionally, this review highlights various gaps in the current research that require further exploration. Firstly, there is a strong evidence base to suggest that brief self-compassion intervention will benefit the student population. However, the student sample recruited by existing studies lack diversity and failed to capture students from a variety of ethnic and cultural background. Furthermore, similar research has never been conducted on London general student population. Secondly, despite most research aimed to look at whether students could respond differently to challenging situations, they mainly focused on academic and social struggles, such as motivation to learn and coping with academic failure. As mentioned, other factors such as homesickness, cultural adaptation are also highly relevant to students' life and may contribute to success in university. Therefore, it would be worthwhile to investigate whether this brief intervention could also improve students' experiences along those challenges.

To conclude, existing research indicates the potential benefit of a brief self-compassion intervention for university students. Given the current pressures on mental health services, the ability to improve psychological wellbeing after only a few brief sessions of self-compassion training is practical and valuable. The identified gaps in this article indicate the potential of delivering the existing brief intervention programme to meet the needs of university students in London. This can play an important contribution in preventing vulnerable students from developing more complex mental health issues and reducing waiting time for university counselling services, which is crucial in the field of counselling psychology.

To our knowledge, studies have yet to explore the role of brief self-compassion intervention on the diverse university students in London. Therefore, I am interested in looking at whether this intervention is effective in promoting mental wellbeing in this population. This study also fills a gap in the current literature on self-compassion. While some qualitative studies have explored the experience of establishing self-compassion in a non-cancer population (Pauley & McPherson, 2010); a cancer population practicing mindfulness-based stress reduction training (Kvillemo & Bränström, 2011; L'Estrange et al., 2016); young adult cancer adult survivor (Lathren et al., 2018); there were very few studies that have explored students' experience of the process of establishing self-compassion in a diverse population, with Artimitsu (2015) study on university students in Japan and Binder (2019) study on university students in Norway. This study is particularly interested in looking at London University students, given the diversity of this population and is likely to be vulnerable to additional pressure such as managing cultural diversity, homesickness, relationship difficulties and working while studying. It would be worthwhile to explore the experience of this population following a brief self-compassion intervention, in order to understand the process and different factors that may contribute to any meaningful psychological changes and the development of self-compassion.

Given the gaps in the existing literature, the need to promote mental health among university students and address issues such as stigma and ease the increasing demands for university counselling services, this study will provide a deeper understanding on how these issues can be overcome and allow higher education institutions to better support students which are highly relevant to counselling psychology.

### 1.9 Research aims and questions

The study aims at examining whether a brief self-compassion intervention is effective in promoting mental health for students in London Universities using a mixed methods design.

The researcher is also interested in understanding the factors that facilitate the development of self-compassion in London University students.

In the quantitative part: To examine the effectiveness of a brief self-compassion intervention in promoting mental wellbeing in London university students

In the qualitative part: To explore the subjective experiences of students attending the group intervention. It is hoped that the qualitative interviews may provide an understanding to the mechanisms of change that participants have found most helpful or relevant from the group intervention.

# CHAPTER 2: METHODOLOGY

## 2.1 Overview

This chapter explains the methodology that was used to further investigate the research questions and study aims as identified from the introduction chapter. The main research question for the current study was: How and in what way is the brief self-compassion group intervention effective to support and promote mental wellbeing in London university students? This study evaluated the effectiveness of this intervention and explored students' experience attending the group intervention. It is hoped that doing so will provide further understanding on the mechanism of change in the development of self-compassion in a diverse university student population, thus contributing to counselling psychology literature, and providing further evidence to inform our practices and for service development.

The following sections would first discuss the rationale for the choice of methods to address the research question, along with the theoretical framework that was used in this study. Secondly, the procedures, recruitment, data collection strategy and analytic procedures are described in detail. The last part of the chapter would discuss the role that reflexivity played in the mixed methods design.

## 2.2 Theoretical Position

### *2.2.1 Epistemological positioning*

A relativism ontology and pragmatist epistemology underpin the current research. This approach has been selected as it enables researcher to adopt a pluralistic stance of gathering data using quantitative and qualitative methods (Creswell and Clark, 2011), appropriate to the study's mixed methods design. The researcher shares pragmatist's views that knowledge and

reality can be obtained using different practical ways, not being weighed down by doctrine or ideology (Goles and Hirschheim, 2000; Morgan, 2014; Tashakkori and Teddlie, 2008).

In the quantitative part of the research, the aim to investigate whether developing self-compassion can promote mental health in a group intervention for London university students is taking a positivist epistemology. It makes an assumption that phenomena (mental wellbeing) objectively exist in the outside world, which are quantifiable using outcome measures. It also assumes that the phenomena can be changed by other objective phenomena (self-compassion), based on the theory of self-compassion from existing literature. Furthermore, the researcher aims to produce findings that are generalisable and replicable to inform future practice in counselling psychology. Therefore, self-report questionnaires are considered to be an appropriate method for data collection in this part of the study.

The researcher is aware of the limitations when positioning the study within a positivist epistemology. Firstly, constructivist suggests that it is impossible to achieve 'objective' knowledge when discounting the socio-cultural and subjective experiences in influencing our awareness of the world. For example, 'mental wellbeing' may be perceived differently according to individuals' cultural, political and social norms. Similarly, different authors in the existing literatures have also constructed the concept of 'self-compassion' differently, emphasizing different aspects (i.e., level of kindness, mindfulness) that may have contributed to the definition and development of 'self-compassion'. Furthermore, the reliable, pre-determined self-report measures may impose the researcher's assumptions on participants' responses, that can prevent participants from expressing alternative or contradictory perspectives. This may potentially overlook important socio-cultural and political influences on the development of self-compassion and promoting mental health in this study (Gergen,

1992). Secondly, positivist emphasizes on 'objectivity' and the researcher to be separated from the research. Yet, researcher's subjectivity and the construction of meaning also play an important role in the research process that needs to be taken into account (Ashworth, 2003).

Pragmatists believe reality cannot be determined once and for all (Pansiri, 2005) and that there should not be dichotomy of 'objectivity' and 'subjectivity' (Morgan, 2014). It is based on the idea that research can focus on practical understanding of specific 'real world' problem instead of discussing the nature of truth and reality (Patton, 2005). The pragmatists' view enabled researcher to move beyond objectivist conceptualisation, and to further explore and understand the connections between knowledge and action context. Hence, the emphasis is placed on interrogating the value and meaning of research data through evaluation of its practical repercussions (Morgan, 2014). The research of the current study believes the pragmatic view corresponds well with the current intervention study, as Biesta (2010) suggested, 'knowing' has the potential to transform practice. In pragmatism, the research question takes priority in which the false dichotomy between post-positivism and constructivism does not impose restrictions on the investigation. Additionally, it is believed that a research question or topic can be answered through multiple lenses (Morgan, 2014). As a new paradigm, pragmatism acknowledges the value of the use of both qualitative and quantitative approaches in answering an inquiry. Hence, in the present study, the researcher is guided by 'what works best' when answering the research question.

In this study, the qualitative part of the research aims to further understand individual's experiences attending the group and other important factors that may contribute to the development of self-compassion. The research question to explore the experiences of London university students appear to sit within a constructivist paradigm, believing that the 'truth' is

waiting to be discovered and 'reality' does not pre-exist independently of human activity, but meaning or knowledge is through human construction. In this part of the research, the researcher seeks to create form and structure instead of discovering pre-existing ones and with the exploratory nature to understand individual's group experience, qualitative data will be collected through semi-structured interview resulting in open-ended data.

To conclude, in order to address some of the conflicts mentioned above, the current research therefore adopts pragmatism to answer the research questions, with a focus on the consequences of research and placing emphasis on the question asked rather than the methods. By using multiple methods of data collection to inform the problems under study, the aim is not to seek a truth that is independent from human experience, but to achieve a better, richer understanding (Maxcy, 2003). Holding a pragmatism worldview, while accepting positivist and constructivist as epistemology positions in different parts of the study, the researcher will break down the hierarchies between positivist and constructivist ways of knowing in order to look at what is meaningful from both for the research question (Biesta, 2010).

### *2.2.2 Mixed methods research*

Quantitative method has been traditionally regarded as the gold standard of scientific research. It has been widely used in psychology and was used by researchers who shared the postpositivist and positivist worldview. The approach has been encouraged due to the use of scientific methods for data collection and analysis that makes generalisation possible, its replicability and objectivity of the researcher. Yet, it was argued that this method discounts the richness of human experiences and is simplified by transforming into objective data (Willig, 2008). In the late 20th century, qualitative method has become more popular in psychology as the approach allows researchers to discover the participant's inner experience and understand

how meanings are shaped through and in culture (Denzin & Lincoln, 2005; Corbin & Strauss, 2008). However qualitative methods have received criticism for its lack of generalisability; leaving out contextual sensitivities; and complex data interpretation process.

There has been ongoing debates and arguments regarding the appropriateness of qualitative or quantitative research approaches in conducting social research, especially between constructivists and positivists (Robson, 2002). Yardley & Bishop (2015) suggested pragmatism as a conceptual solution to paradigmatic tensions and as a framework that has the potential to embrace both qualitative and quantitative approach (Fishman, 1999; Greene & Caracelli, 2003; Cornish & Gillespie, 2009; Tashakkori & Teddlie, 2021; Morgan, 2014). Tashakkori and Teddlie (2003) formally linked pragmatism and mixed methods research. The mixed methods approach (MMR) is growing as a recognised methodology and counselling psychologists are encouraged to employ this method when conducting research (Fetters & Freshwater, 2015; Haverkamp et al., 2005). It combines quantitative and qualitative approaches that allow researchers to explore diverse perspectives, and to provide a better understanding of a research topic. Greene, Caracelli, and Graham (1989) highlighted other important reasons, rationales and benefits of mixed methods research: complementarity (interpret the results from one method with the findings from the other method), development (when the results from one method inform the use of the other) and expansion (using different methods to extend understanding to research question and the range of inquiry).

The researcher believes that collecting diverse types of data can provide a more complete understanding of a research problem than either quantitative or qualitative data alone. MMR could produce a richer understanding to answer the research questions. It is hoped that combining the two methods could enhance the authenticity of the results and to generalize to a

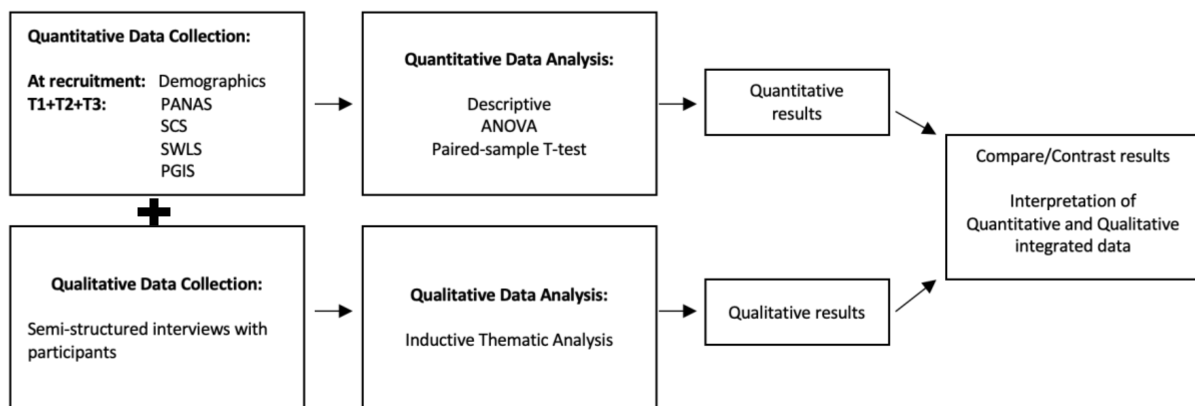
population as well as develop a detailed view of the meaning of a phenomenon or concept for individuals. Moreover, MMR is suggested to be helpful to focus on mental health needs and treatments, as they are complex and socioculturally embedded (Creswell et al., 2011). It is worth noting that despite MMR is an established design in counselling psychology, compared to singular methods, it is still less frequently used in counselling research (Leech & Onwuegbuzie, 2010). Some of the key reasons may be due to unfamiliarity with the paradigm, specific difficulties integrating data from two methodologies (Smith, 2012).

This study proposed a convergent design to address the research question. The quantitative and qualitative data are collected and analysed independently, with both sets of data given equal priority at the data analysis stage. During the interpretation stage, the results are integrated and compared. It is hoped that the quantitative and qualitative data can complement the weaknesses of both methods and build on their strengths to best address the research question (Johnson & Onwuegbuzie, 2004). The quantitative part of the study will collect outcome measures to examine whether the self-compassion intervention can promote mental wellbeing for students in London university. This method could provide generalisable results to my target population-London university students. Additionally, the researcher believes that one's perceptions and knowledge of the world are influenced by individual's unique experiences. Therefore, the second part will employ the qualitative method complementary to the first part in order to establish a fuller understanding of the research questions, using semi-structured interviews to collect detailed views from a few group participants to obtain their subjective experiences and voice about the topic.

The researcher has considered some of the challenges this design could present, such as the difference in sample size in the two parts, integration of text and numeric data, and potential

conflicts that arise from the different data sets. The researcher is interested in examining a brief self-compassion group intervention for London university students using objective measures, at the same time exploring their subjective experience of the group to further understand the mechanism of change involved in the development of self-compassion. As mentioned, the research adopted pragmatism and believes that the same research topic can be explored using multiple lenses, hence a mixed-method design is deemed as appropriate.

**Figure 1** *Description of the mixed methods design*




## 2.3 Research Design

This study used a convergent mixed method design consists of both quantitative and qualitative components. Part one was the quantitative part of the study that involves an experimental design aiming to examine the effectiveness of a brief self-compassion intervention in improving students' mental wellbeing in London university. Initially, the researcher considered conducting a randomised controlled trial (RCT) due to it being the gold standard for assessing the impact of psychological interventions in NICE guidelines (2014). Due to the time constraints of the doctoral thesis and difficulties with recruitment at the early stage of the project due to COVID-19 pandemic, the researcher decided to conduct an experimental design that involved a waitlist control group. It provided a pre-intervention comparison for the active

intervention group to determine whether the treatment is effective. The researcher also believed all participants should be given the freedom to attend the intervention. Whilst keeping the benefits of having a control group, participants were not randomly allocated to either group. Nonetheless, the researcher is aware of the limitations of a non-RCT experimental design. Such as the lack of randomisation may introduce selection bias and concern around internal validity. To take into account the potential weaknesses, this study added a timepoint to check whether the impact of the passing of time alone led to changes in outcome measures rather than the intervention. Furthermore, the qualitative part of this study's mixed methods design allowed for an exploration of the subjective experiences of the participants. It can also increase the robustness both quantitative and qualitative results due to findings being strengthened through triangulation.

Part two was a qualitative design that involved interviewing participants who attended the brief self-compassion intervention in order to capture their subjective experience of attending the group intervention. It was hoped that the qualitative account could add further insight into the development of self-compassion or experiences that were not captured by the self-reported measure in the quantitative part of the study. For this part of the study, the researcher chose thematic analysis (Braun & Clark, 2006) that was believed to be best suited for this study. More detail will be discussed below.

The quantitative and qualitative data collection was independent of each other but ran concurrently during a single stage of research. The quantitative survey data was collected first, immediately followed by collection of the qualitative semi-structured interviews.

## 2.4 Part I- Quantitative design

Part one was an experimental design, with a mixed factorial design. The first factor was a between participants group factor, where participants were opportunistically (detail discussed below) assigned to either intervention group (SC) or waitlist control group (WLC). The second factor was a within-participants time factor, data was collected at Pre-intervention/Timepoint-1 (T1), Post-intervention/ Timepoint-2 (T2) and at 1-month follow-up/ Timepoint-3 (T3) using self-reported outcome measures. The dependent variables were: Demographic information, Positive and negative affect, Self–compassion, The Satisfaction with Life, and Personal Growth. Outcome measures were discussed below.

### 2.4.1 Participants, sampling and recruitment

#### *2.4.1.1 Sample size*

The statistical power was calculated before data collection based on information (effect size) from a similar study for this brief intervention in a student population (Smeets et al., 2014) in order to evaluate the sample size required for the current study (Appendix H). Statistical power indicates the likelihood of observing a statistically significant result at level alpha (α) if a true effect of a certain magnitude exists. It enables the researcher to detect a difference between test variations when a difference exists. Statistical power (1 – β) has an inverse link with Type II errors (β). It's also how to control for the possibility of false negatives. Typically, the research would lower the risk of Type I errors to an acceptable level while retaining sufficient power to detect improvements if the intervention group is actually better. Using a 5% alpha to evaluate the sample size means that the researcher is accepting a 5% probability to incorrectly rejecting the null hypothesis. With 95% power, the researcher accepts there is a 5% probability of not being able to detect an actual difference for a given magnitude of interest.

A power analysis was conducted using the G*power software (Faul et al., 2007), with sample size being calculated using repeated measures multivariate analysis of variance with two time points, a medium effect size of $d = 1.19$, a 5% alpha (95% significance) and 95% power. The analysis yielded that to meet these priori conditions, the optimal number of a sample size of 12 participants was considered adequate, i.e., 6 per group. Taking into account of attrition rate, it is hoped to recruit a minimum of 30 participants.

#### *2.4.1.2 Participant Eligibility*

The study was designed to be as inclusive as possible. Participants were included if they were i) 18 years of age, ii) identified themselves as London University student, iii) enrolled at City, University of London or King's College London, iv) Resided in the UK at the time of participating in the intervention group.

Students were excluded if they were i) under 18 years old (in order to eliminate issues of consent), ii) were accessing psychological intervention (i.e., through the NHS, university counselling services, third sector or privately) for any mental health difficulties at the time of participating in the intervention group or, iii) reported a complex mental health difficulty.

For the current study, complex mental health difficulties are defined as follows:

- Students who experience high levels of psychological distress
- Students who experience symptoms and experiences that are impactful, severe, enduring, episodic
- Students who receive one or more diagnoses such as Schizophrenia/ psychosis, Bipolar disorder, Personality Disorder, Obsessive Compulsive Disorder, PTSD

There was no cut-off for psychological symptom scores.

*2.4.1.3 Recruitment and research strategy*

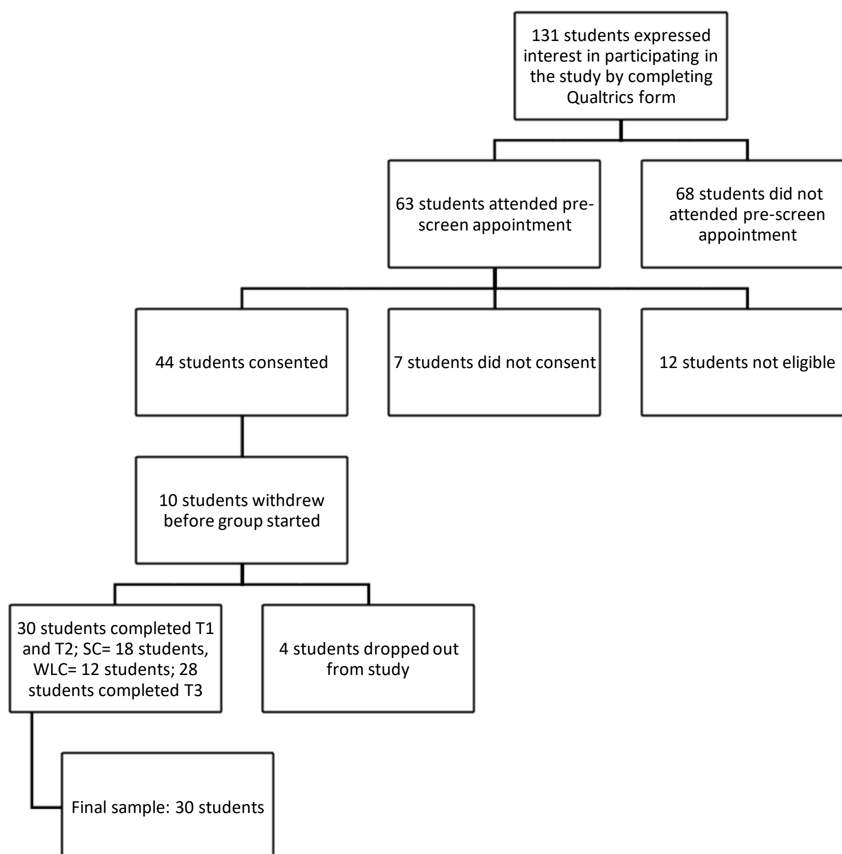
For this study, participants were recruited from City, University of London and King's College London via posters on campus, advertisements on university websites or email communications. Participants were invited to register or show interest by completing the Qualtrics form (Appendix J), which included questions about demographics, a few screening questions (i.e., whether they are currently seeking therapy, clinical diagnosis) to ensure they were eligible for the study. For participants who did not meet the eligible criteria, an email would be sent to explain the purpose of the study and they were offered a chance for a Zoom meeting if they had further questions. For participants who met the eligible criteria from the screening questions, before agreeing to participate, they were invited to attend a pre-screen meeting via Zoom, in which they were given a participation information sheet (Appendix C) and had the opportunity to ask questions regarding their participation. Furthermore, risk assessment was conducted when appropriate, and participants were encouraged to speak to the researcher if they experienced any discomfort during their participation which they would be signposted to the appropriate services or support. They were reminded of their freedom to withdraw from the study at anytime during their participation. They would have returned a signed copy of the consent form (Appendix D) to participate in the study. Once the researcher received the signed consent form from participants, they were then assigned to one of the two conditions (SC, WLC) opportunistically, on a first come first serve basis. The researcher was unable to employ a randomised controlled process due to recruitment difficulties during the COVID-19 pandemic. For allocation, participants were invited to the next upcoming intervention group. If they were available, they would be given details (date and time) of the group and were assigned to the SC condition. Whereas those who were not available for the

upcoming group would be assigned to the WLC condition and would be allocated to the next group. To prevent observer bias, participants were blind to the assigned group, meaning that participants were not told whether they were in the SC or WLC condition. For the intervention group, participants were sent an email with information about the group and the link to complete a set of measures (PANAS, SCS, SWLS, PGIS) approximately a week prior to the first session (Appendix I). They were advised to complete the first set of measures prior to the group. The researcher would check whether participants completed the questionnaires, and participants were reminded to complete the questionnaires before the group started. Participants were sent the second set of questionnaires after the intervention, at the end of the final session. The researcher also sent email reminders to follow up. The final set of questionnaires were emailed to the participants one month after the intervention completed. For participants who were added to the waitlist control group, they would have to complete all sets of measures for the three timepoints before they attended the group. The gaps between completing the measures in this group followed similar intervals as SC, 3 weeks between the first and second set of measures and one month between the second and final set of measures. After participants in WLC completed all the measures, they were sent an email with the dates and times about the next available group (Appendix I). The waiting time varied, as individuals were recruited at different times and were typically assigned to the next available group unless they were not available. All participants provided consent to attend the group were asked to attend all sessions. The brief self-compassion group intervention consists of three weekly sessions. No more than fifteen participants were included per cycle of intervention (Yalom & Leszcz, 2020). The researcher collected data from four cycles of the group intervention until the sample size was saturated. The groups varied in size and included between three to ten participants per cycle of intervention.

Data was collected from October 2020 to September 2022, with the aim for all participants to complete the measures described above at the three timepoints. Upon completion, participants were provided with a debrief information sheet (Appendix E) to explain the aim of the study and provide them with the researcher's contact information. Participants were not provided with any reimbursements, as participants were not required to travel and there was no financial budget for the study.

Figure 2 shows that a total of 44 students consented to participate, 30 students participated in the study and completed T1 and T2 measures. However, 10 students withdrew before attending the intervention. The final sample consisted of 30 students.

**Figure 2** *Recruitment and attrition rates through the research process*



### 2.4.2 Quantitative data collection

The researcher selected the below outcome measures for this study to ensure that the questionnaires selected matched the intended aims of the intervention and were able to replicate results from previous studies.

Participants completed the demographic information when they registered interest with the group. In addition, the researcher administered the following questionnaires: PANAS (Appendix K), SCS (Appendix L), SWLS (Appendix M), PGIS (Appendix N). 28 participants completed all the above self-reported measures at the three timepoints, with 2 participants did not complete the outcome measures at T3. The measures were completed via a survey hosted on Qualtrics, for participants' convenience and in compliance with COVID-19 pandemic regulation.

Participants were emailed the link to the survey containing the measures. For SC group, participants completed the pre-intervention measures a day before the start of the first session, the post-intervention measures at the end of the group, the 1-month follow-up measures completed 1-month after the group completed. For WLC group, participants completed the first measure, the T2 measures completed 3 weeks later and the T3 measures completed 1 month later.

The following measures were selected in order to best capture the information required. Participants were asked to complete majority of measures at three timepoints, and demographics only once.

### *2.4.2.1 Demographics*

At recruitment, demographics information was captured via Qualtrics: gender, ethnicity, age, disability, residential status and education level. A total of 30 eligible participants were invited to take part in the study. In total 12 participants were allocated to the waitlist control group and 18 to the intervention group. Demographics details can be found in Table 1.

**Table 1** *Sample Demographics for quantitative part*

| CATEGORY | SUB CATEGORY | | |
|---|---|---|---|
| **N=30** | | | |
| | | ***M*** | ***SD*** |
| **AGE (IN YEARS)** | | 29.5 | 9.68 |
| | | **N** | **%** |
| **GENDER** | Male | 6 | 20 |
| | Female | 23 | 76.7 |
| | Non-binary | 1 | 3.3 |
| | Prefer not to say | 0 | 0 |
| **RELATIONSHIP STATUS** | Single | 14 | 46.7 |
| | In a relationship | 12 | 40 |
| | Married/Registered | 3 | 10 |
| | Divorced/Separated | 0 | 0 |
| | Any other relationship status | 1 | 3.3 |
| **ETHNICITY** | White | 13 | 43.3 |
| | Mixed/Multiple ethnic | 2 | 6.7 |
| | Asian or Asian British | 7 | 23.3 |
| | Black, African, Caribbean | 2 | 6.7 |
| | Other ethnic group | 6 | 20 |
| **EDUCATION** | Undergraduate | 8 | 26.7 |
| | Postgraduate | 22 | 73.3 |
| | Other | 0 | 0 |
| **RESIDENTIAL STATUS** | International | 12 | 40 |
| | Home | 18 | 60 |

*Note*. *N* = number of participants; *M* = mean score; *SD* = Standard Deviation

#### *2.4.2.2 Outcome Measures*

The researcher selected the below outcome measures for this study based on previous studies on the brief self-compassion on student populations. This was to ensure the outcome measures selected matched the intended aim of the intervention and to replicate previous findings. The researcher administered the following questionnaires: PANAS (Watson et al., 1988), SCS (Neff, 2003b), SWLS (Diener et al., 1985) and PGIS (Robitschek, 1998). Participants were required to complete all these self-reported measures at all three timepoints. Participants completed the demographic information when they first registered interest, with the demographic details being further confirmed at pre-screen meeting. The measures were completed via Qualtrics as the research was conducted remotely in line with COVID-pandemic regulations. No participants were required to complete paper-based questionnaires. Participants took an average of 15 minutes to complete the questionaries.

*a. Positive and Negative Affect Scale (PANAS; Watson et al., 1988)*

The PANAS is a self-reporting 20 items instrument designed to measure mood level and to assess individual's strengths and symptoms of wellbeing. It consists of two subscales assessing positive affect (PA) and negative affect (NA), with different words that describe feelings and emotions. Positive affect involves the experience of positive emotions and interact with others positively, even when facing challenges. Negative affect involves the experience of negative emotions towards the world. Each question is rated on a five-point scale ranging from 'very slightly or not at all' to 'extremely'.

To assess for positive affect, the scores on positive affect items were added up to generate a total score. Scores can range from 10-50, with higher scores representing higher levels of positive affect. To assess for negative affect, the scores on negative affect items were added to

generate a total score. Scores can range from 10-50, with lower scores representing lower levels of negative affect.

The PANAS has been found to be a valid and reliable assessment tools to assess positive and negative affect (Merz et al., 2013). It showed good reliability (PA: α= .89; NA: α= .88) and convergent validity against measures of anxiety and depression (Crawford & Henry, 2004).

*b. Self–compassion Scale (SCS; Neff, 2003)*

SCS is a 26 items instrument with 6 subscales: self-kindness, self-judgment, awareness of common humanity, isolation, mindfulness and over-identification within the three core components self-kindness, common humanity and mindfulness and their opposite constructs of self-judgment, isolation, and overidentification. The 26 items explicitly represent the thoughts, emotions and behaviours associated with the three components of self-compassion and measure how often people respond to feelings of suffering with each six components. Each question is rated on a five-point scale ranging from 'almost never' to 'almost always'.

The collected data can be applied in two ways: the negative subscale items (self-judgment, isolation and overidentification) were reversed before computing a total self-compassion score. Then, the mean score of each subscale were taken to compute a total mean. For individual subscales scores, scoring of the items were reversed to compute a total score for each subscale. For total self-compassion, a score of 1-2.5 indicates low self-compassion, 2.5-3.5 indicates moderate, and 3.5-5.0 is an indication of high self-compassion. Higher scores on subscales indicate higher self-compassion.

The SCS demonstrated excellent reliability (α=.92; Neff, 2003) and convergent validity against well-being measures (Barnard & Curry, 2011). Despite being a reliable and valid tool to

measure self-compassion, there were ongoing debates on whether the factor structure generalises across populations (Williams et al., 2014). This measure was selected due to being the only scale available to measure self-compassion, indicated internal consistency and reliability, and being a simple tool to administer.

*c. The Satisfaction with Life Scale (SWLS; Diener et al., 1985)*

The SWLS is a five-item instrument designed to measure global cognitive judgments of satisfaction with one's life. Participants were asked to judge how they feel about each of the statements. Each question is rated on a seven-point scale ranging from 'strongly disagree' to 'strongly agree'.

The collected scores were added up to a final total score for an indication of how satisfied participants are overall with life. Higher score indicates higher the life satisfaction.

The SWLS indicated adequate reliability (α=. 78; Vassar, 2008) and convergent validity against other well-being measures (Pavot & Diener, 2008) as well as other measures for happiness (Lyubomirsky & Lepper, 1999). It has also correlated well with scales measuring the meaning of life (Steger et al., 2006) and scales measuring hope (Bailey & Synder, 2007). This measure was selected due to its reliability and easy to administer, with good validity across different cultural groups (Galanakis et al., 2017) that is beneficial for the diverse sample in the current study.

*d. Personal Growth Initiative Scale (PGIS; Robitschek, 1998)*

The PGIS is a self-reporting nine-item instrument designed to assess intentional engagement and self-efficacy with regard to personal growth. Each question is rated on a six-point scale

ranging from ‘definitely disagree’ to ‘definitely agree’. The collected data were summed to obtain a total PGI score. The PGIS indicated good reliability (α=.90; Robitschek, 1998).

#### *2.4.2.3 Self-compassion Intervention Specification*

The three-week brief self-compassion intervention was developed by Smeets and colleagues (2014), with the aim to help students to be more compassionate when dealing with challenges of university life. The intervention in this study closely followed the protocol as laid out in Smeets and colleagues’ study due to the brief nature of the group and a similar target population (university students) to the current study and adopted the content such as instructions and weekly tasks based on the Mindful Self-Compassion workbook by Neff and Germer (2018). Each session comprises three elements: Introduction to the topic and concepts; in-session exercises; a subsequent discussion about their thoughts and feelings; and take-home tasks. As the researcher has no formal training for compassion-based intervention, the researcher ensured the content and instructions were followed as closely as possible when delivering the intervention.

The intervention consisted of three sessions held over three weeks, online via Zoom. All meetings were led by the researcher, a trainee counselling psychologist. The first 2 sessions lasted 1.5 hour and the last session was 45 minutes. The first two session was the intervention sessions, each session consisted of a short presentation, followed by experiential exercises and discussions; with the third session allowing space for participants to evaluate the intervention. The group was generally relaxed, friendly and warm. Towards the end of each session, participants were sent a schedule summarising tasks for the week.

The intervention outlined (Appendix G) aims to equip participants with the ability to treat themselves compassionately when facing personal sufferings. Content of the sessions were as follows:

*Session 1*

In this session, participants were taught to recognise their own sufferings and were introduced a few informal self-compassion techniques. At the start of the session, participants were provided background information on self-compassion and how it differs from concepts such as self-indulgence, self-pity and self-esteem. Following this, participants were asked to share their experience on how they treated themselves when facing challenge. They were asked to write down their most common self-critical thoughts on a paper as an exercise to explore their self-critical voice. Participants were then asked to consider what they would require in order to feel comforted and understood during challenging situations. Participants were introduced to tasks for the week towards the end of the session.

Task for the week:

1. Whenever a participant spoke to themselves in a harsh way or became upset about something, they had to switch their 'intervention bracelet' from one arm to the other.
2. To keep a 'self-compassion journal' for the whole week. They were given instructions on the way to reprocess difficult experiences with a sense of kindness, common humanity and mindfulness (Adapted from Neff, 2011).
3. To practice an informal form of loving-kindness meditation, a traditional Buddhist practice for the cultivation of benevolent attitude to oneself and others. Instructions and recordings were provided, and participants were asked to silently repeat three loving-kindness phrases, directed at others and themselves, before going to bed ('may you be at peace,' 'may you be kind to yourself,' 'may you be free from suffering').

*Session 2*

The main focus of this session was to teach participants in developing self-compassion when dealing challenges in daily life. At the start of the session, participants were invited to share their experience from the previous week. They were given a short presentation on the role of self-criticism in fear of failure and procrastination. As part of the practice exercise, participants were asked to think about ways to motivate themselves in a self-compassion rather than self-critical way. Following this, participants were asked to create three personalised self-compassion phrases that corresponded with the essential components of the self-compassion definition (adapted from Neff, 2011)- mindfulness, common humanity, self-kindness. These phrases were for the participants to use when they encounter challenges in daily life, which can be adapted to different situations. In the next practice exercise, participants were told to note down five things they appreciate about themselves and to discuss their experience of relating to themselves in a positive way. Participants were introduced to tasks for the week towards the end of the session.

Task for the week:

1. To use the self-compassion phrases whenever they encounter challenges or disappointments in daily life.
2. To write a self-compassionate letter from the perspective of an imaginary friend, on a recurring challenging situation. This was to be read twice in the upcoming week.
3. To continue with their informal loving-kindness practice every day.

*Session 3*

Participants were asked to share their experience on practices from the previous week and evaluated the intervention. A discussion on how to maintain their practices following the intervention.

### 2.4.3 Quantitative data analysis strategy

Errors made when making statistical or generalisability inferences can affect the validity of an experiment (Shadish & Sullivan, 2012). Therefore, accurate selection of statistical tests and their accurate application was prioritised for data analysis. The Qualtrics data collected from participants was imported to IBM SPSS Statistics V.27 for Mac, where all quantitative data were analysed. The significance level was set at $p < 0.05$. The scores for questionnaires were calculated as described in the above section, with reverse coding being applied wherever relevant. The researcher screened the data by observing the ranges of scores obtained by participants on each measure, prior to data entry and analysis to check for erroneous entries.

#### *2.4.3.1 Missing data*

The researcher followed the best practice recommendations (Schlomer et al., 2010) of reporting missing data to understand results better. As the measures were completed via Qualtrics software, it provided the benefits in the completion of the measures with the forced entry option. No missing data were found in the current study, with two participants did not complete the final measures at T3. The incomplete measures were treated as missing data. A missing value analysis was conducted and 16.7% of data was found missing overall, with no patterns found in the missing values.

#### *2.4.3.2 Outlier analysis*

To ensure the robustness of the data analyses, the data were screened for both univariate and multivariate outliers. Any outliers were addressed through Winsorisation in order to minimise the influence of outliers in the data (Dixon, 1960). The screening procedures and treatment of outliers will be described in the following chapter.

#### *2.4.3.3 Main analyses*

Before analysis, the dataset was checked for missing data, outliers, normality and homogeneity of variance. The main analysis utilised descriptive statistics, a mixed analyses of variance (ANOVAs) was used to examine the interaction between study conditions (SC, WLC) and changes over time (T1, T2 and T3) on the outcome measures as stated above, and a paired sample t-test to compare mean scores for each of the group in T1, T2 and T3. Furthermore, exploratory demographic analysis was conducted alongside correlations and partial correlations. Analyses were run to compare the two different groups (SC, WLC) on the demographics, such as ethnicity, relationship status, age, education level and residential status.

## 2.5 Part II-Qualitative data collection

### 2.5.1 Rationale for Thematic Analysis

The researcher employed Thematic Analysis (TA) as an appropriate method for the qualitative part of the study. TA was chosen as the research method for this part of the study as it was considered to be suitable to address the research question and supported this study's ontological, epistemological, and methodological position as discussed above. Additionally, it is a theoretically flexible and straightforward approach that can be adapted to suit various approaches, contexts. Being a simple approach, TA can be used regardless of the researchers' previous qualitative research experiences. TA is widely used to analyse qualitative data in mixed methods designs as it offers flexibility and is compatible with both realism and constructionist paradigms. (Creswell, 2013; Braun & Clarke, 2006). It is a research method that emphasizes identifying, analysing and interpreting patterns of meaning within qualitative data (Braun and Clarke, 2006). It is crucial for the themes to be grounded in the data, logically

derive and substantial for it to be representative of the phenomenon or topic described (Boyatzis,1998; Braun & Clarke, 2006).

Braun and Clarke identified different positionings in TA based on whether the researchers want a rich account of the whole data set or just a particular aspect of it (critical realist/constructionist); whether they are guided by a theoretical framework (inductive/deductive) and whether the themes are captured at a manifest level (i.e., directly observable meaning) or latent level (Implicit meaning) (Joffe, 2012). In order to identify and describe themes from the whole data set with relevance specific to the research question and corroborate quantitative findings, this part of the study adopted a critical realist, inductive and manifest meanings TA analysis help identify themes in relation to participants' experiences of the group intervention, with the inductive approach fits well with both a mixed methods design and a pragmatic epistemology underpinning.

Due to TA being a flexible approach, it has been applied across different research fields, such as educational, social, behavioural and psychological research (Braun & Clarke,2006). Yet, there are some limitations to this method. For example, there were concerns regarding its coherence and consistency, that the reporting of themes across the data may dismiss some experiences reported by individual participants. Furthermore, the themes identified using a TA may lack substantial depth and may miss the opportunity to introduce the reader about the construction of each theme and to make explicit connections to the underlying data. It is worth noting that despite other types of qualitative analysis may offer greater depth for theoretical generation, TA is especially useful for the aim of this study to communicate one particularly aspect from the dataset (Willig, 2013).

The researcher considered whether other qualitative methodologies such as Interpretative Phenomenological Analysis (IPA; Smith et al., 1999) or Grounded Theory (Glaser, 2007) could be used to better approach the research question. However, IPA and Grounded Theory are both theoretically bounded. For example, IPA adopts a phenomenological epistemology and has a dual focus on the unique account of individual participants and no patterning of meaning across participants to gain insight on the subject being researched (Smith & Shinebourne, 2012). Whereas TA mostly focus on patterning of meaning across participants. Furthermore, IPA interprets data in an inductive, double hermeneutics process and was mostly employed to capture the lived experience of the research participant around a significant life event that may have implication for their identity (Braun & Clarke, 2013). Overall speaking, IPA is a method and methodology with a set structure and guidance on its application, the researched decided that this approach may not allow flexibility in answering the research question within a mixed methods design.

Additionally, another qualitative methodology Grounded theory seeks to generate a theory on a particular phenomenon from a data set, which may not be suitable for the current mixed method design and research aim. This study aimed to identify themes regarding the experiences of individuals participating in the self-compassion group, with the hope to support the findings from the quantitative part of the study instead of identifying an emergent theory. With Grounded Theory sitting with a constructivist stance (Charmaz, 2000), it is not suitable for this study's pragmatic stance. As mentioned, TA is generally recommended for a mixed methods design due to its flexibility and its theoretical framework (Creswell & Clark, 2017).

### 2.5.2 Participants, sampling and recruitment

#### *2.5.2.1 Sample size*

Recent guidelines for thematic analysis suggested 6-10 participants for interviews for small projects (Braun & Clarke, 2013). Sandelowski (1995) argued that the aim for qualitative studies is to ensure the data collected is small enough to manage and large enough to provide a new understanding to the research question and can be of subjective judgement.

Given the mixed methods design of this study, the time constraints of the doctoral thesis and difficulties with recruitment at the early stage of the project due to COVID-19 pandemic, five participants were recruited for this part of the analysis. Purposive sampling method was used to recruit participants (Patton, 1990) that complies with TA requirements and allows a homogeneous sample of the target population.

#### *2.5.2.2 Participant Eligibility*

Additional to the eligibility as set out in the quantitative part of the study, participants had to meet the following inclusion criteria: i) individuals attended all three sessions of the group intervention.

#### *2.5.2.3 Recruitment*

Participants who have consented to be interviewed at pre-screen, signed the consent form and have attended all the sessions in the group intervention were contacted via email to ask if they were still interested in taking part in the second part of the project- to attend a semi-structured interview. Subsequently, the researcher randomly selected eight participants who attended all three sessions of the brief intervention and sent an email invitation to invite them to take part in the interviews. They were expected to provide feedback regarding their experience of

the group. Five participants agreed and attended the interview, with two participants declined due to busy schedule and one participant did not reply. Participants were given the opportunity to ask questions before their interview. Upon completion, participants were provided with a debrief information sheet (Appendix E) to explain the aim of the study and provide them with the researcher's contact information. Same as the quantitative part of the study, participants were not provided with any reimbursements for attending the interviews, as they were not required to travel and there was no financial budget for the study.

**Table 2** *Sample Demographics for qualitative part*

| CATEGORY | SUB CATEGORY | | |
|---|---|---|---|
| **N=5** | | | |
| | | ***M*** | ***SD*** |
| **AGE (IN YEARS)** | | 29 | 3.94 |
| | | **N** | **%** |
| **GENDER** | Male | 0 | 0 |
| | Female | 5 | 100 |
| | Non-binary | 0 | 0 |
| | Prefer not to say | 0 | 0 |
| **RELATIONSHIP STATUS** | Single | 3 | 60 |
| | In a relationship | 2 | 40 |
| | Married/Registered | 0 | 0 |
| | Divorced/Separated | 0 | 0 |
| | Any other relationship status | 0 | 0 |
| **ETHNICITY** | White | 3 | 60 |
| | Mixed/Multiple ethnic | 0 | 0 |
| | Asian or Asian British | 0 | 0 |
| | Black, African, Caribbean | 0 | 0 |
| | Other ethnic group | 2 | 40 |
| **EDUCATION** | Undergraduate | 2 | 40 |
| | Postgraduate | 3 | 60 |
| | Other | 0 | 0 |
| **RESIDENTIAL STATUS** | International | 4 | 80 |
| | Home | 1 | 20 |

*Note*. *N* = number of participants; *M* = mean score; *SD* = Standard Deviation

### 2.5.3 Qualitative data collection and Research strategy

#### *2.5.3.1 Semi-structured interview designs*

Semi-structured interview was used to for data collection, as interview schedule enables further exploration on the phenomenon of group experiences and things that participants may consider as important, which may not be included in the quantitative part of the study. The researcher remained flexible in the interview process in order to keep an open-ended nature of the questions. An interview schedule (Appendix F) was generated with questions aiming to explore the subjective experience of participants who attended the group intervention.

The main exploratory questions for this study are as follow:

1. What have they learnt from attending the brief self-compassion group intervention?
2. What aspects of the intervention they found most helpful in developing self-compassion and general mental wellbeing?
3. What were the challenges they faced in attending the group intervention?
4. What was participants' experience attending the group intervention?

#### *2.5.3.2 Semi-structured interviews*

The interviews were conducted via Zoom software provided by City, University of London for students. Interviews were scheduled at a time and date agreed with participants. Before the interview started, the researcher reiterated the purpose of the interview, confidentiality, allowed participants to raise any concerns or questions and they were given the chance to consider if they would like to withdraw at this point.

The semi-structured interviews were conducted based on the interview schedule in Appendix F, each interview lasted around 30-90 minutes. The interview schedule was intended to be used as a guidance to explore participants experiences of the brief intervention. The interviews were audio-recorded using the online software (Zoom) used for the interviews. Following each interview, the researcher noted down some key discussions and reflections to help enhance reflexivity. The initial transcriptions were obtained from Zoom, that was also used for the interviews and where the interviews were recorded. The time-stamped transcriptions were automatically generated by Zoom and available for download. The researcher listened to the recordings three times, at the same time verified and modified the initial transcriptions to ensure the interviews were correctly transcribed.

### 2.5.4 Qualitative data analysis strategy

#### *2.5.4.1 Data analysis*

As mentioned earlier, the qualitative data were analysed using thematic analysis (Braun & Clarke, 2006). Interviews were anonymised and any identifying details were taken off from the transcripts during transcription. The transcripts were stored in a password-protected personal computer. Following the interview, participants were provided with a debrief information sheet (Appendix E), verbally debrief and will be given an opportunity to ask further questions.

The data collected through interviews were transcribed and analysed. The qualitative data analysis strategy utilised thematic analysis. Thematic analysis was the preferred method for this purpose as it allowed identifying, analysing and reporting patterns within the data (Braun & Clark, 2006). The analysis drew on Braun and Clark's six phase model of thematic analysis. An inductive approach was used to identify themes and patterns, which would prevent the researcher from trying to fit the data to prior theory or coding themes and allowed the themes

and codes to be generated through the researcher's interpretative engagement with data. It is a recognised method for organising and analysing thematic data in social science (King, 1998, Brooks & King, 2016). The data was analysed at a semantic, explicit level to identify patterns in the semantic content and their broader implications and meanings (Boyatzis, 1998). This study used an inductive approach and the analysis conducted manually/ NVivo.

Drawing on guidelines outlined in Braun and Clarke (2006), the six stages of thematic analysis in this study were as follows:

1. Familiarisation with data: During the transcription, the researcher listened to all recordings at least 3 times whilst simultaneously reading the transcripts and making separate notes of key thoughts relevant to the research question.
2. Generating initial codes: After familiarising with the data set, the transcripts were coded in detail across the entire data set, and to highlight areas of text that are relevant to the research question. This process was done using NVIVO software. Similar concepts and patterns were identified as prospective themes following comparing and contrasting the codes.
3. Searching for themes: Codes generated from the data set were collated and to develop into potential themes, all relevant data were gathered to each potential theme. In order to ensure the identified themes and subthemes are compelling, logical and answering the research questions, the third stage consisted of revising these themes by comparing to data set, combined and discarded where appropriate.
4. Reviewing themes: Themes were checked to see if it works in relation to the coded extracts and the entire data set, a thematic map was generated for the analysis. A number of master themes were changed at stage four of analysis, including the reduction of

overlapped themes. This helped to make the process more objective and the themes more distinctive.

5. Defining and naming themes: The data were analysed again to refine the specifics of each theme; the overall story of the analysis. Clear definitions and names were generated for each theme. The transcripts were revised to ensure the final proposed master themes with their associated sub-themes were evident in the data set (see Figure 8 for themes and sub-themes). Illustrative quotations were collated to provide evidence for each of the themes proposed.
6. Producing the report: Compelling extract examples were selected and apply to the full data set to provide the basis for data reporting, interpretation and further connected to form the narrative that were presented in the next chapter.

***2.5.4.2 Transcribing***

Transcription was obtained from zoom as an initial draft transcript of each interview. The researcher then read through the transcripts whilst simultaneously listening to the audio recordings, to make corrections to the transcript. A combination of verbatim transcription and notation participants' nonverbal behaviour is appropriate for the study, considering the theoretical background and research question of the current study (Mcmullin, 2021). Verbatims transcription refers to the word-for-word reproduction of verbal data and the written words are an exact replication of the audio recorded works (Poland, 1995), and is suggested to be reliable, valid way of qualitative data collection (Maclean et al., 2004; Seale & Silverman, 1997). Furthermore, it allows the researcher to be closer to the data. Hence, pauses and non-verbal communication (such as laughter, um, argh and err) were referenced. The researcher listened to each of the five audio interviews a minimum of three times. The verbatim transcripts were

then exported from the transcribing software and double line formatted with line numbers for analysis. Word count per transcript ranged from 3805 to 6695 words.

### 2.6 Mixed analysis and integration strategy

Integration is a crucial aspect of MMR (Schoonenboom & Johnson, 2017). In this study, integration was driven by the research question. Quantitative and qualitative data were collected concurrently, the information was analysed separately, and then merges the two databases. The integration strategy in the present study consists of the following steps (Creswell & Clark, 2017). First, the common concepts from both the quantitative and qualitative results were identified, with join display tables to present aspects from both sets of data that complement each other. For example, we identified that the quantitative data showed significant improvement in self-kindness, which was also reported by participants in the qualitative account. This set of data was put in the display table. Subsequently, the results from the table were interpret by concepts, using the theories and findings from previous findings, and identify how they confirm, disconfirm, and expand from each other. It is hoped that the addition analyses could provide further insight into the existing literature and address the research question. Lastly, the integration would be presented in a narrative discussion, which is detailed in the discussion section.

### 2.7 Ethical Considerations

The researcher seeks to adhere to the professional and ethical guidelines for counselling psychologist. The research project and procedure were granted ethical approval by the Low-Risk Research Ethics Committee at City University of London. Ethical consent are as follows: Ethical consent (ETH2021-0738) plus necessary amendments were sought for this study (ETH2021-1751*, ETH2122-0175*, ETH2122-0671*), with relevant documents provided in

Appendix A. In addition to the consent and inclusion and exclusion criteria as discussed, further ethical issues were considered.

### *Confidentiality and Data Storage*

During pre-screen, participants were told that their identity would be kept confidential and that their data would be stored securely with password protected. This study did not require participants' personal data except email addresses and their name for contacting purpose. A study-specific unique subject identification number were assigned to each participant for linkable anonymity. The interviews took place via a City's approved secure online platform (Zoom), to ensure data were sufficiently encrypted. Furthermore, all recordings and transcripts were encrypted in which only the researcher have access to. City's standard research data retention policy is for the data to be kept for 10 years after the research project is completed. Hardcopies of transcripts were stored securely in a locked cabinet at the primary researcher's home and destroy upon fulfilment of research requirements.

Participants were informed their right to withdraw at any time and were not entitled to disclose a reason for doing so. They were assured that any identifiable personal data were kept confidential.

### *Informed consent and Debriefing*

The nature and overall objectives of the research were explained to participants in detail and informed consent were obtained prior to participation. However, specific analytical features relating to self-compassion and analysis were not discussed to avoid influencing data collection. When the research study ended participants were sent a debrief statement and were provided an opportunity to discuss any queries within the researcher and/or her supervisor.

The debrief information sheet (Appendix E) were provided at the end of the data collection in order to remind participants of available support and further clarify the research aims. Participants were given information of support services such as the NHS, Samaritans, student counselling service in case of distress. All participants were provided with the researcher's and university's contact details on recruitment materials and information sheet for any research-related questions.

***Participant Safeguarding***

The study was conducted with non-clinical population. It is unlikely that participants will experience any discomfort. However, some students may experience difficulties with adjusting to university life or personal reasons, so there was a possibility that some participants may feel upset, especially when thinking about their self-critical voice. All participants were provided with debrief information sheet and mental health resources information to contact GP or the Samaritans in case some students felt a greater degree of distress than normal. Students were encouraged to speak with the group facilitator if they experienced any discomfort related to their participation in the group intervention to discuss the need for further support or to be withdrawn from the study. This did not happen at time of the study.

Participants may also experience some boredom, irritation or other unpleasant feelings when completing the questionnaires and engaging some exercises during the intervention, but it was worth noting that these were not reported in similar previous studies and did not happen in this study.

***Distinction between research and clinical issues***

It was important that individuals were aware of the distinction between the brief intervention and their participation in the research. It was explained clearly (verbal and written) to potential participants during pre-screen, in case participants wanted formal talking therapy and was clarified to all participants that the brief intervention group would be of more psychoeducation nature and not intended to replace formal talking therapy.

### 2.8 Reflexivity

Malterud (2001) suggested that reflexivity is when ‘an attitude of attending systematically to the context of knowledge construction, especially to the effects of the researcher, at every step of the research process’. Hence, it is important for researchers to recognise how their characteristics, personal experiences and values influence the research approach, interpretation of results and ethical judgments. Reflexivity is suggested to be an important part of the process in qualitative research (Ponterotto, 2005), and is often deemed as unnecessary in quantitative studies from a positivist worldview (Creswell, 2013). I believe that a researcher cannot draw absolute conclusions or hold total objectivity when interpretating results. Hence, with this study adopting a mixed-method design that involves both quantitative and qualitative parts, reflexivity may offer valuable insight into how my beliefs and reflections can play out in the research.

Undeniably, my personal experience has shaped my interest with this topic. Coming from another country, moving away from my home to attend university in London, it would be difficult to have a completely neutral view on the topic. Furthermore, working within the counselling service in a London university enabled me to hear experiences from students of the diverse backgrounds. The most evident presumption I have is that students will experience non-academic distress such as homesickness and loneliness. I am aware this assumption may have an impact on the interviewing process, as participants may have a completely different

experience to myself. For example, despite transitioning to a different environment with various changes in life, some students who move away from home may adapt to the new environment well for other reasons (i.e., their background, information received pre-departure) or could potentially be more complex reasons, which will be helpful to explore further.

When I first learned about Compassion Focused Therapy, I was fascinated by the concept and the theory behind the therapy. I started reflecting on my own journey being a student moving away from home, and how self-compassion has built my resilience to manage difficulties and challenges. Because of my personal experience, I believe that people who are more self-compassionate are more likely to have better mental health. At the same time, coming from a cultural background that people are highly critical to themselves, I am mindful that people from diverse backgrounds may define 'self-compassion' differently. While I am aware that the assumptions from my personal experiences may potentially lead me to pay more attention to the 'effectiveness' of self-compassion in the research process, I am interested in uncovering participants' perspectives and views on self-compassion that are not previously known. My humanistic side value the importance of 'giving everyone a voice' and believe participants should provide feedback in contributing to the support they receive or to help shape future support. This is one of the key reasons to why I chose to conduct a mixed methods study, with a semi-structure qualitative interview added alongside the self-reported quantitative outcome measures in order to capture participants experience of the group and impact through different lens.

Furthermore, taking up the dual role to deliver the group and being the main researcher, there were moments where I experience the tension and having to manage the boundaries between the two roles during the research process. Participants may be confused or having

misconceptions about my roles, which can lead them to feel obliged to participate or to provide positive feedback to the intervention I deliver. Reflexivity can allow acknowledgement of potential coercion and the research design has created opportunities for participants voices their opinions or to withdraw if they wish. For example, during the interviews, participants were asked explicitly regarding any challenges they had with the group intervention such as content, lengths, being in a group etc. Whilst this question was to ensure participants have the space to openly talk about their difficulties they would not otherwise discuss; I am mindful of the power imbalance and that sometimes participants may not be able to express themselves in confidence. Additionally, I am aware of my role in shaping the research project and findings, especially for the qualitative part of the study. For example, my assumptions may influence the process in identifying themes and patterns generated from the data, and the interpretation I made.

Being reflexive can enhance research rigor, credibility and ethical considerations (Hiller et al., 2016). Having considered what was mentioned above, I am mindful in not bringing any presumptions when conducting interviews and interpreting the data. While I am aware how my own beliefs can influence my research and interpretation of data, I believe there are more could be uncovered during the research process. Therefore, I will keep a reflective research diary to record observations about the research process and ensure my beliefs will not affect participants in exploring their experiences.

# CHAPTER 3: ANALYSIS

## 3.1 Part I- Quantitative Analyses

### *3.1.1 Demographics*

A total of 30 eligible participants were invited to take part in the study. In total 10 participants were allocated to the waitlist control group and 18 to the intervention group.

Demographics data were explored prior to data analyses, the results are summarised in Table 1. The average age of participants in the sample was 29.5 years (*SD* = 9.68, range: 19-66), 44.3% (*n* = 13) of participants identified as White, 23.3% (*n* = 7) Asian British, 6.7% (*n* = 2) Mixed ethnic, 6.7% (*n* = 2) Black, African, Caribbean, 20% (*n* = 6), other ethnic group; 76.7 % (*n* = 23) identified as female and 20% (*n* = 6) identified as male. The small percentage of males in the sample reflects the wider literature suggesting that fewer men access psychological support than female (Parent et al., 2018).

A Chi-Square analysis was performed to assess the relationship between the two groups on gender, relationship status, ethnicity, education and residential status. The relationship between these variables were not significant: gender ($\chi^2$ (2, N = 30) = 2.98, $p$ = .23); relationship status ($\chi^2$ (3, N = 30) = 2.817, $p$ = .42); ethnicity ($\chi^2$ (4, N = 30) = 1.76, $p$ = .78); education ($\chi^2$ (1, N = 30) = 1.023, $p$ = .31); and residential status ($\chi^2$ (1) = 0.83, $p$ = .36)

**Table 3** *Shapiro-Wilk Test of Normality values for all outcome measures with their associated degrees of freedom and P value*

**SHAPIRO-WILK**

| | | Statistic | df | *P* |
|---|---|---|---|---|
| **TIMEPOINT-1** | PANAS.positive | 0.979 | 28 | 0.824 |
| | PANAS.negative | 0.923 | 28 | 0.040 |
| | SCS.kindness | 0.978 | 28 | 0.790 |
| | SCS.judgement | 0.980 | 28 | 0.859 |
| | SCS.commonhumanity | 0.916 | 28 | 0.027 |
| | SCS.isolation | 0.977 | 28 | 0.766 |
| | SCS.mindfulness | 0.953 | 28 | 0.236 |
| | SCS.overidenitifed | 0.971 | 28 | 0.620 |
| | SWLS.total | 0.970 | 28 | 0.582 |
| | PGI.totalS1 | 0.969 | 28 | 0.549 |
| | SCS.totalS1 | 0.973 | 28 | 0.663 |

*Note*. *df* = degrees of freedom; *P* = P-value; significant at $p < .05$

### *3.1.2 Univariate and multivariate assumptions*

***Types of variables***

All relevant outcome variables are measured at a continuous level. Between and within-factor variables are categorical and measured at three levels: pre-group/ Timepoint-1 (T1), post-group/Timepoint-2 (T2) and 1-month follow up/Timepoint-3 (T3).

***Normality of Data***

To confirm the assumption that the data collected from outcome measures are normally distributed and meet the conditions for parametric testings, a one-tailed Shapiro-Wilk test was performed. The test was recommended for a sample size below fifty. By looking at T1 data, apart from PANAS negative affect and SCS common humanity, all the other variables met the assumptions of normality as assessed by Shapiro-Wilk's test ($p > .05$), with further support through the examination of histograms and Q-Q normality plots. The skewness of SCS

common humanity scores was found to be 0.46, indicating that the distribution was right-skewed, however within the normal limits; the kurtosis was found to be 0.73, indicating that the distribution was more light-tailed compared to the normal distribution.

As PANAS negative affect did not meet the assumptions of normality, it was further assessed using Q-Q normality plots and boxplots. An outlier was identified from one participant. It can be due to this research did not exclude participants with mild mental health difficulties who were more likely to report higher scores. As the analyses were mainly looking at the differences between different timepoints, the outlier was not excluded from the analyses. Winsorizing was used to reduce the influence of the outlier. The outlier identified was replaced with the next highest value in the data set.

Parametric tests were used for further analysis for all the variables.

### *3.1.3 Testing hypotheses*

***Primary hypothesis****: Participants in the brief intervention group will show significantly improved mental wellbeing following the intervention; and compare to those in the Waitlist control group*

Mixed ANOVA

A 2x2 mixed ANOVA was performed to look at the interaction between group (Intervention and control group) and change over time (T1, T2 and T3) on participants' wellbeing.

Post hoc tests (Pairwise comparisons)

To determine which mean differences were significant and whether there was a significant change in mental wellbeing between T1 (Pre-group) and T2 (Post-group), T1 and T3 (1-month follow up) for participants from each separate group

Levene's test

The assumption of homogeneity of variance was checked using Levene's test. The table (Appendix P) showing Levene's test indicated that variances are homogenous for all levels of the repeated measures variables (*p > .05),* apart from overidentified.

### 3.2 Quantitative results

***Primary Hypothesis****: Participants in the brief intervention group will show significantly improved mental wellbeing following the intervention; and compare to those in the Waitlist control group*

**Table 4** *Baseline scores comparison between intervention and control group and p-value*

| | **Intervention Group (*n* = 18)** | | **Control Group (*n* = 12)** | | ***P*** |
|---|---|---|---|---|---|
| | ***M*** | ***SD*** | ***M*** | ***SD*** | |
| **PANAS Positive Affect** | 21.06 | 6.52 | 21.83 | 7.28 | 0.96 |
| **PANAS Negative Affect** | 19.00 | 5.93 | 23.00 | 5.72 | 0.77 |
| **SCS Kindness** | 2.61 | 0.71 | 2.45 | 0.81 | 0.63 |
| **SCS Judgement** | 2.66 | 0.91 | 2.70 | 1.11 | 0.66 |
| **SCS Common Humanity** | 2.75 | 0.65 | 2.85 | 0.99 | 0.23 |
| **SCS Isolation** | 2.60 | 0.87 | 2.67 | 1.02 | 0.36 |
| **SCS Mindfulness** | 3.06 | 0.63 | 2.90 | 0.76 | 0.31 |
| **SCS Overidentification** | 2.72 | 0.91 | 2.48 | 0.91 | 0.89 |
| **SWLS** | 19.89 | 6.77 | 21.42 | 7.12 | 0.90 |
| **PGIS** | 34.61 | 8.05 | 32.50 | 11.04 | 0.46 |
| **Total SCS** | 2.73 | 0.65 | 2.68 | 0.64 | 0.88 |

*Note*. *n* = number of participants; *M* = mean score; *SD* = Standard Deviation; *P* = P-value

**Table 5** *Means and Standard Deviations for Outcome Measures at Pre-Intervention, Post-Intervention and Follow-up, includes pre-post effect size for intervention group*

| **Measures** | **Pre-group (*n*=18)** | | **Post-group (*n*=18)** | | | **Pre-Post Effect Size** | **1-month FU (*n*=18)** | |
|---|---|---|---|---|---|---|---|---|
| | ***M*** | ***SD*** | ***M*** | ***SD*** | ***P*** | ***d*** | ***M*** | ***SD*** |
| **PANAS Positive Affect** | 21.06 | 6.52 | 26.39 | 5.63 | .002* | 0.88 | 26.00 | 6.06 |
| **PANAS Negative Affect** | 19.00 | 5.93 | 17.94 | 5.50 | .434 | -0.19 | 16.67 | 4.81 |
| **SCS Kindness** | 2.61 | 0.71 | 3.18 | 0.41 | .008* | 0.98 | 2.47 | 0.41 |
| **SCS Judgement** | 2.66 | 0.91 | 3.22 | 0.75 | .001* | 0.68 | 3.44 | 0.56 |
| **SCS Common Humanity** | 2.75 | 0.65 | 3.15 | 0.98 | .45 | 0.49 | 2.40 | 0.81 |
| **SCS Isolation** | 2.60 | 0.87 | 3.31 | 0.98 | .003* | 0.77 | 3.60 | 0.67 |
| **SCS Mindfulness** | 3.06 | 0.63 | 3.32 | 0.61 | .125 | 0.43 | 2.29 | 0.62 |
| **SCS Overidentification** | 2.72 | 0.91 | 3.26 | 0.75 | .006* | 0.65 | 3.44 | 0.43 |
| **Total SCS** | 19.89 | 6.77 | 24.06 | 6.62 | .001* | 0.62 | 24.44 | 5.66 |
| **SWLS** | 34.61 | 8.05 | 38.89 | 3.94 | .001* | 0.68 | 37.28 | 7.77 |
| **PGIS** | 2.73 | 0.65 | 3.24 | 0.56 | .019* | 0.84 | 2.94 | 0.23 |

*Note*. *n* = number of participants; *M* = mean score; *SD* = Standard Deviation; *P* = P-value; *d* = Cohen's D

**Table 6** *Mean and Standard Deviations for Outcome measures at Timepoint 1, 2 (n=30) and 3 (n=28)*

| **Outcome Measures** | **Time** | **SC (*n*=18)** | | **WLC (T1, T2: *n*=12, T3: *n*=10)** | | | **SC (*n*=18)** | | **WLC (T1, T2: *n*=12, T3: *n*=10)** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ***M*** | ***SD*** | ***M*** | ***SD*** | | ***M*** | ***SD*** | ***M*** | ***SD*** |
| ***PANAS Positive Affect*** | **1** | 21.06 | 6.52 | 21.83 | 7.28 | ***SCS Mindfulness*** | 3.06 | 0.63 | 2.90 | 0.76 |
| | **2** | 26.39 | 5.63 | 25.00 | 5.22 | | 3.32 | 0.61 | 3.31 | 0.63 |
| | **3** | 26.00 | 6.06 | 28.20 | 6.48 | | 2.29 | 0.62 | 3.00 | 0.58 |
| ***PANAS Negative Affect*** | **1** | 19.00 | 5.93 | 24.00 | 8.02 | ***SCS Overidentification*** | 2.72 | 0.91 | 2.48 | 0.91 |
| | **2** | 17.94 | 5.50 | 24.08 | 8.63 | | 3.26 | 0.75 | 2.46 | 0.84 |
| | **3** | 16.67 | 4.81 | 22.40 | 7.99 | | 3.44 | 0.43 | 2.25 | 0.74 |
| ***SCS Kindness*** | **1** | 2.61 | 0.71 | 2.45 | 0.81 | ***Total SCS*** | 19.89 | 6.77 | 21.42 | 7.12 |
| | **2** | 3.18 | 0.41 | 2.78 | 0.45 | | 24.06 | 6.62 | 21.17 | 6.26 |
| | **3** | 2.47 | 0.41 | 3.36 | 0.61 | | 24.44 | 5.66 | 22.10 | 5.88 |
| ***SCS Judgement*** | **1** | 2.66 | 0.91 | 2.70 | 1.11 | ***SWLS*** | 34.61 | 8.05 | 32.50 | 11.04 |
| | **2** | 3.22 | 0.75 | 2.32 | 0.87 | | 38.89 | 3.94 | 34.25 | 8.45 |
| | **3** | 3.44 | 0.56 | 2.34 | 0.63 | | 37.28 | 7.77 | 37.80 | 7.87 |
| ***SCS Common Humanity*** | **1** | 2.75 | 0.65 | 2.85 | 0.99 | ***PGIS*** | 2.73 | 0.65 | 2.68 | 0.64 |
| | **2** | 3.15 | 0.98 | 2.92 | 0.92 | | 3.24 | 0.56 | 2.76 | 0.52 |
| | **3** | 2.40 | 0.81 | 3.05 | 0.65 | | 2.94 | 0.23 | 2.75 | 0.26 |
| ***SCS Isolation*** | **1** | 2.60 | 0.87 | 2.67 | 1.02 | | | | | |
| | **2** | 3.31 | 0.98 | 2.79 | 1.10 | | | | | |
| | **3** | 3.60 | 0.67 | 2.50 | 0.77 | | | | | |

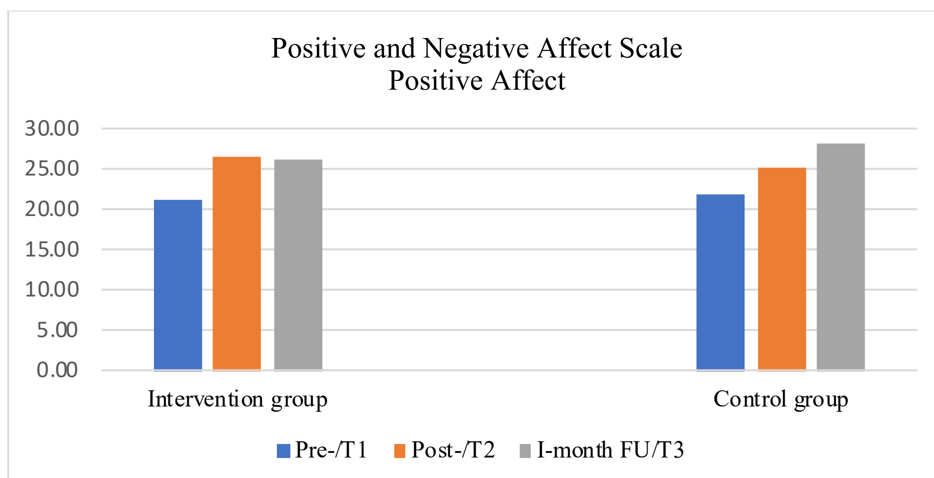
*Note*. *n* = number of participants; *M* = mean score; *SD* = Standard Deviation

### 3.2.1 PANAS

#### *3.2.1.1 Positive affect*

A 2x2 mixed ANOVA was conducted to assess the impact of the brief intervention on participants' positive affect as compared to the waitlist control group, across three timepoints. This was to identify if there was evidence to support the hypothesis (an increase in positive affect). There was no significant interaction between group and timepoint, ($F$ (2, 52) = 1.11, $p$ = .34). There was a main effect for timepoint, ($F$ (2, 52) = 8.27, $p < .001$), with a large effect size ($\eta^2$ = .24). The main effect comparing the two groups was not significant, ($F$ (1, 26) = .47, $p$ = .5), suggesting no difference in the effectiveness of the brief intervention on positive affect compared to waitlist control.

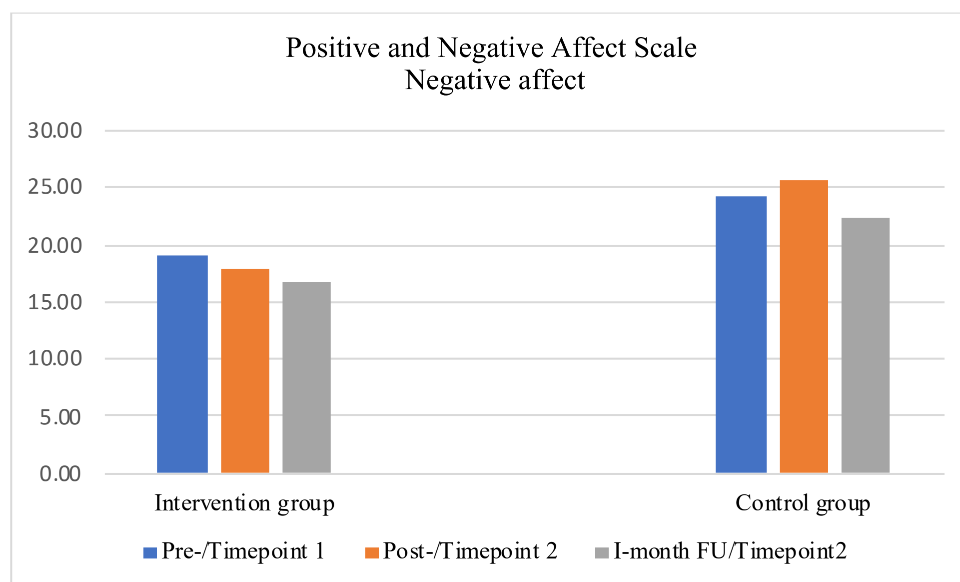
**Figure 3** *PANAS positive affect mean scores at pre-/T1, Post-/T2 and 1-month follow up/T3*




#### *3.2.1.2 Negative affect*

A 2x2 mixed ANOVA was conducted to assess the impact of the brief intervention on participants' negative affect as compared to the waitlist control group, across three timepoints. There was a significant interaction between group ($F$ (1, 26) = 9.35, $p$ = .005), with a large effect size ($\eta^2$ = .27). There was no significant main effect of timepoint ($F$ (2, 52) = 1.54, $p$ = .23) and no significant interaction between group and timepoint ($F$ (2, 52) = .95, $p$ = .39).

**Figure 4** *PANAS negative affect mean scores at pre-/T1, Post-/T2 and 1-month follow up/T3*

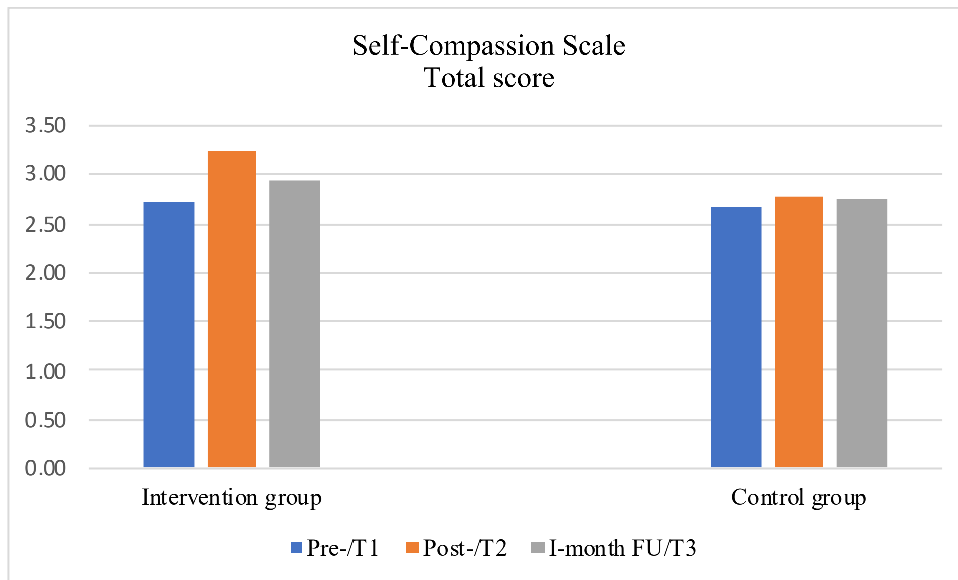



## 3.2.2 Self-compassion Scale (SCS)

### *3.2.2.1 SCS Total*

A 2x2 mixed ANOVA was conducted to assess the impact of the brief intervention on participants' self-compassion as compared to the waitlist control group, across three timepoints. There was no significant interaction between group and timepoint ($F$ (2, 52) = 2.73, $p$ = .07), no significant main effect of timepoint ($F$ (2, 52) = 2.95, $p$ = .06) or group ($F$ (1, 26) = 2.17, $p$ = .15), suggesting no difference in the effectiveness of the brief intervention on self-compassion compared to waitlist control.

**Figure 5** *SCS total mean scores at pre-/T1, Post-/T2 and 1-month follow up/T3*




### *3.2.2.2 SCS Subscales*

*Kindness*

There was a significant interaction between the group and timepoint in kindness, (*F* (2, 52) = 6.95, *p* = .002), with the average score significantly higher in the intervention group in T2 (*M* = 3.18, *SD* = 0.41) than for waitlist control group (*M* = 2.78, *SD* = 0.45), indicating that the effect was greater in the intervention group than in the waitlist control group. Post hoc analyses indicated the intervention group showed significant pre-post increase in kindness, with large effect size (*t* (26) = -3, *p* = .006, *d* = 0.98), pre-group mean score (*M* = 2.61, *SD* = 0.71) and post-group mean score (*M* = 3.18, *SD* = 0.41).

*Judgement*

There was a significant interaction between the group and timepoint in judgment, (*F* (2, 52) = 12.09, *p* < .001, with the average score significantly higher in the intervention group in T2 (*M* = 3.22, *SD* = 0.75) than for waitlist control group (*M* = 2.32, *SD* = 0.87), indicating that the effect was greater in the intervention group than in the waitlist control group. Post hoc analyses indicated the intervention group showed significant pre-post improvement in judgement (*t* (26)

= -3.83, *p* = < .001), with large effect size (*d* = 0.68), pre-group mean score (*M* = 2.66, *SD* = 0.91) and post-group mean score (*M* = 3.22, *SD* = 0.75); significant improvement was maintained at 1-month follow up (*t* (26) = -4.05, *p* = < .001), with large effect size (*d* = 0.68), with 1-month FU mean score (*M* = 3.45, *SD* = 2.34).

*Isolation*

There was a significant interaction between the group and timepoint in isolation, (*F* (2, 52) = 7.19, *p* = .002), with the average score significantly higher in the intervention group in T2 (*M* = 3.31, *SD* = 0.98) than for waitlist control group (*M* = 2.79, *SD* = 1.1), indicating that the effect was greater in the intervention group than in the waitlist control group. Post hoc analyses indicated the intervention group showed significant pre-post improvement in isolation (*t* (26) = -3.59, *p* = .001), with large effect size (*d* = 0.77), pre-group mean score (*M* = 2.59, *SD* = 0.87) and post-group mean score (*M* = 3.31, *SD* = 0.98); significant improvement was maintained at 1-month follow up (*t* (26) = -5.99, *p* < .001), with 1-month FU mean score (*M* = 3.6, *SD* = 0.67)

*Overidentified*

There was a significant interaction between the group and timepoint in overidentified (*F* (2, 52) = 5.95, *p* = .005), with the average score significantly higher in the intervention group in T2 (*M* = 3.26, *SD* = 0.76) than for waitlist control group (*M* = 2.46, *SD* = 0.84), indicating that the effect was greater in the intervention group than in the waitlist control group. Post hoc analyses indicated the intervention group showed significant pre-post improvement in overidentified (*t* (26) = -3.43, *p* = .002), with large effect size (*d* = 0.65), pre-group mean score (*M* =2.72, *SD* = 0.91) and post-group mean score (*M* = 3.26, *SD* = 0.75); significant improvement was maintained at 1-month follow up(*t* (26) = -3.88, *p* < .001), with 1-month FU mean score (*M* = , *SD* = 0)

No significant interactions in other SCS subscales: common humanity, ($F$ (2, 52) = 1.08, $p$ = .35); mindfulness, ($F$ (2, 52) = 2.27, $p$ = .11).

There was a significant main effect of timepoint in SCS subscales: isolation ($F$ (2, 52) = 4.94, $p$ = .01) and mindfulness ($F$ (2, 52) = 7.75, $p$ = .003). No significant main effect of timepoint in SCS subscales: kindness ($F$ (2, 52) = 1.78, $p$ = .18); judgement ($F$ (2, 52) = 1.65, $p$ = .21); common humanity; ($F$ (2, 52) = 1.41, $p$ = .25); overidentified; ($F$ (2, 52) = 1.6, $p$ = .21).

There was a significant effect of group in SCS subscales: kindness ($F$ (1, 26) = 9.15, $p$ = .006); judgement ($F$ (1, 26) = 7.55, $p$ = .01) and overidentified ($F$ (1, 26) = 11.73, $p$ = .002). No significant effect in SCS subscales: common humanity, ($F$ (1, 26) = 3.86, $p$ = .06); isolation ($F$ (1, 26) = 3.9, $p$ = .06); mindfulness ($F$ (1, 26) = 3.99, $p$ = .06).

Participants from the intervention group showed an improvement in kindness, judgment, isolation and overidentified after attending the brief self-compassion group than participants who did not attend the group after 3 weeks, with effects on judgement, isolation and overidentified maintained at 1-month follow up.

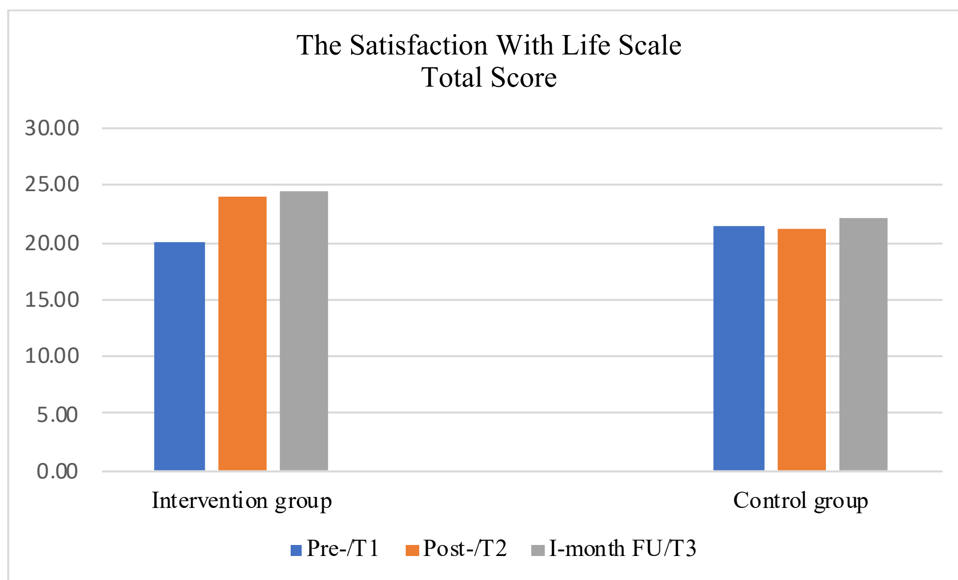
**3.2.3 SWLS**

A 2x2 mixed ANOVA was conducted to assess the impact of the brief intervention on participants' life satisfaction as compared to the waitlist control group, across three timepoints. There was a significant main effect for timepoint, ($F$ (2, 52) = 4.21, $p$ = .02), with a large effect ($\eta^2$ = .14). The main effect comparing the two groups was not significant, ($F$ (1, 26) = .24, $p$ = .63).

There was a significant interaction between group and timepoint, $F$ (2, 52) = 4.33, $p$ = .02), with a large effect ($\eta^2$ = .14), with the average score significantly higher in the intervention group in T2 ($M$ = 24.06, $SD$ = 6.62) than for waitlist control group ($M$ = 21.17, $SD$ = 6.26), indicating that the effect was greater in the intervention group than in the waitlist control group. Post hoc analyses indicated the intervention group showed significant pre-post improvement in life satisfaction ($t$ (26) = , $p$ = .002), with large effect size ($d$ = 0.65), pre group score ($M$ = 19.89, $SD$ = 6.77) and post group score ($M$ = 24.06, $SD$ = 6.62); significant increase between pre-group and 1-month follow up ($t$ (26) = -5.22, $p$ < .001), with 1 month follow up score ($M$ = 24.44, $SD$ = 5.66), indicating the improvement was maintained at 1-month.

The result indicated SC was more effective in improving participants' life satisfaction, and there was a significant difference between participants from SC and participants from WLC at post-intervention.

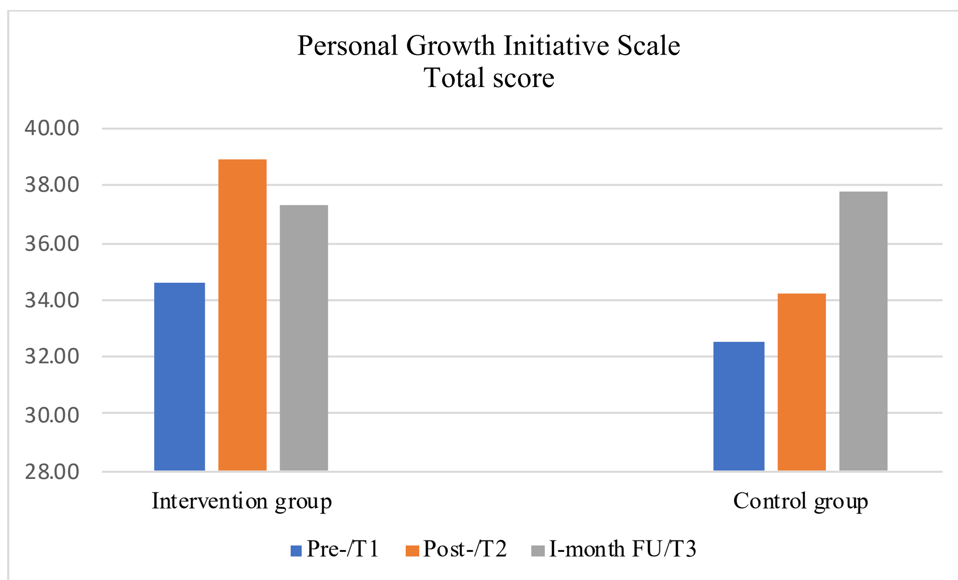
**Figure 6** *SWLS mean scores at pre-/T1, Post-/T2 and 1-month follow up/T3*



### 3.2.4 PGI

A 2x2 mixed ANOVA was conducted to assess the impact of the brief intervention on participants' personal growth as compared to the waitlist control group, across three timepoints. There was no significant interaction between group and timepoint, ($F$ (2, 52) = .67, $p$ = .52). There was no significant main effect for timepoint, ($F$ (2, 52) = 2.54, $p$ = .09). The main effect comparing the two groups was not significant, ($F$ (1, 26) = .16, $p$ = .69), suggesting no difference in the effectiveness of the brief intervention on personal growth compared to waitlist control.

**Figure 7** *PGI mean scores at pre-/T1, Post-/T2 and 1-month follow up/T3*




### 3.3 Quantitative finding summary

In conclusion, our findings suggested that the primary hypothesis is partially supported. The quantitative data demonstrated that attending a brief self-compassion intervention significantly improve participants' life satisfaction, some self-compassion components (kindness, judgment,

isolation and overidentification) as compared to the waitlist control group, but not on positive and negative affect; total self-compassion and other subscales and personal growth.

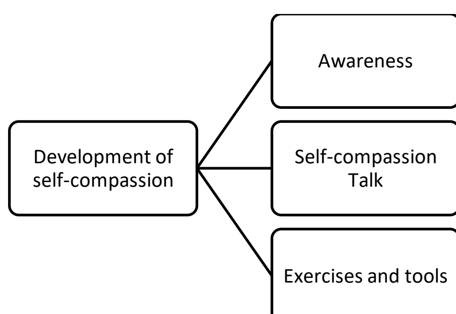
### 3.4 Part II-Qualitative Analyses

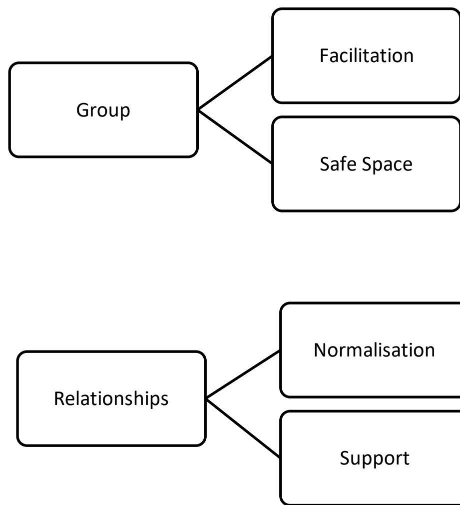
This chapter presents the results of the thematic analysis of the data from the five semi-structured interviews carried out. Firstly, an outline of the stages of thematic analysis will be provided. Secondly, the themes and sub-themes that resulted from the analysis will be presented alongside relevant quotes. Lastly, a summary of the qualitative results will be provided.

#### *3.4.1 Semi-structured interviews data*

As mentioned above, five semi-structured interviews (Appendix F for the description of questions) were conducted with participants who attended all three sessions of the group intervention. All participants were given pseudonyms to protect their identity. The interviewed participants were all women (Ann, Beth, Clare, Daisy, and Eva), age ranging between 23 to 32 years of age and different ethnic backgrounds. The average interview duration time was 30 minutes. All interviews took place online via Zoom.

**Figure 8** *Final master themes with sub-themes map and the relevant codes*






### 3.5 Qualitative results

3 master themes and 7 sub-themes were identified from the thematic analysis. They are illustrated in Figure 8, and further presented below in a narrative account (Braun & Clarke, 2006). Quotations were used throughout the narrative account to ground the findings in the data and allow the reader to examine whether the interpretations of the results fit the data set (Fossey et al., 2002). Pseudonyms were referenced for each quotation. Some parts may have less relevance to the theme, the researcher would omit those parts and indicate them by […].

### Narrative account of results

#### *3.5.1 Theme one: Development of self-compassion*

This master theme encapsulated participants' development of self-compassion. When exploring individual interviews, participants reported having found the group content, such as the definition of self-compassion and exercises and tools helpful. During the process of developing self-compassion, most participants highlighted some changes following the group intervention, such as increased their awareness on how they used to treat themselves when facing challenges and increased talking to themselves in a compassionate way. Furthermore,

participants also described practicing exercises and tools learnt in the group intervention helped them better manage and navigate challenges and led to promotion in mental wellbeing. The organising theme includes the following sub-themes.

***Awareness***

Most participants reported that one of the benefits of attending the group intervention was that the group raised their awareness on how they used to be hard on themselves when facing challenges. The sessions helped them to learn that being hard on themselves as a way to motivate themselves or to cope with challenges, which they realised was actually affecting their performance and mental wellbeing. Some participants mentioned being more aware of negative thoughts. Some noticed being hard on themselves, such as putting themselves down when not performing. The group provided participants with important insights into being self-compassionate when facing challenges, which has helped them navigate difficulties better or be more able to approach difficulties with a positive attitude.

For example, Ann spoke about her difficulties as a student at London university. After attending the group, she started to realise she was being hard on herself when facing challenges. The self-compassion exercises reminded her of other ways to respond to her difficulties, such as to be more kind to herself.

> "*Now, I am better than last year. But when you just arrive everything overwhelming you have to set up everything and sometimes you, [...] And, but your…your brain is busy with other stuff. And sometimes you can be like very hard on yourself and put yourself down because you don't have the same performance as you supposed to have. And these [Self-compassion exercises] ... I think, can help you to be more kind to yourself and-and just adapt to the situation better.*" Ann

Similarly, Beth started to become aware that being hard on herself was unhelpful. After attending the group, she started becoming more self-compassionate and noticed this has a positive effect on her.

> "*Maybe before like I thought that this, er…being like hard on myself will motivate me into doing more. But it made me like-before thinking about it, it just made me more miserable while I was doing the… the whatever assignment I had in hand, but what was like actually encouraging myself, it made me like fine with what I'm doing, oh not-I didn't feel like it was such a drag to do you know, like, I was excited to finish the assignment, […] I do like part of me actually believes that-er- talking nicely to myself does have that effect on my performance*." Beth

Daisy became aware that she used to seek reassurance from others to cope with difficulties or feelings. She noticed a decrease in her seeking reassurance behaviour as a result of attending the group, suggesting that self-compassion helps reduce the reliance on external support and increase internal resources when facing challenges.

> "*I usually need quite a bit of reassurance and I'll usually bring up somebody like my mom or my boyfriend or something and have to have like about an hour long chats in order to get that reassurance, and they probably have to repeat that to me over and over again, and I will end up being sort of arguing back like 'oh no I shouldn't be allowed'. But this time I actually-I think I'm on like I've had three weeks of it and I've only made one phone call and usually that will be a lot more.*" Daisy

Eva also spoke about the group has helped her to become more aware of how she was affected by her negative thoughts, which was something she did not realise before attending the group.

"*Only the feelings kind of like, when I say- I'm saying something negative about myself, 'you are so bad at this' or something like that, and then I kind of like 'oh what was that?' and um… but I really…. before these sessions I didn't pay attention to those thoughts and how-how detrimental they can be, how kind of like paralyzing actually they can be. Um…because I don't feel like doing anything if I already kind of like set myself off…*" Eva

***Self-compassion talks***

In addition to increased awareness that has led to changes, participants further spoke about noticing an increase in self-compassion talks following the group intervention. Participants described talking to themselves in a self-compassionate way during stressful situations has helped them better manage challenges they are facing as students (i.e., deadlines, placement); be more positive about things in general and reduce physical symptoms as a result of stress and anxiety. This suggested that self-compassion talks is an important factor in promoting mental wellbeing in London university students. Participants described the group intervention as a stepping stone to becoming more self-compassionate. Below are some illustrative quotes of this sub-theme.

Ann spoke about a situation after attending the group, where she was stressed due to having a lot of commitments and started being hard on herself. However, she noticed some changes in how she used to treat herself. She managed to start talking to herself in a compassionate way, which has led her to calm down and alleviate some physical symptoms.

"*Erm yeah basically yesterday. I was thinking 'okay I don't have time' because I have placement, I have the exam on [Date], and I have like many days placement now[…] and it was kind of stressing me out of like… I don't have time for study for that exam.*

*And it was being very hard like 'you're gonna fail, it's not going to be good, you are not going to enjoy these, what I was like this, and I was a hate.' So then, as I tried to stop myself and…and then I did the meditation, I have some breathings and started to like, say nice things to myself, but 'it's okay, it's okay, it's like it's not the end of the world', you know, and so it helped me a lot honestly. It felt like I have a panic attack or something. I'm saying, for example, erm 'Everything is going to be okay'. Things like that, like 'This is not the end of the world, this is just an assignment, that's it, we're more than that', things like that, I was saying these thing, so yeah. After doing that what I was calm down, like I calmed down. Um…of course I felt better because there was like this weight on my chest, pressure my chest, and everything and after that it was like even my body was less tense."* Ann

Similarly, Beth spoke about the group has enabled her in treating herself differently. She was able to talk to herself in a compassionate way when facing academic pressure. Interestingly, she was surprised by this change as she has never treated herself nicely under pressure prior to attending the group.

"*So before the sessions, I was like… when I had a deadline on a project that was due I would get really anxious and I would get panic attacks, just because I wouldn't calm myself down, and I would just…um… like be harsh on myself in terms of tell myself that 'I'm an idiot I should not have procrastinated' or whatever, and that would just increase my anxiety, but after the sessions like, two weeks ago, with my finals and they were like two days like in a row. And, to my surprise, I was like the first time in forever or like literally first time in my life that I was under heavy pressure, but I managed to go through with it any self-loving way like I was-even though I did procrastinate but I was like 'it's okay, you still have time, you can do it', I was very… I was encouraging myself*

*rather than putting myself down, which was very surprising, so it was it was a really weird feeling […]. It was- it was like, for the first time I actually was nice to myself under pressure, so it was it was great, it was a great experience.*" Beth

Slightly different from Ann and Beth, Clare reported she has always been a positive person. Yet, the group allowed her to manage difficult situations in a calm manner. She was more able to talk to herself in a self-compassionate way, which was helpful for her to feel more confident in herself, especially when things go wrong.

> *"I think I was always a positive person, but right now I feel like I'm a bit more calm when things go wrong, and I can easily sit back and be like 'you know it's fine… it's not like I'm a failure'. I-and I sort of start reminding myself of all the things that I've accomplished, and where I am right now, you know, in a different country, studying the thing that I love, being independent as well you know living my life alone, without my family. yeah, so I think- I think I'm a bit more calm and confident when it comes to comforting myself. After certain things that, like... go wrong or like frustrate me."* Clare

Apart from academic and social pressure as typically experienced by university students, Daisy spoke about appearance being one of the things she has been particularly hard on herself. The group allowed her to start challenging her negative thoughts and she was more able to talk to herself in a more compassionate way, despite it being a challenging process.

> "*One of the things that I'm not compassionate with is sort of um…appearance and thinking like 'I should be doing this' […] and I'm like, 'oh wait a minute, what do I even care like, why should I because that's not what I'm here for.' you know that kind of… I'm able to it, rather than kind of going- 'I really need to go sort this out' and being panicked about it and making sure that there isn't some kind of malfunction or*

*just in general, 'why did I, you know, um…to do these things'. I kind of think 'you know what, they actually kind of doesn't matter that much, it's not a big deal and it's not going to change really anything else about functionality of anything else'. And so I have been able to kind of, although I still think about it a lot, it [Self-compassion group content] has given me a stepping stone to kind of manage it (laugh) yeah*." Daisy

Similarly, Eva found talking to herself in a self-compassionate way improved her general wellbeing and made a difference in her day. She also acknowledged saying positive things would not necessarily change the situation she was in, but it helped change her attitude towards starting the day.

"…t*he most important thing that really resonated with me was that those [affirmation] phrases that we said to ourselves, that we repeated. Because I noticed that just saying something, er it really made a difference. […] So I knew already that, in a way, like you say something, and it really kind of like reinforces that good thing. Of course the day can be quite bad afterwards, but I-I noticed a difference because sometimes when I said 'Oh gosh, today, I hate today already'. Erm… even though I wouldn't be that serious but it had… in a way, like serious consequences, and I noticed that, even if I didn't felt that positive and that great, but if I just said that, today is going to be a good day, it helped me. And it made me feel more positive and also like…very light*." Eva

***Exercise and tools***

Most participants reported experiencing a certain extent of academic demands being a university student in London. Following the brief self-compassion group, most participants managed to engage with the exercises learnt during the group intervention. Participants reported a variety of skills to have been useful in helping them to feel more relaxed when

overwhelmed and in helping them to move on and complete their university work at hand. Intervention bracelet, an exercise for participants to be aware when they speak to themselves in a harsh way or become upset, and loving-kindness meditation, an informal practice for the cultivation of a benevolent attitude towards oneself and others, were the exercises that most participants reported to be helpful, with some are keen to continue practicing these exercises following the group.

For example, Ann found exercises like intervention bracelet and meditation helps her in feeling more relaxed and calmer when she felt overwhelmed by academic pressure. This suggests that self-compassion exercises are helpful for participants to improve their mental wellbeing and better manage challenges.

> "*Like the thing on the bracelet, I didn't know about that, or the meditation was so good honestly. And I don't know these things, err just helped me and now that we are doing the assignments, and things like that, it just reminded me okay just for boosting you. Because sometimes I was like so overwhelmed that [...] These sessions were a reminder like, okay, relax calm down, be gentle and yeah.*" Ann

Likewise, Eva found loving-kindness phrases helpful for her to better focus on her academic work.

> "*But um… it helps kind of like… see what were the-those phrases that we used, kind of yeah 'I don't want you to suffer', it helps in that moment and it's not the whole thing like. But it helps that moment, in a way… Okay, and then you can move on and do what you need to, for example, uni stuff, you're not concentrating on anything else.*" Eva

In addition to academic pressure, most participants spoke about moving away from home to study in London, with some participants identified as international students who moved away from their home country. Being away from home, most participants reported limited support from family or their usual support bubble, which can be challenging at times. Most participants believe learning about self-compassion and exercises would be helpful to self-soothe when feeling alone, without having to rely on external factors or support.

Ann spoke about international students being less likely to have external support, and that self-compassion exercises could benefit international students in better managing their wellbeing without having to rely on external support.

> "*So yeah I think it can be very useful on a student… to student- international students, so you don't have the support of your family here. you are on your own usually. mean like the difference between like national students international students, maybe they have their support bubble around. You have to start one from zero. So it's a good way, like to self-soothing yourself, to know these tools to self soothe yourself and take care of yourself, since you don't have anyone else at the moment*." Ann

Beth talked about her own experience being an international student and that she would feel alone due to family or close friends not being around. She believed the group could benefit international students to understand themselves better, with self-compassion exercises as important tools for students to start treating themselves in a more compassionate way, especially when they are alone without external support.

> "*Because they-they're in a whole new city on- by themselves on…even if they made friends, it wouldn't be the same as being around your family or like your close friends back home, so you even-even if you're surrounded by people, you would still feel*

*like….out of place, and like alone, or at least that's what I feel like. So that's why I think it's very important to sort of get them together and in terms of like, I don't know, like it could be seminars, or even like sessions like these, it would help them understand themselves more and it would just say… I don't know to me like it would-it would be like kind of even if you do feel alone, and you don't feel like you've got anyone, you've got yourself. Which is what matters, if you actually know how to be nicer to yourself, and like more compassionate, so that's why I think it's very important.*" Beth

Similarly, Clare believed self-compassion exercises can be helpful for students to look after their mental wellbeing, without the need for external support.

*"I guess it [Self-compassion exercises and content] also shows them it gives them ideas of how they can be emotionally responsible for themselves and supporting themselves emotionally. Yeah like I said, without having to always resort to external factors and other people."* Clare

Overall, participants' experiences demonstrate that self-compassion is effective in promoting mental wellbeing for London university students and the development of self-compassion is dependent on numerous factors such as being aware of how they treated themselves, talking to themselves in a self-compassionate way and having the exercises or tools when they are facing challenges.

***3.5.2 Theme two: Group***

This master theme encapsulated the positive experiences participants had being part of the group. Most participants found it enjoyable being part of a group. Most participants commented on finding the group structure and content adequate and suitable especially with all other

demands being a student in London university, allowing them to maintain engagement in the intervention. Regarding the facilitation of the intervention, most participants reported having had a positive experience. The group was perceived overall as safe and friendly by participants. This organising theme subsumes the following sub-themes.

***Facilitation***

Most participants commented on facilitation being an important part of the group, with an adequate balance between theory and practice. Furthermore, participants reported feeling less likely to misinterpret things as the facilitator explained the concept of self-compassion and allowed space for participants to discuss and reflect on the group content. An essential aspect of the group as reported by participants was the pace that was led by the facilitator, allowing participants to engage with the content and practices, and space for reflections. Subsequently, participants were less likely to rush through practices as a tick box exercise.

Ann felt the group has the right amount and adequate content across the three sessions.

> "*Well, I think, is the perfect amount, because you have like the first one is more about introduction, and you already give some homework. The second one, I think, is the one that I like the most. And then you have the third one, just to like a closure and to review what we have done. So I don't think there is too many and also it's not too little either. I think is a perfect amount*." Ann

Daisy also described adequate content and the facilitation was helpful in pacing the sessions and understanding more about self-compassion without misinterpreting it.

> "*I feel like yeah there was a good balance between theory and practice and I liked that um…there was you took time to introduce these concepts and then we did them whilst*

*in the session to kind of give a feeling of what we're actually…you know, looking to try and do um…rather than just reading off a page and kind of having like if I-if I bought like a book on self-compassion, I might have misinterpreted things in a different way or rush things because I know um…in sessions you'd sort of says, you know you're not trying to race through this and just say these things as quickly as possible so that it's ticked off and done*." Daisy

Eva found the group a unique and meaningful experience, with the facilitator asking questions and pacing the group. Facilitation appears to be a key element that made participants feel the group was tailored to them.

"*It was also unique because it wasn't the like lecture where some like one person is just talking about stuff and you can replicate that, like me and times to me and different people, but with this, how we did it no, it was very unique because of that, like you were asking questions and the pace it wasn't like certain like yeah… we need to be on schedule, or something like that, like it was…You didn't rush us to do anything or say anything-anything like that, […]. Also, I think that my time was well spent, because it, it was very unique and very meaningful so good."* Eva

***Safe space***

Most participants described an important factor that enhance their participation and engagement in the group was the lack of judgement from other participants and the safe space created by the facilitator throughout the group intervention. This allowed participants to be more open and comfortable to share their experiences and engage with the exercises and reflections.

Beth reported the most enjoyable experience was being able to feel safe and express herself freely.

> "*I was able to express my thoughts freely without being judged. um yeah so that's what I enjoy the most I guess."* Beth

Likewise, Clare expressed finding the group environment comfortable and making her feel able to share, including things that she would not normally share with friends and family.

> "*Personally, no I don't think anything in the group made me feel uncomfortable. And I think, on the contrary, I was…I was a bit more open, like, I was, I was sharing my experiences in a way that I don't think I would have with like friends or with family. Yeah and I think I was participating a lot, I think I spoke a lot."* Clare

Despite not sharing much in the group, Eva felt safe being in the group and did not feel she was pressured to talk.

> "*I-I felt very kind of like secure and safe already and everything like it was….and I think it's thanks to you because you were very good with-with us like it was group of people, but everyone were so nice to each other and I wasn't expecting anything bad, but I mean like I remember the first time, when I think it was the first time…um…when we talked about kind of like the ground rules, do you remember? yeah…someone said that, well perhaps like anything that we are talking about this like could stay in this group, […] it really made me feel more secure and I didn't talk that much, but I also felt like it was okay for me not to talk…"* Eva

Overall, participants' experiences of the group demonstrated the brief self-compassion group provided adequate knowledge and exercises and was sufficient in enhancing self-compassion.

Furthermore, facilitation of the group and having a safe space were suggested to be the two important factors for participants to engage with the group and exercises.

### *3.5.3 Theme 3: Relationships*

This master theme was prevalent in the comments participants offered in their interviews. Most participants emphasised the importance of being part of the group and the group being a source of support and normalisation. They valued the opportunity to share their experiences as a London university student and to listen to similar challenges. Additionally, participants found the group interactions and discussions enjoyable, especially most reported a lack of social interactions during the pandemic. Below are some of the sub-themes included in this master theme.

***Normalisation***

One of the key benefits of the group as described by participants was the validation from the group, to understand that their struggles are normal and other students also share similar struggles. Their similar struggles with academic and social challenges were the foundation of a sense of togetherness which contributed to elevating the feeling of loneliness.

For example, Ann and Beth spoke about even the purpose of the group was not to socialise, being part of the group and the interactions with other participants helped normalise their experience as London university students. This suggest that having a sense of belonging is crucial in elevating the feelings of loneliness.

"*Well, you know even like socializing it wasn't point in the group, but at least you like- to see all the people, you talk to people, and also like first of all the tools that you learn and exercise that you do, [...]. And also being in a group so you feel that you are not alone in this. So yeah I think that's important.*" Ann

"*But when the first person talks, those like… oh okay there we all we're all here for the same reason, completely fine and I actually enjoyed like listening to other people's experience and kind of relating to them. So it made me feel like I'm not alone. Yeah*" Beth

Clare and Daisy also reported similar experiences that being part of the group allowed them to listen to other experiences, suggesting normalisation helped individuals to learn that they are not alone with their difficulties.

"*Yes, um. I mean I loved listening to other people, and what they thought and how they felt, but it also made me realize that sometimes you know, in your mind you think you're different, anything your experiences are different and unique, but then you find out that almost everyone goes through, they go through the same thing, and they have similar thoughts and feelings and I love that because it makes you think that you know we're not really as different as we might think. But we just it's all about who hides it better, or who just doesn't self-express much.*" Clare

"*Yeah I think there was a couple of people, that were happy to share um…which was good. Because other people talking will help to normalize things as well and kind of go, oh yeah there's other people feel the same way, and that makes me feel a little bit more… like comfortable in this situation.*" Daisy

***Support***

The interactions between participants appear to play an important role in their positive experience of the group intervention. Some participants reported establishing some social interactions and conversation, which was particularly meaningful during the difficult pandemic times, given some participants felt isolated being away from their family and friends, having to attend online lectures and staying in their room most of the time. Participants described having group support motivates them in engaging with the self-compassion exercises.

For example, Ann spoke about being in a group facilitated support from each other and motivated her to practice self-compassion exercises.

> "*Also I think working in a group is… is good because it provides you like kind of like, because of the group, like support even you don't know each other, just to have to meet with other people, it puts a bit of pressure on you also to do things [practice exercises] but that good pressure."* Ann

Clare spoke about the pandemic has impacted how people socialise with each other. The group interactions allowed her to have proper conversations with others that she has not been able to engage in for a long time.

> "*Maybe, because after the pandemic people aren't- aren't they aren't as-as social as they used to be. I think we're more used to using phones to text and stuff like that we aren't… I mean we haven't engaged in a like a long conversation with others about a specific topic. And so it sort of reminded me how I can have a conversation.*" Clare

Overall, participants' experiences demonstrated that during the process of developing self-compassion, being in a group can bring a sense of belonging. Furthermore, support from the group and normalising experiences were particularly beneficial for participants to engage in the exercises and discussions.

### 3.6 Qualitative- Summary of findings

The qualitative analysis identified three master themes: Development of self-compassion, Group and Relationships, which incorporated seven sub-themes. Overall, most participants reported the intervention as helpful and changed the way they treat themselves when facing challenges. They were more aware of how they treated themselves in the past, increased in self-compassion talks and started practicing self-compassion exercises. These have improved their way in managing difficult situations, which has eventually led to improvements in their mental wellbeing, such as reducing negative thoughts and physical symptoms; more able to relax themselves. The data indicated that the participants found the group content and exercises adequate and useful. Despite some reported difficulties engaging with self-compassion exercises at first as they were not used to talking to themselves in a self-loving way, participants reported the group as a stepping stone for them to becoming more self-compassionate and most were keen to continue practicing the exercises as learnt in the group intervention. Furthermore, most participants reported the supportive and safe space as two most important factors in attending the group intervention. The facilitation of the group intervention not only enable participants to feel the content was tailored to their needs, but they were also more able to engage with the content without rushing through the materials and more open to sharing their experiences and reflections. Nonetheless, they reported the key aspect of the group was having shared experiences with other participants which normalised their difficulties being a student

at London university. Most participants believed the group intervention would benefit students who study at London universities.

### 3.7 Data Quality and Validity

#### Part I-Quantitative

In Quantitative research, quality of the study is achieved through measurement of validity and reliability (Fletcher et al., 2005). Quality criteria in quantitative research include internal and external validity.

To enhance internal validity, sample size for this study was calculated using power calculation to ensure it is sufficient for statistical power. The use of waitlist control group intended to minimise the effects of variables other than the independent variables, increasing the reliability of the results. All the procedures (i.e., the delivery of the group intervention, questionnaires were collected at the same time point for all participants) were standardised across groups to minimise unintended variation.

To ensure external validity, this study employed random sampling to produce generalisable results. Participants (students) were recruited from various platforms (i.e., advertisement on campus, emails), and were selected and placed on either intervention or control group on first come first serve basis. All participants attended the same intervention in the same condition via online platform (Zoom) and were given the same information and instructions.

Main variables on outcome measures have adequately matched with the key concepts of the study and were considered reliable and valid based on previous studies (as mentioned in 3.2.1).

The researcher also ensured data reliability by estimating the internal consistency across repeated measures.

**Part II-Qualitative**

During the data analysis process, it was inevitable that the researcher's own experience or research supervision could influence how the data was interpreted. To ensure the quality of the qualitative part of the research, we followed the key markers of quality in qualitative research as proposed by Guba and Lincoln (1981): credibility, transferability, dependability and confirmability.

Data collection and theory triangulation were used to enhance credibility (Lincoln & Guba, 1985). Furthermore, the researcher incorporated multiple theoretical perspectives to examine and interpret data. To enhance transferability, the researcher ensured doing a thorough job of describing the research context and the assumptions that were key to the research. Data were collected until no new themes were generated (data saturation) to enhance dependability, with the researcher maintained flexibility and stayed open in the process. Furthermore, the researcher kept a diary throughout to reflect on the process and maintain reflexivity with the aim to enhance confirmability.

# CHAPTER 4 DISCUSSION

## 4.1 Overview

As mentioned in the introduction chapter, with an increasing number of students reporting mental health difficulties (Thorley, 2017) and challenges faced by university counselling services (Holm-Hadulla & Koutsoukou-Argyraki, 2015), it is therefore important to find new ways to address mental health issues on campus (Brown, 2018), at the same time reduce waiting time for university counselling services (Campbell, 2019). Existing research indicates the potential benefit of a brief self-compassion intervention for university students (Smeets et al., 2014; Dundas et al., 2017; Arimitsu, 2016; Huang et al., 2021), however, these studies conducted on students from individual cultures and their results may not be generalisable to a more diverse student population. It is still unclear whether self-compassion intervention is beneficial for other cultures, which is highly relevant to London universities due to its diverse student population, with international students constituting a high proportion within the UK higher education institutions (Al-Oraibi et al., 2022). Therefore, the aim of the present study was to evaluate a brief self-compassion group intervention for London university students quantitatively and qualitatively. The quantitative part of the study compared participants' scores on standardised questionaries across the three timepoints on self-compassion, positive and negative affect, life satisfaction and personal growth. The main hypothesis was that participants who attended the brief group intervention would show significant improvements in wellbeing (positive and negative affect, self-compassion, life satisfaction and personal growth), and when compared to the waitlist control group. The results partially support the hypothesis, with life satisfaction and the four sub-components of self-compassion showing significant group differences: self-kindness, self-judgement, isolation and overidentification, suggesting the brief group intervention benefitted students in enhancing life satisfaction and some components of self-compassion. The results indicated a large effect size for pre-post

treatment group improvement for these variables. Additionally, the effects of life satisfaction and the three sub-components of self-compassion (judgement, overidentification, isolation) were maintained at one month following the intervention. These results suggested the intervention has led to the improvements in wellbeing, instead of pass of time alone. The qualitative part of the study aimed at exploring participants' subjective experience of attending the group intervention and to understand how and in what way the brief self-compassion group was helpful for participants in promoting mental wellbeing. The findings were captured by the semi-structured interviews and were analysed using thematic analysis. The themes that generated from the dataset were as follows: *Development of self-compassion*, *Group* and *Relationships*, highlighting the key mechanism of actions that have contributed to the development of self-compassion and confirming that the brief group intervention was positively experienced by students from diverse backgrounds. The following discussion will first discuss the interpretation and integration of both the quantitative and qualitative findings and in relation to theory and existing evidence. Subsequently, the later part of this chapter would discuss how the findings were relevant to clinical practice and the implications. Lastly, we would discuss methodological issues and suggestions for future research.

## 4.2 Main Discussion

### *4.2.1 Interpretation of quantitative hypothesis with qualitative themes integration*

The main hypothesis of the study was to examine whether the brief self-compassion group intervention was effective in promoting mental wellbeing for students in London university. It was hypothesised that there would be a significant difference in participants' self-reported outcome measures across the three timepoints following the intervention: pre-intervention, post-intervention and at 1-month follow up. Students' wellbeing was measured by examining students' positive and negative affect, self-compassion, life satisfaction and personal growth. Furthermore, it was hypothesised that students' wellbeing would improve significantly

compared with the results from the control group. The quantitative results partially support the hypothesis, with life satisfaction and the four sub-components of self-compassion showing significant group differences: self-kindness, self-judgement, isolation and overidentification, suggesting the brief group intervention benefitted students in enhancing their life satisfaction and some components of self-compassion. The results indicated a large effect size for pre-post treatment group improvement for these variables. Additionally, the effects of life satisfaction and the three sub-components of self-compassion (judgement, overidentification, isolation) were maintained at one month following the intervention. Each of these findings will be further discussed below.

As mentioned above, no significant group differences were found for positive and negative affect, total self-compassion, and personal growth in this study. This result may mean when comparing across the groups, the improvements indicated in the intervention group is not significantly better than the improvements in the waitlist control group. The improvements in wellbeing as indicated in the study can be due to passing of time. However, it should be noted that when comparing the mean scores of these variables, only the self-compassion group showed significant pre-post improvements. Similar observations were noted in Smeets et al. (2014) study, in which they found no significant difference between groups on their outcome measures such as self-compassion, life satisfaction, positive and negative affect, and self-efficacy. However, when looking at the intervention and the control group separately, the intervention group showed a significant pre-post increase in self-compassion, mindfulness, life satisfaction and self-efficacy that was not found in the control group. These observations suggest that these findings should be interpreted with caution, as a larger sample size may have yielded more clear-cut results as to whether there was a significant group effect on these variables or not.

*4.2.1.1 Self-compassion*

When compared to the waitlist control group, the intervention group indicated significant improvement for the four self-compassion sub-components: kindness, self-judgment, isolation and overidentification, but no significant improvements were found for total self-compassion. This finding partially supports the hypothesis and suggests that a relatively short self-compassion intervention can successfully enhance certain aspects of self-compassion, although perhaps not the improvement the researcher predicted to achieve. Interestingly, the two components (kindness and judgement) that showed significant group differences tap into one of the three components of self-compassion (self-kindness versus self-judgment, common humanity versus isolation, and mindfulness versus overidentification). Neff (2003) suggested that self-kindness and self-judgement are not mutually exclusive. For example, when someone tends not to judge himself, that does not mean that they would take proactive steps to be kind to themselves. The quantitative data in this study suggests that participants who attended the self-compassion group not only showed a reduction in being critical to themselves (self-judgement) but also an improvement in how they treated themselves (self-kindness). One of the reasons to this can be due to the content and exercises introduced in the self-compassion group, where participants were encouraged to mindfully acknowledge their difficulties and learn to treat themselves in a kinder way. For example, they were introduced to informal exercises such as intervention bracelets and self-compassion phrases to improve their ability in becoming mindfully aware of their personal sufferings and cultivate a benevolent attitude toward themselves and others. This could potentially explain the significant improvements as reported by the participants, suggesting that informal practices are sufficient in teaching participants to be less self-judgemental and increase self-kindness, which should ultimately contribute to participants' overall self-compassion. These findings correspond well with findings from Arimitsu's (2016) study that found a pre-post improvement in self-kindness and

self-judgement in the intervention group. Surprisingly, they did not find a significant group difference in self-kindness that was found in our study, despite their studies including more sessions. One of the key differences was that their study recruited low self-compassionate participants from high self-criticising culture (Japan). When comparing the pre-treatment mean scores between participants from both studies, this study indicated a higher self-kindness and self-compassion pre-treatment means scores than participants from Arimitsu's study. This can imply that the diverse population in this study consists of higher self-compassionate participants. Nevertheless, this finding confirms that the self-compassion intervention is effective in increasing self-kindness in a more diverse population, but perhaps less effective for participants from a high self-criticising culture. As our study did not recruit participants from one specific culture, it is still unclear to what extent the significant increase in self-kindness is culturally related, future research is needed to examine this further.

In analysing the response to the semi-structured interviews, our qualitative findings from the theme *Development of self-compassion* appears to revolve around being aware of being harsh to themselves. Furthermore, this theme highlights that practicing exercises enabled participants in becoming kinder to themselves. This is in concordance with the quantitative findings, where participants indicated a significant improvement in self-judgment and self-kindness after attending the brief intervention. This study identified some important factors that have contributed to the development of self-compassion in London university students. As indicated in one of the subthemes *Awareness*, most participants expressed the intervention has raised their awareness that they used to treat themselves in a harsh way and they were introduced to new ways of relating to themselves. Findings as highlighted in another subtheme *Exercises and Tools* indicate that participants found the self-compassion exercises beneficial for them to navigate everyday challenges. As mentioned, the intervention group introduced informal

exercises, which appear to have benefitted participants in becoming more aware of their self-critical thoughts and the way they used to treat themselves. The awareness developed following the group intervention appears to have led to further changes. For example, participants started noticing treating themselves in a more supportive and kinder way, especially when facing challenges. Similar findings were observed in Binder et al. (2019) study. Furthermore, the qualitative account of the subtheme *Self-compassion talks* highlighted that all participants spoke about after they attended the brief intervention, they started talking to themselves in a compassionate way, even in difficult situations. This was something that they have never experienced before. Participants' new ways of responding to themselves suggest that the brief intervention group is helpful for students in developing self-compassion. Even though *Awareness* and *Self-compassion talks* are presented as two separate subthemes in our results, these themes are highly interlinked. This can be further evident from the quote from one of our participants Ann, where she recalled being in a difficult situation recently, and how she started becoming aware of being self-critical. She expressed noticing the brief intervention has changed the way she responded to difficulties in a recent situation, and she was able to stop herself from being self-critical. Furthermore, she managed to apply the exercises acquire from the group (e.g., meditation) to manage her self-critical thoughts and started talking nicely to herself. Consistent responses were reported by other participants, with most participants noticed talking compassionately to themselves. These responses suggest that in the process of developing self-compassion, awareness is a crucial factor for participants to start responding compassionately towards their difficulties or emotions. Another important mechanism of action was that *Awareness* appears to lead to changes, allowing participants to respond to themselves kindly. This supports the finding from Binder's study that increasing awareness shows potential transformative power that can lead to behavioural change (talking nicely to themselves). Remarkably, whilst most participants reported these changes, one participant

expressed surprise by the changes as she never treated herself nicely under pressure prior to the group. This qualitative account suggest that some participants may not be expecting quick changes following the group. A potential explanation to this can be due to the intervention group aimed at introducing simple and easy exercises (e.g., intervention bracelets, self-compassion phrases) for participants to practice in their day-to-day life. Perhaps participants did not expect simple exercises can bring significant changes to how they relate to themselves. In fact, this finding is in line with a study that suggest changes can be achieved through simple intentional positive activities, such as expressing gratitude or practicing kindness (Lyubomirsky & Layous, 2013). This finding is particularly meaningful, as the present study adopts a very brief intervention with only three sessions, introducing simple exercises and skills that can be implemented in day-to-day life. The fact that participants reported how quickly things started to change and they were able to treat and talk to themselves in a nicer way, with less self-critical thoughts is encouraging. The qualitative and quantitative data complement each other, with both parts emphasizing participants' improvement in self-kindness. Participants' interviews added further insight into how applying self-compassion exercises when facing life situations beneficial in the development of self-compassion, suggesting a brief intervention is sufficient for participants in promoting mental wellbeing.

This study employed an experimental design that included a control group when examining the effectiveness of the brief intervention, similar to other self-compassion based studies that also included control groups to examine the effectiveness of the brief self-compassion intervention on different student populations. For example, Smeets et al. (2014) employed an active control group that introduced time management skills, with Dundas et al. (2017), Arimitsu (2016) and Huang et al. (2021) included waitlist control groups. When comparing the size of increase in self-compassion across these studies, no significant difference was found. The insignificant

different size of increase across these studies imply that self-compassion-based interventions demonstrate robust effects on self-compassion regardless of whether it's compared to an active control or waitlist control.

In this study, when comparing the results from the intervention group with the control group, the findings also indicate the intervention significantly improved students' overidentification. Specifically, participants were less likely to become too immersed in their emotions which can improve their ability to distance themselves from difficult situations and adopt a more objective perspective (Bennett-Goleman, 2001). During the self-compassion group, participants were given background information on self-compassion and the differentiating concepts of self-compassion, such as self-indulgence, self-pity, and self-esteem. It is particularly important as self-compassion is directly linked to feelings of compassion and concern for others (Neff, 2003). Understanding the different concepts allowed participants to acknowledge that suffering, failure, and inadequacies are part of the human condition, and everyone is worthy of compassion, subsequently breaking the cycle of self-absorption and overidentification. The result suggests that understanding more about the concept of self-compassion prevented participants from overidentified. The subtheme *Facilitation* in the qualitative data provides further insight into this finding. Participants highlighted facilitation as being an important part of the group, which enabled them to understand the concepts of self-compassion without misinterpreting them. As the concepts of self-compassion appear to be important to break the cycle of overidentification, it would be crucial for participants to understand the concepts and not misinterpret them. This may imply that self-compassion may be more suitable to be delivered by a facilitator instead of through self-practices (such as reading self-help book). More importantly, most participants found it enjoyable and expressed the facilitation of the group has helped create a safe space for them to listen and share. The support from the group

also allowed them to engage with the group content and exercises, once again highlight facilitation can be crucial in the process of developing of self-compassion.

Similar to self-kindness vs self-judgement, overidentified and mindfulness are not mutual exclusive (Neff, 2003). Even though participants showed less tendency to overidentify, it does not mean that they are mindfully aware of their thoughts and emotions. Surprisingly, contrary to Smeets et al. (2014) and Dundas et al., (2017) studies, our findings suggest the brief intervention may not be sufficient in improving participants' mindfulness as indicated in the self-compassion subscale scores. The present study shares similar findings to Arimitsu (2016) study that did not show significant improvement in participants' mindfulness. One way to explain this was that similar to Arimitsu's study, the intervention in the present study only introduced limited informal mindfulness practices (e.g., the bracelet and the self-compassion phrases), which may not be sufficient in enhancing students' mindfulness. Furthermore, the psychoeducational nature of the group could not ensure participants practiced the informal mindfulness skills regularly outside the group, especially when students were unable to practice or engage with mindfulness skills, or they may choose to apply other techniques introduced in the group that are easier to engage with (e.g., intervention bracelets, letter writing). Interestingly, Smeets' results indicated one session of mindfulness was sufficient in increasing mindfulness. Hence, apart from limited mindfulness skills as introduced in the group, another possible explanation to the difference in findings can be related to the diverse population recruited in the current study. Previous studies found that self-compassion levels differed across cultures. For example, it was suggested that Japanese tend to be less self-compassionate than the people in Thailand and the USA and Taiwanese are more self-critical than individuals in western cultures (Neff, 2008; Arimitsu, 2016). Findings from these studies confirm previous findings that cultural factors play an important role in influencing individuals' responses to

self-compassion. In this study, participants recruited were students of diverse backgrounds, such as different cultures, ethnicity etc. The finding in this study highlights that students from individual cultures can develop mindfulness by practicing simple mindfulness skills, whereas students from different cultures may show different mechanism of change when developing mindfulness. Yet, this study was unable to detect how each culture may influence participants in enhancing mindfulness. To our knowledge, no other studies have examined the effectiveness of a brief self-compassion group on the diverse student population. Existing literature only examined the brief intervention on specific student populations such as independent culture (e.g., USA, UK or Japan). This is particularly important as London universities tends to have a more diverse student population and our findings imply that students of diverse backgrounds may require more skills or sessions to improve mindfulness. Future research could further explore the mechanism underlying the development of mindfulness in a diverse student population and whether the intervention needs to be further adapted. Nonetheless, the qualitative data analysis reveals that participants were more aware of their thoughts and emotions following the group, indicating the intervention helps increase mindfulness in participants of diverse backgrounds. For example, Ann spoke about starting to realise being hard on herself that has reminded her to be more kind to herself; and Beth talked about becoming aware that being hard on herself was unhelpful and made her more miserable. These findings suggest that the self-compassion intervention was sufficient in improving mindfulness, enabled participants to be mindful of their present moment experiences, sufferings and how that impact their mental health. A possible explanation to the contrasting results as indicated from the qualitative and quantitative data is that similar to Arimitsu's study, participants likely showed improvement in mindfulness skills but was not picked up by the SCS due to the mindfulness subscale not focusing extensively on the mindfulness concept. Keeping in mind the aim of this study is to examine self-compassion in participants, future research that aims to

explore the effectiveness of self-compassion-based interventions on mindfulness may wish to include other measures in adjunction with the SCS to better capture the potential impact on participants' development of mindfulness.

#### *4.2.1.2 Positive and negative affect*

Further to self-compassion, this research measured the positive and negative affect as another indicator to promoting wellbeing, given that the previous study made the link between self-compassion and emotional resilience (Gilbert, 2014b). In this study, no significant group difference was found for both positive and negative affect. Again, the result corresponds well with Smeets et al. (2014) study, suggesting that the intervention did not affect both positive and negative affect. Despite the previous study suggesting there is a significant association between trait self-compassion and mood (Neff et al., 2007), adolescent studies of compassion-based interventions suggested that it would typically require longer period of time before interventions start to have an influence on mood level. (Bluth et al., 2016; Bluth & Eisenlohr-Moul, 2017). Furthermore, the result from the present study may suggest that mood can be influenced by many factors, and short-term improvements in self-compassion may not be enough to counter mood that can be highly linked to situational events. This is not surprising as university students typically experience various events in their university life, such as academic pressure, social, transitioning to a new environment and moving away from home (Compas et al., 1986; Dyson & Renk, 2006; Felner et al., 1983; Pittman & Richmond, 2008). Remarkably, our result from the 1-month follow-up indicated a slight improvement in negative affect albeit not significant. Whilst the self-compassion intervention does not have an impact on mood level in the short-term, practicing self-compassion may achieve longer-term gain. This supports findings from a community sample that found following a self-compassionate letter once a day for seven days, participants showed an increase in happiness and a reduction

in depression symptoms three and six months later. Future research may want to include longer follow-up periods to examine whether self-compassion may influence mood over the long term (Odou & Brinker, 2014).

The impact of the intervention on positive and negative affect can be further explained by the qualitative part of the study. Although most participants noticed quick changes following the group, a participant acknowledged that self-critical thoughts were still there despite finding the group and exercises helpful. This qualitative response can potentially explain the quantitative result that did not show significant improvement in negative affect. Even the group was helpful for participants to be kinder to themselves, it would not lead to an immediate reduction in negative thoughts and participants may need more time to practice self-compassion exercises for a longer-term change. Nonetheless, the participant believed the group has provided her with a stepping stone in managing her self-critical thoughts and starting to treat herself nicely. Furthermore, this intervention is psychoeducational in nature and not intended for symptom reduction, therefore may not be suitable for students who are highly self-critical. These findings were not explored in previous research studies and our findings are particularly encouraging, suggesting a brief intervention can benefit a more diverse London student population, including those who move away from home.

*4.2.1.3 Life Satisfaction*

When compared to the waitlist control group, the intervention group indicated significant improvement for life satisfaction and is maintained at 1-month follow-up. One way to explain it was that participants were more able to feel cared for and supported by oneself in the process of developing self-compassion when they were part of a group, which was not experienced by participants in the waitlist control group at the time of completing the outcome measures.

Similarly, when comparing the intervention group to a time management control group, Smeets et al.'s (2014) found both groups indicated pre-post improvement in life satisfaction. These findings support the previous explanation that participants would feel cared for and supported being in a group. In Smeets' study, all participants attended a group, whether it's a self-compassion group or a time management group. Being in a group enabled participants to feel supported, which appears to be particularly meaningful to students that contributed to greater life satisfaction. Therefore, this finding suggests that life satisfaction can be developed through feeling support, regardless of the content of the group. This finding corresponds well with previous study that suggested perceived social support plays an important role in enhancing the life's satisfaction (Alorani & Alradaydeh, 2018). Our finding is particularly encouraging as it suggests that a brief intervention could enhance life satisfaction not only for students from individual culture, but students from a diverse student population.

The theme *Relationships* from the qualitative data helps explain this finding further. The finding highlights the importance of relationships as part of the experience in the self-compassion group. Most participants emphasized group interactions and support as the most enjoyable part of the group. Furthermore, students' interviews included several therapeutic processes that were found to enable therapeutic change in group psychotherapy (Yalom & Leszcz, 2020). For example, as indicated in the subtheme *Normalisation*, participants expressed a strong sense of normalisation, in which listening to others allowed them to understand that their struggles are normal and other students share similar experiences. A research study on Cognitive Behavioural Therapy group found a similar mechanism, where group members felt less alone when they noticed other group members share similar experiences, worries, and emotional responses. It allowed them to understand they are not unique in their experiences and this normalising experience can help reduce associated stigma

and shame (Whitfield, 2010). This normalisation mechanism may not occur if self-compassion was introduced through self-help or individual sessions, suggesting that self-compassion intervention being delivered in a group format can enhance students' development of life satisfaction and self-compassion. Participants further expressed a sense of togetherness which makes them feel less alone. The relationship established during the brief group reflects the idea of group cohesiveness, which Yalom and Leszcz (2020) proposed as an important therapeutic factor that facilitates changes in group therapy. Participants also mentioned that social interactions were particularly meaningful during the difficult pandemic period, having support from each other further motivated them to engage with the group and practices. These findings show that the group was altruistic, which Yalom and Leszcz (2020) found to be an important group process in enhancing the wellbeing of group participants. These responses reveal relationship as one of the most important aspects of the group intervention, suggesting the perceived benefits of the brief intervention in a group format, such as a sense of belonging and normalisation. Participants highlighted the importance of listening and sharing with other group participants, which supports findings from previous research that students value being understood and relating to others (Naslund et al. 2014). Given that the group interventions in the present study took place during the COVID-19 pandemic, the social interactions and support appear to be more meaningful than ever.

#### *4.2.1.4 Personal growth*

Similarly, no significant group differences were found for personal growth in this study. However, significant pre-post improvement in personal growth was only indicated in the intervention group, suggesting that the brief self-compassion intervention can improve students' general self-efficacy. This finding corresponds well with findings from previous studies. Smeets et al. (2014) study reported participants in the self-compassion intervention

significantly improved self-efficacy, and Dundas et al. (2017) study found that self-compassion increases rather than decreases motivation to learn and to improve. Our result extends findings from prior research that a brief self-compassion intervention was not only effective for students from individual cultures but also for students from diverse backgrounds. More importantly, the brief intervention enabled participants to build on their internal resources, hence more confident in their abilities to navigate challenges. The qualitative account of the participants' experience is also in line with the findings from the quantitative part. A previous study found that self-compassion is associated with an increased feeling of agency and provide a useful tool to handle stressful situations and emotions (Binder et al., 2019). In this study, Beth highlighted that being self-compassionate encouraged her to complete the academic work that she was struggling with and allowed her to complete the task at hand with a positive attitude. She expressed that talking to herself compassionately influences her performance. Once again, this has confirmed that the self-compassion intervention improves participants' motivation. Particularly, self-compassion enabled participants to handle challenging situations with a positive attitude. Further qualitative account from Daisy where she talked about that she would normally seek reassurance quite often from her close friends and family. However, she noticed a decrease in seeking reassurance following the self-compassion intervention. It was suggested that we normally seek reassurance when we perceive high levels of uncertainty, and when we feel unable to control challenging situations (Kobori & Salkovskis, 2013). The fact that the self-compassion intervention was successful in decreasing reassurance seeking behaviour is encouraging and suggests that the self-compassion intervention can benefit students in better tolerating uncertainty, especially without the need for external support.

#### *4.2.2 Discussion of Qualitative Findings*

#### *4.2.2.1 Development of self-compassion*

The themes mentioned in the above paragraphs were the key experiences that generated from participants' interviews, which supported the quantitative findings of this study that a brief self-compassion intervention is effective in improving students' wellbeing. Overall, participants mentioned during the process of developing self-compassion, they noticed some key changes such as being aware of how they treated themselves and more able to talk to themselves in a compassionate way. Together with the subtheme *Exercises and tools,* findings from this theme further support the quantitative findings that the self-compassion group is sufficient in promoting mental wellbeing in London university students. The qualitative responses from participants indicated that the brief intervention is useful in equipping London university students with skills to navigate different university challenges, especially academic and social challenges, thus explaining the pre-post improvements in the intervention group. Most participants noticed a change following the brief intervention and reported the self-compassion exercises as helpful in enabling them to feel more relaxed and more able to get on with the academic pressure at hand. This benefit is particularly important as previous research highlighted stress as a key factor in the high risk of mental health problems among students (Porru et al., 2022). Furthermore, mental health play an important role in students' academic performance (Lipson & Eisenbery, 2018). For example, a longitudinal study on the US university student population found that depression significantly predicted lower grade point averages and was associated with an increased risk of dropouts (Eisenberg et al., 2007). Another longitudinal study on the UK student population indicated that depression was a significant predictor of low exam performance (Andrew & Wilding, 2004). Therefore, our finding implies that the brief intervention has the potential to improve mental wellbeing, academic performance, and prevent adverse health outcomes in London university students.

The most surprising result that developed from our qualitative findings indicated in this theme was the unique experience as expressed by students at London university, which was not explored in previous studies. Students from London university reported having to move away from home to study, with some participants moving to London from other countries. They talked about feeling alone when having limited support from family and their usual support bubble. This qualitative account corresponds well with a recent study that suggested despite study abroad can offer unique learning opportunities, students can experience issues such as separation from family and friends, stress from traveling, culture shock, social or cultural adjustment that can negatively affect their mental health (Niehaus et al., 2022). Likewise, other studies suggested that students who do not meet their social needs are more likely to experience negative emotions such as loneliness (Lim & Vighnarajah, 2018) and those who are homesick or isolated are more vulnerable to mental health problems (Thurber & Walton, 2012). Hence, the finding from this study is particularly important, especially for students who moved away from their home country to study in London. As the qualitative responses indicated that when participants were feeling alone, the self-compassion exercises introduced in the brief intervention allowed them to self-soothe and take care of themselves without needing to rely on external support. This finding is in line with the quantitative data that showed pre-post group improvement in isolation, suggesting the brief intervention is helpful in alleviating the feeling of loneliness. Subsequently, the finding suggest that self-compassion exercises are helpful for participants to build on their internal resources without having to rely on external support, which is highly beneficial for London university students who are more prone to having limited external support due to being away from home. The exercises enabled students to navigate challenges, suggesting that the brief intervention is helpful for London university students to manage their mental wellbeing.

*4.2.2.2 Group*

Although the brief intervention is psychoeducational in nature and is not intended to replace professional mental health support, it could be beneficial if students are facing long waiting time to access support, especially for students who are looking to learn some skills to help navigate day-to-day challenges instead of symptom reduction. Typically, individual therapy was rated more favourably than group therapy (Fawcett et al., 2020). Interestingly, the qualitative findings indicated the group was overall positively experienced. This finding was supported by previous studies that have found strong effects for group-based delivery when examining the modes of delivery on self-compassion outcomes (Ferrari et al., 2019). It was suggested that the experience of connection (as opposed to isolation) can be achieved through group delivery, which is consistent with the core theoretical framework for self-compassion. Additionally, we identified two key processes that enhance participants' experience of the group: *Facilitation and Safe space* as briefly mentioned above. In the current study, most participants found the group content and number of sessions adequate and tailored to students' needs. A participant highlighted the session that introduced the concept of procrastination and fear of failure, in which she found the content particularly helpful and suitable for her role as a student. Participants further commented on the importance of the facilitator's role in balancing theories and practices and emphasized the pace of the sessions guided by the facilitator as one of the key elements in allowing them to fully engage with the group, without feeling they were rushed through practices as box-ticking exercises. Furthermore, as mentioned previously, participants felt less likely to misinterpret self-compassion concepts as compared to when they read the materials on their own. This was supported by an evaluation review that found skill-oriented interventions were more effective with supervised practice (Conley et al., 2013). Further reference was made regarding the facilitator fostering a non-judgemental and safe environment for participants to be in the group or feel comfortable sharing their own

experiences. A previous study also found benefits of group therapy, suggesting sharing and discussing the personal relevance of intervention concepts could reinforce common humanity and acceptance of flaws (Ferrari et al., 2019). This has provided further evidence for university counselling services, that a group format may be most suitable when considering delivering self-compassion intervention for student populations. Not only this was the most time and cost-effective choice, but the brief group intervention was also widely accepted by students of diverse backgrounds. Future research can further explore the effectiveness of self-compassion intervention by comparing different modes of delivery to contribute to the self-compassion literature and service development.

#### *4.2.2.3 Relationships*

Another finding from the qualitative data that was widely discussed by participants was the importance of relationships as established in the group, especially during the COVID-19 pandemic. It appears that *Normalisation* and *Support* (as reflected in the subtheme) during the group process enabled therapeutic change in group psychotherapy (Yalom & Leszcz, 2020). Participants referred to the group interactions with other participants, in which they felt supported by others. Not only there was a lack of social interactions during the pandemic but feeling isolated and lonely seem to be a common experience among London University students as discussed by participants. This finding is in line with a previous study that suggested loneliness is affecting both domestic and international students of all education levels (i.e., undergraduate, and postgraduate students) in UK universities (Vasileiou et al., 2019). As mentioned in the introduction chapter, socially isolated and lonely are highly associated with poor mental wellbeing in students (Thorley, 2017). Therefore, the positive interactions experienced by participants in this brief intervention that enabled feelings of belongings and enhanced socially supportive environment is particularly encouraging, as these processes were

suggested to be highly associated with better mental health outcomes (Fink, 2014). Participants further discussed finding it comforting having the validation from the group and that other students shared similar struggles being a student studying in London, especially since most of the participants had to move away from home. The shared struggles with academic and social challenges were the foundation of a sense of togetherness for the participants, which contributed to alleviating the feeling of loneliness. The finding in this theme once again supports the hypothesis that the brief group intervention is helpful in promoting mental wellbeing.

Overall, the present results show that a relatively short self-compassion intervention can effectively enhance wellbeing among London university students. Introducing self-compassion concepts, and exercises not only increase students' self-compassion but also improve their overall mental wellbeing such as life satisfaction. These findings highlight the potential of self-compassion intervention for students to navigate different challenges of university life, especially for those who have to move away from home with limited external support. The quantitative findings confirmed findings from previous studies on the effectiveness of self-compassion-based interventions on students in individual cultures (Smeets et al., 2014; Dundas et al., 2017; Arimitsu, 2016; Huang et al., 2021). More importantly, the results demonstrate that the brief intervention not only benefitted students from individual cultures but also a more diverse student population, confirming earlier reports that suggested the potential of self-compassion intervention in improving self-compassion and mental health in diverse samples (Arimitsu, 2016; Gilbert & Procter, 2006; Neff & Germer, 2013; Smeets et al., 2014). The fact that London university students' wellbeing could be improved in such a short time with minimal resources suggests that self-compassion-based interventions such as this one is promising, and it is worthwhile for university counselling services to consider offering this

group intervention as a form of support for students. The qualitative findings highlighted some important mechanisms of action from this brief intervention that have contributed to the development of self-compassion. Moreover, participants of different backgrounds expressed positive experiences attending the group and the process of cultivating self-compassion. It is particularly encouraging as these findings once again suggest a relatively short self-compassion group as proposed in the current study could successfully enhance levels of self-compassion and promote mental wellbeing in London university students of diverse backgrounds and cultures, indicating the brief intervention can be offered as an alternative mental health support for students. Ultimately, it can alleviate some of the challenges university counselling services are facing as highlighted.

### 4.3 Research limitations

The study was designed to evaluate a brief, online self-compassion intervention for students in London universities. It has provided some insightful findings that suggested the brief group intervention is helpful for this population. However, there were some methodological limitations that need to be considered when interpreting the findings. Some of these limitations have helped to identify areas for future research, which will be discussed in chapter 4.6.

#### *Sample size*

The calculation of the sample size typically depends on the precision and good estimates of the parameters necessary for the calculation (Noordzij et al., 2010). In the current study, the sample size was being calculated using repeated measures multivariate analysis of variance with two time points, a large effect size of $d = 1.19$, a 5% alpha (95% significance) and 95% power, which concluded that 12 participants were needed to obtain an effect for the study. The researcher noted that using a large effect size obtained from previous research increase

the statistical power, in which decrease the needed sample size for the current study. Whilst the smaller sample size evaluated was cost and time effective, Type II error (false negative, fails to reject a null hypothesis that is actually false) was more likely to occur. Subsequently, there may be a chance that despite the statistical tests did not find a significant improvement in some of the mental wellbeing outcome measures (i.e., total self-compassion), improvements may have actually taken place. In order to reduce Type II error, future studies could consider using a lower alpha and a higher power when performing sample size calculations.

***Attrition***

The large attrition rate (32%) should be considered. It was speculated that the control group participants may lose interest as they were assigned to a group that may require a short wait after they signed up, with some participants not being available due to circumstances changing. This can also impact their motivation to complete the questionnaires as the measures were not taken before and after they attended the group. Furthermore, the large attrition rate resulted in the small sample size of the current study. Larger sample size is required to show a more accurate reflection of the effectiveness of the intervention, which this study was unable to achieve due to recruitment difficulties during the COVID-19 pandemic and the limited time of the doctorate course.

***Sample***

The homogenous sample may limit the generalisability of the findings as it contained a large majority of participants who identified as female, even though this study was open for all gender to participate. It can be related to men's health-seeking behaviour as suggested by previous research, that men are less likely to seek support from mental health professionals for

problems (Parent et al., 2018). It is possible that this gender disparity may influence the findings, meaning that the findings may not be applicable to students identified as other gender. Moreover, recruitment was mainly done online due to the COVID-19 pandemic, it may not reach individuals who do not use the internet regularly or those who prefer joining an in-person intervention.

Furthermore, self-selection bias may result from opportunity sampling and voluntary involvement. Many participants appeared to be students who were more psychological minded, willing to access support and ready to change. Factor such as readiness to change is suggested to be predictive of therapy success (Duncan & Miller, 2000), therefore the findings from this study may not be applicable to students who have low motivation and are less likely to engage. Nonetheless, this recruitment strategy enabled the current study to recruit participants from a wider range of backgrounds which is crucial to reflect the diverse student population in London universities. As reflected from the sample, this research recruited students of different enrolment years, faculties, countries, and ethnicities. Furthermore, the researcher wondered whether students' mental health may vary across the sample given that the data collection period spanned over summer, Christmas and Easter holidays, lockdown to restrictions lifted, with the intervention groups being run in different periods. For example, whether participants who attended the group closer to the exam period may report higher scores? Or would participants who attended the group closer to the holiday period report lower scores and engage better with the group and practices? Future studies may want to take into account the possibility of external influence on the self-reported data.

Another limitation to the qualitative part of the recruited sample was that participants would only be invited for interviews if they have attended all the sessions and completed all the

questionnaires. This group of participants were evidently more motivated, hence were more likely to be interested in the topic and engaged well with the group. Hence, they would be more likely to report positive experiences of the group and provide positive feedback during the interview, such as what they have found useful and their reflections on practicing the exercises. It is inevitable that this study would exclude the experiences of participants who dropped out or disengaged from the group. Feedback from these participants can also be essential as they can provide reasons for their disengagement, such as whether the content was not suitable for them, or they felt unable to share things in a group setting etc. The potential feedback can be important for practitioners or counselling services to inform the delivery of the brief intervention.

***Quantitative and Qualitative data***

All outcome measures were sent to participants to complete across the three timepoints through an online link (Qualtrics). The benefit of this is that it offers a sense of confidentiality and anonymity, yet these questionnaires were answered by participants in an uncontrolled environment. It is possible that some participants completed the questionnaires before a deadline, which is likely to introduce bias in their scores (e.g., they may score higher on negative affect, and self-judgment) and was not a true reflection on the overall impact of the intervention. Furthermore, the reliance on self-report data may mean that socially desirable responses can potentially bias results. However, the measures demonstrated good psychometric properties as mentioned in the methodology chapter. Furthermore, this research activated a feature on Qualtrics to ensure 100% of questions were answered before submission may have reduced the number of missing data.

The semi-structured interview in the qualitative part of the study may also introduce social desirability bias. In the present study, the researcher adopted a dual role as a researcher and a

facilitator of the group. Participants were more likely to say positive things to the interviewer about the intervention she delivered, which may result in inherent biases that result from the positioning of the researcher in the research process (Frost, 2016). In order to control this, there were questions included in the interview regarding the challenges of participating in the group and the downside to attending, to ensure participants have the space to talk about any challenges that they were unable to express otherwise.

***Lack of randomisation***

One of the key limitations in the current study is the lack of randomisation. Randomisation provides the benefit of improving a study's internal validity by decreasing the possibility of confounding variables and introducing artificiality and reducing a study's ecological validity. In the current study, instead of the use of randomisation, the researcher opted for 'first come first serve' for participants to join the intervention group due to limited time of the doctorate programme and recruitment difficulties during the COVID-19 pandemic. However, this study involves a qualitative part with the intention to provide further insight into the effectiveness of the group intervention and explore the mechanism of action that contributed to development of self-compassion. The outcome measures included in the third timepoint not only allowed the researcher to understand whether the intervention has a long-lasting impact, but also offered the opportunity to understand if the results were obtained due to the intervention or the passing of time alone.

In conclusion, this study shares similar limitations that could be found in similar intervention studies. As part of a Doctorate in Counselling Psychology, this study was time and resources limited. Moreover, the global pandemic has led to unpredictable changes to the initial design of the study, along with a few amendments made regarding the recruitment process and strategy,

the exclusion and inclusion criteria. Hence, the researcher was unable to conduct a randomised controlled study or recruit a larger sample size as planned.

**4.4 Research strengths**

The current research demonstrated a number of strengths. Firstly, this study has addressed some of the challenges highlighted in the current literature regarding the mental health crisis among university students in the UK (The Insight Network, 2019). It is hoped that this study will contribute to the development of alternative ways to provide support for students, particularly a shorter, effective evidence-based intervention in order to reach a more diverse student population and reduce the waiting time for counselling services. Additionally, previous studies were mainly conducted in individual cultures or single gender, in which the findings may not be generalisable to a more diverse student population. The current study has therefore bridged the gap in the literature by evaluating a brief intervention on a more diverse university population. This was to date the first study looking at exploring the effectiveness of a brief self-compassion intervention on a diverse student population and it indicated encouraging results. Another key strength of the present study was its mixed methods design. The qualitative part of the study has provided valuable insights and expansion to the quantitative data. This has allowed a more thorough understanding of the experience of individuals participating in the self-compassion group and the primary mechanism in the development of self-compassion in this unique population. The waitlist control group design allowed all participants to attend the intervention while maintaining the advantage of a control condition. Furthermore, this study includes a 1-month follow-up, which allows us to understand if the improvements in self-compassion participants reported post-intervention would be maintained. This will provide further insight into whether the brief intervention equips students with long-lasting tools for their university life.

It is worth noting that this study did not recruit students from counselling services. A previous study suggested that around only a third of UK students experiencing mental health issues seek formal counselling (Macaskill, 2012). Being able to attract interest from students that did not access counselling services may imply that the brief psychoeducational nature of the group can reach more students that do not normally seek formal psychological intervention. Finally, this study did not offer any financial incentive for participants to take part. This may mean that university students are interested in participating in a brief intervention for mental health reasons, in contrast with financial incentivised studies.

Overall, the current study indicated that this brief intervention is effective in enhancing developing self-compassion and promoting mental wellbeing. Research has shown that enhancing compassion toward the self and others is beneficial for students to navigate challenges.

## 4.5 Implications

### *4.5.1 Clinical implications*

The findings of this study have important clinical implications given the increased demands on university students in seeking mental health support. Our findings indicated that a brief self-compassion group intervention is effective in improving self-compassion and promoting wellbeing in London university students. As mentioned, changes have been made to the initial design of the study, including the delivery mode. The intervention was delivered remotely via Zoom due to the restrictions imposed by the government in response to the COVID-10 pandemic. Interestingly, research suggested there is an increasing demand by young people in seeking psychological support, which is mainly through online platforms in the first instance (Hanley & Wyatt, 2021), suggesting online intervention is an appropriate alternative to face-to-face support. Remarkably, the encouraging results in this study demonstrated that the brief

intervention, being delivered in groups and online can be beneficial for a more diverse student population. It appears that this mode of delivery offers flexibility for students to access support, especially when face-to-face support was not available. More importantly, it could be particularly beneficial to accommodate students' busy academic and social life, especially for students who have other commitments alongside their role as a student. It may also provide a means of supporting students and attracting individuals who would not otherwise access therapy. Even though this study did not include students who are residing outside the UK, counselling services could consider offering this group intervention for students who are attending lectures remotely, or from overseas in order to improve access to mental health support for all students as they would not be able to attend counselling sessions in person. Furthermore, our results show that students of diverse backgrounds reported positive experiences with the group, suggesting the intervention is widely accepted by this population. These finding is not only relevant to London university students but could also be applied to universities in other cities or countries that tend to have a more diverse student population.

Most importantly, it is promising that a brief intervention could provide students with the skills to navigate challenges, especially for students who move away from home without needing to rely on external support. As mentioned, managing students' mental health appropriately could avoid leading to issues such as poor academic performance, substance abuse and suicide (Fong & Loi, 2016) and intervening early could potentially bring a positive effect on student's academic and social functioning and avoid long-term risks associated with poor mental health (Bruffaerts et al., 2018). It is important to note that this intervention was aimed at a non-clinical population and is not intended to replace either medical or clinical care. This needs to be made clear to students before they are being registered to the brief intervention, in which this was also emphasized in the current study during pre-screen to avoid confusion and match student's

expectations in case they were looking for proper clinical support. Furthermore, counselling psychologists or other practitioners should also be mindful of the pros and cons of delivering a brief intervention, as an intervention of psychoeducational nature may not be suitable as a complete replacement for traditional mental health or face-to-face support.

With the growing number of students entering higher education and the ongoing demands on mental health support for students, the promising findings from the current study suggest a brief self-compassion intervention may be an appropriate alternative option for counselling services to offer to students, to promote mental health in students and alleviate some of the challenges university counselling services are facing. It is particularly beneficial for counselling services due to the low cost and minimal resources involved in the delivery of the intervention. With the intervention being delivered online and in a group format, not only it's cost-effective but could potentially increase access to psychological support for students. Furthermore, participants highlighted some key processes in the development of self-compassion were psychoeducation, awareness, and normalisation, with some participants mentioned wishing they attended the group at the start of their university life. With this in mind, counselling services could consider offering this brief intervention as an introductory psychoeducation group as a standard university induction in order to introduce self-compassion skills and promote mental wellbeing. It could potentially benefit students who are transitioning into university life. Subsequently, it may prevent students from developing mental health problems and help reducing the ongoing demands for counselling services (Bruffaerts et al., 2018). This might also potentially act as a gateway to further support students in accessing mental health support or improve future engagement with other evidence-based therapy.

Although university students may not consider group intervention delivered online as their first choice of mental health support (Apolinário-Hagen et al., 2018; Levin et al., 2018), counselling psychologists and services must take this into account by balancing students' expectations and limited resources available within the counselling services. More importantly, this study suggests this brief intervention is positively experienced by students recruited for the study.

#### *4.5.2 Research implication*

The findings of this study have important research implications by contributing to counselling psychology literature and providing further evidence to inform our practices, for service development (Sucala et al., 2012). As mentioned, this study did not recruit students from the university counselling services. However, the study presents valuable evidence that the brief self-compassion intervention is effective on a diverse student population, confirming findings from previous studies conducted on student populations from individual cultures (Smeets et al., 2014; Dundas et al., 2017; Arimitsu, 2016). This finding is promising, and it is hoped that this research could encourage counselling services to conduct further research on the effectiveness of interventions provided to students. This is particularly important as there is increased pressure on counselling services to demonstrate clinical effectiveness (Murray et al., 2016), and there has been limited research conducted on student counselling in the UK and the effectiveness of the counselling services. This study provides a better understanding of promoting mental wellbeing in a diverse student population and allows higher education institutions to better support students, which is highly relevant to counselling psychology. Based on the results from the current study, counselling services could consider offering this brief intervention as a way to support students, providing its time and cost-effective. At the same time, it is hoped that university counselling services could consider conducting more randomised control trials to contribute to the evidence base (Cooper & Reeves, 2012) and the

publication of replication studies (Yong, 2012). This could promote confidence in the research findings and generalisability. It is realistic and achievable as most counselling services collect outcome measures from students who access support as a standard procedure, perhaps counselling psychologists could take the lead in developing more evidence-based support by evaluating the outcome measures collected. Furthermore, the non-significant results on total self-compassion when comparing the groups may be due to the small sample size in this study. Future research may want to recruit more participants to better reflect the effectiveness of the group intervention. Additionally, it could be worth comparing the brief self-compassion intervention with other group interventions that are offered by the counselling services. By comparing with other group interventions, areas for revision can be identified more easily. Collecting qualitative feedback would be helpful to understand more about high retention rates in the student population.

The findings suggest the brief intervention significantly improved students' life satisfaction. Yet, the overall self-compassion was not significant when compared to the control group. As mentioned, it may be due to the small sample size, but it might also mean that the intervention requires further adaptation when working with a more diverse population. The intervention in this study was adapted from the intervention developed in Smeets' study. This was the first study to conduct a brief intervention as such on a diverse student population, and some participants reported finding certain exercises harder to practice (i.e., meditation) and at times felt they did not deserve to be treated nicely. These challenges were commonly reported by participants from previous studies. Another explanation for this can also be related to the different backgrounds of participants (i.e., culture and ethnicity). Some participants mentioned the cultural aspects briefly during the interviews, but this was not widely discussed. This could potentially be because this study was conducted on the student population, and they would

naturally pay more attention to the academic and social challenges when thinking of their experiences during the interviews. This research offers valuable insight into the factors that have contributed to the development of self-compassion for a London University student population. However, there is still limited understanding on the mechanism of change and students' experience in a more diverse population. Therefore, it would be important for researchers to continue exploring these questions to inform the current practice and to investigate whether there is a need to refine the current intervention. Future research may want to further explore whether this brief intervention can be implemented across cultures and examine whether there is a need to refine the brief intervention to accommodate students of different cultural backgrounds. For example, whether there is a need for the content of the group to be culturally adapted.

The current study's mixed methods design provided further insight on the development of self-compassion from the brief intervention and how this can be improved, hence contributing to the future development of self-compassion intervention or practitioners who are seeking to work with the diverse student population. These recommendations and research implications highlighted the importance and relevancy of the qualitative part in evaluating and improving psychological interventions. Whilst the interview content cannot be statistically analysed, the qualitative data helped highlight essential aspects of clinical and research practice, particularly when working or recruiting from a diverse population. Therefore, these recommendations and clinical implications may be a relevant starting point to ensure that counselling services and researchers can provide intervention that is appropriate for a more diverse student population.

### 4.6 Future

The literature review, along with findings and limitations discussed in the present study highlighted some potential recommendations for future research. As mentioned, there is a lack

of research on the student population, with limited randomised controlled studies. Future research would want to consider conducting more randomised controlled studies on a brief self-compassion intervention on different student populations. Furthermore, a larger sample size with a more diverse population would enable a more accurate reflection of the effectiveness of such intervention and allow for any potential adaptions to the group. These could provide more evidence-based intervention for university counselling services and inform the support offered to a more diverse student population. Furthermore, the high attrition rate appears to be a common issue among university students. Similar help-seeking barriers were also identified in previous studies conducted in other countries (Levin et al., 2018, Apolinário-Hagen et al., 2018), with concerns around data privacy, stigma, and intervention credibility. It is still unclear how to best approach university students; future studies could further explore help-seeking barriers in UK university students as it would be helpful to start understanding how to best engage the student population.

There is also a need for future studies to offer the intervention at the start of the academic year as part of the induction program and follow-up on participants attending the intervention. As discussed above, a participant mentioned wishing they could attend the group intervention in the beginning of the term so that they would have the skills to navigate any challenges. Furthermore, adjustment to university has been a topic of interest in higher education on its influence on students' wellbeing (Bowman et al., 2019). Therefore, it would be worth to explore and further understand whether such brief intervention is effective in preparing students to navigate challenges and whether follow-up sessions are needed to help maintain the benefits of the intervention in a long run. These findings could provide the counselling services with better insight into integrating a brief psychoeducation group into their routine of care, and whether it would benefit a more diverse population and enable more students to access support

without long waiting time. Furthermore, it is recommended that university counselling services take an active role in evaluating the effectiveness of the intervention they provide. They could potentially compare the brief self-compassion intervention group with other similar groups university counselling services offer, such as Acceptance and Commitment Therapy and Mindfulness-based cognitive therapy to understand the cost and benefit of different interventions, and also as a way to control for confounding anticipation effects.

The literature also highlighted a need for qualitative or mixed methods research on a student population as this was one of the first studies that explore the subjective experience of students of different backgrounds in attending a brief intervention. Qualitative interviews could provide a further understanding of the mechanism of changes from the intervention. Furthermore, whilst our findings suggest a possibility that culture can influence individuals in developing self-compassion, it remains unsure to what extent and how this may be the case. Hence, future research would want to further explore the link between culture and self-compassion, which could help inform the further development of this brief intervention for a more diverse student population.

### 4.7 Final Research Reflections

This research project is conducted during a world pandemic, which is undeniably challenging. Yet, my journey through this research has undoubtedly shaped me both professionally and personally. For example, having to learn to balance the time and resources constraints and my hope to conduct a 'perfect' project on a topic I am interested in. My choice to conduct a mixed methods study was informed by my professional interest in exploring an intervention. As a trainee counselling psychologist who values working holistically, I believe that participants should have a 'voice' to the numbers they provided. The process of acquiring new qualitative research skills such as coding and establishing themes have been challenging. However, the

approach allows me not only to examine the effectiveness of the intervention based on the 'numbers' but enables me to take into account the subjective experiences of the participants. I am aware of the potential power imbalance present in the study, hence I remained mindful of the challenges participants face when talking about their experiences and ensured they were provided with the space to discuss them. It is also hoped that conducting mixed methods research could provide more publishable research in counselling psychology.

It is hoped that the group would be helpful for students from diverse backgrounds. Being a mental health advisor in a busy London university counselling service, working with students of diverse backgrounds, I had the opportunity to listen to their struggles, experiences and understand the support they would like to receive. Fortunately, I was involved in the process of brainstorming psychoeducation or therapy groups to offer students, which I have suggested running a brief self-compassion group. By conducting this project, I could also present the findings to the team and use the opportunity to promote the brief self-compassion intervention as an evidence-based practice. On reflection, I would naturally wish the brief intervention could improve students' wellbeing. While the insignificant between-group results were slightly discouraging, it was interesting to reflect on the variables that did show significant improvement, such as self-kindness, self-judgment, and overidentification and how that complement the findings from the qualitative data. Furthermore, due to the high attrition rate, there were times during recruitment when I started to question if the group was needed by students or whether it would be effective for the student population. It was of great relieve to learn about the positive experiences of participants and that they believe such intervention would also be beneficial to other students who share similar struggles.

Conducting research on a topic that interests me was not only a very useful learning experience but also enjoyable and rewarding. Despite being a challenging process, I would like to encourage researchers and counselling psychologists to conduct more mixed methods research in order to boost the profile of research work in counselling psychology.

**4.8 Conclusion**

In conclusion, the current study has provided greater insight into the effectiveness of a brief self-compassion group intervention for a diverse London university student population, in response to the urge to provide a solution for more effective care for students as laid out in the literature. The results indicated that the brief group intervention was sufficient in promoting mental wellbeing in a diverse university student population. Suggesting it is a time and cost-effective solution to address the pressure in university counselling services and demands in students needing mental health support. To date, this is the first study to explore the impact of a self-compassion-based group intervention to a diverse student population, and one of the very few studies that explored the subjective experiences of individuals participating in the self-compassion group. This has offered further insight into the mechanism of action in the development of self-compassion in London university students. Key areas for further revision were included, for example, more RCT to be conducted on the diverse student population on the effectiveness of a brief self-compassion intervention. Furthermore, future studies may consider offering the intervention at the start of the academic year as part of the induction program and follow-up on participants attending the intervention. This could help understand whether such brief intervention is effective in preparing students to navigate challenges. Overall, this study contributed to the evidence-based for self-compassion-based intervention in the student population and the brief self-compassion intervention appear to be a promising alternative in supporting university students.

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## 6 Appendices

### *Appendix A: Ethical Application*

Ethics Application Approvals- Low risk

ETH2021-073: Original application
ETH2021-1751: Amendments (to change recruitment method)
ETH2122-0175: Amendments (to incorporate additional recruitment site).
ETH2122-0671: Amendments (to change participants eligibility)

Dear Debbie

**Reference: ETH2021-0738**

**Project title: Effectiveness of a Brief Self-Compassion Group Intervention for International Students in London University**

**Start date: 9 Feb 2021**

**End date: 31 Dec 2022**

I am writing to you to confirm that the research proposal detailed above has been granted formal approval from the Psychology low risk review. The Committee's response is based on the protocol described in the application form and supporting documentation. Approval has been given for the submitted application only and the research must be conducted accordingly. You are now free to start recruitment.

**The approval was given with the following conditions:**

- ...
- ...
- ...

Please ensure that you are familiar with City's Framework for Good Practice in Research and any appropriate Departmental/School guidelines, as well as applicable external relevant policies.

Please note the following:

**Project amendments/extension**

You will need to submit an amendment or request an extension if you wish to make any of the following changes to your research project:

- Change or add a new category of participants;
- Change or add researchers involved in the project, including PI and supervisor;
- Change to the sponsorship/collaboration;
- Add a new or change a territory for international projects;
- Change the procedures undertaken by participants, including any change relating to the safety or physical or mental integrity of research participants, or to the risk/benefit assessment for the project or collecting additional types of data from research participants;
- Change the design and/or methodology of the study, including changing or adding a new research method and/or research instrument;

- Change project documentation such as protocol, participant information sheets, consent forms, questionnaires, letters of invitation, information sheets for relatives or carers;
- Change to the insurance or indemnity arrangements for the project;
- Change the end date of the project.

**Adverse events or untoward incidents**

You will need to submit an Adverse Events or Untoward Incidents report in the event of any of the following:

a) Adverse events

b) Breaches of confidentiality

c) Safeguarding issues relating to children or vulnerable adults

d) Incidents that affect the personal safety of a participant or researcher

Issues a) and b) should be reported as soon as possible and no later than five days after the event. Issues c) and d) should be reported immediately. Where appropriate, the researcher should also report adverse events to other relevant institutions, such as the police or social services.

Should you have any further queries relating to this matter, please do not hesitate to contact me. On behalf of the Psychology low risk review, I do hope that the project meets with success.

Kind regards

Dermot Bowler

Psychology low risk review

City, University of London

Dear Debbie

**Reference: ETH2021-1751**

**Project title: Doctoral Research Project**

**Start date: 9 Feb 2021**

**End date: 31 Dec 2022**

I am writing to you to confirm that the research proposal detailed above has been granted formal approval from the Psychology low risk review. The Committee's response is based on the protocol described in the application form and supporting documentation. Approval has been given for the submitted application only and the research must be conducted accordingly. You are now free to start recruitment.

**The approval was given with the following conditions:**

- ...
- ...
- ...

Please ensure that you are familiar with City's Framework for Good Practice in Research and any appropriate Departmental/School guidelines, as well as applicable external relevant policies.

Please note the following:

**Project amendments/extension**

You will need to submit an amendment or request an extension if you wish to make any of the following changes to your research project:

- Change or add a new category of participants;
- Change or add researchers involved in the project, including PI and supervisor;
- Change to the sponsorship/collaboration;
- Add a new or change a territory for international projects;
- Change the procedures undertaken by participants, including any change relating to the safety or physical or mental integrity of research participants, or to the risk/benefit assessment for the project or collecting additional types of data from research participants;
- Change the design and/or methodology of the study, including changing or adding a new research method and/or research instrument;
- Change project documentation such as protocol, participant information sheets, consent forms, questionnaires, letters of invitation, information sheets for relatives or carers;

- Change to the insurance or indemnity arrangements for the project;
- Change the end date of the project.

**Adverse events or untoward incidents**

You will need to submit an Adverse Events or Untoward Incidents report in the event of any of the following:

a) Adverse events

b) Breaches of confidentiality

c) Safeguarding issues relating to children or vulnerable adults

d) Incidents that affect the personal safety of a participant or researcher

Issues a) and b) should be reported as soon as possible and no later than five days after the event. Issues c) and d) should be reported immediately. Where appropriate, the researcher should also report adverse events to other relevant institutions, such as the police or social services.

Should you have any further queries relating to this matter, please do not hesitate to contact me. On behalf of the Psychology low risk review, I do hope that the project meets with success.

Kind regards

Dermot Bowler

Psychology low risk review

City, University of London

Dear Debbie

**Reference: ETH2122-0175**

**Project title: Effectiveness of a Brief Self-Compassion Group Intervention for International Students in London University**

**Start date: 9 Feb 2021**

**End date: 31 Dec 2022**

I am writing to you to confirm that the research proposal detailed above has been granted formal approval from the Psychology low risk review. The Committee's response is based on the protocol described in the application form and supporting documentation. Approval has been given for the submitted application only and the research must be conducted accordingly. You are now free to start recruitment.

**The approval was given with the following conditions:**

n/a

Please ensure that you are familiar with City's Framework for Good Practice in Research and any appropriate Departmental/School guidelines, as well as applicable external relevant policies.

Please note the following:

**Project amendments/extension**

You will need to submit an amendment or request an extension if you wish to make any of the following changes to your research project:

- Change or add a new category of participants;
- Change or add researchers involved in the project, including PI and supervisor;
- Change to the sponsorship/collaboration;
- Add a new or change a territory for international projects;
- Change the procedures undertaken by participants, including any change relating to the safety or physical or mental integrity of research participants, or to the risk/benefit assessment for the project or collecting additional types of data from research participants;
- Change the design and/or methodology of the study, including changing or adding a new research method and/or research instrument;
- Change project documentation such as protocol, participant information sheets, consent forms, questionnaires, letters of invitation, information sheets for relatives or carers;
- Change to the insurance or indemnity arrangements for the project;

- Change the end date of the project.

**Adverse events or untoward incidents**

You will need to submit an Adverse Events or Untoward Incidents report in the event of any of the following:

a) Adverse events

b) Breaches of confidentiality

c) Safeguarding issues relating to children or vulnerable adults

d) Incidents that affect the personal safety of a participant or researcher

Issues a) and b) should be reported as soon as possible and no later than five days after the event. Issues c) and d) should be reported immediately. Where appropriate, the researcher should also report adverse events to other relevant institutions, such as the police or social services.

Should you have any further queries relating to this matter, please do not hesitate to contact me. On behalf of the Psychology low risk review, I do hope that the project meets with success.

Kind regards

Beatriz Calvo Merino

Psychology low risk review

City, University of London

Dear Debbie

**Reference: ETH2122-0671**

**Project title: Effectiveness of a Brief Self-Compassion Group Intervention for International Students in London University**

**Start date: 9 Feb 2021**

**End date: 31 Dec 2022**

I am writing to you to confirm that the research proposal detailed above has been granted formal approval from the Psychology low risk review. The Committee's response is based on the protocol described in the application form and supporting documentation. Approval has been given for the submitted application only and the research must be conducted accordingly. You are now free to start recruitment.

**The approval was given with the following conditions:**

* Please correct some typos in PIS " and is a student at City University"

* In PIS, in section 'Why have I been invited to take part?' Add Kings, as currently only say City.

Please ensure that you are familiar with City's Framework for Good Practice in Research and any appropriate Departmental/School guidelines, as well as applicable external relevant policies.

Please note the following:

**Project amendments/extension**

You will need to submit an amendment or request an extension if you wish to make any of the following changes to your research project:

- Change or add a new category of participants;
- Change or add researchers involved in the project, including PI and supervisor;
- Change to the sponsorship/collaboration;
- Add a new or change a territory for international projects;
- Change the procedures undertaken by participants, including any change relating to the safety or physical or mental integrity of research participants, or to the risk/benefit assessment for the project or collecting additional types of data from research participants;
- Change the design and/or methodology of the study, including changing or adding a new research method and/or research instrument;
- Change project documentation such as protocol, participant information sheets, consent forms, questionnaires, letters of invitation, information sheets for relatives or carers;

- Change to the insurance or indemnity arrangements for the project;
- Change the end date of the project.

**Adverse events or untoward incidents**

You will need to submit an Adverse Events or Untoward Incidents report in the event of any of the following:

a) Adverse events

b) Breaches of confidentiality

c) Safeguarding issues relating to children or vulnerable adults

d) Incidents that affect the personal safety of a participant or researcher

Issues a) and b) should be reported as soon as possible and no later than five days after the event. Issues c) and d) should be reported immediately. Where appropriate, the researcher should also report adverse events to other relevant institutions, such as the police or social services.

Should you have any further queries relating to this matter, please do not hesitate to contact me. On behalf of the Psychology low risk review, I do hope that the project meets with success.

Kind regards

Beatriz Calvo Merino

Psychology low risk review

City, University of London

*Appendix B: Recruitment flyer*

**Department of Psychology**
**City, University of London**

**PARTICIPANTS NEEDED FOR A STUDY ON A BRIEF SELF-COMPASSION GROUP INTERVENTION FOR LONDON UNIVERSITY STUDENTS**

*Are you kind to yourself? Have you ever been critical or harsh to yourself? Do you sometimes find it hard to cope with university life?*

If you think you may be interested in participating a group intervention, as part of a project to examine whether self-compassion can improve mental health, we are looking for volunteers to take part in our study.

Participants should be over 18 years of age, enrolled at City, University of London or King's College London.

Your participation would involve completing a range of questionnaires and attending 3-weekly group sessions via Zoom/Teams free of charge. The first 2 sessions is approximately 90 minutes and last session for 45 minutes.

**If you are interested in taking part in this study please follow this lin**
https://cityunilondon.eu.qualtrics.com/jfe/form/SV_7O63k2lnX4X24HI

For more information about this study, or to volunteer for this study, please contact:
**Primary Researcher**: Debbie Li *Debbie.li@city.ac.uk*
*Or*
**Research Supervisor**: Dr Seraphine Clarke: seraphine.clarke@city.ac.uk

This study has been reviewed by, and received ethics clearance through the *Psychology Low Risk Review* Committee, City, University of London. Ethics approval code: ETH2021-0738. If you would like to complain about any aspect of the study, please contact the Secretary to the Senate Research Ethics Committee on 020 7040 3040 or via email: Anna.Ramberg.1@city.ac.uk. *City, University of London is the data controller for the personal data collected for this research project. If you have any data protection concerns about this research project, please contact City's Information Compliance Team at* *dataprotection@city.ac.uk*

*Appendix C: Participant Information Sheet*

**REC reference number:** ETH2122-0671*
**Date:** July 2020
**Title of study:** Effectiveness of a Brief Self-Compassion Group Intervention for Students in London University
**Principle researcher:** Debbie Li

I would like to invite you to take part in a research study. Before you decide whether you would like to take part it is important that you understand why the research is being done and what it would involve for you. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. You will be given a copy of this information sheet to keep.

**What is the purpose of the study?**
This study is being undertaken as part of a Professional Doctorate in Counselling Psychology at City, University of London. The research is expected to be completed in 2022. The purpose of this study is to explore the usefulness of a brief self-compassion group intervention for London University students.

**Why have I been invited to take part?**
You have been invited because you are over eighteen years of age and have identified yourself as a student studying in a London university. You are also identified to have the experience that the study is interested in learning about- students attending university in London.

**Do I have to take part?**
Participation is voluntary and you can choose not to participate in part or all of the project and you may withdraw from the project at any stage and without giving a reason, during the data collection period (January 2021 – October 2022). If you do decide to take part, you will be asked to sign a consent form. Should you choose to withdraw, you will not be penalised or disadvantaged in any way. Taking part in the research will not affect your grades. It is up to you to decide whether or not to take part.

**What will happen if I take part?**
Participation will involve attending a three-weekly session brief self-compassion group

intervention. The first and second session will be 90 minutes and last session will be 45 minutes. Participants will be asked to complete a series of online questionnaires before, after the group intervention; and at one month follow up. These questionnaires will be used to measure the effectiveness of the intervention. Please allow 10-20 minutes to complete the questionnaires at each point of time.

Upon completion, you may also be invited to a one-off, 45-90 interviews that will take place over Zoom at a time convenient for you. Interview is expected to take place within two months after the intervention. During the interview, we will have a discussion guided by a number of pre-designed questions. However, you are also welcome to discuss any experience regarding your experience of the group intervention. No preparation is needed for the interview.

**What are the possible disadvantages and risks of taking part?**
You are not expected to experience any discomfort during the intervention. In the unlikely event that you feel a greater degree of distress than normal, please contact your GP or the Samaritans

You are also encouraged to raise any concerns during the interview or intervention in case further support is needed.

**What are the possible benefits of taking part?**
We hope that you will experience an improvement in your mental wellbeing and increase your resilience in managing difficult situations. This study will also contribute to knowledge about the best psychological therapy for university students.

**Data privacy statement**
City, University of London is the sponsor and the data controller of this study based in the United Kingdom. This means that we are responsible for looking after your information and using it properly. The legal basis under which your data will be processed is City's public task.

Your right to access, change or move your information are limited, as we need to manage your information in a specific way in order for the research to be reliable and accurate. To safeguard your rights, we will use the minimum personal-identifiable information possible (for further information please see https://ico.org.uk/for-organisations/guide-to-data-protection/guide-to-the-general-data-protection-regulation-gdpr/lawful-basis-for-processing/public-task/).

City will use your name and contact details to contact you about the research study as necessary. If you wish to receive the results of the study, your contact details will also be kept for this purpose. The only people at City who will have access to your identifiable information will be the principal researcher. City will keep identifiable information about you from this study after the study has finished.

You can find out more about how City handles data by visiting https://www.city.ac.uk/about/governance/legal. If you are concerned about how we have

processed your personal data, you can contact the Information Commissioner's Office (IOC) https://ico.org.uk/.

**What will happen to the results?**

The results of the study will be written up for a doctoral thesis and potentially academic or clinical publications related to Counselling Psychology. No identifiable personal data will be published. I would also be happy to send you a copy of the final research results. If this is of interest, please just let me know using the contact details given at the end of this information sheet.

**What will happen when the research study stops?**

Data will be stored securely electronically for ten years, in line with the University's guidelines. If the project is abandoned before completion, all data will be destroyed.

**Who has reviewed the study?**

This study has been approved by City, University of London Psychology Low-Risk Research Ethics Committee.

**What if there is a problem?**

If you have any problems, concerns or questions about this study, you should ask to speak to a member of the research team. If you remain unhappy and wish to complain formally, you can do this through City's complaints procedure. To complain about the study, you need to phone 020 7040 3040. You can then ask to speak to the Secretary to Senate Research Ethics Committee and inform them that the name of the project is: Effectiveness of a Brief Self-Compassion Group Intervention for Students in London University

You can also write to the Secretary at:
Anna Ramberg
Research Integrity Manager
City, University of London, Northampton Square
London, EC1V 0HB
Email: Anna.Ramberg.1@city.ac.uk

**Further information and contact details**

If you require any further information, or have any questions, please don't hesitate to get in touch with the principle researcher, Debbie Li using the following contact details: Debbie.li@city.ac.uk or Research Supervisor Dr Seraphine Clarke: seraphine.clarke@city.ac.uk

**Thank you for taking the time to read this information sheet.**

*Appendix D: Consent Form*

**Name of principal investigator: Debbie Li**
**REC reference number:** ETH2122-0671*
**Title of study:** Effectiveness of a Brief Self-Compassion Group Intervention for Students in London University

| | | Please tick or initial box |
|---|---|---|
| 1 | I confirm that I have read and understood the participant information dated July 2020 for the above study. I have had the opportunity to consider the information and ask questions which have been answered satisfactorily. | |
| 2. | I understand that my participation is voluntary and that I am free to withdraw without giving a reason without being penalised or disadvantaged. | |
| 3. | I understand that I will be able to withdraw my data up to the time of transcription. | |
| 4. | I understand that personal information **may** be shared with members of the research and/or the teaching team at City, University of London. | |
| 5. | I agree to the interview being audio recorded. | |
| 6. | I agree to City recording and processing this information about me. I understand that this information will be used only for the purpose(s) explained in the participant information and my consent is conditional on City complying with its duties and obligations under the General Data Protection Regulation (GDPR). | |
| 7. | I understand that the duty of confidentiality is not absolute and in exceptional circumstance this may be overridden by more compelling duties such as to protect individuals from harm. | |
| 8. | I would like to be informed of the results of this study once it has been completed and understand that my contact details will be retained for this purpose. | |
| 9. | I agree to take part in the above study. | |

| ____________________ | ____________________ | ____________________ |
|---|---|---|
| Name of Participant | Signature | Date |
| ____________________ | ____________________ | ____________________ |
| Name of Researcher | Signature | Date |

*Appendix E: Debrief Information Sheet*

**EFFECTIVENESS OF A BRIEF SELF-COMPASSION GROUP INTERVENTION FOR STUDENTS IN LONDON UNIVERSITY**

**DEBRIEF INFORMATION**

Thank you for taking part in this study. Now that it's finished we'd like to tell you a bit more about it.

The aim of the study is to explore the effectiveness of a brief self-compassion group intervention on university students, in particular students in London University. Students' mood level, self-compassion, life satisfaction and personal growth were measured before and after the treatment to record and compare any movement. It is expected that the brief intervention would bring a positive improvements on mood, self-compassion, life satisfaction and personal growth.

By speaking with you regarding your experience attending the group allows us to explore what has been helpful/unhelpful. Your experiences are valuable in guiding us in further develop the intervention.

If you are experiencing distress, whatever you are going through, please contact your GP or the Samaritans free anytime 116 123.

If you are currently based in UK and would like further mental health support, you can access City's or King's student counselling service by completing the Student Counselling registration form which you can access from your university homepage. Your GP can also provide further support.

Crisis and emergency service is available to support people who are experiencing a mental health crisis and who need help quickly. The service can be accessed through your GP and by calling 111. Lines are open 24 hours, 7 days a week.

We hope you found the study interesting. If you have any other questions please do not hesitate to contact us at the following:

***Primary Researcher***
Debbie Sze Pui, Li
Debbie.li@city.ac.uk
***Research Supervisor***
Dr Seraphine Clarke
seraphine.clarke@city.ac.uk

Ethics approval code: ETH2122-0671*

## *Appendix F: Preliminary Interview Schedule for Post Intervention Group*

**Interview Guide: Participants' Experiences After a Self-Compassion Group**

1. What do you experience is the most important thing you got out of participating the group?
2. Have you treated yourself differently after participating the group?
   (If yes): can you recall a situation that you notice treating yourself differently?
3. What was it that interests you in participating the group?
4. What did you expect from the group? Have you met your expectation?
5. Before attending the course, have you read about self-compassion or work with the topic on your own?
6. What was your experience of participating the group?
7. Was there anything about the group that made you feel uncomfortable? Any downside to participating?

Is there anything else that is important to you? Anything we forgot to ask/ you haven't had a chance to mention?

***References:***
Binder, P., Dundas, I., Stige, S. H., Hjeltnes, A., Woodfin, V., & Moltu, C. (2019). Becoming Aware of Inner Self-Critique and Kinder Toward Self: A Qualitative Study of Experiences of Outcome After a Brief Self-Compassion Intervention for University Level Students. *Frontiers in Psychology, 10*, 2728. 10.3389/fpsyg.2019.02728

*Appendix G: Brief Self-compassion group outline*

The intervention is based on the self-compassion intervention developed by Smeets and colleagues (2014). The intervention will be held over 3 weeks, with the first two sessions lasting 1.5 hour and the last session for 45 minutes.

**First session:**

- To provide participants background information on self-compassion and its differences with concepts, such as self-indulgence, self-pity, and self-esteem.
- Participants to share experiences on how they usually treat themselves when having a difficult time and explore their self-critical voice by writing down their most common self-critical thoughts on cards.
- Participants will be asked to think about what they would need to feel comforted and understood in times of distress
- Introduce homework assignments for the week:
    a. Participants to switch their 'intervention bracelet' from one arm to the other every time they address themselves in a harsh way or feel upset about something.
    b. Participants to keep a weeklong 'self-compassion journal' that contain instructions on how to process difficult experiences with a sense of kindness, common humanity and mindfulness.
    c. Participants to practice with an informal form of loving-kindness meditation- to silently repeat three loving-kindness phrases, direct at others and themselves, ever night before going to bed.

**Second session:**

- Revisit participants' experiences from the previous week and their exercises
- To provide a short presentation on the role of self-criticism in the fear of failure and procrastination. Participants will then be asked to think about ways to motivate themselves in a self-compassionate rather than a self-critical way.
- Participants will be asked to design three personalised self-compassion phrases that are corresponding with the key elements of the self-compassion definition. Participants will use these phrases when encountering difficulties in daily life and are advised to adapt these sentences according to situation.
- Participants will be asked to write down five things they appreciate about themselves and to discuss the experience of relating to oneself in a positive way
- Introduce homework assignments for the week:
    a. Participants are told to use their self-compassion phrases as often as possible when encountering difficulties or disappointment in daily life
    b. Participants to write a self-compassionate letter about an issue they tend to feel bad about. This letter has to be written from the perspective of an imaginary friend who is unconditionally kind, accepting and compassionate, and will be read twice in the upcoming week.
    c. Participants are asked to continue with their informal loving-kindness practice ever night before going to bed

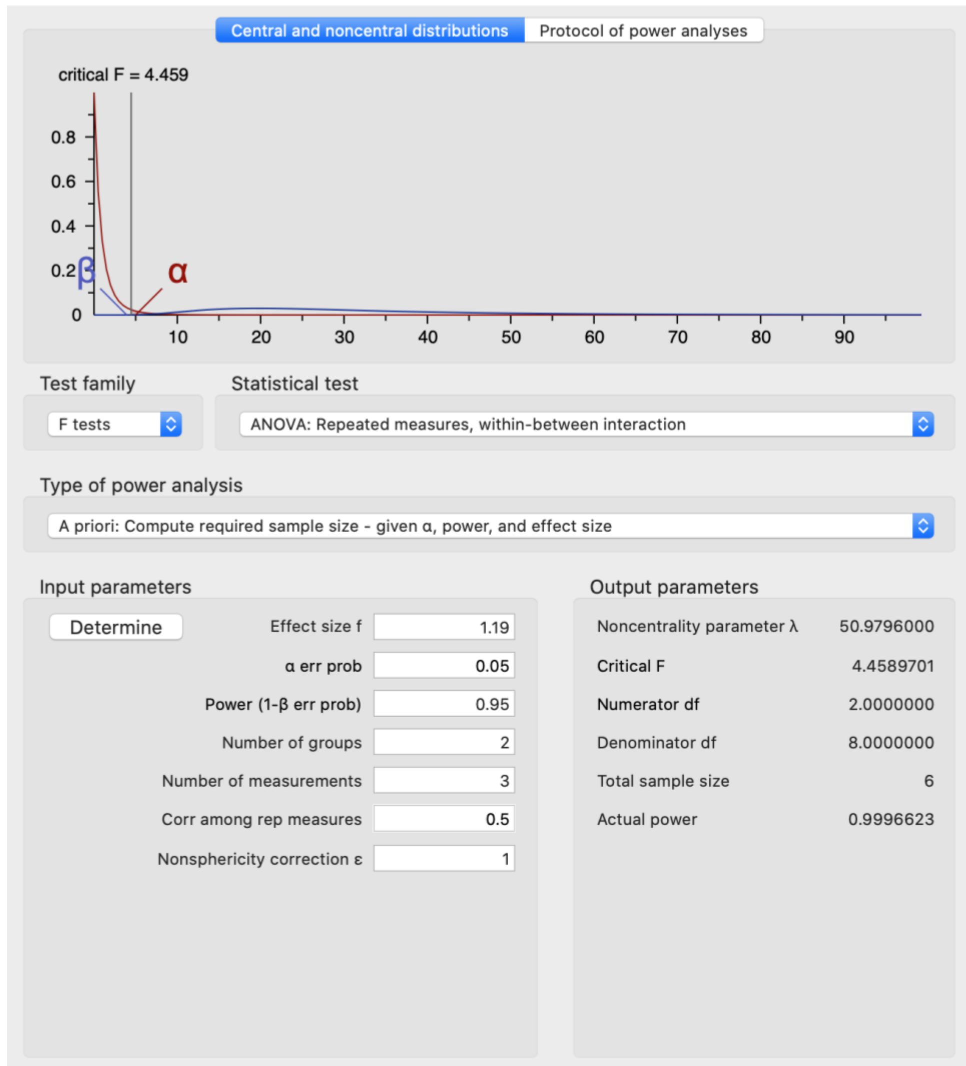
**Third session:**

- Participants to share experiences on their previous weeks and evaluated the intervention

***Reference:***

Smeets, E., Neff, K., Alberts, H., & Peters, M. (2014). Meeting suffering with kindness: effects of a brief self-compassion intervention for female college students. *Journal of Clinical Psychology, 70*(9), 794-807. 10.1002/jclp.22076

## *Appendix H: Power analysis on G*power software*



*Appendix I: Email Templates*

**Invitation for prescreen**

Dear,

Thank you very much for your interest in participating in my research project and completing the brief questionnaires. I would like to quick chat (around 15-20 minutes) with you on Teams to discuss more about your participation.

Once you confirm the appointment on Teams (by clicking 'accept'), I will send you an information sheet regarding the group which can be discussed in our meeting.

Please let me know if you would like to reschedule to a time more convenient for you.

Look forward to hearing from you.

**No reply to invitation-Reminder**

Hi,

I hope you are well. You may remember receiving an email from me last week regarding a quick chat about the brief self-compassion group. I haven't heard from you and wonder if you are still available for the meeting?

Please let me know if you would like to reschedule this appointment.

Alternatively, if you are no longer interested in attending the group, please let me know and I will not contact you in the future.

Thank you and look forward to hearing from you.

**Confirmed prescreen + send documents**

Hi,

Thank you for confirming. Please find attached information sheet regarding the study. I am happy to answer any questions you may have in our meeting.

Look forward to meeting you.

**Intervention Group details**

Brief CFT group details

Hi,

Thank you for confirming that you would like to participate in the research. Please see below the details of the group:

**1st session: Thursday 14th July 2022 10:00-11:30am**
**2nd session: Thursday 21th July 2022 10:00-11:30am**
**3rd session: Thursday 28th July 2022 10:00-10:45am**

I will send a zoom invitation a day before each session.

Please do not hesitate to let me know if you have any questions. Otherwise I will see you in the group.

**Confirmed participation- Waitlist control group**

Hi,

Thank you for speaking with me and confirming that you would like to participate in the research. As mentioned, I will update you once I have confirmed the dates for the next group (likely to be in end of June/early July).

Before you attend the group, you will be asked to complete a set of **questionnaires** at 3 different timepoints. (**Date to be confirmed, 3 weeks and 1 month later**). Please ensure you complete them before the date suggested as they are time sensitive.

I hope you are well. Please find the link to the first questionnaire here: https://cityunilondon.eu.qualtrics.com/jfe/form/SV_0652G50HvgTxUHk

Could you please ensure you complete them before [Date]?

Thank you very much again Please do not hesitate to let me know if you have any questions.

**Waitlist Group details**

Hi,

Thank you for speaking with me and confirming that you would like to participate in the research. Please see below the **PROVISIONAL** dates of the April group (I will confirm this closer to the date):

**1st session: Thursday 21st April 2022 5pm-6:30pm**
**2nd session: Thursday 28th April 2022 5pm-6:30pm**
**3rd session: Thursday 5th May 2022 5pm-5:45pm**

Before you attend the group, you will be asked to complete a set of **questionnaires** at 3 different timepoints. (**This week, 3 weeks and 1 month later**). Please ensure you complete them before attending the group.

Please do not hesitate to let me know if you have any questions. Otherwise I will see you in the group.

**1st zoom invitation + 1st questionnaire**

Brief CFT 1st questionnaire-Please complete

Hi,

I hope you are well. Please find the link to the first questionnaire here:
https://cityunilondon.eu.qualtrics.com/jfe/form/SV_0652G50HvgTxUHk

Could you please ensure you complete them before tomorrow? Thank you very much and see you tomorrow at 5pm.

Topic: Brief CFT group Session 1
Time: Feb 16, 2022 05:00 PM London

Join Zoom Meeting
https://city-ac-uk.zoom.us/j/87355438404

Meeting ID: 873 5543 8404
Passcode: 151684
**********************************************************

**2nd Zoom invitation**

Hi,

I hope you are well.

Please see below the invitation to tomorrow's session.
**********************************************************

**********************************************************
See you at 5pm tomorrow.

**3rd Zoom invitation (Intervention Group)**

Hi,

I hope you are well.

Please see below the invitation to tomorrow's session.
**********************************************************
Debbie Li is inviting you to a scheduled Zoom meeting.

Topic: Brief CFT Group Session 3

Time: Mar 2, 2022 05:00 PM London

Join Zoom Meeting
https://city-ac-uk.zoom.us/j/7264985410

Meeting ID: 726 498 5410
Passcode: 537138
*****************************************************
See you at 5pm tomorrow.

**2nd Questionnaire (after group)- (Intervention Group)**

Brief CFT 2nd questionnaire-Please complete

Hi,

I hope you are well. Thank you for attending the group today and I hope you have found it helpful.

Please find the link to the second questionnaire here:
https://cityunilondon.eu.qualtrics.com/jfe/form/SV_78wh3qUBs33g38W

Could you please ensure you complete them as soon as you can?

**3rd questionnaire (Intervention Group)**

Brief CFT 3rd questionnaire-Please complete

Hi,

I hope you are well. Please find the link to the third questionnaire here:
https://cityunilondon.eu.qualtrics.com/jfe/form/SV_a3MUXG8VKQQ9dm6

Could you please ensure you complete them as soon as you can?

Thank you very much again for your participation in my research and being engaged in the process. I hope you have found the group helpful and please continue with your journey in developing self-compassion.

All the best.

**WL control Email- 1st questionnaire**

Hi,

Thank you for speaking with me and confirming that you would like to participate in the research. Before you attend the group, you will be asked to complete a set of **questionnaires** at 3 different timepoints. (**Next week, 3 weeks and 1 month later**).

Please find here the link to your first questionnaire.
*https://cityunilondon.eu.qualtrics.com/jfe/form/SV_0652G50HvgTxUHk*
Please could you complete it before **Friday (Date)?**

The next questionnaire will be sent in 3 week's time. Thank you very much.

**WL control Email- 2nd questionnaire**

Hi,

I hope you are keeping well. Please find here the link to the second questionnaire.
*https://cityunilondon.eu.qualtrics.com/jfe/form/SV_78wh3qUBs33g38W*
Please could you complete it before **Friday (Date)?**

The next questionnaire will be sent in a month's time. Thank you very much.

**WL control Email- 3rd (Final) questionnaire**

Hi,

I hope you are keeping well. Please find here the link to the final questionnaire.
https://cityunilondon.eu.qualtrics.com/jfe/form/SV_a3MUXG8VKQQ9dm6
Please could you complete it before **Friday (Date)?**

Thank you for completing the questionnaires. I will get in touch with you soon to confirm the date of the next group.

**NOT offer pre-screen, seeking support**

Hi,

Thank you very much for your interest in participating in my research project and completing the brief questionnaires.

This research study involves students participating in a psychoeducational intervention group with the aim to investigate its effectiveness. The reason there was a question asking whether you have a diagnosis/are currently seeking support is because if participants are attending this brief intervention and talking therapy at the same time, when the data indicates improved mental wellbeing in students, it would be difficult to find out whether it's the brief intervention or talking therapy that has contributed to it.

I appreciate your time and interest in supporting my research, it is unfortunate that I could not invite you to attend this group. However please let me know if you are interested to know more about self-compassion I am happy to send you some materials on it.

I wish you all the best and please do not hesitate to let me know if you have any questions.

**NOT offer pre-screen, complex diagnosis**

Hi,

Thank you very much for your interest in participating in my research project and completing the brief questionnaires.

This research study involves students participating in a psychoeducational intervention group with the aim to investigate its effectiveness. The reason there was a question asking whether you have a diagnosis/are currently seeking support is because if participants are attending this brief intervention and talking therapy at the same time, when the data indicates improved mental wellbeing in students, it would be difficult to find out whether it's the brief intervention or talking therapy that has contributed to it.

I appreciate your time and interest in supporting my research. As the group is psychoeducational, it may not be suitable to meet your needs and it would be recommended for you to seek/continue with specialist support. It is unfortunate that I could not invite you to attend this group, however please let me know if you are interested to know more about self-compassion I am happy to send you some materials on it.

I wish you all the best and please do not hesitate to let me know if you have any questions.

*Appendix J: Participant Demographic and Pre-screen questions (Qualtrics)*

Q1. Name

Q2. What is your gender?

- Male
- Female
- Non-binary / third gender
- Prefer not to say

Q3. What is your ethnic group? (Please tick one answer)

White

- English, Welsh, Scottish, Northern Irish or British
- Irish
- Gypsy or Irish Traveller
- Any other White background

Mixed or Multiple ethnic groups

- White and Black Caribbean
- White and Black African
- White and Asian
- Any other Mixed or Multiple ethnic background

Asian or Asian British

- Indian
- Pakistani
- Bangladeshi
- Chinese
- Any other Asian background

Black, African, Caribbean or Black British

- African
- Caribbean
- Any other Black, African or Caribbean background

Other ethnic group

- Arab
- Any other ethnic group

Q4. What is your date of birth? (Day/Month/Year i.e. 07/04/2000)

---

Q5. Do you have a disability?

- Yes (Please specify)
- No

---

Q6. Have you been diagnosed with a clinical condition by a mental health professional?

- Yes (Please specify diagnosis and if you are receiving support from a mental health service)
- No

---

Q7. What is your relationship status?

- Single
- In a relationship
- Married/Registered
- Divorced/Separated
- Any other relationship status, please describe

Q8. In which year of University are you currently enrolled?

- Undergraduate- Year 1
- Undergraduate- Year 2
- Undergraduate- Year 3
- Postgraduate- Taught
- Postgraduate- Research
- Any other enrolment status, please describe

---

Q9. What faculty are you in?

- Arts
- Social Science
- Science
- Law
- Business
- Medicine
- Education
- Engineering
- Other, please describe

*Q10.* Do you identify yourself as an international student?

- ◯ Yes
- ◯ No

---

*Q11.* The groups will be starting from June 2021 onwards. Please select (all) your preferred period(s) to attend the group
(Please note that this is for reference only but we will try our best to allocate base on your preference)

- ☐ May 2022 (Weekday after 5pm)
- ☐ May 2022 (Saturday am)
- ☐ June 2022 (Weekday after 5pm)
- ☐ June 2022 (Saturday am)

---

*Q12.* If you would like to be contacted by the researcher to discuss more about attending the group, please leave your university email below
(Please also provide an alternative email address if you do not check your university's email regularly)

Thank you very much for your interest in attending the group and completing this questionnaire. You will be contacted by the researcher within 2 weeks to discuss more regarding your participation. Please keep an eye on your email inbox.

*Appendix K: Positive And Negative Affect Scale (PANAS)*

**PANAS Questionnaire**

This scale consists of a number of words that describe different feelings and emotions. Read each item and then list the number from the scale below next to each word. **Indicate to what extent you feel this way right now, that is, at the present moment *OR* indicate the extent you have felt this way over the past week (circle the instructions you followed when taking this measure)**

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Very Slightly or Not at All | A Little | Moderately | Quite a Bit | Extremely |

| | | | |
|---|---|---|---|
| ___________ | 1. Interested | ___________ | 11. Irritable |
| ___________ | 2. Distressed | ___________ | 12. Alert |
| ___________ | 3. Excited | ___________ | 13. Ashamed |
| ___________ | 4. Upset | ___________ | 14. Inspired |
| ___________ | 5. Strong | ___________ | 15. Nervous |
| ___________ | 6. Guilty | ___________ | 16. Determined |
| ___________ | 7. Scared | ___________ | 17. Attentive |
| ___________ | 8. Hostile | ___________ | 18. Jittery |
| ___________ | 9. Enthusiastic | ___________ | 19. Active |
| ___________ | 10. Proud | ___________ | 20. Afraid |

**Scoring Instructions:**

Positive Affect Score: Add the scores on items 1, 3, 5, 9, 10, 12, 14, 16, 17, and 19. Scores can range from 10 – 50, with higher scores representing higher levels of positive affect. Mean Scores: Momentary = 29.7 (*SD* = 7.9); Weekly = 33.3 (*SD = 7.2)*

Negative Affect Score: Add the scores on items 2, 4, 6, 7, 8, 11, 13, 15, 18, and 20. Scores can range from 10 – 50, with lower scores representing lower levels of negative affect. Mean Score: Momentary = 14.8 (*SD* = 5.4); Weekly = 17.4 (*SD* = 6.2)

*Copyright © 1988 by the American Psychological Association. Reproduced with permission. The official citation that should be used in referencing this material is Watson, D., Clark, L. A., & Tellegan, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. Journal of Personality and Social Psychology, 54(6), 1063–1070.*

*Appendix L: Self-Compassion Scale (SCS)*

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

_____ 2. When I'm feeling down I tend to obsess and fixate on everything that's wrong.

_____ 3. When things are going badly for me, I see the difficulties as part of life that everyone goes through.

_____ 4. When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world.

_____ 5. I try to be loving towards myself when I'm feeling emotional pain.

_____ 6. When I fail at something important to me I become consumed by feelings of inadequacy.

_____ 7. When I'm down and out, I remind myself that there are lots of other people in the world feeling like I am.

_____ 8. When times are really difficult, I tend to be tough on myself.

_____ 9. When something upsets me I try to keep my emotions in balance.

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

_____ 12. When I'm going through a very hard time, I give myself the caring and tenderness I need.

_____ 13. When I'm feeling down, I tend to feel like most other people are probably happier than I am.

_____ 14. When something painful happens I try to take a balanced view of the situation.

_____ 15. I try to see my failings as part of the human condition.

_____ 16. When I see aspects of myself that I don't like, I get down on myself.

_____ 17. When I fail at something important to me I try to keep things in perspective.

*Appendix M: Satisfaction with Life Scale (SWLS)*

Below are five statements that you may agree or disagree with. Using the 1 - 7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding.

- 7 - Strongly agree
- 6 - Agree
- 5 - Slightly agree
- 4 - Neither agree nor disagree
- 3 - Slightly disagree
- 2 - Disagree
- 1 - Strongly disagree

____ In most ways my life is close to my ideal.

____ The conditions of my life are excellent.

____ I am satisfied with my life.

____ So far I have gotten the important things I want in life.

____ If I could live my life over, I would change almost nothing.

- 31 - 35 Extremely satisfied
- 26 - 30 Satisfied
- 21 - 25 Slightly satisfied
- 20 Neutral
- 15 - 19 Slightly dissatisfied
- 10 - 14 Dissatisfied
- 5 - 9 Extremely dissatisfied

*Appendix N: Personal Growth Initiative Scale (PGIS)*

## Personal Growth Initiative Scale (PGIS)

By Christine Robitschek, Ph.D.

Using the scale below, circle the number which best describes the extent to which you agree or disagree with each statement.

1 = Definitely disagree
2 = Mostly disagree
3 = Somewhat disagree
4 = Somewhat agree
5 = Mostly agree
6 = Definitely agree

| | | | | | | |
|---|---|---|---|---|---|---|
| 1. I know how to change specific things that I want to change in my life. | 1 | 2 | 3 | 4 | 5 | 6 |
| 2. I have a good sense of where I am headed in my life. | 1 | 2 | 3 | 4 | 5 | 6 |
| 3. If I want to change something in my life, I initiate the transition process. | 1 | 2 | 3 | 4 | 5 | 6 |
| 4. I can choose the role that I want to have in a group. | 1 | 2 | 3 | 4 | 5 | 6 |
| 5. I know what I need to do to get started toward reaching my goals. | 1 | 2 | 3 | 4 | 5 | 6 |
| 6. I have a specific action plan to help me reach my goals. | 1 | 2 | 3 | 4 | 5 | 6 |
| 7. I take charge of my life. | 1 | 2 | 3 | 4 | 5 | 6 |
| 8. I know what my unique contribution to the world might be. | 1 | 2 | 3 | 4 | 5 | 6 |
| 9. I have a plan for making my life more balanced. | 1 | 2 | 3 | 4 | 5 | 6 |

## *Appendix O: SPSS output*

**Mauchly's Test of Sphericity[a]**

| Within Subjects Effect | Measure | Mauchly's W | Approx. Chi-Square | df | Sig. | Epsilon[b] | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Greenhouse-Geisser | Huynh-Feldt | Lower-bound |
| Timepoint | PANASpos | .908 | 2.408 | 2 | .300 | .916 | 1.000 | .500 |
| | PANASneg | .898 | 2.680 | 2 | .262 | .908 | 1.000 | .500 |
| | SCSkindness | .804 | 5.443 | 2 | .066 | .836 | .922 | .500 |
| | SCSjudgement | .705 | 8.756 | 2 | .013 | .772 | .843 | .500 |
| | SCScommonhum | .655 | 10.563 | 2 | .005 | .744 | .809 | .500 |
| | SCSisolation | .951 | 1.246 | 2 | .536 | .954 | 1.000 | .500 |
| | SCSmindfulness | .761 | 6.824 | 2 | .033 | .807 | .886 | .500 |
| | SCSoveridentified | .964 | .912 | 2 | .634 | .965 | 1.000 | .500 |
| | SWLStotal | .891 | 2.871 | 2 | .238 | .902 | 1.000 | .500 |
| | PGItotal | .993 | .183 | 2 | .913 | .993 | 1.000 | .500 |
| | SCStotal | .931 | 1.794 | 2 | .408 | .935 | 1.000 | .500 |

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. Design: Intercept + Group
Within Subjects Design: Timepoint

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

**Group Statistics**

| | Group | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| PANASpositiveS1 | Intervention Group | 18 | 21.06 | 6.521 | 1.53706 |
| | Control Group | 12 | 21.83 | 7.284 | 2.10279 |
| PANASpositiveS2 | Intervention Group | 18 | 26.39 | 5.627 | 1.32630 |
| | Control Group | 12 | 25.00 | 5.222 | 1.50756 |
| PANASpositiveS3 | Intervention Group | 18 | 26.00 | 6.059 | 1.42801 |
| | Control Group | 10 | 28.20 | 6.477 | 2.04831 |
| PANASnegativeS1 | Intervention Group | 18 | 19.00 | 5.931 | 1.39794 |
| | Control Group | 12 | 24.00 | 8.023 | 2.31595 |
| PANASnegativeS2 | Intervention Group | 18 | 17.94 | 5.504 | 1.29724 |
| | Control Group | 12 | 24.08 | 8.628 | 2.49077 |
| PANASnegativeS3 | Intervention Group | 18 | 16.67 | 4.814 | 1.13472 |
| | Control Group | 10 | 22.40 | 7.989 | 2.52631 |
| SCS.kindnessS1 | Intervention Group | 18 | 2.61 | .708 | .16684 |
| | Control Group | 12 | 2.45 | .805 | .23241 |
| SCS.kindnessS2 | Intervention Group | 18 | 3.18 | .411 | .09686 |
| | Control Group | 12 | 2.78 | .447 | .12900 |
| SCS.kindnessS3 | Intervention Group | 18 | 2.47 | .406 | .09566 |
| | Control Group | 10 | 3.36 | .610 | .19276 |
| SCS.judgementS1 | Intervention Group | 18 | 2.66 | .910 | .21439 |
| | Control Group | 12 | 2.70 | 1.107 | .31956 |
| SCS.judgementS2 | Intervention Group | 18 | 3.22 | .754 | .17778 |
| | Control Group | 12 | 2.32 | .867 | .25040 |
| SCS.judgementS3 | Intervention Group | 18 | 3.44 | .560 | .13191 |
| | Control Group | 10 | 2.34 | .626 | .19788 |
| SCS.commonhumanityS1 | Intervention Group | 18 | 2.75 | .647 | .15259 |
| | Control Group | 12 | 2.85 | .985 | .28448 |
| SCS.commonhumanityS2 | Intervention Group | 18 | 3.15 | .978 | .23057 |
| | Control Group | 12 | 2.92 | .919 | .26531 |
| SCS.commonhumanityS3 | Intervention Group | 18 | 2.40 | .805 | .18975 |
| | Control Group | 10 | 3.05 | .654 | .20683 |
| SCS.isolationS1 | Intervention Group | 18 | 2.60 | .871 | .20526 |
| | Control Group | 12 | 2.67 | 1.019 | .29409 |
| SCS.isolationS2 | Intervention Group | 18 | 3.31 | .976 | .23005 |
| | Control Group | 12 | 2.79 | 1.102 | .31807 |
| SCS.isolationS3 | Intervention Group | 18 | 3.60 | .670 | .15803 |
| | Control Group | 10 | 2.50 | .773 | .24438 |
| SCS.mindfulnessS1 | Intervention Group | 18 | 3.06 | .633 | .14928 |
| | Control Group | 12 | 2.90 | .757 | .21859 |
| SCS.mindfulnessS2 | Intervention Group | 18 | 3.32 | .605 | .14264 |
| | Control Group | 12 | 3.31 | .632 | .18238 |
| SCS.mindfulnessS3 | Intervention Group | 18 | 2.29 | .620 | .14610 |
| | Control Group | 10 | 3.00 | .577 | .18257 |
| SCS.overidenitifedS1 | Intervention Group | 18 | 2.72 | .911 | .21474 |
| | Control Group | 12 | 2.48 | .907 | .26195 |
| SCS.overidenitifedS2 | Intervention Group | 18 | 3.26 | .755 | .17790 |
| | Control Group | 12 | 2.46 | .838 | .24198 |
| SCS.overidenitifedS3 | Intervention Group | 18 | 3.44 | .433 | .10217 |
| | Control Group | 10 | 2.25 | .736 | .23274 |
| SWLS.totalS1 | Intervention Group | 18 | 19.89 | 6.773 | 1.59634 |
| | Control Group | 12 | 21.42 | 7.115 | 2.05404 |
| SWLS.totalS2 | Intervention Group | 18 | 24.06 | 6.620 | 1.56028 |
| | Control Group | 12 | 21.17 | 6.264 | 1.80837 |
| SWLS.totalS3 | Intervention Group | 18 | 24.44 | 5.659 | 1.33388 |
| | Control Group | 10 | 22.10 | 5.877 | 1.85861 |
| PGI.totalS1 | Intervention Group | 18 | 34.61 | 8.045 | 1.89623 |
| | Control Group | 12 | 32.50 | 11.041 | 3.18733 |
| PGI.totalS2 | Intervention Group | 18 | 38.89 | 3.939 | .92845 |
| | Control Group | 12 | 34.25 | 8.454 | 2.44058 |
| PGI.totalS3 | Intervention Group | 18 | 37.28 | 7.767 | 1.83076 |
| | Control Group | 10 | 37.80 | 7.871 | 2.48909 |
| SCS.totalS1 | Intervention Group | 18 | 2.73 | .647 | .15242 |
| | Control Group | 12 | 2.68 | .635 | .18342 |
| SCS.totalS2 | Intervention Group | 18 | 3.24 | .557 | .13133 |
| | Control Group | 12 | 2.76 | .517 | .14917 |
| SCS.totalS3 | Intervention Group | 18 | 2.94 | .227 | .05345 |
| | Control Group | 10 | 2.75 | .263 | .08313 |

**Univariate Tests**

| Source | Measure | | Type III Sum of Squares | df | Mean Square | F | Sig. | Partial Eta Squared |
|---|---|---|---|---|---|---|---|---|
| Timepoint | PANASpos | Sphericity Assumed | 320.921 | 2 | 160.461 | 8.267 | <.001 | .241 |
| | | Greenhouse-Geisser | 320.921 | 1.832 | 175.194 | 8.267 | .001 | .241 |
| | | Huynh-Feldt | 320.921 | 2.000 | 160.461 | 8.267 | <.001 | .241 |
| | | Lower-bound | 320.921 | 1.000 | 320.921 | 8.267 | .008 | .241 |
| | PANASneg | Sphericity Assumed | 83.562 | 2 | 41.781 | 1.783 | .178 | .064 |
| | | Greenhouse-Geisser | 83.562 | 1.815 | 46.028 | 1.783 | .182 | .064 |
| | | Huynh-Feldt | 83.562 | 2.000 | 41.781 | 1.783 | .178 | .064 |
| | | Lower-bound | 83.562 | 1.000 | 83.562 | 1.783 | .193 | .064 |
| | SCSkindness | Sphericity Assumed | 2.622 | 2 | 1.311 | 3.187 | .049 | .109 |
| | | Greenhouse-Geisser | 2.622 | 1.673 | 1.567 | 3.187 | .059 | .109 |
| | | Huynh-Feldt | 2.622 | 1.843 | 1.422 | 3.187 | .054 | .109 |
| | | Lower-bound | 2.622 | 1.000 | 2.622 | 3.187 | .086 | .109 |
| | SCSjudgement | Sphericity Assumed | .742 | 2 | .371 | 1.645 | .203 | .060 |
| | | Greenhouse-Geisser | .742 | 1.544 | .481 | 1.645 | .209 | .060 |
| | | Huynh-Feldt | .742 | 1.686 | .440 | 1.645 | .207 | .060 |
| | | Lower-bound | .742 | 1.000 | .742 | 1.645 | .211 | .060 |
| | SCScommonhum | Sphericity Assumed | 2.060 | 2 | 1.030 | 1.411 | .253 | .051 |
| | | Greenhouse-Geisser | 2.060 | 1.487 | 1.385 | 1.411 | .253 | .051 |
| | | Huynh-Feldt | 2.060 | 1.617 | 1.274 | 1.411 | .253 | .051 |
| | | Lower-bound | 2.060 | 1.000 | 2.060 | 1.411 | .246 | .051 |
| | SCSisolation | Sphericity Assumed | 2.836 | 2 | 1.418 | 4.938 | .011 | .160 |
| | | Greenhouse-Geisser | 2.836 | 1.907 | 1.487 | 4.938 | .012 | .160 |
| | | Huynh-Feldt | 2.836 | 2.000 | 1.418 | 4.938 | .011 | .160 |
| | | Lower-bound | 2.836 | 1.000 | 2.836 | 4.938 | .035 | .160 |
| | SCSmindfulness | Sphericity Assumed | 6.801 | 2 | 3.400 | 7.750 | .001 | .230 |
| | | Greenhouse-Geisser | 6.801 | 1.614 | 4.213 | 7.750 | .003 | .230 |
| | | Huynh-Feldt | 6.801 | 1.772 | 3.839 | 7.750 | .002 | .230 |
| | | Lower-bound | 6.801 | 1.000 | 6.801 | 7.750 | .010 | .230 |
| | SCSoveridentified | Sphericity Assumed | .856 | 2 | .428 | 1.603 | .211 | .058 |
| | | Greenhouse-Geisser | .856 | 1.931 | .444 | 1.603 | .212 | .058 |
| | | Huynh-Feldt | .856 | 2.000 | .428 | 1.603 | .211 | .058 |
| | | Lower-bound | .856 | 1.000 | .856 | 1.603 | .217 | .058 |
| | SWLStotal | Sphericity Assumed | 84.016 | 2 | 42.008 | 4.206 | .020 | .139 |
| | | Greenhouse-Geisser | 84.016 | 1.804 | 46.566 | 4.206 | .024 | .139 |
| | | Huynh-Feldt | 84.016 | 2.000 | 42.008 | 4.206 | .020 | .139 |
| | | Lower-bound | 84.016 | 1.000 | 84.016 | 4.206 | .050 | .139 |
| | PGItotal | Sphericity Assumed | 160.904 | 2 | 80.452 | 2.538 | .089 | .089 |
| | | Greenhouse-Geisser | 160.904 | 1.986 | 81.039 | 2.538 | .089 | .089 |
| | | Huynh-Feldt | 160.904 | 2.000 | 80.452 | 2.538 | .089 | .089 |
| | | Lower-bound | 160.904 | 1.000 | 160.904 | 2.538 | .123 | .089 |
| | SCStotal | Sphericity Assumed | .873 | 2 | .437 | 2.951 | .061 | .102 |
| | | Greenhouse-Geisser | .873 | 1.870 | .467 | 2.951 | .065 | .102 |
| | | Huynh-Feldt | .873 | 2.000 | .437 | 2.951 | .061 | .102 |
| | | Lower-bound | .873 | 1.000 | .873 | 2.951 | .098 | .102 |
| Timepoint * Group | PANASpos | Sphericity Assumed | 43.207 | 2 | 21.603 | 1.113 | .336 | .041 |
| | | Greenhouse-Geisser | 43.207 | 1.832 | 23.587 | 1.113 | .333 | .041 |
| | | Huynh-Feldt | 43.207 | 2.000 | 21.603 | 1.113 | .336 | .041 |
| | | Lower-bound | 43.207 | 1.000 | 43.207 | 1.113 | .301 | .041 |
| | PANASneg | Sphericity Assumed | 22.086 | 2 | 11.043 | .471 | .627 | .018 |
| | | Greenhouse-Geisser | 22.086 | 1.815 | 12.166 | .471 | .609 | .018 |
| | | Huynh-Feldt | 22.086 | 2.000 | 11.043 | .471 | .627 | .018 |
| | | Lower-bound | 22.086 | 1.000 | 22.086 | .471 | .499 | .018 |
| | SCSkindness | Sphericity Assumed | 5.715 | 2 | 2.858 | 6.947 | .002 | .211 |
| | | Greenhouse-Geisser | 5.715 | 1.673 | 3.417 | 6.947 | .004 | .211 |
| | | Huynh-Feldt | 5.715 | 1.843 | 3.101 | 6.947 | .003 | .211 |
| | | Lower-bound | 5.715 | 1.000 | 5.715 | 6.947 | .014 | .211 |
| | SCSjudgement | Sphericity Assumed | 5.457 | 2 | 2.728 | 12.094 | <.001 | .317 |
| | | Greenhouse-Geisser | 5.457 | 1.544 | 3.534 | 12.094 | <.001 | .317 |
| | | Huynh-Feldt | 5.457 | 1.686 | 3.237 | 12.094 | <.001 | .317 |
| | | Lower-bound | 5.457 | 1.000 | 5.457 | 12.094 | .002 | .317 |
| | SCScommonhum | Sphericity Assumed | 1.578 | 2 | .789 | 1.081 | .347 | .040 |
| | | Greenhouse-Geisser | 1.578 | 1.487 | 1.061 | 1.081 | .332 | .040 |
| | | Huynh-Feldt | 1.578 | 1.617 | .976 | 1.081 | .336 | .040 |
| | | Lower-bound | 1.578 | 1.000 | 1.578 | 1.081 | .308 | .040 |
| | SCSisolation | Sphericity Assumed | 4.131 | 2 | 2.065 | 7.192 | .002 | .217 |
| | | Greenhouse-Geisser | 4.131 | 1.907 | 2.166 | 7.192 | .002 | .217 |
| | | Huynh-Feldt | 4.131 | 2.000 | 2.065 | 7.192 | .002 | .217 |
| | | Lower-bound | 4.131 | 1.000 | 4.131 | 7.192 | .013 | .217 |
| | SCSmindfulness | Sphericity Assumed | 1.988 | 2 | .994 | 2.266 | .114 | .080 |
| | | Greenhouse-Geisser | 1.988 | 1.614 | 1.232 | 2.266 | .126 | .080 |
| | | Huynh-Feldt | 1.988 | 1.772 | 1.122 | 2.266 | .121 | .080 |
| | | Lower-bound | 1.988 | 1.000 | 1.988 | 2.266 | .144 | .080 |
| | SCSoveridentified | Sphericity Assumed | 3.178 | 2 | 1.589 | 5.947 | .005 | .186 |
| | | Greenhouse-Geisser | 3.178 | 1.931 | 1.646 | 5.947 | .005 | .186 |
| | | Huynh-Feldt | 3.178 | 2.000 | 1.589 | 5.947 | .005 | .186 |
| | | Lower-bound | 3.178 | 1.000 | 3.178 | 5.947 | .022 | .186 |
| | SWLStotal | Sphericity Assumed | 86.493 | 2 | 43.246 | 4.330 | .018 | .143 |
| | | Greenhouse-Geisser | 86.493 | 1.804 | 47.939 | 4.330 | .022 | .143 |
| | | Huynh-Feldt | 86.493 | 2.000 | 43.246 | 4.330 | .018 | .143 |
| | | Lower-bound | 86.493 | 1.000 | 86.493 | 4.330 | .047 | .143 |
| | PGItotal | Sphericity Assumed | 42.523 | 2 | 21.261 | .671 | .516 | .025 |
| | | Greenhouse-Geisser | 42.523 | 1.986 | 21.416 | .671 | .515 | .025 |
| | | Huynh-Feldt | 42.523 | 2.000 | 21.261 | .671 | .516 | .025 |
| | | Lower-bound | 42.523 | 1.000 | 42.523 | .671 | .420 | .025 |
| | SCStotal | Sphericity Assumed | .809 | 2 | .404 | 2.733 | .074 | .095 |
| | | Greenhouse-Geisser | .809 | 1.870 | .432 | 2.733 | .078 | .095 |
| | | Huynh-Feldt | .809 | 2.000 | .404 | 2.733 | .074 | .095 |
| | | Lower-bound | .809 | 1.000 | .809 | 2.733 | .110 | .095 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Error(Timepoint) | PANASpos | Sphericity Assumed | 1009.341 | 52 | 19.410 | | | |
| | | Greenhouse-Geisser | 1009.341 | 47.627 | 21.193 | | | |
| | | Huynh-Feldt | 1009.341 | 52.000 | 19.410 | | | |
| | | Lower-bound | 1009.341 | 26.000 | 38.821 | | | |
| | PANASneg | Sphericity Assumed | 1218.652 | 52 | 23.436 | | | |
| | | Greenhouse-Geisser | 1218.652 | 47.202 | 25.818 | | | |
| | | Huynh-Feldt | 1218.652 | 52.000 | 23.436 | | | |
| | | Lower-bound | 1218.652 | 26.000 | 46.871 | | | |
| | SCSkindness | Sphericity Assumed | 21.389 | 52 | .411 | | | |
| | | Greenhouse-Geisser | 21.389 | 43.492 | .492 | | | |
| | | Huynh-Feldt | 21.389 | 47.920 | .446 | | | |
| | | Lower-bound | 21.389 | 26.000 | .823 | | | |
| | SCSjudgement | Sphericity Assumed | 11.731 | 52 | .226 | | | |
| | | Greenhouse-Geisser | 11.731 | 40.140 | .292 | | | |
| | | Huynh-Feldt | 11.731 | 43.830 | .268 | | | |
| | | Lower-bound | 11.731 | 26.000 | .451 | | | |
| | SCScommonhum | Sphericity Assumed | 37.957 | 52 | .730 | | | |
| | | Greenhouse-Geisser | 37.957 | 38.673 | .981 | | | |
| | | Huynh-Feldt | 37.957 | 42.054 | .903 | | | |
| | | Lower-bound | 37.957 | 26.000 | 1.460 | | | |
| | SCSisolation | Sphericity Assumed | 14.933 | 52 | .287 | | | |
| | | Greenhouse-Geisser | 14.933 | 49.588 | .301 | | | |
| | | Huynh-Feldt | 14.933 | 52.000 | .287 | | | |
| | | Lower-bound | 14.933 | 26.000 | .574 | | | |
| | SCSmindfulness | Sphericity Assumed | 22.814 | 52 | .439 | | | |
| | | Greenhouse-Geisser | 22.814 | 41.973 | .544 | | | |
| | | Huynh-Feldt | 22.814 | 46.062 | .495 | | | |
| | | Lower-bound | 22.814 | 26.000 | .877 | | | |
| | SCSoveridentified | Sphericity Assumed | 13.894 | 52 | .267 | | | |
| | | Greenhouse-Geisser | 13.894 | 50.202 | .277 | | | |
| | | Huynh-Feldt | 13.894 | 52.000 | .267 | | | |
| | | Lower-bound | 13.894 | 26.000 | .534 | | | |
| | SWLStotal | Sphericity Assumed | 519.341 | 52 | 9.987 | | | |
| | | Greenhouse-Geisser | 519.341 | 46.910 | 11.071 | | | |
| | | Huynh-Feldt | 519.341 | 52.000 | 9.987 | | | |
| | | Lower-bound | 519.341 | 26.000 | 19.975 | | | |
| | PGItotal | Sphericity Assumed | 1648.430 | 52 | 31.701 | | | |
| | | Greenhouse-Geisser | 1648.430 | 51.623 | 31.932 | | | |
| | | Huynh-Feldt | 1648.430 | 52.000 | 31.701 | | | |
| | | Lower-bound | 1648.430 | 26.000 | 63.401 | | | |
| | SCStotal | Sphericity Assumed | 7.694 | 52 | .148 | | | |
| | | Greenhouse-Geisser | 7.694 | 48.632 | .158 | | | |
| | | Huynh-Feldt | 7.694 | 52.000 | .148 | | | |
| | | Lower-bound | 7.694 | 26.000 | .296 | | | |

**Levene's Test of Equality of Error Variances[a]**

| | | Levene Statistic | df1 | df2 | Sig. |
|---|---|---|---|---|---|
| PANASpositiveS1 | Based on Mean | .198 | 1 | 26 | .660 |
| | Based on Median | .194 | 1 | 26 | .663 |
| | Based on Median and with adjusted df | .194 | 1 | 25.202 | .663 |
| | Based on trimmed mean | .197 | 1 | 26 | .661 |
| PANASpositiveS2 | Based on Mean | .087 | 1 | 26 | .770 |
| | Based on Median | .065 | 1 | 26 | .800 |
| | Based on Median and with adjusted df | .065 | 1 | 25.496 | .800 |
| | Based on trimmed mean | .066 | 1 | 26 | .799 |
| PANASpositiveS3 | Based on Mean | .042 | 1 | 26 | .838 |
| | Based on Median | .020 | 1 | 26 | .889 |
| | Based on Median and with adjusted df | .020 | 1 | 25.952 | .889 |
| | Based on trimmed mean | .058 | 1 | 26 | .811 |
| PANASnegativeS1 | Based on Mean | 1.080 | 1 | 26 | .308 |
| | Based on Median | .414 | 1 | 26 | .525 |
| | Based on Median and with adjusted df | .414 | 1 | 18.227 | .528 |
| | Based on trimmed mean | .917 | 1 | 26 | .347 |
| PANASnegativeS2 | Based on Mean | 2.923 | 1 | 26 | .099 |
| | Based on Median | 2.599 | 1 | 26 | .119 |
| | Based on Median and with adjusted df | 2.599 | 1 | 23.754 | .120 |
| | Based on trimmed mean | 2.932 | 1 | 26 | .099 |
| PANASnegativeS3 | Based on Mean | 6.704 | 1 | 26 | .016 |
| | Based on Median | 4.669 | 1 | 26 | .040 |
| | Based on Median and with adjusted df | 4.669 | 1 | 25.147 | .040 |
| | Based on trimmed mean | 6.551 | 1 | 26 | .017 |
| SCS.kindnessS1 | Based on Mean | .468 | 1 | 26 | .500 |
| | Based on Median | .267 | 1 | 26 | .609 |
| | Based on Median and with adjusted df | .267 | 1 | 25.426 | .610 |
| | Based on trimmed mean | .482 | 1 | 26 | .494 |
| SCS.kindnessS2 | Based on Mean | .340 | 1 | 26 | .565 |
| | Based on Median | .059 | 1 | 26 | .810 |
| | Based on Median and with adjusted df | .059 | 1 | 23.548 | .811 |
| | Based on trimmed mean | .344 | 1 | 26 | .563 |
| SCS.kindnessS3 | Based on Mean | 2.322 | 1 | 26 | .140 |
| | Based on Median | 1.539 | 1 | 26 | .226 |
| | Based on Median and with adjusted df | 1.539 | 1 | 23.249 | .227 |
| | Based on trimmed mean | 2.363 | 1 | 26 | .136 |
| SCS.judgementS1 | Based on Mean | .029 | 1 | 26 | .865 |
| | Based on Median | .009 | 1 | 26 | .925 |
| | Based on Median and with adjusted df | .009 | 1 | 24.756 | .925 |
| | Based on trimmed mean | .026 | 1 | 26 | .872 |
| SCS.judgementS2 | Based on Mean | 1.823 | 1 | 26 | .189 |
| | Based on Median | 1.157 | 1 | 26 | .292 |
| | Based on Median and with adjusted df | 1.157 | 1 | 25.908 | .292 |
| | Based on trimmed mean | 1.883 | 1 | 26 | .182 |
| SCS.judgementS3 | Based on Mean | .228 | 1 | 26 | .637 |
| | Based on Median | .300 | 1 | 26 | .589 |
| | Based on Median and with adjusted df | .300 | 1 | 25.972 | .589 |
| | Based on trimmed mean | .261 | 1 | 26 | .614 |

| | | | | | |
|---|---|---|---|---|---|
| SCS.commonhumanityS1 | Based on Mean | .635 | 1 | 26 | .433 |
| | Based on Median | .459 | 1 | 26 | .504 |
| | Based on Median and with adjusted df | .459 | 1 | 23.850 | .505 |
| | Based on trimmed mean | .562 | 1 | 26 | .460 |
| SCS.commonhumanityS2 | Based on Mean | 1.171 | 1 | 26 | .289 |
| | Based on Median | 1.328 | 1 | 26 | .260 |
| | Based on Median and with adjusted df | 1.328 | 1 | 25.920 | .260 |
| | Based on trimmed mean | 1.223 | 1 | 26 | .279 |
| SCS.commonhumanityS3 | Based on Mean | .592 | 1 | 26 | .448 |
| | Based on Median | .528 | 1 | 26 | .474 |
| | Based on Median and with adjusted df | .528 | 1 | 25.340 | .474 |
| | Based on trimmed mean | .644 | 1 | 26 | .429 |
| SCS.isolationS1 | Based on Mean | .093 | 1 | 26 | .763 |
| | Based on Median | .043 | 1 | 26 | .837 |
| | Based on Median and with adjusted df | .043 | 1 | 25.867 | .837 |
| | Based on trimmed mean | .108 | 1 | 26 | .745 |
| SCS.isolationS2 | Based on Mean | .141 | 1 | 26 | .710 |
| | Based on Median | .193 | 1 | 26 | .664 |
| | Based on Median and with adjusted df | .193 | 1 | 24.283 | .664 |
| | Based on trimmed mean | .152 | 1 | 26 | .699 |
| SCS.isolationS3 | Based on Mean | .439 | 1 | 26 | .513 |
| | Based on Median | .499 | 1 | 26 | .486 |
| | Based on Median and with adjusted df | .499 | 1 | 25.674 | .486 |
| | Based on trimmed mean | .426 | 1 | 26 | .520 |
| SCS.mindfulnessS1 | Based on Mean | .607 | 1 | 26 | .443 |
| | Based on Median | .674 | 1 | 26 | .419 |
| | Based on Median and with adjusted df | .674 | 1 | 25.809 | .419 |
| | Based on trimmed mean | .642 | 1 | 26 | .430 |
| SCS.mindfulnessS2 | Based on Mean | .127 | 1 | 26 | .724 |
| | Based on Median | .195 | 1 | 26 | .662 |
| | Based on Median and with adjusted df | .195 | 1 | 23.858 | .663 |
| | Based on trimmed mean | .131 | 1 | 26 | .720 |
| SCS.mindfulnessS3 | Based on Mean | .072 | 1 | 26 | .790 |
| | Based on Median | .088 | 1 | 26 | .769 |
| | Based on Median and with adjusted df | .088 | 1 | 22.300 | .769 |
| | Based on trimmed mean | .081 | 1 | 26 | .778 |
| SCS.overidenitifedS1 | Based on Mean | .334 | 1 | 26 | .569 |
| | Based on Median | .313 | 1 | 26 | .581 |
| | Based on Median and with adjusted df | .313 | 1 | 24.325 | .581 |
| | Based on trimmed mean | .333 | 1 | 26 | .569 |

| | | | | | |
|---|---|---|---|---|---|
| | Based on trimmed mean | [illegible] | [illegible] | [illegible] | [illegible] |
| SCS.overidenitifedS2 | Based on Mean | 2.562 | 1 | 26 | .122 |
| | Based on Median | 2.816 | 1 | 26 | .105 |
| | Based on Median and with adjusted df | 2.816 | 1 | 25.121 | .106 |
| | Based on trimmed mean | 2.693 | 1 | 26 | .113 |
| SCS.overidenitifedS3 | Based on Mean | 4.593 | 1 | 26 | .042 |
| | Based on Median | 4.707 | 1 | 26 | .039 |
| | Based on Median and with adjusted df | 4.707 | 1 | 23.394 | .040 |
| | Based on trimmed mean | 4.619 | 1 | 26 | .041 |
| SWLS.totalS1 | Based on Mean | .091 | 1 | 26 | .765 |
| | Based on Median | .047 | 1 | 26 | .830 |
| | Based on Median and with adjusted df | .047 | 1 | 25.450 | .830 |
| | Based on trimmed mean | .082 | 1 | 26 | .777 |
| SWLS.totalS2 | Based on Mean | .054 | 1 | 26 | .818 |
| | Based on Median | .115 | 1 | 26 | .737 |
| | Based on Median and with adjusted df | .115 | 1 | 24.627 | .737 |
| | Based on trimmed mean | .093 | 1 | 26 | .763 |
| SWLS.totalS3 | Based on Mean | .006 | 1 | 26 | .939 |
| | Based on Median | .001 | 1 | 26 | .971 |
| | Based on Median and with adjusted df | .001 | 1 | 25.649 | .971 |
| | Based on trimmed mean | .003 | 1 | 26 | .957 |
| PGI.totalS1 | Based on Mean | .291 | 1 | 26 | .594 |
| | Based on Median | .336 | 1 | 26 | .567 |
| | Based on Median and with adjusted df | .336 | 1 | 24.295 | .568 |
| | Based on trimmed mean | .280 | 1 | 26 | .601 |
| PGI.totalS2 | Based on Mean | 3.312 | 1 | 26 | .080 |
| | Based on Median | 1.710 | 1 | 26 | .202 |
| | Based on Median and with adjusted df | 1.710 | 1 | 12.761 | .214 |
| | Based on trimmed mean | 2.953 | 1 | 26 | .098 |
| PGI.totalS3 | Based on Mean | .001 | 1 | 26 | .979 |
| | Based on Median | .009 | 1 | 26 | .924 |
| | Based on Median and with adjusted df | .009 | 1 | 25.989 | .924 |
| | Based on trimmed mean | .000 | 1 | 26 | .993 |
| SCS.totalS1 | Based on Mean | .022 | 1 | 26 | .883 |
| | Based on Median | .071 | 1 | 26 | .792 |
| | Based on Median and with adjusted df | .071 | 1 | 25.958 | .792 |
| | Based on trimmed mean | .023 | 1 | 26 | .881 |
| SCS.totalS2 | Based on Mean | .000 | 1 | 26 | .982 |
| | Based on Median | .000 | 1 | 26 | .983 |
| | Based on Median and with adjusted df | .000 | 1 | 21.987 | .983 |
| | Based on trimmed mean | .000 | 1 | 26 | .982 |
| SCS.totalS3 | Based on Mean | .346 | 1 | 26 | .561 |
| | Based on Median | .250 | 1 | 26 | .622 |
| | Based on Median and with adjusted df | .250 | 1 | 25.581 | .622 |
| | Based on trimmed mean | .322 | 1 | 26 | .576 |

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Group
Within Subjects Design: Timepoint

**Tests of Between-Subjects Effects**

Transformed Variable: Average

| Source | Measure | Type III Sum of Squares | df | Mean Square | F | Sig. | Partial Eta Squared |
|---|---|---|---|---|---|---|---|
| Intercept | PANASpos | 48758.671 | 1 | 48758.671 | 681.470 | <.001 | .963 |
| | PANASneg | 34026.000 | 1 | 34026.000 | 411.689 | <.001 | .941 |
| | SCSkindness | 614.599 | 1 | 614.599 | 3566.753 | <.001 | .993 |
| | SCSjudgement | 584.965 | 1 | 584.965 | 457.320 | <.001 | .946 |
| | SCScommonhum | 658.544 | 1 | 658.544 | 1402.469 | <.001 | .982 |
| | SCSisolation | 639.483 | 1 | 639.483 | 380.235 | <.001 | .936 |
| | SCSmindfulness | 703.315 | 1 | 703.315 | 2132.500 | <.001 | .988 |
| | SCSoveridentified | 587.328 | 1 | 587.328 | 604.718 | <.001 | .959 |
| | SWLStotal | 38069.846 | 1 | 38069.846 | 355.062 | <.001 | .932 |
| | PGItotal | 102471.365 | 1 | 102471.365 | 945.664 | <.001 | .973 |
| | SCStotal | 630.859 | 1 | 630.859 | 1408.716 | <.001 | .982 |
| Group | PANASpos | 33.528 | 1 | 33.528 | .469 | .500 | .018 |
| | PANASneg | 756.476 | 1 | 756.476 | 9.153 | .006 | .260 |
| | SCSkindness | .386 | 1 | .386 | 2.240 | .146 | .079 |
| | SCSjudgement | 9.651 | 1 | 9.651 | 7.545 | .011 | .225 |
| | SCScommonhum | 1.812 | 1 | 1.812 | 3.858 | .060 | .129 |
| | SCSisolation | 6.376 | 1 | 6.376 | 3.791 | .062 | .127 |
| | SCSmindfulness | 1.315 | 1 | 1.315 | 3.987 | .056 | .133 |
| | SCSoveridentified | 11.391 | 1 | 11.391 | 11.728 | .002 | .311 |
| | SWLStotal | 26.084 | 1 | 26.084 | .243 | .626 | .009 |
| | PGItotal | 17.746 | 1 | 17.746 | .164 | .689 | .006 |
| | SCStotal | .974 | 1 | .974 | 2.174 | .152 | .077 |
| Error | PANASpos | 1860.281 | 26 | 71.549 | | | |
| | PANASneg | 2148.893 | 26 | 82.650 | | | |
| | SCSkindness | 4.480 | 26 | .172 | | | |
| | SCSjudgement | 33.257 | 26 | 1.279 | | | |
| | SCScommonhum | 12.209 | 26 | .470 | | | |
| | SCSisolation | 43.727 | 26 | 1.682 | | | |
| | SCSmindfulness | 8.575 | 26 | .330 | | | |
| | SCSoveridentified | 25.252 | 26 | .971 | | | |
| | SWLStotal | 2787.726 | 26 | 107.220 | | | |
| | PGItotal | 2817.337 | 26 | 108.359 | | | |
| | SCStotal | 11.643 | 26 | .448 | | | |

**Pairwise Comparisons**

| Measure | Group | (I) Timepoint | (J) Timepoint | Mean Difference (I-J) | Std. Error | Sig.[b] | 95% Confidence Interval for Difference[b] | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Lower Bound | Upper Bound |
| PANASpos | Intervention Group | 1 | 2 | -5.333* | 1.408 | <.001 | -8.228 | -2.439 |
| | | | 3 | -4.944* | 1.670 | .006 | -8.377 | -1.512 |
| | | 2 | 1 | 5.333* | 1.408 | <.001 | 2.439 | 8.228 |
| | | | 3 | .389 | 1.303 | .768 | -2.290 | 3.067 |
| | | 3 | 1 | 4.944* | 1.670 | .006 | 1.512 | 8.377 |
| | | | 2 | -.389 | 1.303 | .768 | -3.067 | 2.290 |
| | Control Group | 1 | 2 | -2.000 | 1.889 | .300 | -5.883 | 1.883 |
| | | | 3 | -4.600 | 2.241 | .050 | -9.206 | .006 |
| | | 2 | 1 | 2.000 | 1.889 | .300 | -1.883 | 5.883 |
| | | | 3 | -2.600 | 1.748 | .149 | -6.194 | .994 |
| | | 3 | 1 | 4.600 | 2.241 | .050 | -.006 | 9.206 |
| | | | 2 | 2.600 | 1.748 | .149 | -.994 | 6.194 |
| PANASneg | Intervention Group | 1 | 2 | 1.056 | 1.560 | .505 | -2.152 | 4.263 |
| | | | 3 | 2.333 | 1.321 | .089 | -.381 | 5.048 |
| | | 2 | 1 | -1.056 | 1.560 | .505 | -4.263 | 2.152 |
| | | | 3 | 1.278 | 1.842 | .494 | -2.508 | 5.064 |
| | | 3 | 1 | -2.333 | 1.321 | .089 | -5.048 | .381 |
| | | | 2 | -1.278 | 1.842 | .494 | -5.064 | 2.508 |
| | Control Group | 1 | 2 | -2.600 | 2.093 | .225 | -6.903 | 1.703 |
| | | | 3 | .700 | 1.772 | .696 | -2.942 | 4.342 |
| | | 2 | 1 | 2.600 | 2.093 | .225 | -1.703 | 6.903 |
| | | | 3 | 3.300 | 2.471 | .193 | -1.780 | 8.380 |
| | | 3 | 1 | -.700 | 1.772 | .696 | -4.342 | 2.942 |
| | | | 2 | -3.300 | 2.471 | .193 | -8.380 | 1.780 |
| SCSkindness | Intervention Group | 1 | 2 | -.567* | .189 | .006 | -.956 | -.178 |
| | | | 3 | .144 | .257 | .579 | -.383 | .672 |
| | | 2 | 1 | .567* | .189 | .006 | .178 | .956 |
| | | | 3 | .711* | .188 | <.001 | .324 | 1.098 |
| | | 3 | 1 | -.144 | .257 | .579 | -.672 | .383 |
| | | | 2 | -.711* | .188 | <.001 | -1.098 | -.324 |
| | Control Group | 1 | 2 | -.280 | .254 | .280 | -.802 | .242 |
| | | | 3 | -.840* | .344 | .022 | -1.548 | -.132 |
| | | 2 | 1 | .280 | .254 | .280 | -.242 | .802 |
| | | | 3 | -.560* | .252 | .035 | -1.079 | -.041 |
| | | 3 | 1 | .840* | .344 | .022 | .132 | 1.548 |
| | | | 2 | .560* | .252 | .035 | .041 | 1.079 |
| SCSjudgement | Intervention Group | 1 | 2 | -.567* | .148 | <.001 | -.870 | -.263 |
| | | | 3 | -.789* | .195 | <.001 | -1.190 | -.387 |
| | | 2 | 1 | .567* | .148 | <.001 | .263 | .870 |
| | | | 3 | -.222 | .124 | .084 | -.476 | .032 |
| | | 3 | 1 | .789* | .195 | <.001 | .387 | 1.190 |
| | | | 2 | .222 | .124 | .084 | -.032 | .476 |
| | Control Group | 1 | 2 | .540* | .198 | .011 | .133 | .947 |
| | | | 3 | .360 | .262 | .181 | -.179 | .899 |
| | | 2 | 1 | -.540* | .198 | .011 | -.947 | -.133 |
| | | | 3 | -.180 | .166 | .288 | -.521 | .161 |
| | | 3 | 1 | -.360 | .262 | .181 | -.899 | .179 |
| | | | 2 | .180 | .166 | .288 | -.161 | .521 |
| SCScommonhum | Intervention Group | 1 | 2 | -.403* | .185 | .038 | -.782 | -.023 |
| | | | 3 | .347 | .313 | .278 | -.297 | .991 |
| | | 2 | 1 | .403* | .185 | .038 | .023 | .782 |
| | | | 3 | .750* | .333 | .033 | .065 | 1.435 |
| | | 3 | 1 | -.347 | .313 | .278 | -.991 | .297 |
| | | | 2 | -.750* | .333 | .033 | -1.435 | -.065 |
| | Control Group | 1 | 2 | -.025 | .248 | .920 | -.534 | .484 |
| | | | 3 | .025 | .420 | .953 | -.839 | .889 |
| | | 2 | 1 | .025 | .248 | .920 | -.484 | .534 |
| | | | 3 | .050 | .447 | .912 | -.869 | .969 |
| | | 3 | 1 | -.025 | .420 | .953 | -.889 | .839 |
| | | | 2 | -.050 | .447 | .912 | -.969 | .869 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SCSisolation | Intervention Group | 1 | 2 | -.708* | .197 | .001 | -1.114 | -.303 |
| | | | 3 | -1.000* | .167 | <.001 | -1.343 | -.657 |
| | | 2 | 1 | .708* | .197 | .001 | .303 | 1.114 |
| | | | 3 | -.292 | .170 | .098 | -.642 | .058 |
| | | 3 | 1 | 1.000* | .167 | <.001 | .657 | 1.343 |
| | | | 2 | .292 | .170 | .098 | -.058 | .642 |
| | Control Group | 1 | 2 | -.025 | .265 | .925 | -.569 | .519 |
| | | | 3 | .125 | .224 | .581 | -.335 | .585 |
| | | 2 | 1 | .025 | .265 | .925 | -.519 | .569 |
| | | | 3 | .150 | .228 | .517 | -.319 | .619 |
| | | 3 | 1 | -.125 | .224 | .581 | -.585 | .335 |
| | | | 2 | -.150 | .228 | .517 | -.619 | .319 |
| SCSmindfulness | Intervention Group | 1 | 2 | -.264 | .158 | .107 | -.589 | .061 |
| | | | 3 | .764* | .250 | .005 | .250 | 1.278 |
| | | 2 | 1 | .264 | .158 | .107 | -.061 | .589 |
| | | | 3 | 1.028* | .242 | <.001 | .530 | 1.526 |
| | | 3 | 1 | -.764* | .250 | .005 | -1.278 | -.250 |
| | | | 2 | -1.028* | .242 | <.001 | -1.526 | -.530 |
| | Control Group | 1 | 2 | -.400 | .212 | .071 | -.836 | .036 |
| | | | 3 | .025 | .335 | .941 | -.664 | .714 |
| | | 2 | 1 | .400 | .212 | .071 | -.036 | .836 |
| | | | 3 | .425 | .325 | .203 | -.243 | 1.093 |
| | | 3 | 1 | -.025 | .335 | .941 | -.714 | .664 |
| | | | 2 | -.425 | .325 | .203 | -1.093 | .243 |
| SCSoveridentified | Intervention Group | 1 | 2 | -.542* | .158 | .002 | -.867 | -.217 |
| | | | 3 | -.722* | .186 | <.001 | -1.105 | -.339 |
| | | 2 | 1 | .542* | .158 | .002 | .217 | .867 |
| | | | 3 | -.181 | .171 | .302 | -.533 | .172 |
| | | 3 | 1 | .722* | .186 | <.001 | .339 | 1.105 |
| | | | 2 | .181 | .171 | .302 | -.172 | .533 |
| | Control Group | 1 | 2 | .125 | .212 | .561 | -.311 | .561 |
| | | | 3 | .250 | .250 | .326 | -.264 | .764 |
| | | 2 | 1 | -.125 | .212 | .561 | -.561 | .311 |
| | | | 3 | .125 | .230 | .591 | -.348 | .598 |
| | | 3 | 1 | -.250 | .250 | .326 | -.764 | .264 |
| | | | 2 | -.125 | .230 | .591 | -.598 | .348 |
| SWLStotal | Intervention Group | 1 | 2 | -4.167* | 1.176 | .002 | -6.583 | -1.750 |
| | | | 3 | -4.556* | .873 | <.001 | -6.350 | -2.761 |
| | | 2 | 1 | 4.167* | 1.176 | .002 | 1.750 | 6.583 |
| | | | 3 | -.389 | 1.088 | .724 | -2.626 | 1.848 |
| | | 3 | 1 | 4.556* | .873 | <.001 | 2.761 | 6.350 |
| | | | 2 | .389 | 1.088 | .724 | -1.848 | 2.626 |
| | Control Group | 1 | 2 | .600 | 1.577 | .707 | -2.642 | 3.842 |
| | | | 3 | -.400 | 1.172 | .736 | -2.808 | 2.008 |
| | | 2 | 1 | -.600 | 1.577 | .707 | -3.842 | 2.642 |
| | | | 3 | -1.000 | 1.460 | .499 | -4.001 | 2.001 |
| | | 3 | 1 | .400 | 1.172 | .736 | -2.008 | 2.808 |
| | | | 2 | 1.000 | 1.460 | .499 | -2.001 | 4.001 |
| PGItotal | Intervention Group | 1 | 2 | -4.278* | 1.849 | .029 | -8.078 | -.477 |
| | | | 3 | -2.667 | 1.825 | .156 | -6.418 | 1.084 |
| | | 2 | 1 | 4.278* | 1.849 | .029 | .477 | 8.078 |
| | | | 3 | 1.611 | 1.954 | .417 | -2.406 | 5.628 |
| | | 3 | 1 | 2.667 | 1.825 | .156 | -1.084 | 6.418 |
| | | | 2 | -1.611 | 1.954 | .417 | -5.628 | 2.406 |
| | Control Group | 1 | 2 | -1.700 | 2.480 | .499 | -6.799 | 3.399 |
| | | | 3 | -3.600 | 2.448 | .153 | -8.632 | 1.432 |
| | | 2 | 1 | 1.700 | 2.480 | .499 | -3.399 | 6.799 |
| | | | 3 | -1.900 | 2.622 | .475 | -7.289 | 3.489 |
| | | 3 | 1 | 3.600 | 2.448 | .153 | -1.432 | 8.632 |
| | | | 2 | 1.900 | 2.622 | .475 | -3.489 | 7.289 |
| SCStotal | Intervention Group | 1 | 2 | -.509* | .119 | <.001 | -.754 | -.264 |
| | | | 3 | -.211 | .144 | .156 | -.507 | .086 |
| | | 2 | 1 | .509* | .119 | <.001 | .264 | .754 |
| | | | 3 | .298* | .120 | .020 | .052 | .545 |
| | | 3 | 1 | .211 | .144 | .156 | -.086 | .507 |
| | | | 2 | -.298* | .120 | .020 | -.545 | -.052 |
| | Control Group | 1 | 2 | -.010 | .160 | .951 | -.338 | .318 |
| | | | 3 | -.006 | .193 | .975 | -.403 | .391 |
| | | 2 | 1 | .010 | .160 | .951 | -.318 | .338 |
| | | | 3 | .004 | .161 | .980 | -.327 | .335 |
| | | 3 | 1 | .006 | .193 | .975 | -.391 | .403 |
| | | | 2 | -.004 | .161 | .980 | -.335 | .327 |

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).