An Online Guided Self-Help Intervention for Sexual Distress for Female Survivors of Sexual Assault: A Single Case Experimental Study

Kimberley Khoo

June 2023

Research submitted in partial fulfilment of the requirements for the degree of Doctor in Clinical Psychology (DClinPsy), Royal Holloway, University of London.

Acknowledgments

I want to thank the women who made this project possible, who generously offered their time in participation or aided in developing the intervention.

To my supervisor Dr Jane Vosper, thank you for your compassionate and invaluable guidance throughout this process. Thank you to Dr Andy MacLeod & Dr Gary Brown for your calming and helpful support. I would also like to acknowledge the team at My Body Back, who supported the recruitment of this project. To my course mates and friends who have significantly shaped me into the clinician I am, thank you for your friendship and kindness.

To my parents, brothers, grandparents & extended family, thank you for the unwavering support. Thank you for cheering me on and being a constant source of encouragement. To my husband, who has been my rock through the challenges of the doctorate training. Thank you for your love and patience throughout the years.

Contents

List of Figures

List of Tables

I. Lay Summary

Why did we do this research?

Sexual assault is a global issue that has detrimental impacts on women's mental and physical health. Following sexual assault, women experience a range of difficulties that may impact their quality of life. Sexual difficulties are a common problem for 25 - 94% of women following sexual assault. Women may view changes to their sexual functioning as negative and distressing. This is known as sexual distress. It is associated with feelings of shame and leads to women viewing themselves negatively. Despite the established association for women to develop sexual distress and difficulties following sexual assault, there are limited options for treatment. Typical psychological treatments for sexual trauma do not improve sexual difficulties. On the other hand, traditional sex therapy approaches do not consider the impact of trauma on sexual difficulties. Therefore, it is necessary to develop specific interventions which combine traditional psychological interventions, and sex therapy approaches for female survivors of sexual assault who experience sex as distressing.

Aims of the Research

The research aimed to identify current treatments for women's sexual difficulties following sexual assault and assess their effectiveness. In this project, identifying current treatments informed the development of a new intervention, integrating therapeutical models that would be helpful for female survivors of sexual assault.

Systematic Review

A search of online libraries was performed to identify current treatments developed for women with sexual difficulties following sexual assault. The review examined how effectively the interventions improved sexual satisfaction or sexual functioning. It was found that:

- Five papers tested treatments developed for women's sexual difficulties following sexual assault.
- These treatments include Sexual Schema Expressive Writing, Mindfulness-Based Therapy, Cognitive Processing Therapy and Rational-Emotive Therapy
- These treatments were delivered in different formats such as individual, group or individual online self-help intervention.
- There was variation across the questionnaires used to measure sexual functioning.
- All the treatments seemed to improve sexual functioning outcomes for women following sexual assault. However, formal conclusions cannot be made.
- Further high-quality research should be done.

Empirical Study

Based on the findings from the systematic review, an online guided self-help intervention was developed for female survivors of sexual assault and tested in an experimental study. The intervention considered current research, which suggests combining treatments can benefit female survivors of sexual assault with sexual distress. In addition, this study aimed to examine if the intervention would (1) be acceptable and feasible for use among female survivors of sexual assault and (2) improve sexual distress.

The intervention we developed consisted of four online videos, which participants would engage with once a week for four weeks. The materials were informed by Compassion-Focused Therapy (CFT). Other aspects of the intervention included encouraging participants to be present in the current moment through Mindfulness, standard sex therapy approaches and trauma theory. Psychologists and survivors of sexual assault reviewed the intervention materials and provided feedback. Participants were recruited through an Instagram post by a charity for sexual violence and assigned to 5 to 14 days before starting the intervention. Participants were contacted one-month after completing the intervention to

see if there were improvements over time. At the beginning of the study and the one-month follow-up, participants were asked to complete longer questionnaires to assess their levels of sexual distress, sexual functioning, and self-compassion. Throughout the study, participants completed daily questions which asked about their feelings of shame, guilt, self-criticism, self-compassion, how much they understand their difficulties are normal in the context of their sexual trauma and their motivation to get better. It was found that:

- Of the 19 women who accessed the intervention, 15 completed the intervention, and nine completed the follow-up measures.
- This finding suggests that the study was suitable for most women who took part.
- Of the nine participants who completed the feedback form, eight completed all four intervention sessions, suggesting the online intervention was feasible.
- Participants provided mostly positive feedback on the qualitative feedback forms and found the intervention easy to understand and informative.
- Comparing daily measures from before and during the intervention period showed improvements in more than half the participants.
- One month after the intervention, six participants reported lower levels of sexual distress, four reported higher levels of self-compassion and five reported higher levels of sexual functioning.

The findings suggest that the developed online intervention is acceptable and easy to implement for female survivors of sexual assault. There was also some support that the intervention improved sexual distress and self-compassion. However, there were limitations to these findings. Further research should be conducted to see if the intervention is successful. The results from this study will be written up for scientific publication and presented at conferences focusing on trauma and CFT.

II. Psychosexual Therapies for Sexual Difficulties Following Sexual Assault in Women: A Systematic Review

Abstract

Sexual health is often overlooked as an integral component of women's health. Experiencing sexual difficulties impacts sexual satisfaction, a significant factor in women's quality of life. Sexual difficulties impact women's self-esteem, global well-being, and relationships. Women with a history of sexual assault are more likely to develop sexual difficulties than non-abused women. Research has demonstrated the different underlying mechanisms for sexual difficulties in women with and without a history of sexual assault. Due to these differences, specific psychosexual interventions should be developed for women with a history of sexual assault. Indeed, previous studies have found that current treatments for post-traumatic stress disorder do not change sexual functioning outcomes in women with a history of sexual assault. Therefore, this paper aimed to systematically review and conduct a narrative synthesis of studies which examined the effectiveness of psychosexual interventions for sexual difficulties in women following sexual assault.

A search of three electronic databases (PsycINFO, PubMed & Web of Science) identified 5275 papers. Five studies met the inclusion criteria. The Revised Cochrane Risk of Bias -2 tool was used to appraise the quality of included studies. The overall risk of bias was 'some concerns' for four and 'high' for one paper. The interventions identified in the included studies were Mindfulness-Based Therapy, Sexual Schema Expressive Writing, Cognitive Processing Therapy & Rational-Emotive Therapy. The modality of the interventions ranged from individual face-to-face therapy, individual online therapy, group therapy and independent online therapy. In terms of effectiveness, all the studies reported improvements in sexual functioning post-treatment or follow-up. However, further high-quality research is required before drawing conclusions. The findings suggest that limited treatments have been empirically tested for women's sexual difficulties following sexual assault, and further research should be completed.

Introduction

Sexual health and sexual satisfaction are often overlooked as essential aspects of women's health despite being recognised as significant factors affecting the quality of life (World Health Organization, 2006). Previous studies suggest that women with lower sexual satisfaction may experience poorer health and global well-being (Davison et al., 2009; Flynn et al., 2016; Higgins et al., 2011). In contrast, women with satisfying sexual relationships were more likely to experience higher levels of emotional satisfaction (Rosen & Bachmann, 2008). One barrier to sexual satisfaction is the presence of sexual difficulties (Frank et al., 1978; MacNeil & Byers, 1997). Therefore, it is necessary to acknowledge and advance treatment options for sexual difficulties in women.

According to the National Survey of Sexual Attitudes and Lifestyles (NATSAL-3; 2012), 48% of women in the UK reported at least one or more sexual difficulties between the ages of 16 and 44. Similar to previous papers, sexual difficulties in this systematic review refers to barriers preventing an individual from engaging in safe sex or experiencing sexual satisfaction (Richters et al., 2003). Sexual difficulties can be physiological, cognitive, or behavioural. Some examples include arousal dysfunction, sexual distress, sexual pain and fear of anxiety (Feldman-Summers et al., 1979; Maltz, 2001; van Berlo & Ensink, 2000; Weaver, 2009). Additionally, sexual difficulties impacts relationships and can contribute to low self-esteem, psychological and sexual distress (Stephenson & Meston, 2010; 2012). It is worth noting that sexual difficulties are influenced by societal and cultural factors (Nimbi et al., 2022) and not all women will find psychosexual difficulties distressing (Gewirtz-Meydan, 2022; Hayes et al., 2006). However, since it is more common for women to find sexual difficulties distressing, it is critical to consider the risk factors for developing psychosexual impairments (Gosney, 2017; Hall, 2007).

Various factors have been associated with the development of sexual difficulties. Factors such as breast cancer, heart diseases, older age, obstetrics factors, and mood disorders were associated with the development of sexual difficulties (Hinchliff et al., 2018; Nimbi et al., 2022; Schwarz et al., 2008; Serati et al., 2010; Sørensen et al., 2017). A significant risk factor for developing sexual difficulties is having a history of sexual assault or sexual abuse (Becker, 1989; Feldman-Summers et al., 1979; Kelley, 2016). In a study of 83 female survivors of rape, 70% reported sexual difficulties following sexual assault (Becker et al., 1982). A recent systematic review reported that 25% to 59% of women with a history of childhood sexual trauma report sexual difficulties, and prevalence rates increased in clinical samples from 84% to 94% (Pulverman et al., 2018).

It has been hypothesised that psychosexual difficulties manifest differently in women with and without a history of sexual assault (Kim et al., 2009; Pulverman et al., 2018). In non-abused women, Barlow's model suggests that sexual difficulties occur due to negative affect during sexual activity and attentional bias for sexually relevant stimuli (Barlow, 1986). Similarly, one of the underlying mechanisms proposed by the sex response cycle was that sexual arousal is impacted by distractions of daily life or by worries about one's sexual performance (Basson, 2005). These theoretical models do not consider the impact of trauma on psychosexual difficulties (Althof et al., 2005; Pulverman et al., 2018). Following an experience of sexual assault, any sexual contact may be triggering and impact sexual activity (Zwickl & Merriman, 2011). The traumagenic model described four dynamics of sexual abuse that may impact sexual difficulties: traumatic sexualisation, stigmatisation, powerlessness and betrayal (Finkelhor & Browne, 1985; Gewirtz-Meydan & Lassri, 2023). Traumatic sexualisation considers the way trauma symptoms present during sexual activities in the form of dissociation, hypervigilance, intrusive thoughts and shame (Gewirtz-Meydan & Godbout, 2023). Feelings of powerless and stigmatisation may impact women's sexual

self-concept and how survivors engage in sex (Meston et al., 2006). One study found that survivors of sexual abuse had more threatening interpretations of sex than non-abused women (Lorenz & Meston, 2012). Previous research reports that survivors of sexual assault experienced higher levels of fear, disgust and sexual shame during sex than non-abused women (Meston et al., 2006; Pulverman & Meston, 2020a). Survivors of sexual assault may feel unsafe during intimacy and adopt avoidant coping strategies which maintain sexual difficulties (Leonard & Follette, 2002; Staples et al., 2012). Overall, this suggest the differences in the underlying mechanisms of sexual difficulties for women with and without a history of sexual trauma. (Althof et al., 2005).

The research has demonstrated that women with and without a history of sexual trauma also respond differently to treatment for sexual difficulties (Pulverman et al., 2018). Trauma symptoms such as flashbacks or dissociation may impede the effectiveness of current psychosexual interventions (Martinson et al., 2013; O'Driscoll & Flanagan, 2016). Sexual shame due to sexual trauma also impacts the response to current psychosexual treatment (Pulverman & Meston, 2020a). Standard sex therapies such as sensate focus were considered insufficient for women with a history of sexual trauma (Maltz, 2001). Using traditional psychosexual interventions may harm survivors of sexual assault where the goal of the intervention is to enable penetration, imposing an expectation for sexual functioning (Hall, 2008). Since the literature outlines the differences in the manifestation of sexual difficulties and response to treatment for women with and without a history of sexual trauma, it is necessary to consider the available treatments for sexual difficulties amongst survivors of sexual assault.

Previous reviews for interventions for women's sexual difficulties

Previous systematic reviews predominantly focused on sexual difficulties in women with clinical sexual dysfunction. Günzler & Berner (2012) reviewed the psychological

treatment for female sexual dysfunction. The review reported on 15 randomised controlled trials (RCTs), which suggested traditional sex therapy (Masters & Johnson, 1966) and cognitive behavioural therapy (CBT) to be effective in increasing sexual satisfaction and frequency of sexual activity (Günzler & Berner, 2012). In addition, Fruhuaf et al. (2013) conducted a meta-analysis and reported on 20 randomised controlled trials (RCTs), which improved symptoms of Hyposexual Dysfunction Disorder (HSDD) and Female Orgasmic Disorder (FOD). Another meta-analysis reviewed the efficacy of mindfulness-based therapies for female sexual dysfunction and reported improvements of moderate to large effect sizes for sexual desire, sexual arousal, lubrication, orgasm, sexual satisfaction, sexual distress and subjective sexual well-being (Stephenson & Kerth, 2017). Kharaghani et al. (2020) reported that individual and group CBT were effective in improving sexual functioning in women. More recently, systematic reviews have examined and reported the potential effectiveness of internet-based psychological interventions for sexual difficulties (Mahar et al., 2022; Zarski et al., 2022).

Although there have been several literature reviews considering the effectiveness of psychological interventions, there were limited reviews evaluating interventions for sexual difficulties in women following sexual assault. Previous literature reviews have predominantly examined the effectiveness of interventions in survivors of sexual trauma and the impact on psychological distress such as anxiety, depression, dissociation and guilt (Lomax & Meyrick, 2022; Parcesepe et al., 2015; Regehr et al., 2013) without considering sexual difficulties as an outcome measure.

The author of this thesis has only identified two reviews which focused on interventions for sexual difficulties following sexual assault. Firstly, an overview of empirical research on sexual dysfunction in survivors of child sexual abuse (CSA) identified only two empirically validated therapeutic approaches, Mindfulness-based therapy and Sexual Schema

Expressive writing (Gewirtz-Meydan, 2022b). However, this review only outlined the treatment components and did not analyse outcome measures.

The second review is a meta-analysis examining psychological treatments on sexual difficulties for individuals with post-traumatic stress disorder (PTSD) from sexual trauma (O'Driscoll & Flanagan, 2016). This meta-analysis demonstrated that treatments for PTSD do not improve sexual concerns. Instead, the authors found that none of the identified treatments for PTSD, such as Trauma-focused group (Classen et al., 2011), Trauma Affect Regulation (Ford & Nangle, 2015), Cognitive Processing therapy (Resick et al., 2003) and Prolonged exposure (Schnurr et al., 2009) had any effects on sexual difficulties (O'Driscoll & Flanagan, 2016).

Congruently, the lack of systematic reviews demonstrates the limited research conducted despite the prevalence of sexual difficulties among female survivors of sexual assault. Therefore, it is necessary to review the literature to inform the state of currently available interventions.

Aims of the systematic review

This systematic review differs to previous reviews. The previous review examined psychological interventions for PTSD and their effect on sexual functioning; it did not review interventions developed to target sexual difficulties (O'Driscoll & Flanagan, 2016).

The current review focused on psychosexual therapies for women that aim to alleviate sexual difficulties following sexual assault. This review aimed to determine (i) what type of psychosexual therapies have been empirically tested through quantitative studies for sexual difficulties after sexual assault and (ii) how effective these therapies were in improving sexual difficulties or sexual well-being, the number of participants who improved and treatment attrition. A secondary aim was to examine the components and topics covered

within the interventions. This is to inform the development of the guided-self-help intervention materials for the empirical paper of this thesis.

Methods

This systematic review adhered to guidelines from Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA; Moher et al., 2009).

Search Strategy

A search of titles and abstracts was conducted on three electronic databases: PsychINFO, Web of Science and PubMed on the 22nd of November 2022 for published and unpublished articles. Search terms were agreed upon with research supervisors. PsychINFO was selected as it has peer-reviewed studies covering behavioural sciences and mental health. The PubMed database has an extensive overview of biomedical papers, and Web of Science is widely acknowledged as a valuable database of research publications.

Table 1 shows the search terms for the three key variables of psychosexual therapies, sexual assault, and sexual distress. The exact search terms varied between the database based on syntax (refer to Appendix A). No search limits or filters were implemented to ensure a thorough search. Reference lists of recent meta-analyses, systematic reviews and eligible papers were reviewed to search for additional studies.

Table 1

Key variables and search terms used for systematic review of databases

Key variables	Search terms
Psychosexual therapies	‘psychosexual therapy’ OR 'psychological interventions' OR 'psychosocial’ OR 'psychotherapy’ OR ‘behavioural interventions’ OR ‘'therapy' OR ‘CBT’ OR ‘ACT’ OR ‘DBT’ or 'CFT' or 'compassion-focused therapy' or 'mindfulness' OR ‘schema therapy' OR ‘narrative therapy’ OR ‘expressive writing’ OR ‘therapeutic writing’ OR ‘EMDR’ OR 'psychosexual’
(AND) Sexual Assault	'sexual assault' OR 'rape' OR 'sexual violence' OR 'sexual abuse' OR 'sexual trauma' OR 'childhood sexual abuse' OR 'forced sex' OR 'sexual victimization'
(AND) Sexual Difficulties	‘sexual difficulties’ OR ‘sexual well-being’ OR ‘sexual distress’ OR ‘sexual functioning’ OR ‘sexual dysfunction’ OR ‘sexual problems’ OR ‘hyposexual’ OR ‘sexual satisfaction’ OR ‘sexual desire’ OR ‘sexual disorders’ OR ‘sexual pain’

Study Eligibility Criteria

The review used the PICOS framework to formulate the eligibility criteria recommended to improve the quality of systematic reviews (Amir-Behghadami & Janati, 2020; Eriksen & Frandsen, 2018). Table 2 shows the study eligibility criteria based on the PICOS framework, which assessed the Population, Intervention, Comparison, Outcome & Study design. Only empirical research written in English were include, as this is the native language of the primary researcher.

Table 2

Study eligibility criteria based on the PICOS framework.

PICOS Criteria	Description	
	Inclusion Criteria	Exclusion Criteria
Population	Women over the age of 18 with a history of sexual trauma. No specification on the age of incident of sexual trauma to capture a broader range of studies. *Amendment: Studies can be included if more than 80% of participants experienced sexual trauma.**	Study population with males or adolescents.
Intervention	Any therapeutic intervention aimed to address sexual difficulties.	Integrative interventions or studies that did not target sexual difficulties.

PICOS Criteria	Description	
	Inclusion Criteria	Exclusion Criteria
Comparison	Study with comparisons such as placebo, control or other comparative interventions with outcome compared pre and post-intervention. Studies with no comparisons group would be included to best inform the current state of interventions in this area where studies are limited (Peinemann et al., 2013).	
Outcome	Study included at least one distinct quantitative outcome measure for sexual functioning.	Only qualitative measures used.
Study Design	Quantitative study designs.	Qualitative only study designs, conceptual papers, systematic reviews & meta-analyses, research protocols, treatment manuals, conference abstracts. These study designs were excluded to focus on studies with standardised measures.

Note: *= Amendment to original eligibility criteria

Changes to eligibility criteria. Due to the limited papers that met the study eligibility criteria, it was decided in research supervision that the eligibility criteria should be adapted to include more papers. Therefore, an amendment was made to the population criterion for the systematic reviews. Articles were included if at least 80% of participants were survivors of sexual trauma and there was no significant difference in pre-treatment sexual functioning scores between the sexual trauma group and non-sexual trauma group.

Process of Study Selection

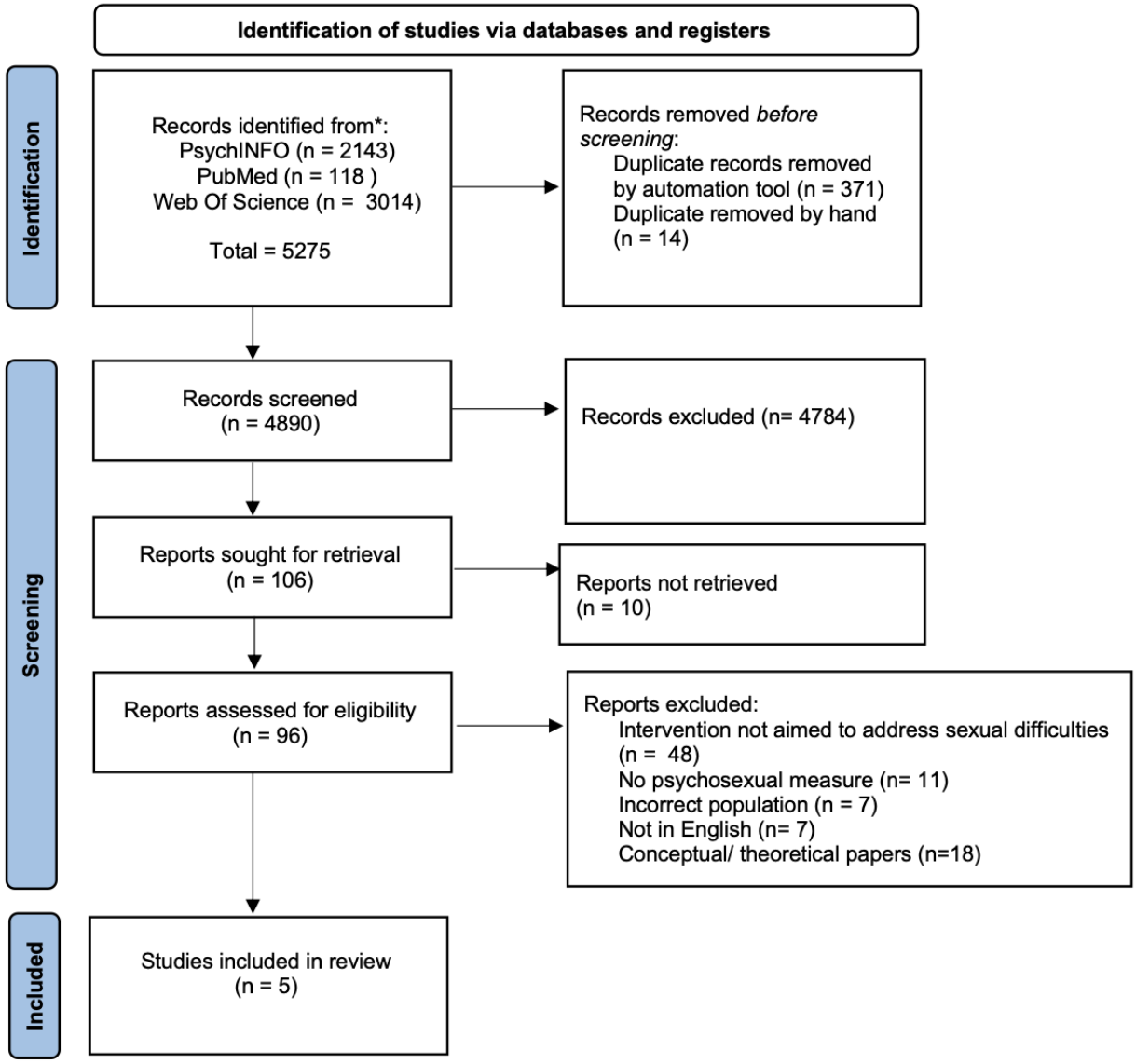
A total of 5275 papers were retrieved across three electronic databases (PsychINFO: 2143, PubMed: 118, Web of Science: 3014). Reference list searches did not produce any studies that met the inclusion criteria. Articles were exported to Rayyan, a free website that aids the process of literature reviews (http://rayyan.qcri.org; Ouzzani et al., 2016). Rayyan was used to automatically detect duplicates, yielding 4904 studies. A further 14 duplicates were manually removed. In total, 385 duplicates were identified and removed, yielding 4890 articles to be screened by title and abstract. At this stage, 4784 studies were excluded. The full texts of the remaining 106 articles were retrieved and assessed for eligibility. References were exported from Rayyan and uploaded to Zotero referencing management software for full-text screening. Ten reports were not retrieved as they were not available via Google Scholar, Senate House, Royal Holloway University database or via inter-library loan. The remaining articles were excluded for the following reasons, the intervention aim did not address sexual difficulties (n=48), the study did not include a psychosexual outcome measure (n=11), the incorrect population was studied (n=7), the articles were not in English (n=7) or were theoretical or conceptual articles (n=18). Refer to Figure 1 for the process of study selection using a PRISMA diagram.

Data Collection

Full texts were retrieved via Google Scholar or the Royal Holloway University online library database. Where full-text articles were unavailable, inter-library loans were requested. Articles were reviewed independently with a second reviewer (NS) reviewing 20% of the full-text articles for eligibility. The percentage of agreement for two raters was 88% (K = 0.888). The one paper discrepancy was discussed between reviewers and resolved.

Figure 1

PRISMA diagram



Data Extraction & Analysis

Each article was reviewed considering the aims of the systematic review, and only relevant findings were extracted. A pre-defined data extraction form was utilised by one reviewer for data extraction. Data extracted included author, title, country of origin, study design, recruitment, study eligibility criteria, number of participants, participants demographic, type of sexual assault experienced, intervention components (length, modality, topics covered, groups), time points of assessment, sexual well-being outcome measure, sexual trauma assessment/definition, method of data analysis, participant dropout rates and main intervention effects with means and standard deviation. Where an included study had a population where not all participants were survivors of sexual assault, pre-treatment differences between groups were extracted. Due to the small number of studies, there was a varied range of interventions and sexual functioning outcome measures identified, meta-analyses were deemed inappropriate (Liberati et al., 2009). A narrative synthesis of the data was conducted instead. Results from each of the included articles were presented as follow: summary characteristics of included studies, sample characteristics, intervention characteristics and main intervention effects.

Strategies for assessing quality of included studies

The Cochrane Risk of Bias 2 tool (RoB 2; Higgins et al., 2019) was used to assess the quality of included studies. This tool assesses five domains, risk of bias arising from the randomisation process, effects of allocation to intervention, bias due to missing data, measurement effects and selection of the reported results. A judgement for each domain is made from a low risk of bias, some concerns to a high risk of bias. This judgement was made by the primary researcher (KK). Any borderline decisions were discussed in supervision.

Results

Five published studies met the eligibility criteria. One of the articles was only included after the amendment to the population criteria as not all participants have a history of sexual trauma.

Quality of included studies

Table 3 presents the quality assessment of included studies guided by the Cochrane RoB 2 (Higgins et al., 2019). Information from the original RCT was used to assess bias for the quasi-experimental study (Wells et al., 2018). Four studies were judged to have some concerns and only one was judged to have high risk of bias. Overall, the included studies randomised participants and it seemed that the allocation sequence was concealed. One study found a significant difference in participant baseline scores despite randomisation, raising some concerns (Rieckert & Möller, 2000). All studies did not deviate from the assignment of intervention. The most common domain for bias was the measurement of outcome since most studies used self-report measures and participants were aware of their condition. In other cases, it was not clear if clinicians were blind to the participants intervention. Although study protocols were requested, they were unavailable for all studies and many of the items were rated as no information which lowers the quality of the study. Due to the lack of information, quality rating should be inferred with caution.

Study Characteristics of Included Studies

Five articles were included in this systematic review and were published between 2000 to 2021. Table 4 presents the summary characteristics of included studies. Studies were conducted in the United States (n= 3), Canada (n=2) and South Africa (n=1). Four studies were two-armed randomised controlled trials (RCT). Of these, three studies used an active control while one had a waitlist control. The fifth study was secondary data analysis of an RCT where the researchers analysed data from both arms as one group (Wells et al., 2018).

Table 3

Quality assessment of studies using the Cochrane Risk of Bias Tool 2

Author, Year	Randomisation process	Deviations from the intervention	Missing outcome data	Measurement of the outcome	Selective reporting	Overall risk of bias
Brotto et al., 2012	Low	Low	High	Some concerns	Some concerns	High
Kilimnik et al., 2020	Low	Low	Low	Some concerns	Low	Some concerns
Meston et al., 2013	Low	Low	Low	Some concerns	Some concerns	Some concerns
Rieckert & Möller, 2000	Some concerns	Low	Low	Some concerns	Some concerns	Some concerns
Wells et al., 2018	Low	Low	Low	Some concerns	Low	Some concerns

Note: Low = Low risk of bias, Some concerns = some concerns of bias, High = high risk of bias

Table 4

Sample and Intervention Characteristics of the included studies

Author, Year, Country	Study Design	Sample Characteristics	Intervention Characteristics		Drop-out rates
		Number of participants Age: M(SD), Range Demographic	Intervention Groups	Modality Number of sessions Components of main intervention	
Brotto et al., 2012 Canada	RCT	n = 20 Age: 35.8 (8.8), 22 – 54 years 100% with a history of CSA, experienced sexual distress during sexual activity and engaged in any form of sexual activity over the past 4 weeks. 85% white 5% African Canadian 10% Biracial	MBT Group (n = 12) Or CBT Group (n=8)	Two Face-to-face groups, two sessions, two weeks apart. Groups facilitated by clinical psychology graduate students. Components of both interventions: Importance of sexuality, rates of sexual difficulties, factors affecting sexuality, psychoeducation of the female sexual response cycle. Homework task to reflect on factors affecting sexual experiences and on the female sexual response cycle. MBT Components: Socialisation to mindfulness in sexual and nonsexual situations, mindful breathing, and body scan. Homework to mindfully observe bodily sensations. CBT Components: CBT model with nonsexual and sexual examples, challenging maladaptive thoughts in sexual situations, progressive muscle relaxation. Homework to recognise and challenge unhelpful thoughts.	33% n=10

Author, Year, Country	Study Design	Sample Characteristics	Intervention Characteristics		Drop-out rates
		Number of participants Age: M(SD), Range Demographic	Intervention Groups	Modality Number of sessions Components of main intervention	
Kilimnik et al., 2020 United States & Canada	RCT	n =125 Age: 28.56 (9.97), NI 100% with a history of CSA Report concerns with sexual well-being. 57.6% white 2.4% Native American 0.8% Pacific Islander 11.2% African American 12.2% Latin American 4.6% Asian 7.2% Other	Sexual Schema Expressive Writing (n=68) or Daily events (n=57)	Individual independent interventioncompleted a total of five writing sessions online over a three-week period. No facilitation by clinicians. Writing prompts adapted from Meston et al. (2013). Sexual Schema components: encouraged participants to reflect on sexual experiences in relation to processing the sexual self. Daily events components: Writing prompt encouraged participants to reflect for 20 minutes on what happened during the day, their moods, reaction, and personal needs.	9.5% (n=14)

Author, Year, Country	Study Design	Sample Characteristics: Number of participants Age: M(SD), Range Demographic	Intervention Characteristics: Intervention Groups	Intervention Characteristics: Modality Number of sessions Components of main intervention	Drop-out rates
Meston et al., 2013 United States	RCT	n= 91 33.7 (10.29), NI 100% women with a history of CSA reporting sexual dysfunction. Participants were required to be currently sexually active or in a potential sexual relationship. 63.7% White 23.1% Latin American 6.6% African American 4.4% Asian American 7.7% Other 4.4% NI	Sexual Schema Expressive Writing (n=50) or Trauma-Focused Expressive Writing (n=41)	Individual independent intervention,five 30-minute sessions spread out over several weeks. Check-in by female therapist with a Master's in psychology before participants independently completed the expressive writing task. Sexual Schema: writing prompts were provided each session to encourage participants to consider their experience of sexual abuse and how it affects their beliefs about the self, sex, sexuality, and goals for their future sexual life. Tauma-focused: writing prompts were procided each session to encourage participants to consider their feelings about a traumatic event and how it has affected their beliegs about safety, power, control and intimacy.	<u>Sexual Schema</u> 24.1% Treatment (n=3) FU (n=19) <u>Trauma Group</u> 31.9% Treatment (n=11) FU (n=18)

Author, Year, Country	Study Design	Sample Characteristics	Intervention Characteristics		Drop-out rates
		Number of participants Age: M(SD), Range Demographic	Intervention Groups	Modality Number of sessions Components of main intervention	
Rieckert & Möller, 2000 South Africa	RCT	n=4228 (NI, 20 - 35 years 100% with a history of CSA who did not meet diagnostic criteria for PTSD or mood disorder. Ethnicity not reported.	Rational-Emotive therapy (n=28) Delayed treatment control group (n=14)	Face to face group, 10 weekly sessions, 2 hours each. Two RET groups with 14 participants in each group.Groups facilitated by rational-emotive therapist. Components: Socialisation to the A-B-C model of emotions, considering the emotional and behavioural impact of CSA, identifying dysfunctional beliefs related to sexual problems. Each session focused on challenging and replacing dysfunctional beliefs with rational beliefs regarding various symptoms of CSA such as low self-esteem, guilt, anger, anxiety and sexual problems. Homework assigned related to the theme of each session such as identifying irrational beliefs.	7% RET (n=1) Control (n =1)

Author, Year, Country	Study Design	Sample Characteristics Number of participants Age: M(SD), Range Demographic	Intervention Characteristics Intervention Groups	Intervention Characteristics Modality Number of sessions Components of main intervention	Drop-out rates
Wells et al., 2018, United States	Quasi-experimental	n = 126 (21 veterans, 105 civilians) 46.4 (11.92), NI 83% report lifetime sexual assault, 60% history of CSA Nonsexual trauma: war-related, natural disaster, and physical assault. 47.6% Caucasian 14.3% Asian 11.9% Pacific Islander 26.2% Other	Face to Face CPT (n=61) Online CPT (n=63)	Individual face to face or Online 12, 90-minute sessions Components: CPT treatment manual adhered to by therapist. Target unhelpful beliefs about intimacy with the self and others. Considers negative beliefs about safety, trust, and maladaptive appraisals	<u>Face to face:</u> 26% Treatment (n=13) FU (n=32) <u>Online</u> 47.6% Treatment (n=15) FU (n=45)

Note. CBT = Cognitive Behavioural Therapy; CPT = Cognitive Processing Therapy; CSA = Child Sexual Abuse; NI = No information; FU = follow-up ; RET = Rational-emotive Therapy

Sample Characteristics. Across the five studies, there were 646 female participants, with sample sizes ranging between 20 and 242 participants. The mean age of participants ranged from 28 to 46.4 years. 20% of the participants in one of the studies were female military veterans (Wells et al., 2018). In terms of the incidence of sexual assault, four studies only included survivors of child sexual abuse (Brotto et al., 2012; Kilimnik et al., 2020; Meston et al., 2013; Rieckert & Möller, 2000). One study had a sample where 83% of participants experienced sexual assault in their lifetime, and 60% experienced child sexual abuse (Wells et al., 2018). In terms of additional inclusion criteria, three studies required participants to have experienced difficulties with sexual functioning (Brotto et al., 2012; Kilimnik et al., 2020; Meston et al., 2013). Two of these studies required participants to have engaged in some form of sexual activity in the last four weeks or be in a relationship with the potential for sexual activity (Brotto et al., 2012; Meston et al., 2013). One study required participants to have a diagnosis of PTSD (Wells et al., 2018), while another study excluded participants who met the criteria for PTSD or mood disorder (Rieckart & Möller, 2000). One study only included participants who met the criteria of female sexual arousal disorder (FSAD), female hyperarousal disorder (HSDD) or female orgasmic disorder (FOD; Meston et al., 2013). Most studies recruited participants through multiple sources such as newspaper or online advertisements and community outreach. One study also recruited through veteran centres (Wells et al., 2018). One study recruited participants seeking treatment for sexual concerns at a university medical centre (Brotto et al., 2012). One study recruited through clinicians working with people with emotional problems associated with childhood abuse (Rieckert & Möller, 2000).

Intervention Characteristics. Across five articles, four types of interventions were examined, Sexual Schema Expressive Writing (n=2), Mindfulness-Based Therapy (n=1), Cognitive Processing Therapy (n=1) and Rational-Emotive Therapy (n=1). In terms of

intervention modality, two studies delivered the intervention by in-person groups, while two studies delivered in-person individual sessions. One study had two arms of interventions delivered face-to-face or as online individual therapy. The therapist delivering treatment also varied between studies with one study using Rational-Emotive therapist (Rieckert & Möller, 2000), clinical psychology graduate student (Brotto et al., 2012) and one study labelled clinicians as 'therapists' but did not provide more details (Wells et al., 2019). One study used women with a master's in psychology to assess for risk and conduct socialisation to the intervention but were not involved in delivering the intervention (Meston et al., 2013). One study conducted their intervention solely online and participants did not engage with researchers or clinicians during the duration of the intervention except for researchers to prompt participation (Kilimnik et al., 2020).

In terms of control groups, three studies used active controls comparing the intervention to Cognitive Behavioural Therapy (Brotto et al., 2012), Daily Events writing (Kilimnik et al., 2020) or Trauma-Focused Expressive writing (Meston et al., 2013). One study had a waitlist control in the form of a delayed treatment group (Rieckert & Möller, 2000). One study did not have a control group but compared online and face to face cognitive processing therapy (Wells et al., 2018). The length of intervention ranged between two to 12 sessions. Three studies only collected quantitative measures, one study used multilevel measuring and collected genital arousal. One study collected qualitative and quantitative data but only the latter was extracted for analysis.

Regarding the components of the interventions, the MBT and CBT study consisted of one session of psychoeducation about the female sexual response cycle, the rates of sexual difficulties after sexual abuse and how it impacts sexuality. The second session of the MBT condition consisted of socialisation to the mindfulness mode, nonjudgement, mindful breathing and body scan. In the CBT condition, the second session socialised participants to

the CBT model highlighting nonsexual and sexual experiences. Participants were encouraged ot challenge their biased thinking styles that occur in sexual experiences. The group was run by clinical psychology graduate students (Brotto we al., 2012).

The studies which examined Sexual Schema Expressive Writing used the same writing prompts by Meston et al. (2013). Each session utilised different prompts that encouraged participants to write for a 30-minute period. The topics covered encouraged participants to consider their beliefs about sex, the impact of sexual trauma on sexuality and their goals for their future relationship with sex. In the study by Meston et al. (2013), participants met with a therapist who socialised them to treatment prior to participants independently completing the intervention. Kilimnik et al. (2020) researchers had no contact with participants except for email reminders to encourage participation. The CPT study was delivered by a therapist who adhered to a treatment manual and reported high treatment fidelity. There was no detailed information provided about the therapist's background. CPT included a module on improving sexual function by changing negative cognitions associated with emotional intimacy (Wells et al., 2018). The rational-emotive group considered the emotional and behavioural consequences of CSA through the association between their experience and activating events (A), their perception of these events (B) and the behavioural and emotional consequences (C). Sessions focused on identifying, disputing dysfunctional emotions and behaviours underlying sexual problems, low self-esteem, anxiety, guilt, depression and anger. Participants completed homework assignments throughout the intervention (Rieckart & Möller, 2000).

Table 5

Study Results

Author, Year	Intervention Groups	Sexual Well-being Outcome Measures	Time points assessed	Key findings
Brotto et al., 2012	Mindfulness Based Therapy Active control: CBT	FSDS VPA SA	Pre-treatment Post-treatment	Significant decrease on FSDS in MBT and CBT group from pre-treatment to post-treatment. *F(1, 11) = 5.07, p = .046* No interaction between MBT and CBT, *F(1,11), < 1* Pre-to-post-treatment MBT VPA/SA ratio significant decreased *(t =-3.04, p<.05)* SA increased (*t=1.98, p=.06)* VPA increased (t=-.74, p = .463) Pre-to-post-treatment CBTVPA/SA ratio increased (t = 1.20, *p=.24)* SA increased*(t=1.04, p=.32)* VPA increased (t=.13, p =.90) No data to calculate effect size

Author, Year	Intervention Groups	Sexual Well-being Outcome Measures	Time points assessed	Key findings
Kilimnik et al., 2020	Sexual Schema Expressive Writing Active control: Daily events	One variable of sexual well-being combining scores from - SSS-W - FSFI - FSDS-R	Pre-treatment Post-treatment One-month follow-up	Sexual well-being scores significant improved across the study regardless of age and condition. *R^2: 0.874 (B = 0.007, SE = 0.00), t(117) = 4.11, p < .001* No significant interactions <u>Across conditions</u> Pre-treatment to follow-up *(d=0.50)* Pre-treatment to post-treatment *(d=0.25)* Post-treatment to follow-up *(d=0.25)* Independent t-test found no significant difference between groups for sexual well-being at post-treatment or follow-up.
Meston et al., 2013	Sexual Schema Expressive Writing	Sexual Functioning Interview based on the DSM-IV-TR	Pre-treatment Post-treatment 2-week follow-up	Incidence of recovery and the number of participants who met the criteria for a sexual dysfunction. - **HSDD: *(z = 2.11, P < 0.05; R^2 = 0.13)***<u>Sexual Schema:</u> Pre- treatment (n=18)Post-treatment (n=11)2-week FU (n= 9)1-month FU (n=8)6-month FU (n=8)

Author, Year	Intervention Groups	Sexual Well-being Outcome Measures	Time points assessed	Key findings
Meston et al., 2013	Active Control: Trauma-Focused Expressive Writing		1-month follow-up 6-month follow-up	<u>Trauma-Focused:</u> Pre- treatment (n=18) Post-treatment (n=15) 2-week FU (n=14) 1-month FU (n=14) 6-month FU (n=14) **FSAD:** ***(z = 2.00, P < 0.05; R^2 = 0.09).*** <u>Sexual Schema:</u> Pre- treatment (n=24) Post-treatment (n=18) 2-week FU (n= 11) 1-month FU (n=11) 6-month FU (n=11) <u>Trauma-Focused:</u> Pre- treatment (n=23) Post-treatment (n=20) 2-week FU (n=20) 1-month FU (n=17) 6-month FU (n=17) **FOD:** ***(z=-0.56, p>.05)*** <u>Sexual Schema:</u> Pre-treatment (n=29) Post-treatment (n=22) 2-week FU (n= 21)

Author, Year	Intervention Groups	Sexual Well-being Outcome Measures	Time points assessed	Key findings
				1-month FU (n=20) 6-month FU (n=20) <u>Trauma-Focused:</u> Pre- treatment (n=27) Post-treatment (n=20) 2-week FU (n=15) 1-month FU (n=15) 6-month FU (n=15)
Rieckert & Möller, 2000,	Rational-Emotive therapy Waitlist control: delayed treatment control group	GRISS	Pre-treatment Post-treatment 8-week follow-up	GRISS Scores within the RET group from pre-treatment to post-treatment, and pre-treatment to follow-up, *(F=9.29, p<.01*) GRISS scores within the control group from pre-treatment to post-treatment, and pre-treatment to follow-up, *(F=2.26, p>.05)* GRISS score between the RET and control group: Pre-treatment (F = 12.46, p<.001) Post-treatment (F = .60, *p>.05)* Follow-up (F = 3.14*p>.05)* No data to calculate effect size

Author, Year	Intervention Groups	Sexual Well-being Outcome Measures	Time points assessed	Key findings
Wells et al., 2018,	Face to Face CPT Online CPT	Developed three sexual functioning questionnaires subscales based on BISF-W and FSFI - SFQ Arousal - SFQ Satisfaction - SFQ Desire	Pre-treatment 3-month follow-up	No difference between sexual and nonsexual trauma groups on all of pre-treatment SFQ subscales ($Z < 1.21$, $p > .05$, $d < 0.11$) No difference between veterans and civilians in sexual functioning outcome after CPT ($X^2 < 2.74$, $p > .05$) Across groups there was a significant improvement from pre-treatment to 3-month follow-up - SFQ Arousal ($B=.64$, $p<.05$, $d=0.54$), - SFQ Satisfaction ($B=.44$, $p<.05$, $d=1.52$) - SFQ Desire ($B=-.18$,, $p<.05$, $d= 0.8$)

Note: FSFI = Female Sexual Function Index, SSS-W =Sexual Satisfaction Scale for Women, MSSCQ = Multidimensional Sexual Self-Concept Questionnaire, BSIF-W= Brief Index of Sexual Functioning in Women, FSDS = Female Sexual Distress Scale, GRISS= Golombok-Rust Inventory of Sexual Satisfaction, HSDD = Hyposexual Dysfunction Disorder, FSAD = female sexual arousal disorder, FOD= Female orgasmic disorder, SA = Subjective Sexual Arousal, VPA = Vaginal Pulse Amplitude (Vaginal Arousal)

Sexual Well-being Outcome Measures

Table 5 presents the outcome measure and main intervention effects. All include studies examined the impact of the intervention on sexual well-being outcomes. There was a range of sexual well-being outcome measures used. One study used the clinician-rated Sexual Functioning Interview based on the DSM-IV-TR (Meston et al., 2013). Brotto et al. (2012) used an arousometer to physiologically measure subjective sexual arousal, vaginal photoplethysmography to measure vaginal arousal and the Female Sexual Distress Scale (FSDS; Derogatis et al., 2002), which is a 12-item selfincludeionnaire assessing levels of sexually related personal distress and the Female Sexual Function Index (FSFI; Rosen, 2000), a 19-item self-report measure with six subscales for desire, arousal, lubrication, orgasm, satisfaction & pain.

Kilimnik et al. (2020) created one variable of sexual well-being from the scores of three questionnaires, Sexual Satisfaction Scale for Women (SSS-W; Meston & Trapnell, 2005), FSFI & FSDS-R. The SSS-W is a 30-item self-report measure of women's sexual distress and dissatisfaction across five domains: communication, compatibility, contentment, personal distress, and relationship distress. Participants completed the questionnaires via online assessment links, which were sent via email.

Rieckert & Möller (2000) used the Golombok-Rust Inventory of Sexual Satisfactiinclude 28-tem questionnaire with seven subscales (frequency, non-communication, dissatisfaction, avoidance, non-sensuality, vaginismus and anorgasmia) that measures the prevalence and severity of sexual difficulties (Rust & Golombok, 1985). The GRISS was only completed by married participants in this study.

Wells et al. (2018) developed three sexual functioning questionnaires for arousal, satisfaction and desire based on the FSFI and the Brief Index of Sexual Functioning for

Women (BISF-W), a 22-item self-report measure which assessed the frequency of sexual behaviour, masturbation, fantasy and sexual preference (Taylor et al., 1994).

Main treatment effects

Table 5 shows the main treatment effects extracted from the included studies with effect size. Where effect size was not provided by the author, they were calculated using means, standard deviation and sample sizes if the information was available. As suggested by Cohen (1988), an effect size of 0.2 was interpretated as small, 0.5 as medium and 0.8 as large.

Mindfulness Based Therapy. One study examined the effectiveness of mindfulness-based therapy (Brotto et al., 2012). There was a significant decrease in sexual distress as measured by the FSDS from pre-to-post-treatment for participants both groups, with no difference between MBT and CBT groups. Hierarchical linear modelling was used to measure the effect of each treatment on genital and subjective arousal pre-and-post-treatment. Women in the MBT group showed a significant improvement genital concordance at post-treatment and compared to women in the CBT group.In the CBT group, genital concordance did not change from pre-treatment to post-treatment. An increase in genital concordance by women in the MBT group shows that for each unit of subjective arousal that increases, a smaller increase in genital arousal is needed to elicit the same level of subjective arousal compared to pre-treatment. . Effect sizes were not calculated as mean and standard deviation scores as these were not presented in the study. Ten participants dropped out of the study prior to the intervention phase.

Sexual Schema Expressive Writing. Two studies tested the effectiveness of sexual schema expressive writing (Kilimnik et al., 2020; Meston et al., 2013).. Kilimnik et al. (2020) found a significant improvement in sexual well-being scores from pre-treatment to post-treatment and follow-up for all participants regardless of age or condition. There were no

significant interaction effects. Additionally, no difference was found between the sexual schema writing group and the daily events group on sexual well-being at post-treatment or follow-up. Effect sizes were calculated across conditions demonstrating a medium effect size from pre-treatment to follow-up and a small effect size from pre-treatment to post-treatment and post-treatment to follow-up.

Meston et al. (2013) calculated the recovery rates from a sexual dysfunction diagnosis based on the Sexual Functioning Index. Condition significantly predicted a higher incidence of recovery, particularly in the sexual schema condition where expressive writing improved incidence of recovery for participants meeting the diagnosis of HSDD and FSAD. From pre-treatment to follow-up, in the sexual schema condition, 56% of participants recovered from HSDD, 54% from FSAD, 31% from FOD, and in the trauma-focused condition, 22% recovered from HSDD, 54% from FSAD, and 44% from FOD. Although both conditions showed improvements in sexual functioning, the sexual schema condition exhibited faster and more significant recovery compared to the trauma-focused condition for FSAD and HSDD.

Rational-Emotive Therapy. Rieckert & Möller (2000) found significant differences in pre-treatment GRISS scores between the RET (M = 8.29) and control condition (M = 5.25) despite randomisation. The study reported no changes in sexual satisfaction scores across time points for control group and a significant improvement for the RET group from pre-treatment to post-treatment, which was maintained at follow-up. Despite an improvement in sexual satisfaction for women in the RET condition, no significant difference was found between the intervention and control group at post-treatment and follow-up. NOnly one participant dropped out.

Cognitive Processing Therapy. Wells et al. (2018) found no difference between the sexual and non-sexual trauma groups on all three baseline sexual functioning measures.

The authors combined online and in-person CPT and reported significant improvements in sexual functioning at follow-up compared to baseline. A medium effect size was found for sexual arousal and a large effect size for sexual satisfaction and desire. In total, 27 participants dropped out during treatment and 77 at follow-up.

Discussion

The review examined the effectiveness of psychosexual interventions for sexual difficulties in women following sexual assault. A thorough search of three databases and a manual search identified five studies. A summary of the main findings will be reviewed alongside the evidence base in wider research.

Effectiveness of interventions

In terms of the psychosexual therapies for female survivors of sexual assault, the review identified Sexual Schema Expressive Writing, Mindfulness-Based Therapy, Cognitive Processing Therapy and Rational-Emotive Therapy. All studies reported improvements in sexual difficulties or sexual satisfaction from pre-treatment to post-treatment or follow-up. For studies where effect sizes were provided or calculated, effect sizes ranged from medium to large from pre-treatment to follow-up.

An interesting finding across most of the included studies was that sexual difficulties significantly decreased in the intervention and control groups at post-treatment and follow-up (Brotto et al., 2022; Kilimnik et al., 2020; Meston et al., 2013). This suggests that the active controls of CBT, daily events writing and Trauma Focused Expressive writing improved sexual difficulties. CBT is an established treatment for sexual dysfunction (ter Kuile et al., 2010). Daily events and trauma writing may have overlapped with mindfulness, which encouraged women to bring their awareness to the present and indirectly improved sexual functioning (Brotto et al., 2008; Kilimnik et al., 2020). Without a non-active control group, it is difficult to estimate the effectiveness of the interventions that were due to non-specific

therapeutic factors. Survivors who took part in these studies might have been actively seeking help for their sexual difficulties, which may have been different to women in the previous review, which engaged with general PTSD intervention (O'Driscoll & Flanagan, 2016). Motivation to improve sexual difficulties may explain the improvement in scores across conditions (Geers et al., 2005).

Possible Mechanisms of Action

Since all the identified interventions improved measures of sexual well-being, this section considers the overlap between the interventions and possible mechanisms of action. All the interventions encouraged women to alter their maladaptive beliefs towards sex due to the incidence of sexual trauma. Sexual schema expressive writing encouraged women to process and alter their adaptive sexual schemas by expressively writing about how their sexuality has changed after the sexual assault and creating a plan to achieve sexual satisfaction (Kilimnik et al., 2020; Meston et al., 2013). Cognitive Processing Therapy encouraged women to work on their negative cognitions and maladaptive appraisals about safety, trust and intimacy (Wells et al., 2019). Rational-Emotive Therapy encouraged women to identify their dysfunctional beliefs about sexual problems (Rieckert & Möller, 2000). For Mindfulness-based Therapy, it is hypothesised that encouraging women to be present in the moment with non-judgement altered cognitive distortions about sex and improved sexual well-being (Banbury et al., 2021; Brotto et al., 2022).

The interventions may have improved sexual well-being due to the normalisation of difficult feelings, which helped process the traumatic experience and the impact on sexual difficulties. In Sexual Schema Expressive Writing, women were encouraged to write about the difficult emotions associated with their sexual difficulties or trauma (Kilimnik et al., 2020; Meston et al., 2013). In Mindfulness, normalisation can be thought about in the non-judgement of one's difficulties. Brotto et al. (2012) also included psychoeducation about the

female sexual response cycle and prevalence rates of sexual difficulties following sexual assault. Through psychoeducation, the intervention emphasized that women were not isolated in their experiences (Wessely et al., 2008). A component of rational-emotive therapy, involves women learning about the adaptive nature of their beliefs which may normalise their difficulties. Promoting normalisation, non-judgement and present moment-awareness aligns with Compassion-Focused Therapy which has also been proposed as a possible psychosexual intervention for women following sexual assault (Vosper et al., 2021). In the wider literature, Mindfulness-based therapies have been effective in improving sexual functioning (Banbury et al., 2021; Brotto et al., 2022). Further research on Sexual schema expressive writing suggests the intervention aids the processing of the sexual trauma, making it less salient in sexual difficulties (Pennebaker & Seagal, 1999; Pulverman et al., 2015, 2017). There was less literature for the effectiveness of Rational-emotive therapy for sexual difficulties (Lyons & Woods, 1991). Cognitive processing therapy was mainly used as a treatment for PTSD to target maladaptive schemas due to an experience of trauma (Resick & Shnik. 1992).

Besides the benefits from the psychological models utilised in the interventions, there may have been non-specific therapeutic factors which facilitated improvements in sexual functioning. Firstly, three studies required participants to be sexually active to participate in the intervention (Brotto et al., 2012; Kilimnik et al., 2020a; Meston et al., 2013). This requirement may limit the study sample to women who were able to engage in sex and benefit from the intervention. Secondly, research has demonstrated that shame and isolation are experienced by women in this population. Taking part in an intervention developed especially for sexual difficulties following sexual assault may have allowed participants to feel less alone and decreased feelings of shame (Stephonsen & Meston 2010). The literature suggests that providing women with a space to consider their psychosexual difficulties,

encouraged awareness and normalisation of their difficulties (Brotto et al., 2012). It may also bring about a feeling of empowerment from having their difficulties validated.

Finally, an important consideration is that previous research on women's sexuality reported strong placebo effects (Bradford & Meston, 2009). It was possible that enrolling in the study increased participants' awareness of their sexual responses which, facilitated improvement (Bradford, 2013). Additionally, the passage of time may be a factor in improved outcomes. Therefore, it will be necessary for future research to consider active controls to understand the underlying mechanisms of improvement.

Modality of intervention

The modality of interventions ranged from individual face-to-face, individual online, group and online independent interventions. Since all studies found significant improvements, it suggests that treatment can be conducted in different forms. Notably, Kiliminik et al. (2020) conducted a study where female survivors of sexual assault had little to no contact with professionals during the intervention. This suggests that online therapy without professionals may be helpful in alleviating sexual difficulties. Online interventions are cost-effective and enable wider distribution of interventions (Zippan et al., 2020). Online interventions are becoming more popular as they bypass the stigma experienced by people with sexual difficulties (Mahar et al., 2022). Group interventions also benefit from non-specific therapeutic factors such as a sense of support which may have allowed survivors to feel less isolated, which reduced sexual difficulties and shame (Brotto et al., 2012; Hébert & Bergeron, 2007).

Outcome measures for sexual well-being

All studies used self-report measures of sexual well-being except one study (Meston et al., 2013), which used a clinician rated sexual functioning interview. The study by Meston

et al. (2013) was also the only study which measured a clinical diagnosis of sexual dysfunction. In contrast, the other studies only measured sexual difficulties such as sexual distress. Sexual dysfunctions are specific to sexual problems and refers to the recurrent difficulties associated with the impaired ability to 'respond sexually or to experience sexual pleasure' (5th ed.; DSM-5; American Psychiatric Association, 2013). Sexual distress is a broader term associated with any feeling of inadequacy about one's sexual health or sexual functioning as a negative aspect of the self (Derogatis et al., 2002; Gewirtz-Meydan & Lahav, 2020).

All the measures reportedly showed good reliability and discriminant validity (Derogatis et al., 2002; Rosen & Bachmann, 2008; Rust & Golombok, 1985; Taylor et al., 1994). Two studies did develop their own variables of sexual well-being by combining scores from several measures (Kilimnik et al., 2020a; Wells et al., 2019). However, this makes it difficult to compare with studies that used a different combination of measures.

Using different sexual well-being measures complicates the comparison of findings since each questionnaire measured different aspects of sexual well-being. The FSFI and BSIF measured sexual functioning. The FSDS measured sexual distress and the GRISS measured sexual satisfaction. Although these are closely related variables, sexual functioning, sexual distress and sexual satisfaction are independent constructs (Stephenson & Meston, 2010a). Research suggests that an experience of CSA moderates the relationship between sexual distress and sexual functioning (Stephenson et al., 2012). This implies that sexual functioning is more weakly associated with sexual distress in women with a history of CSA (Stephenson et al., 2012). Additionally, sexual well-being is multifaceted and may not be sufficiently conceptualized by one measure (Sundgren et al., 2022). This supports the idea of integration for psychosexual interventions to cover different aspects of sexual well-being (Weeks, 2005). Further research should also consider using different measures to assess sexual well-being.

Strengths and Limitations of the review

This is the first systematic review to examine interventions that target sexual difficulties in female survivors of sexual assault. The broad search strategy allowed for a comprehensive search of the literature. Despite finding a limited number of studies, this review synthesised the main treatment effects on sexual difficulties. The limited number of studies reflects the limited empirical research in this area that needs more examination. The use of an independent reviewer to review a number of full texts for inclusion, reduced researcher bias. There were several limitations to consider. Firstly, the eligibility criteria were adapted to include one more study where only 80% of participants had a history of sexual assault. Although there was no difference in pre-treatment sexual functioning scores between the sexual and non-sexual trauma group, the mechanisms of improvement might be different for women with and without a history of sexual trauma, as suggested by previous studies (Gosney, 2017; Pulverman et al., 2018). Secondly, the variations in the outcome measures made it difficult to compare intervention effects. Thirdly, all studies took place in western countries, which may affect the generalisability of findings. A limitation of conducting a systematic review that solely focuses on female survivors of sexual assault is the exclusion of men and other gender identities. It excludes men's and other gender identities unique experiences that may differ from cis-gendered women and perpetuates the disparity in sexual research between cis-gendered and gender-diverse populations. A review including all genders would allow for comparison and understanding of which interventions are helpful for all genders and which are more gender specific. Finally, the majority of the studies include had 'some concerns' about bias, which could over-inflate intervention effects. However, the lack of information available contributed to the bias of the included studies.

Implications

Sexual difficulties affect women's sexual health and impact their quality of life. This review demonstrates the limited number of interventions available for women with sexual difficulties following sexual assault. The review only identified four interventions which show promise in assisting female survivors of sexual assault with psychosexual difficulties. Clinicians who work with survivors of sexual assault may consider exploring these interventions within their therapeutical approaches for their clients who experience sexual difficulties. It is essential to note that while the findings show promise regarding potential benefits of these interventions in this population, higher quality research are required. Future studies should consider the multidimensional aspects of sexual well-being and utilise measures for different constructs such as sexual distress, sexual satisfaction and sexual functioning.

This review also provides evidence of the limited number of empirical studies which have examined interventions for female survivors of sexual assault. Several conceptual papers and protocols which proposed models of intervention for female sexual difficulties following sexual assault were identified (Fonseka & Smith, 2021; Gewirtz-Meydan, 2022; McCarthy, 1990). These interventions should be empirically tested to create a more robust evidence base.

This review focused on women. However, it is important to consider interventions for sexual difficulties following sexual assault for men, non-binary, and trans individuals. Interventions should also be culturally sensitive and tailored to individuals. Overall, the evidence suggests the precedence for developing specific interventions for sexual difficulties following sexual assault. These interventions may consider integrating different psychological models for survivors of sexual assault. Further, there is evidence that exploring an internet-based intervention is promising and effective for psychosexual difficulties.

Conclusion

This review examined psychosexual interventions for women following sexual assault. The findings suggest that several interventions with different modalities may help improve sexual difficulties in this population. In addition, there were overlaps in components of the interventions, such as normalisation and the challenging of maladaptive beliefs related to sex. However, due to the lack of information, these studies were of low quality and more research needs to be conducted in this area. A takeaway from this systematic review is the lack of developed interventions developed specifically for women with sexual difficulties following sexual assault. It demonstrates the need for more interventions to be developed.

III. An Online Guided Self-Help Intervention for Sexual Distress For Female Survivors of Sexual Assault

Abstract

Twenty-five to ninety-four percent of women experience sexual difficulties following sexual assault. Despite this prevalence, limited treatments address sexual distress in female survivors of sexual assault. Current psychological interventions for sexual trauma do not affect sexual functioning outcomes, while standard psychosexual approaches do not consider the impact of trauma on psychosexual difficulties. This study developed a four-session online guided self-help intervention informed by compassion-focused therapy and incorporated aspects of trauma work, standard psychosexual therapy, and mindfulness-based therapy. This study utilised a single-case experimental design with a multiple baselines approach to examine the novel intervention. Seventeen women with self-reported sexual distress following sexual assault were randomised to varying baseline lengths. Participants completed daily measures during the baseline and intervention phases on Shame, Guilt, Self-criticism, Compassion, Normalising and Motivation. Standardised measures such as the Female Sexual Distress Scale, State Self Compassion Scale – Short form and the Female Sexual Functioning Index were completed at baseline and follow-up. Visual analysis and Tau-U analyses assessed changes in daily measures from baseline to intervention. A Reliable Change Index was calculated for standardised measures from baseline to follow-up. Findings suggested that the intervention was viewed as acceptable by survivors of sexual assault. From baseline to intervention, all participants significantly improved on at least one daily measure. Compassion improved (n=11), and Shame decreased for most participants (n=10). At follow-up, a clinically significant decrease in sexual distress was indicated for more than half of the participants, with one individual reporting a clinically significant increase in sexual distress. Overall, the online guided self-help intervention can be considered acceptable and feasible to a certain extent. The results show the intervention's potential for treating sexual distress in

some female survivors of sexual assault. However, future research needs to be conducted. Study limitations and future implications were discussed.

Introduction

Sexual assault and sexual abuse profoundly impact a person's life. A substantial body of research indicates that it may trigger the onset of mental health difficulties (Burnam et al., 1988; Thompson et al., 2003). Sexual assault, trauma and abuse were used interchangeably in this study. These terms refer to a range of physical, psychological, and emotional actions characterised by unwanted sexual contact without explicit consent from the victim. Although sexual assault is a widespread problem perpetuated against individuals of any age or gender, this study focused on women.

Characteristics of Female Sexual Assault

Women are more likely to experience sexual assault. The Crime Survey for England and Wales from 2020 reported that 6.2% of women and 0.4% of men experienced sexual assault from the age of 16 (ONS, 2020). Female survivors of sexual assault often experience societal stigma and are less likely than men to seek help for their difficulties (Mahar et al., 2022).Research has documented the short-term and long-term negative consequences of child and adult sexual abuse in women (Feldman-Summers et al., 1979; Maltz, 2002; van Berlo & Ensink, 2000; Weaver, 2009). Women with a history of sexual abuse have a greater risk of developing physical health difficulties and psychopathologies such as chronic pain, post-traumatic stress disorder (PTSD), depression, anxiety, eating disorders and substance-use disorders (Campbell et al., 2009).

Sexual Difficulties Following Sexual Assault

Research has established the negative ramifications of sexual assault on women's psychosexual functioning and sexual well-being (Bigras et al., 2021; Zwickl & Merriman, 2011). A systematic review of the literature estimated that 25 - 94% of women develop psychosexual difficulties following sexual assault (Pulverman et al., 2018). Furthermore, female survivors of sexual assault were more likely to develop sexual distress and sexual

difficulties than the general population (Pulverman et al., 2018; Stephenson et al., 2012). Sexual difficulties include sexual dysfunction, which refers to the broad spectrum of difficulties associated with an impaired ability to 'respond sexually or to experience sexual pleasure' (5th ed.; DSM-5; American Psychiatric Association, 2013). In this paper, sexual difficulties encompass problems with sexual satisfaction, sexual functioning, sexual cognitions, and sexual behaviour. These include desire and arousal dysfunction, sexual pain, fear of sex, feelings of shame, difficulties with orgasm, intimacy, touch, and sexual satisfaction (Feldman-Summers et al., 1979; Maltz, 2002; van Berlo & Ensink, 2000; Weaver, 2009). Leonard & Follette (2002) identified arousal and desire dysfunction as the most common psychosexual difficulty in female survivors of sexual abuse. One study reported that 68% of sexually assaulted female participants reported fear of sex as the most common sexual difficulty (Becker et al., 1982). Sexual trauma induces different effects on sexual desire and arousal. Some survivors describe decreased sexual desire (van Berlo & Ensink, 2000), while others experience hyperarousal and an increased drive for sex (O'Callaghan et al., 2019; Weaver, 2009). Regardless of the difficulty, sex, formerly associated with intimacy or pleasure, may now evoke sexual distress (Stephenson et al., 2012).

Sexual distress or sexual-related personal distress is distinguishable from generic psychological distress as it encompasses distress arising from impaired sexual functioning and sexual difficulties (Derogatis et al., 2002). Sexual distress is characterised by viewing one's sexual difficulties as a negative aspect of the self and can manifest as shame (Derogatis et al., 2002). Shame is commonly linked to sexual trauma and sexual difficulties (Ellis, 1981). A scoping review found that shame following sexual abuse induced the avoidance of sex, the onset of sexual difficulties, and difficulties with intimacy in relationships (MacGinley et al., 2019). It is common for female survivors of sexual assault to experience

sexual shame alongside impairments to sexual functioning (Pulverman & Meston, 2020b). Sexual shame may cause women to develop a negative sense of self, influencing how women express and consider their sexual selves (Maltz, 2001).

Additionally, an experience of sexual trauma alters how survivors view and think about sex (O'Callaghan et al., 2019). Women may develop a heightened focus and misinterpret any sexual stimuli as threatening (Barlow, 1986). To manage this, women may develop adaptive strategies such as dissociation or learn to reorient their cognitions and attention away from sexual experiences that support sexual functioning (Abdolmanafi et al., 2016; Barlow, 1986). These coping strategies are adaptive during the sexual assault to cope with the traumatic experience; however, it is unhelpful in present sexual experiences as it can impact sexual satisfaction and functioning (Brotto et al., 2012; Rellini, 2008). Characteristics of sex may also be reminiscent of the experience of sexual assault, which can trigger flashbacks and panic attacks, disrupting sexual activity (O'Driscoll & Flanagan, 2016; Sprei & Courtois, 1988). It is worth noting that not all survivors of sexual assault will experience sexual distress or sexual difficulties (Hayes et al., 2006). Some survivors of sexual assault will not view changes to their sexual functioning as distressing. There are aspects of difficulties with sex after the sexual assault which researchers may consider functional instead of maladaptive (Gewirtz-Meydan, 2022a).

Psychological Interventions for Sexual Assault

Despite the prevalence of sexual distress in female survivors of sexual assault, there was limited research identifying treatment. Previous systematic reviews predominantly evaluated the effectiveness of psychological interventions on psychological outcomes, rather than the psychosexual outcomes in the aftermath of sexual assault (Parcesepe et al., 2015; Regehr et al., 2013). This suggests that sexual functioning may not have been regarded as an important treatment outcome for survivors of sexual assault.. In addition, evidence from a

meta-analysis found that current psychological treatments for post-traumatic stress disorder following sexual assault did not improve sexual functioning in women (O'Driscoll & Flanagan, 2016). Despite the established association between sexual assault and sex-related difficulties and distress, it seems rare for treatments to consider women's psychosexual functioning after incidents of sexual assault (Pulverman & Meston, 2020; Regehr et al., 2013). Therefore, it is necessary to develop and advance current treatment for women's sexual difficulties following sexual assault.

Psychosexual Interventions for Sexual Difficulties

Traditional psychosexual therapies such as models proposed by Masters & Johnson (1970) which aim to alleviate sexual difficulties, fall short in treating sexual difficulties following sexual trauma. Traditional psychosexual interventions do not consider the underlying effects of trauma and how it interacts with standard psychosexual approaches (Althof et al., 2005; Maltz, 2012; Nadelson, 1982).

Sexual distress manifest differently in women with and without a history of sexual assault which is suggestive of different mechanisms that underlie these problems (Pulverman et al., 2018). Female survivors of sexual assault with psychosexual difficulties were associated with higher levels of shame and lower levels of self-perceived sexual attractiveness compared to non-abused women with sexual difficulties (Kilimnik & Meston, 2016; Pulverman & Meston, 2020). Research has shown that survivors of sexual assault process sexually relevant information differently to non-abused women (Meston & Heiman, 2000). Sexual difficulties in survivors of sexual assault may stem from avoidant coping strategies which were implemented in an attempt to keep oneself safe, which may not be the case for non-abused women (Bird et al., 2014; Staples et al., 2012).The different mechanisms that underlie sexual difficulties may impact the way women with a history of sexual assault respond to traditional psychosexual approaches. Indeed, female survivors of sexual assault were found to have a lower response to

typical sex therapy than non-abused women (Maltz, 2001; Pulverman et al., 2018). Considering the literature, there is precedence for the development of an integrative psychosexual intervention for female survivors of sexual assault.

Intervention informed by trauma and psychosexual theory.

Integrative treatments were recommended for psychosexual difficulties (Weeks, 2005). The literature suggests that tailored treatments for female survivors of sexual assault with sexual distress should integrate trauma recovery work with aspects of psychosexual therapy (Leonard & Follette, 2002; Maltz, 2002). Potential models that may benefit integration with sex therapy and trauma work for female survivors of sexual assault with sexual distress are Mindfulness-based approaches and Compassion-Focused Therapy (Tilley et al., 2023; Vosper et al., 2021).

Mindfulness-based approaches. Mindfulness can be defined as being in the present moment with non-judgemental awareness (Hanh & Hoa, 1976). Mindfulness-based interventions have shown promise for survivors of sexual assault in improving symptoms of post-traumatic stress disorder (PTSD) and depression (Tilley et al., 2023). Mindfulness improved women's sexual difficulties (Banbury et al., 2021; Stephenson & Kerth, 2017). It encourages women to accept one's thoughts and move away from avoidant coping strategies or self-critical thoughts about their sexual function (Brotto et al., 2012). This decreases sexual distress (Guyon et al., 2023). Mindfulness is also encompassed in sensate focus which encourages focusing on the immediate sensory experience (Masters & Johnson, 1966; Weiner & Avery-Clark, 2014). The systematic review, part of this doctoral thesis, identified one study which found mindfulness-based therapy effective in improving sexual desire, arousal, and levels of sexual distress in female survivors of sexual assault (Brotto et al., 2012). Together, the evidence shows the promise of mindfulness as a model which benefits female survivors of sexual assault with sexual distress.

Compassion-Focused Therapy. Compassion-Focused Therapy (CFT) is a multimodal therapy developed by Paul Gilbert (2009). It encompasses aspects of Buddhist teaching, Cognitive Behavioural therapy (CBT), evolutionary theory, neuroscience, and social psychology (Gilbert, 2009). Compassion within the CFT framework is "the sensitivity to the suffering of self and others, with a commitment to relieve and prevent it" (Gilbert 2014, p. 19). The main objective of CFT is to guide individuals to become aware and understand their difficulties whilst motivating the self to alleviate them and respond in a compassionate way (Gilbert, 2014). For psychosexual distress this implies becoming aware that there are sexual difficulties which are distressing, and turning towards the distress to understand and alleviate it (Vosper et al., 2021). The literature indicates that CFT is helpful for survivors of sexual assault who may experience shame and have difficulties with self-compassion due to their experience of trauma (Lee & James, 2012; McLean et al., 2018; Scoglio et al., 2018). Vosper and colleagues (2021) proposed the principles of CFT to be therapeutic for psychosexual difficulties as it provides a normalising and de-shaming approach to sexual distress and difficulties.

Recently, a pilot study examined the effectiveness of a CFT psychosexual group therapy for women with Genito-Pelvic Penetration Disorder (Saunders et al., 2022). After the intervention, most participants reported increased self-confidence in managing their sexual difficulties, decreased sexual distress, and increased self-compassion (Saunders et al., 2022). The evidence supports CFT independently for psychosexual difficulties and sexual trauma. However, no studies have been conducted using CFT for psychosexual difficulties following sexual assault.

Online Intervention

Online and internet-based interventions have been increasingly utilised to make treatment more accessible. The literature demonstrates women who experience sexual assault

or sexual distress may avoid accessing treatment due to societal barriers such as perceived shame (Abavi et al., 2020; DeLoveh & Cattaneo, 2017). In a national survey, less than one in five women who reported psychosexual difficulties sought help (Field et al., 2013).

Online guided-self-help was the chosen modality for this study as it widens access to treatment in a population who may experience shame and stigma regarding help-seeking (Levin et al., 2018; Mahar et al., 2022). This is particularly helpful for women who face practical barriers to accessing services. For example, in areas of England that do not have provisions for sexual health as few services specialise in treating sexual difficulties in combination with trauma (Hughes et al., 2018; Kingsberg et al., 2019; Mitchell et al., 2013; Quinn et al., 2018). Additionally, services specialised in working with sexual health and trauma may have a long waitlist. Online interventions were also more cost-effective and easier to offer on a larger scale (Tate et al., 2009). The development of an online guided-self-help resource supports individuals on the waiting list for services or individuals who do not feel ready for formal therapy (Ullman & Filipas, 2001).

Previous studies, such as a pilot randomised control trial, found online guided self-help effective in improving sexual functioning in women with vaginismus (Zarski et al., 2017). A review of internet-based treatment for sexual difficulties demonstrates the efficacy of online interventions in increasing accessibility for treatment and improving sexual functioning outcomes (Mahar et al., 2022). Overall, the literature suggests online interventions for sexual difficulties were acceptable and efficacious.

Research Gap

Taking into account the limited research identifying treatment, the movement towards integrated models of psychosexual therapy and the stigma associated with accessing formal therapy, the current study developed an online integrative treatment for women with sexual distress following sexual assault. The literature demonstrates the potential of a CFT-informed

guided self-help intervention, which integrates aspects of mindfulness, trauma theory and psychosexual approaches (Brotto et al., 2012; Maltz, 2001; Vosper et al., 2021). An online guided self-help intervention would increase access to a population who may have difficulties with help-seeking (Abavi et al., 2020).

The proposed intervention

This study proposed a CFT-informed online four-session guided self-help intervention for sexual distress, for female survivors of sexual assault. The intervention aimed to build women's confidence in returning to sex instead of "fixing" sexual difficulties or increasing sexual activity. By exploring an individual's sexual distress through a normalising framework, the objective was to increase women's awareness of their difficulties, encourage a shift towards self-awareness and rebuild their relationship with their sexual self in a compassionate manner (Maltz, 2001). It was expected that indirectly, this will reduce sexual distress and although not the goal of the intervention, improve sexual functioning. To the researcher's knowledge, no research projects have developed integrative guided self-help materials for female survivors of sexual abuse targeting sexual distress. The intervention incorporated aspects of psychosexual therapy such as sensate focus (Masters & Johnson, 1980), CFT (Gilbert, 2009; Lee & James, 2012; McLean et al., 2018; Vosper et al., 2021), mindfulness-based therapy (Brotto et al., 2012) and trauma-focused CBT (Cohen, 2004). Although these are independent interventions, there are overlaps between these treatments, such as the ideas of non-judgement in CFT and mindfulness-based therapy.

CFT emphasises an evolutionary-based framework and encourages acts of responsibility to understand and manage difficulties (Vosper et al., 2021). Psychoeducation about the tricky brain and the body's reaction to trauma encouraged non-judgement and normalises difficulties (Pulverman & Meston, 2020). The three-systems model was introduced as a framework to consider sex, emotions and their relationship to sexual distress

(Gilbert, 2009; Vosper et al., 2021). Compassion was considered as a way of activating the soothing system to develop kindness for one's difficulties in a non-judgemental way to reduce sexual shame and distress (Gilbert, 2009). Materials encouraged women to challenge their sexual beliefs and the 'inner sex critic' to develop a compassionate discourse about sexual distress (Vosper et al., 2021). In terms of mindfulness, it was included to encourage women to move away from self-critical thoughts or avoidant coping strategies to be present in the moment with non-judgement (Brotto et al., 2012). Regarding psychosexual approaches, the dual control model of sexual arousal was considered in relation to evolutionary theory and the experience of trauma (Janssen & Bancroft, 2007; Velten, 2017). Mindfulness was also encompassed in sensate focus which encouraged self-focus on the individual's immediate sensory experience without the pressure of orgasm (Masters & Johnson, 1966; Weiner & Avery-Clark, 2014). Participants were also encouraged to communicate with their partners to create a safe space for sexual exploration. Other activities included writing a compassionate letter, self-practice and breathing exercises. The compassionate letter incorporates aspects of sexual schema expressive writing which was effective in modifying sexual schema in survivors of sexual assault and improving sexual distress (Kilimnik et al., 2020; Meston et al., 2013). To build on compassionate engagement, non-judgement was emphasised throughout the intervention with participants being reminded not to respond negatively to their difficulties by shaming or criticising the self (Gilbert et al., 2017). In line with non-judgement, all the activities included in the materials were optional and participants were constantly reminded that they had a choice in what activity they engaged with. It was important that women felt in control during the intervention since an experience of sexual violence can exacerbate feelings of powerlessness (Kalra & Bhugra, 2013).

The project took guidance from experts by experience to develop materials collaboratively. In addition, clinical psychologists from Bart's NHS Trust Sexual Well-being

Service collaborated on the intervention where similar materials were adopted in a group setting. The intervention was developed, assuming it can be used alone or adjunctive to other psychological interventions. As this is a novel intervention, the study adopted a single-case experimental design (SCED) (Morley, 2017). SCEDs are appropriate for assessing the feasibility, acceptability and preliminary effectiveness of novel interventions (Kazdin, 2019; Krasny-Pacini & Evans, 2018). The study aimed to test the following research questions:

1) Was the developed online guided self-help intervention feasible for female survivors of sexual assault? Feasibility was assessed by the time required to recruit target participants and the number of participants who accessed and completed all four intervention sessions during the intervention phase.
2) What were the participants' evaluations on the acceptability of the online guided self-help intervention as a treatment for sexual distress? Acceptability was defined as how willing participants were to use the materials and their satisfaction with its content (Bowen et al., 2009).
3) Was there an initial indicator that the intervention is effective?
    a) Can the online guided self-help intervention reduce shame, self-criticism, guilt, and improve compassion, motivation, and normalising on idiographic measures?
    b) Can the online guided self-help intervention lead to significant change in standardised measures?

Method

Participants

Recruitment Procedures

Participants were recruited through the NHS and charities. Within the NHS, the study was advertised within a Sexual Health Service with leaflets circulated within the clinic (Appendix B). The leaflet contained a QR code for the participant information sheet (Appendix C). Participants were also recruited through charities such as My Body Back, a charity organisation that works with women who experience sexual assault in the UK. My Body Back shared the study via an Instagram post (Appendix D) with a link to the participant information sheet. Three additional sexual violence charities were approached and asked to aid in recruitment. Two of these charities agreed to share information about the study. Compensation was not offered to participants in the study.

Sample Size

Power in SCEDs are not determined by the number of participants but by the power of repeated measures (Krasny-Pacini & Evans, 2018). A 'three-point guideline' has been proposed as the minimum requirement for control, suggesting a sample of at least three participants (Lanovaz & Rapp, 2016). However, based on What Works Clearinghouse (WWC) guidance, having five or more replications enhances the generalization of results (Kratochwill et al., 2010). Therefore, the researchers aimed to recruit a maximum of 20 and a minimum of six participants to account for attrition. A similar number of participants were used in peer-reviewed SCED publications (Au et al., 2017; Stynes & McHugh, 2023).

Inclusions & Exclusion Criteria

Inclusion criteria.

1. Cis-gendered women who were experiencing sexual distress with a history of sexual assault.

2. Residents of the United Kingdom.
3. Individuals aged 18 or above.
4. Individuals were able to read English to provide consent and meaningfully engage with the intervention.
5. Individuals with access to a smartphone or computer to engage with the intervention.
6. Individuals with fleeting suicidal thoughts or superficial self-harm with strong protective factors may be included.

Exclusion criteria.

1. The sexual assault occurred within the last 12 months.
2. Individuals with severe acute mental health difficulties.
3. Individuals who rated "nearly every day" or "more than half the days" on the PHQ-9 single suicide screening question suggested they experienced thoughts of death or self-harm and did not indicate they were currently accessing further social or psychological support.

Individuals who have been sexually assaulted have a higher chance of experiencing suicidal thoughts or self-harm behaviours than the general population (Plunkett et al., 2001; Ullman, 2004). Individuals with fleeting suicidal thoughts or superficial self-harm with strong protective factors were included in the study. Since it was difficult to assess for risk unless participants reached out for triage, participants would be excluded if they did not have social support systems or access to psychological support.

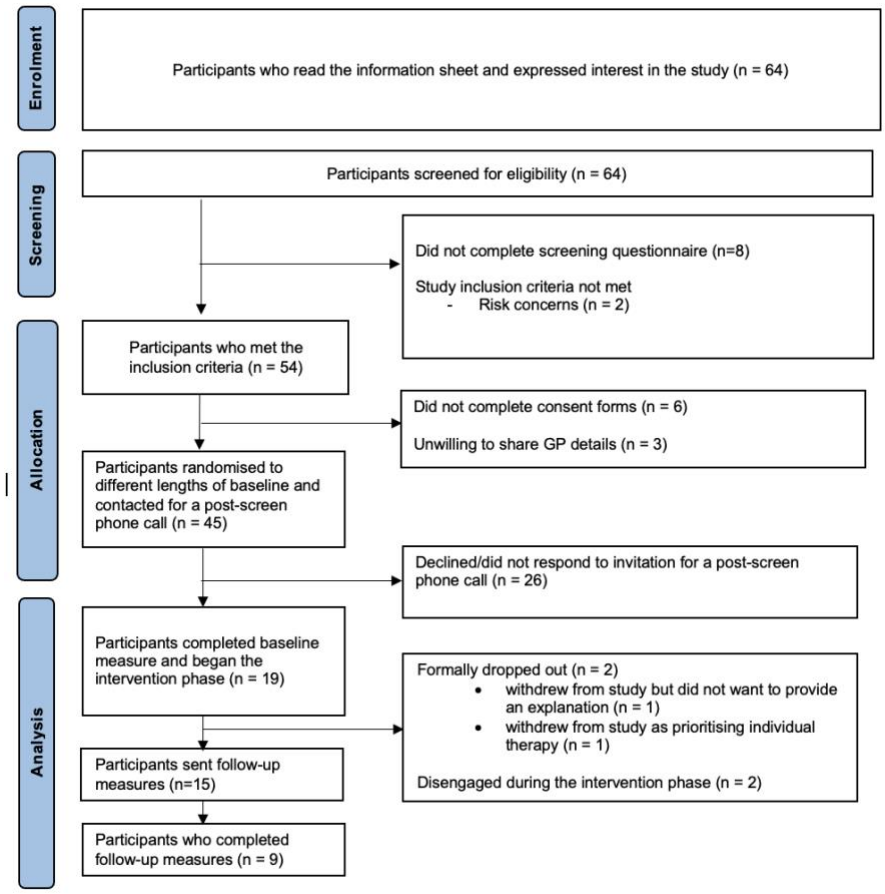
Participant Characteristics

Sixty-four women accessed the online information sheet within 24 hours of the study advertisement being posted on social media. These women began the screening

questionnaires. Eight women did not complete the screening questionnaire, and two individuals were not eligible for participation due to risk concerns. Six women were eligible for the study but did not complete the online consent form. Two women signed the consent form but were unwilling to provide their GP details and were screened out of the study. All eligible women were randomised to varying lengths of baseline and contacted by email to schedule a phone call to collect demographic information, verify risk and discuss the project's next steps. Nineteen women responded to the email and began the baseline phase following the phone call. The participant flow chart is displayed in Figure 2. Demographic information for participants who began the intervention is displayed in Table 6 (refer to Appendix G for more detailed participant demographic information).

Figure 2

Participant flow chart



Procedure

Potential participants accessed a detailed participant information sheet via an online link from the study advertisement. Interested women completed an online screening questionnaire which assessed eligibility (see inclusion and exclusion criteria). Women who did not meet the inclusion criteria were deemed inappropriate for the study and redirected to a debriefing page with signposting resources.

Table 6

Participant characteristics for length of baseline, age, ethnicity, and current access of therapy

Participant	Length of Baseline	Age	Ethnicity	Current therapy	PHQ-2	GAD-2
A	6	35	White British	Yes	4	3
B	7	38	Asian Pakistani British	No	5	4
C	9	27	White British	Yes	1	2
D	14	33	White British	Yes	5	6
E	5	33	White British	No	1	3
F	10	42	White British	Yes	0	3
G	5	34	White British	No	3	5
H	14	32	Arab and White British	Yes	4	5
I	11	33	White British	No	2	6
J	12	27	White British	No	0	1
K	9	35	White British	Yes	2	3
L	8	32	White Scottish	No	2	1
M	10	34	White British	No	0	3
N	11	20	White British	No	2	1
O	6	28	White British	Yes	1	3
P	7	22	White and Black Caribbean	No	2	5
Q	5	36	White British	No	5	6

Excluded women were informed that the research aimed to provide the intervention materials on a wider scale through My Body Back once the intervention was tested and deemed acceptable. Eligible participants were directed to complete consent forms, provide their GP details, and complete the following standardised measures: Female Sexual Distress Scale – Revised (FSDS-R; DeRogatis et al., 2008)), Female Sexual Function Index (FSFI; Rosen et al., 2000) and State Self Compassion Questionnaire (SSCS-S; Neff et al., 2021).

Participants were randomised using a random number generator for different durations of the baseline phase. After completing the screening questionnaire, participants were emailed to schedule a phone call with the primary researcher to verify risk and complete the demographic questionnaire. Participants who completed the screening call started the baseline phase. During the baseline and intervention phase, participants received daily email reminders to complete the daily measures. Participants were sent each intervention session by email that contained a Qualtrics link to the video session and handout. Using a spreadsheet, the primary researcher tracked participant flow through the baseline and intervention phases. At follow-up, a link to a Qualtrics form was emailed to participants for completion.

Risk and Adverse Event Monitoring Procedures

Risk was assessed as part of the screening questionnaire based on a PHQ-9 item, "Over the past two weeks, how often have you been bothered by thoughts that you would be better off dead or of hurting yourself in some way?". Individuals who scored “always” on the questionnaire and reported no social support were screened as ineligible for the study.

Throughout the study, participants were not asked to disclose or think directly about their experience of sexual trauma. However, the researchers recognised that the intervention could elicit difficult or upsetting emotions in participants. To counter this risk, signposting information regarding crisis psychological support was provided to participants at the end of each intervention session and the daily idiographic measures. Participants were prompted to

prioritise their well-being and encouraged to inform the primary researcher if they were concerned for their own safety due to engagement with the study. Participants could request and access one support session from clinicians at the NHS Sexual Health Service for triage. As there was little to no professional contact throughout the study, participants were required to provide their GP information. Participants were informed that their GP would only be contacted if the participant raised an identified risk with the primary researcher. These risks included increased self-harm behaviour, increased suicidal risk or significant deterioration of mental health. Under these circumstances, confidentiality could be breached, and the primary researcher may contact the participant's GP. Participants were recommended to contact their GP or local crisis services if they had immediate safety concerns. No participants raised safety concerns or required a triage appointment.

Development of Intervention Materials

The intervention scripts and handouts were developed by the primary researcher. At the initial stage of development, materials utilised by a CFT informed psychosexual group following sexual trauma within Bart's NHS Foundation Trust Sexual Well-being Clinic were reviewed for relevant content. The group materials guided the core component of the intervention which included socialisation to concepts of CFT such as the tricky brain, the three systems model and the inner sex critic. To supplement these materials, the extensive systematic review, part of this doctoral thesis informed the researcher of relevant empirical studies, and psychosexual models which enhanced the intervention contents.

Clinicians at the Sexual Wellbeing Clinic were consulted during the development process to ensure the intervention addressed the needs of female survivors of sexual assault who experience sexual distress. The researcher also collaborated with an expert by experience to refine the intervention's content, language, and activities to ensure sensitivity. The final intervention comprised of four structured sessions that integrates CFT, mindfulness,

psychosexual approaches and psychoeducation. By integrating different models, the intervention considers the multifaceted nature of sexuality while remaining rooted in evidence-based practice. Table 30 displays a summary table of the session contents.

Study Design

This single-case experimental study adopted a multiple baseline non-concurrent AB design with a one-month follow-up where A refers to the baseline phase and B corresponds to the intervention phase. Figure 3 shows a flow chart of the study design. SCEDs differ from typical experimental designs where one group is compared to another (Au et al., 2017; Stynes & McHugh, 2023). In a SCED, participants function as their own control, with data collected during the baseline phase compared to data in the successive phase (Hammond & Gast, 2010). Upon introducing the intervention in Phase B, data was compared to the baseline phase to evaluate change (Lane & Gast, 2014). SCEDs provide high-quality research for studies with small sample sizes and were appropriate for testing novel interventions (Krasny-Pacini & Evans, 2018). An AB design was chosen for this study as it was suitable to test the feasibility of interventions (Manolov et al., 2014). it was advised that AB design SCED were inferior for determining intervention effectiveness due to a lack of replications (Kratochwill & Levin, 2014). However, more robust SCED designs such as ABAB were not recommended for psychological intervention as it is uncommon for participants to return to baseline after intervention (Kazdin, 2019).

Adopting a multiple baseline approach allowed for a staggered introduction of the intervention, which rules out threats to the internal validity of AB design (Christ, 2007). The multiple baseline approach improves reliability of measure changes in scores due to the intervention instead of extraneous factors (Smith, 2012). Following guidelines for multiple baseline designs, this study had more than six phases with more than five data points to meet the WWCstandard without reservation (Kratochwill et al., 2010).

Table 30

Summary table of the session contents included in the online guided self-help intervention for sexual distress following sexual assault

Session	Contents
1	• Breathing exercise as an introduction to present moment awareness. • Psychoeducation on evolutionary theory such as the tricky brain. • Common trauma responses following sexual assault. • The three systems model is introduced as a framework to consider sex and emotions and its relation to sexual difficulties. • Compassion is introduced as a way to activate the soothing system and develop kindness for one's difficulties in a non-judgemental way to reduce sexual shame and distress.
2	This session focused on introducing mindfulness as a way of being present in the moment without judgement. • Mindfulness is explored in relation to sexual trauma responses and developing compassion towards the self. • Mindfulness attention practice by Paul Gilbert. • How mindfulness and grounding techniques aid with the management of flashbacks. • How to communicate with sexual partners to develop a safety plan for sex.

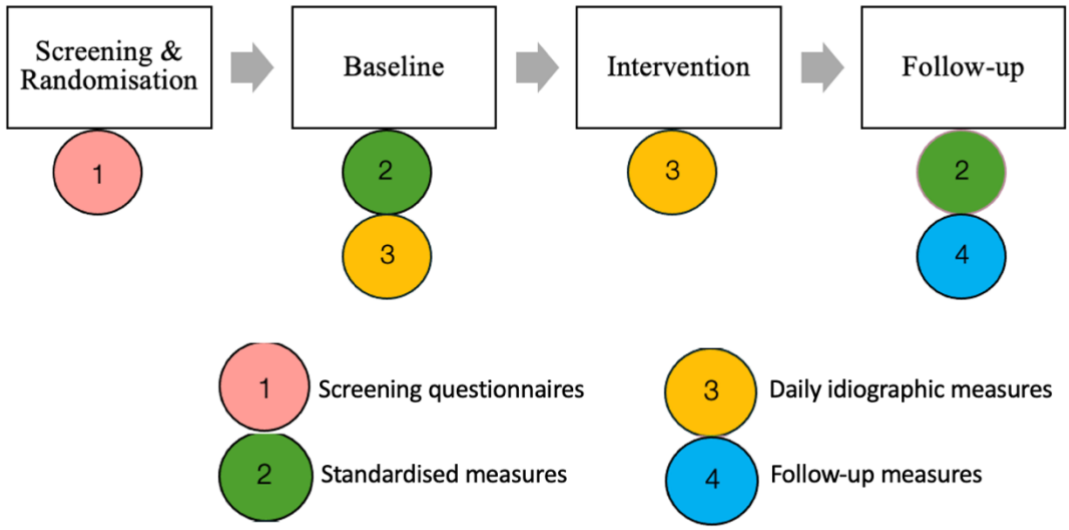
Session	Contents
3	This session covers desire and the sexual self. • Understanding the dual control model of sexual arousal in relation to evolutionary theory and life experiences. • Understanding and challenging one's sexual beliefs and the 'inner sex critic' to develop a positive compassionate discourse in relation to sexual distress. • Redefining the sexual self to build ownership of the body and rebuild one's relationship with the self. • Compassionate letter writing exercise by Paul Gilbert as a component of expressive writing.
4	This session considers psychosexual techniques and relationship with others. • Compassionate colour exercise by Paul Gilbert. • Introducing and reflecting on the conditions for good sex model. • Considering how relationship and intimacy changes after traumatic sexual experiences, and how this relates to the conditions for good sex model. • Skills of compassionate action through self-practice and sensate focus to provide new ways to approaching touch without demands of arousal.

Baseline Phase

Phase A in a SCED refers to the baseline period before the intervention phase of the study. Participants were randomised using a random number table to varying baseline lengths ranging from 5 to 14 days. Participants completed standardised measures at the start of Phase A and idiographic measures daily. Data collected during the baseline phase was used to establish a stable reference point for comparison with the intervention phase.

Figure 3

Flow chart of study design and procedure



Note: 1: screening measures, 2: standardised measures, 3: daily idiographic measures, 4: follow-up measures.

Intervention Phase

Phase B refers to the four-week intervention period of the study following the baseline phase. During Phase B, participants engaged in weekly guided self-help materials and completed daily idiographic measures.

Intervention Material. ***The intervention consisted of four weekly sessions. Each session included a 15–20-minute video which participants accessed through an online link sent via email with complimentary handouts. Refer to Appendix F for the intervention script and handouts. can Follow-Up***

The follow-up period was conducted one month after the intervention phase. Participants completed the standardise measures during follow-up as well as the Client Satisfaction Questionnaire (CSQ; Attkisson et al., 1987) and qualitative feedback form.

Ethical Considerations

The study was reviewed by the NHS Research Authority Committee. The Health Research Authority granted a favourable ethical opinion on the 29th of November 2022 (Appendix I). The protocol for the study was published on ClinicalTrials.gov on the 8th of February 2023 (Appendix J). Royal Holloway University of London Research & Ethics Committee granted ethics on the 28th of October 2022 (Appendix K).

Expert by experience involvement

Survivors of sexual assault were consulted during the development of this study to provide feedback on the session materials and measures used throughout the study. Experts by experience supported the development of the visual analogue scales and provided feedback on the intervention scripts and handouts, which were implemented in the final version. Experts by experience will also be asked to assist in the dissemination of this project.

Measures

The study included four types of outcome measures that were completed electronically. Screening measures included a risk screen, demographic questionnaire, PHQ-2 and GAD-2. Standardised measures were completed once at baseline and follow-up. Idiographic measures included six visual analogue scales and were completed daily during

the baseline and intervention phases. The follow-up measures were a qualitative feedback form and the Client Satisfaction Questionnaire.

Screening Questionnaire

The screening questionnaire (Appendix L) was developed for this study to determine participants' eligibility. Assessment of sexual assault was conducted with the question "are you a survivor of sexual assault" and a tick box for "yes" or "no". Individuals were asked about their level of social support and to provide their GP details. A risk screen based on the PHQ-9 suicide item was utilised as an initial risk assessment, "over the past two weeks, how often have you been bothered by thoughts that you would be better off dead or of hurting yourself in some way?" (Kroenke et al., 2003). The response was scored on a four-point scale (0: not at all; 1: several days; 2: more than half the days; 3: nearly every day). The PHQ-9 suicide item has modest validity in assessing suicide risk (Chung et al., 2023) and a further risk screen was conducted with the primary researcher.

Demographic Questionnaire

A demographic questionnaire (Appendix M) was used to collect information about the participants, age, ethnicity, city, employment status, current or previous interventions accessed and the nature of the intervention. The demographic questionnaire was completed over the phone by the primary researcher and took approximately 15-20 minutes.

The Patient Health Questionnaire 2-item (PHQ-2; Kroenke et al., 2003)) and Generalised Anxiety Disorder 2-item (GAD-2; Spitzer et al., 2006). The PHQ-2 & GAD-2 are brief questionnaires incorporated into the screening questionnaire to collect demographic information. These self-report questionnaires were scored on a four-point scale (0: not at all; 1: several days; 2: more than half the days; 3: nearly every day) with a total score ranging from 0 to 6. A total score of 3 suggests clinical levels of depression or anxiety, which requires further

diagnostic evaluation. The PHQ-2 has been validated as a brief measure for depression (Kroenke et al., 2003). The GAD-2 also demonstrated acceptable to good psychometric properties and validity across multiple studies (Plummer et al., 2016; Sapra et al., 2020). However, these questionnaires were not used to identify participants with clinical levels of depression or anxiety. Instead, these were used to provide further demographic information about the sample.

Standardised measure

The Female Sexual Distress scale – Revised (FSDS-R; DeRogatis et al., 2008) The FSDS-R (Appendix N) is a self-report measure that assesses the level of sexually related distress in women. It was developed as a revised version of the 12-item Female Sexual Distress Scale (FSDS) to enhance the measure's sensitivity for hypoactive sexual desire disorder (DeRogatis et al., 2007). The revised version was utilised in this study as the additional item scores distress related to low sexual desire. Low sexual desire was commonly reported by female survivors of sexual assault (Weaver, 2009). The 13-item self-report questionnaire was scored on a five-point scale (0: never; 1: rarely; 2: occasionally; 3: frequently; 4: always). The total score for the FSDS-R ranged from 0 to 52, with higher scores indicating higher levels of sexual distress. The questionnaire had high internal consistency (Cronbach's $\alpha > 0.88$), high test-retest reliability ($r > 0.88$) and good discriminant validity for individuals with and without female sexual dysfunction (DeRogatis et al., 2007). The FDSD-R was used to indicate levels of sexual distress in participants.

The State Self-Compassion Scale Short Form (SSCS-S; Neff et al., 2021)). Most studies on compassion utilised the 26-item Self-Compassion Scale (SCS; Neff, 2003), which measures Neff's conceptualisation of global self-compassion. The SSCS-S was developed as a brief measure of state self-compassion (Neff et al., 2021). It measures the six components of self-compassion, allowing researchers to examine the impact of state self-compassion on well-

being (Neff et al., 2021). The SSCS-S situates participants and prompts them to consider self-compassion regarding a current difficult or painful situation. The SSCS-S (Appendix P) is a six-item self-report questionnaire scored on a five-point scale from 1 (not very true for me) to 5 (very true for me). The total state self-compassion score ranged from 0 to 5 and was calculated by averaging the mean of the six-items. The measure had a strong correlation with the long form of the SSCS (*r=0.96*). The SSCS-S displayed good reliability (Neff et al., 2021) and measures state levels of self-compassion. Additionally, the SSCS-S was used in the current study to examine change in self-compassion by the intervention. The SSCS-S has good psychometric properties and acceptable internal validity ($\alpha = 0.86$). In this study, the SSCS-S was completed at baseline and follow-up.

The Female Sexual Function Index (FSFI; Rosen, 2000). The FSFI (Appendix O) is a 19-item self-report outcome measure assessing six areas of female sexual (dys)function: desire, arousal, lubrication, orgasm, satisfaction, and pain. Each item was scored on a Likert scale from 0 to 5. Participants score themselves 0 on items if they did not engage in sexual activity in the past month. The total score of the FSFI ranged from 2 to 36, with lower scores indicating higher levels of sexual dysfunction. The total FSFI score was used in the current study to indicate change in the levels of sexual functioning from baseline to follow-up. Scoring and interpretation of the FSFI was guided by a paper published by Meston and colleagues (2019). A systematic review of 83 studies evaluated the measurement properties of the FSFI and reported strong criterion validity (*r= 0.79-0.99*), moderate internal consistency and sufficient reliability (*r = 0.61-0.98*) but of low quality (Neijenhuijs et al., 2019). Despite this, the FSFI is one of the most utilised validated measures and considered the gold-standard for measuring sexual functioning (Meston et al., 2020). The FSFI is a secondary outcome measure for this study.

Idiographic measures

The idiographic measure for this study utilised visual analogue scales (VAS). VAS was developed by reviewing the literature to identify mechanisms which underlie sexual difficulties in survivors of sexual assault. Shame, guilt and self-blame were identified as potential mechanisms for psychosexual dysfunction following childhood sexual abuse and overlapped with aspects of CFT (Gilbert, 2014; Pulverman et al., 2018). Other aspects of CFT, such as compassion, normalising and motivation would also be included (Neff et al., 2021; Vosper et al., 2021). Once the idiographic measures were developed, experts by experience reviewed the VAS and made amendments to the wording. VAS consists of a straight line with two ends. In the current study, one end signifies agree and the other disagree. Participants rated how much they agreed or disagreed with each statement. Six scales were constructed for this project and displayed in Table 7.

Table 7

Idiographic measures scales for the visual analogue scale

Scale	**Visual Analogue Scale Prompt**
Shame	I feel shame when I experience sexual distress
Guilt	I have feelings of guilt when I experience sexual distress
Self-criticism	When I experience sexual distress, I blame myself or my body
Self-compassion	When I experience sexual distress, I try to show myself warmth and comfort through my difficulties
Normalising	I understand my difficulties in the context of my experience
Motivation	I am motivated to put things in place to improve/address the difficulties in my sex life

Note: Constructs and visual analogue scale were developed in collaboration with Experts by Experience.

Follow-up Measures

Client Satisfaction Questionnaire (CSQ; Attkisson et al., 1987). The CSQ contains 8-items and is scored on a 4-point scale (Appendix R). The questionnaire measured client satisfaction and assessed comprehension, usability, engagement, perceived utility, and acceptability of the interventions. The total score for the CSQ ranged from 8 to 32, with higher scores indicating higher satisfaction. Permission was sought to adapt the questionnaire to focus on the satisfaction for the intervention. However, no response was provided by the researchers. The CSQ was utilised at the one month-follow-up to assess acceptability and satisfaction towards the intervention.

Feedback form. A qualitative feedback form (Appendix S) with open-ended questions was developed with experts by experience. Open-ended feedback questions were utilised for participants to describe their experience of the intervention in detail. Questions such as: “what was most (un)helpful about the four-week intervention?”, “in terms of where you are in your journey, was this the right time for you to complete this intervention?” and “would it have been more helpful to do it sooner or after more time has passed”. Participants were asked if they were able to complete all four sessions during the time intervention phase.

Data analysis

Was the developed online guided self-help intervention feasible for female survivors of sexual assault? Feasibility was assessed by the time required to recruit target participants and the number of participants who accessed and completed all four intervention sessions during the intervention phase.

What were the participants' evaluations on the acceptability of the online guided self-help intervention as a treatment for sexual distress? 'Acceptability' was defined as how willing participants were to use the materials and their satisfaction with its content (Bowen et al., 2009). This was accessed by scores on the CSQ and qualitative feedback form.

Can the online guided self-help intervention reduce shame, self-criticism, and guilt and improve compassion, motivation, and normalising on idiographic measures? To analyse idiographic outcome measures, visual analysis and non-overlap *Tau-U* analyses were conducted to compare baseline and intervention data points. Recommendations from WWC (Kroenke et al., 2003) guided visual analysis. Baseline data points were analysed for stability and to ensure minimal overlap with the intervention phase (Franklin et al., 2014; Smith, 2012). Level/central tendency, trend, and variability were plotted for baseline and intervention to assess phase pattern and intervention effects (Kratochwill et al., 2010). Improvements in scores was demonstrated in the visual analysis by a decrease in level or a downward trend for Shame, Guilt, and Self-criticism, or an increase in level or upward trend for Compassion, Motivation or Normalising from baseline to intervention.

Non-overlap Tau-U supplemented findings from visual analysis, which removed observer bias and detected more negligible effects (Kazdin, 2011). Tau-U is an effect size measure that combines Kendall's rank correlation test and the Mann-Whitney U statistic to calculate the proportion of data overlap between the baseline and intervention phases (Morley, 2017). *Tau-U* was computed using an online calculator (www.singlecaseresearch.org/calculators/tau-u; Vannest et al., 2016). Baseline stability was checked by *Tau-U* analyses. *Tau-U* controlling for baseline was used for variables which did not meet the criteria for baseline stability (Parker et al., 2011). Following visual analysis, a single omnibus *Tau-U* effect size was calculated which reflects the proportion of data non-overlap for each variable across participants.

Can the online guided self-help intervention lead to significant change in standardised measures? Jacobson's RCI was calculated to examine the difference between participants' baseline and follow-up scores on sexual distress (FSDS-R), sexual functioning (FSFI) & state self-compassion (SSCS-S). Reliable change assessed the likelihood of a change in score to be

statistically reliable rather than an outcome of measurement error (Jacobson & Truax, 1991). A change in score was considered reliable if the RCI was greater than +/- 1.96 (Jacobson & Truax, 1991). The Cronbach α statistic from previous studies was used as the measure of reliability. The study first looked for an externally valid criteria, such as a diagnostic cut-off score, to determine if the change was significant enough to be considered a clinically meaningful difference. Where there was no gold-standard cut-off score, Jacobson (1991) suggested the use of three criterions. Criterion A based cut-off scores on the mean and standard deviation from clinical populations, Criterion B based on scores on non-clinical populations and Criterion C takes into account data from the clinical and non-clinical group based on the probability of the score ending up in one population as opposed to the other (Jacobson & Truax, 1991). The clinical reference data was determined by choosing a study with a similar demographic to the demographic on the current sample (Morley, 2017). For the reference data for each measure used to calculate the reliable change (RC) and clinically significant change (CSC) refer to Appendix V. The Leeds Reliable Change Indicator excel calculator (Morley & Dowzer, 2014) was used to compute reliable change (RC) and clinically significant change (CSC) for the FSDS-R, FSFI and SSCS-S between the baseline and follow-up phase.

Results

Feasibility

The study had a recruitment target of 20 women to retain at least six participants. However, there was an over-recruitment of 64 individuals who expressed interest in the project within 24 hours of the study being advertised on social media by one charity. The response led to an early closure of recruitment, and no other sites conducted recruitment. Fifteen participants began baseline and accessed the intervention. Four women completed less than 50% of the daily measures and disengaged from the study without formally

dropping out. Nine participants completed the follow-up questionnaire. Eight out of nine participants who completed the follow-up questionnaire reported completing all four intervention sessions within the intervention period. The remainder participant completed three sessions.

Acceptability

No adverse effects, such as increased suicidal ideation or self-harming behaviours were reported by participants. None of the participants accessed the extra support provided by the Sexual Well-being Clinic. The mean score on the CSQ for nine participants was 23.67 (*SD* =3.08) at follow-up (refer to Table 8). Participant A provided the lowest CSQ score, although they maintained the same FSDS-R score and showed an improvement in FSFI from baseline to intervention. Qualitative feedback highlighted that mindfulness, grounding techniques, the psychoeducation of the three-system model, and the brain and body's reaction to trauma was the most beneficial aspect of the intervention. Most participants shared that the intervention's emphasis on non-judgement and normalisation allowed them to feel more compassionate and accept their sexual experience instead of forcing the expectation of intercourse. One participant shared that the way sex was talked was de-shaming while another participant reported feeling more empowered. One participant found the video format helpful. Four participants reported finding the sexual activities handout triggering as it reminded them of the sexual activities they could not do. However, these participants also reported that they knew the activity was optional and did not feel pressured to engage in them. Five participants reported that the intervention could have been extended and included voices of experts by experience, while two participants shared that the four sessions felt sufficient.

Table 8

Participant scores on the client satisfaction questionnaire

Participant	Total CSQ Score
A	19
B	23
C	28
F	23
G	29
J	24
K	22
O	22
P	23

Note. The CSQ was scored out of 32. It was not completed by participant D, E, H, I, L, M, N

Visual analysis and Tau-U for Idiographic Measures

Visual analysis was conducted for idiographic measures. Participants baseline varied from 5 – 14 data points, with the intervention phase having a maximum of 28 data points. Morley (2017) suggests the main parameters to be considered in systematically exploring single case data include the central tendency, trend, and variability to assess phase patterns (Kratochwill et al., 2010). The method used to calculate these measures were shown in Table 9. Due to the apriori randomisation of baseline lengths, the study could not ensure baseline stability before intervention implementation. Criteria for baseline stability were examined using the *Tau-U* calculator. Where baseline data did not meet the criteria for stability (p<.05), *Tau-U* corrected baseline was conducted to control for baseline trends. *Tau-U* analyses were conducted only for participants who completed at least one intervention session and when there were at least three data points in baseline and three data points in the intervention phases to meet the standard with reservation (Kratochwill et al., 2010). *Tau-U* analyses were conducted after imputing missing data through Last Observation Carried Forward (LOCF).

Table 9

Method used to calculate central tendency, trend & variability

Measure	Method use	Explanation
Level/ Central Tendency	Broadened Median (BMED)	The mean of three middle values when the data was rank ordered.
Trend	Running Median of 5 successive points (RM5)	The mean of successive sets of 5 data points from baseline to intervention
Variability	Trended range	Lines connecting the upper and lower data points in each half phase to capture change in variability across the whole phase.

Figure 4

Visual analysis graph legend

Idiographic outcome measures were presented in line graphs for each participant's VAS variable. Figure 4 depicts the graph legend for raw data, central tendency, and trend. Raw data was depicted by a continuous-black-lines with squares. The central tendency was represented by a black-dashed vertical lines and calculated prior to visual analysis. The trend between baseline and intervention was plotted with a green dotted line. Variability was assessed through Trended Range, as seen in Appendix S. Phase change was indicated by a vertical black dashed line. It is worth noting that it is sometimes difficult to distinguish between trend and central tendency on the graph, where they may be the same value as the raw data.

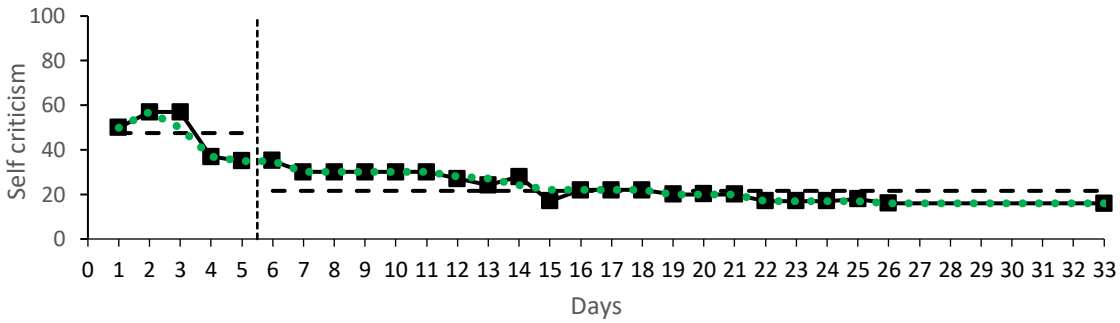
Management of Missing Data

The researchers have assumed missing data was missing at random (MAR), and Last Observation Carried Forward (LOCF) was used to manage missing values. LOCF is a process of replacing missing data by carrying forward the last score preceding the missing score.

LOCF was regarded as the most appropriate method to impute data for the visual analysis of this study (Peng & Chen, 2021). LOCF was chosen in line with the intent-to-treat principle, where even participants who did not fully comply with treatment are retained in analysis to test for intervention effectiveness (Montori & Guyatt, 2001; Salim et al., 2008). LOCF was only used to replace data within the same phase. Missing data from intervention would not be imputed by baseline scores. For participants who provided less than 60% of data points, data were imputed daily up to the closest intervention session. The last data point will then be carried forward to the end of the intervention phase. For example, as seen in Figure 5, if a participant completed less than 60% of data points and their last provided score was before the third intervention session, LOCF is only used to impute daily scores till the third week. The last provided score is then projected to the final score of the intervention phase. Although LOCF of subsequent values creates trends in the data and reduces the variability of the data, carrying forward the value even if participants did not finish the intervention assumes that participants did not improve between that time frame and prevented a type I error by making a type II error. For information about participants missing data, refer to Appendix U.

Figure 5

Example of participant scores which were imputed up until the third session, the last value was carried forward to the end.



Participant A. Participant A provided six baseline and 20 intervention data points. LOCF was used for eight missing data points. Figures A1 to A6 display her idiographic outcome measures. Table 10 shows A's *Tau-U* analyses. Baseline data across all measures were considered stable by *Tau-U* analyses. Visual analysis between the baseline and intervention phase suggests a decrease in levels of Shame and Guilt with a downward trend, while there was an increase and upward trend for Compassion. There were minimal changes between phases in the level for Self-criticism, Normalising and Motivation. For these measures the intervention phases showed an up-and-down trend. Non-overlap *Tau-U* analyses supported visual analysis. There was a significant decrease in Shame and Guilt and a significant increase in Compassion scores between baseline and intervention. The analyses suggest that the intervention positively affected participant A by improving Shame, Guilt and Compassion.

Table 10

Summary of Tau U analyses comparing A's measures from the baseline to intervention phase

Measure	*Tau*	*SD Tau*	*p value*	*90% CI*
Shame	-0.93	0.26	< .001***	[-1.00, -0.50]
Guilt	-0.67	0.26	.01*	[-1.00, -0.23]
Self-Criticism	0.25	0.26	.34	[-0.18, 0.68]
Compassion	0.80	0.26	<.001***	[0.37, 1.00]
Normalising	0.49	0.26	.06	[0.06, 0.92]
Motivation	0.02	0.26	.95	[0.42, 0.45]

Note. [c] = corrected baseline; *SD* = standard deviation; *CI* = confidence interval;
**= p <.05; **= p<.01, ***= p<.001*

Figure A1 Shame

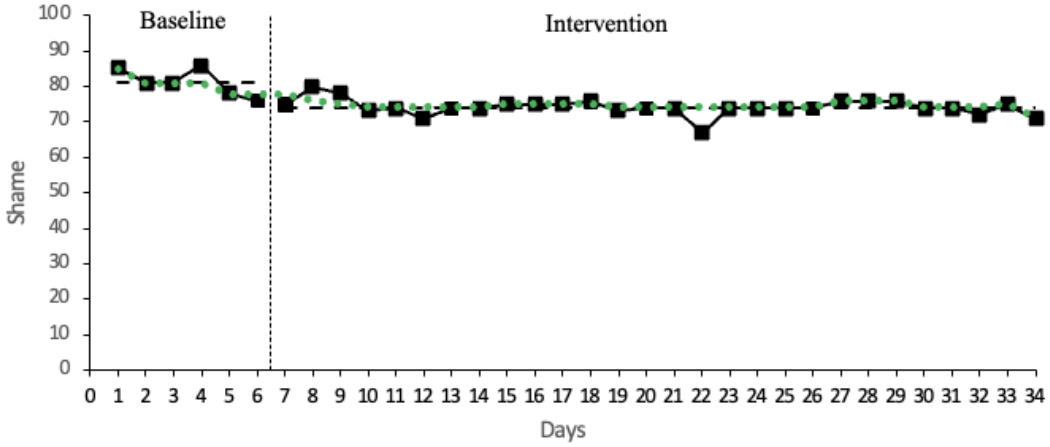


Figure A2 Guilt

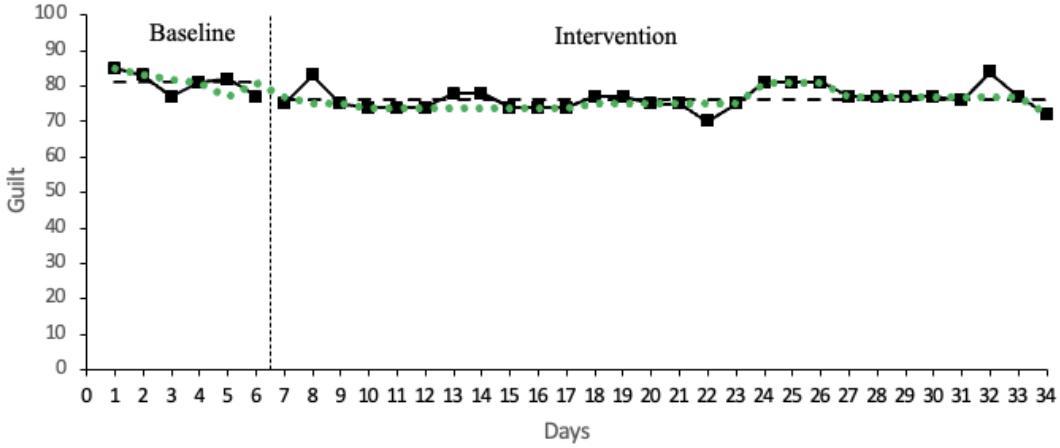


Figure A3 Self-criticism

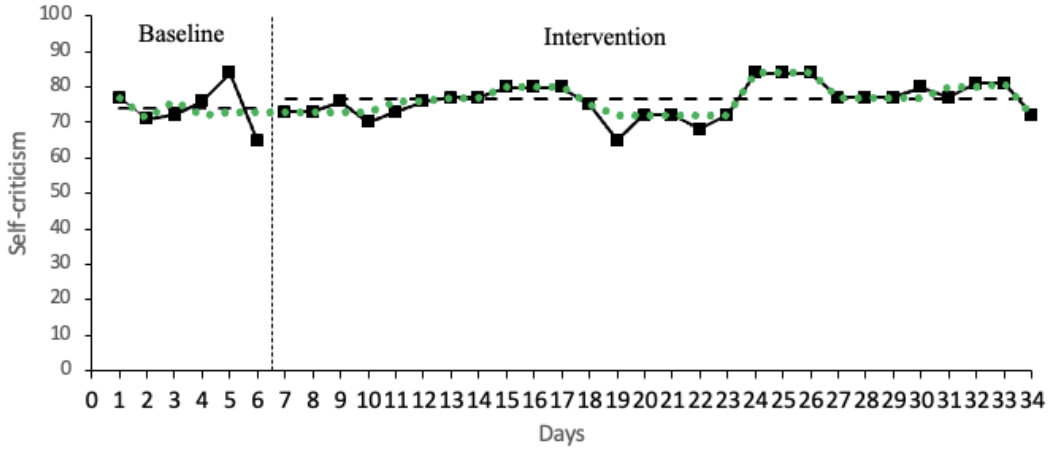


Figure A4 Compassion

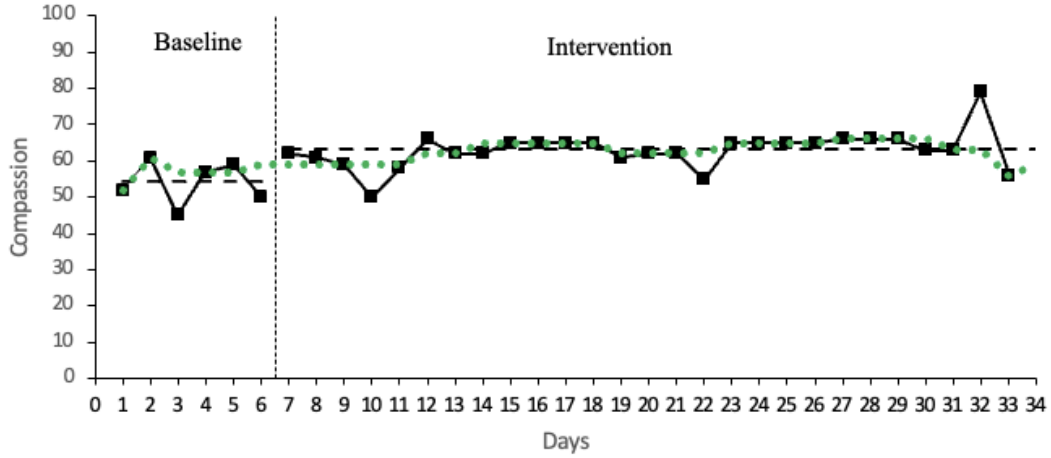


Figure A5 Normalising

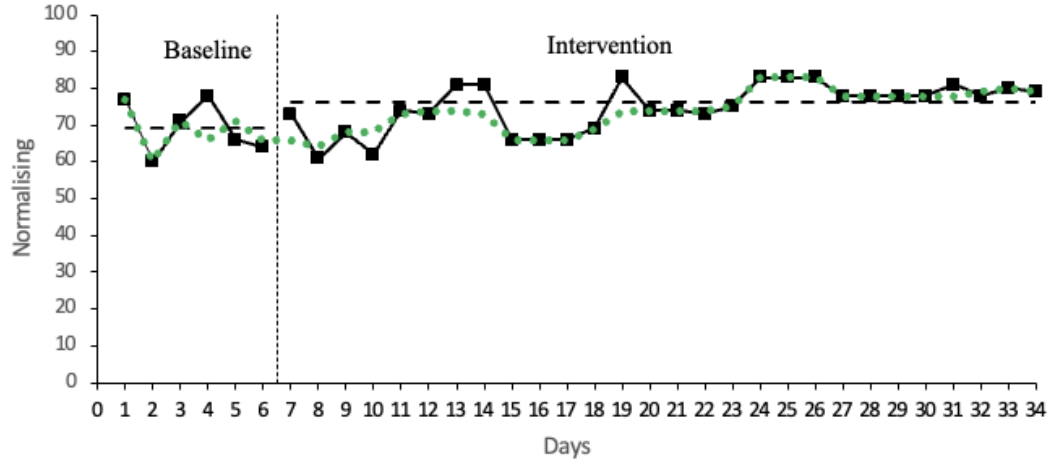
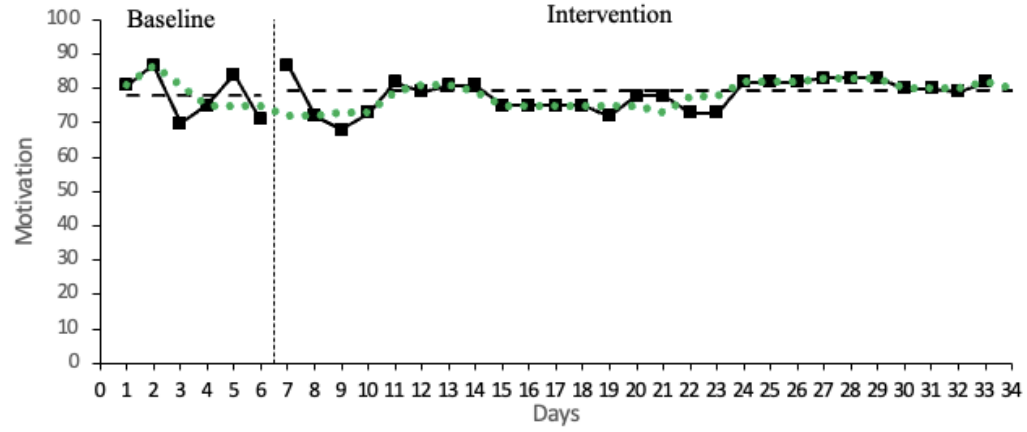


Figure A6 Motivation



Participant B. Participant B provided seven baseline and 25 intervention data points. LOCF was used to impute three missing data points. Figures B1 to B6 depict her outcome on idiographic measures. Table 11 displays B's *Tau-U* analysis. Criteria for baseline stability were deemed stable across all measures except Compassion. Visual analysis from the baseline to intervention phase for Shame, Guilt, and Self-criticism suggested there was minimal change in level and trend. Participant B's most significant change was in Compassion which increased in level and showed an upward trend. There was a slight increase in level and upward trend for Normalising and Motivation. Non-overlap *Tau-U* analyses corroborate visual analysis with significant improvements in scores for Compassion when controlling for baseline, as well as Normalising & Motivation.

Table 11

Summary of Tau U analyses comparing B's measures from the baseline to intervention phase

Measure	*Tau*	*SD Tau*	*p value*	*90% CI*
Shame	-0.16	0.25	.509	[-0.57, 0.24]
Guilt	-0.30	0.25	.224	[-0.71, 0.11]
Self-Criticism	-0.05	0.25	.853	[-0.45, 0.36]
Compassion[c]	0.93	0.25	<.001***	[0.52, 1.00]
Normalising	0.49	0.25	.048*	[0.08, 0.90]
Motivation	0.52	0.25	.037*	[0.11, 0.92]

Note. [c] = corrected baseline; *SD* = standard deviation; *CI* = confidence interval;
**= p <.05; **= p<.01, ***= p<.001*

Figure B1 Shame

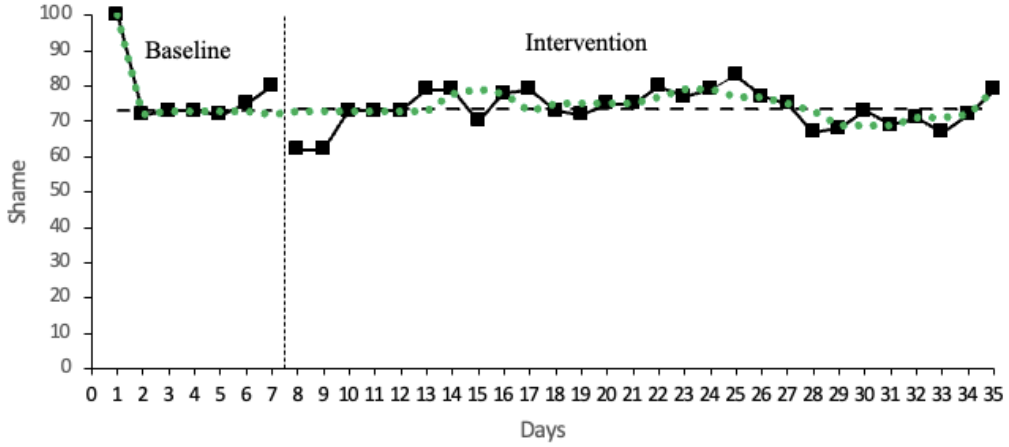


Figure B2 Guilt

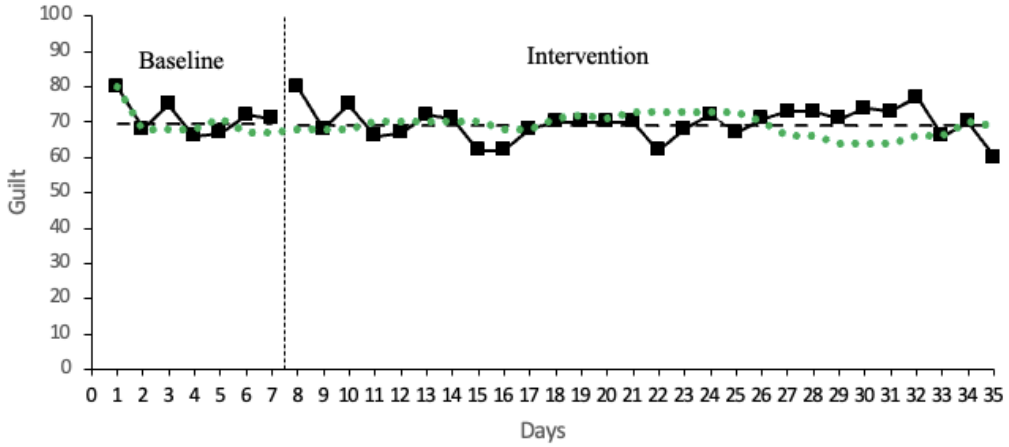


Figure B3 Self-criticism

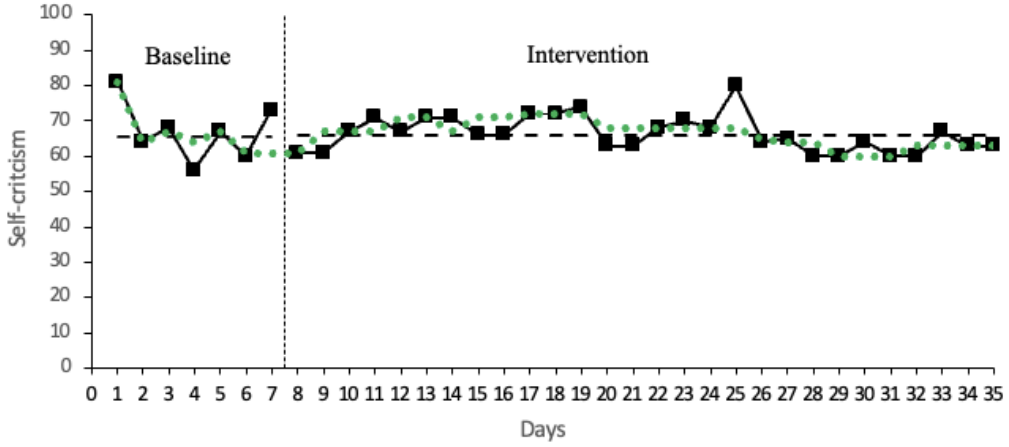


Figure B4 Compassion

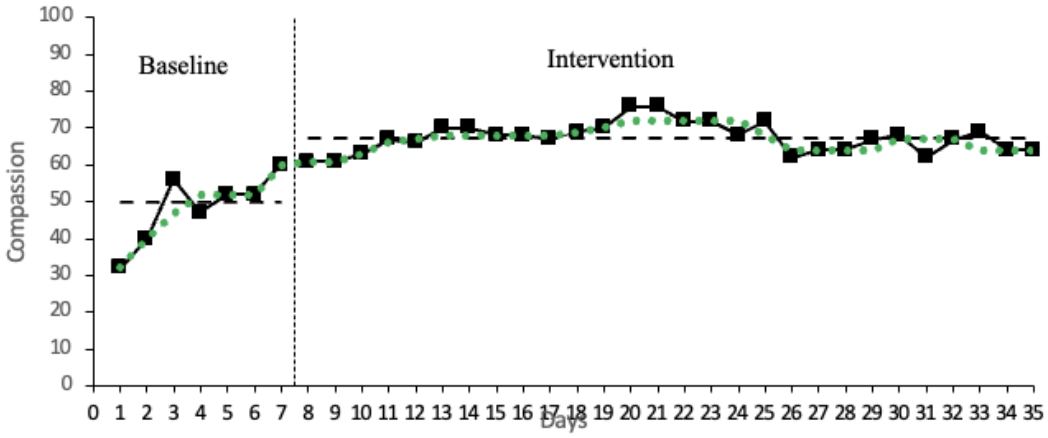


Figure B5 Normalising

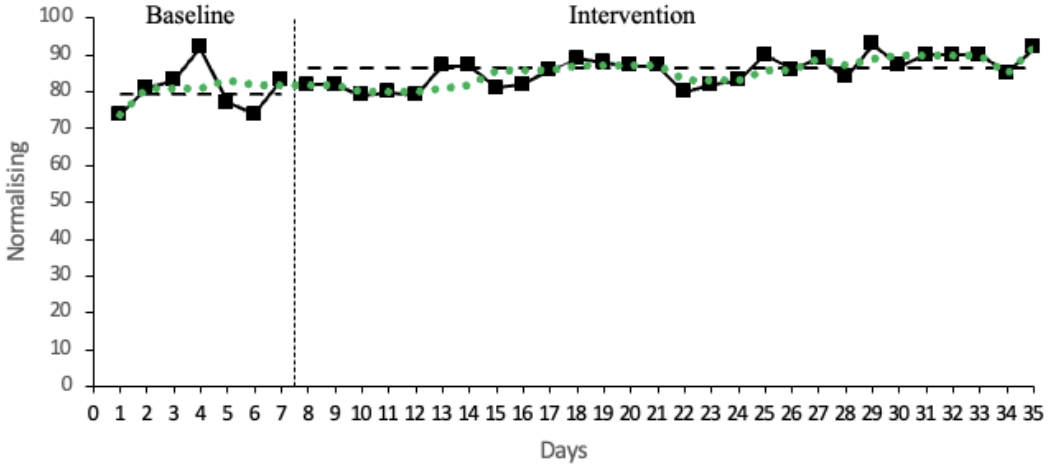
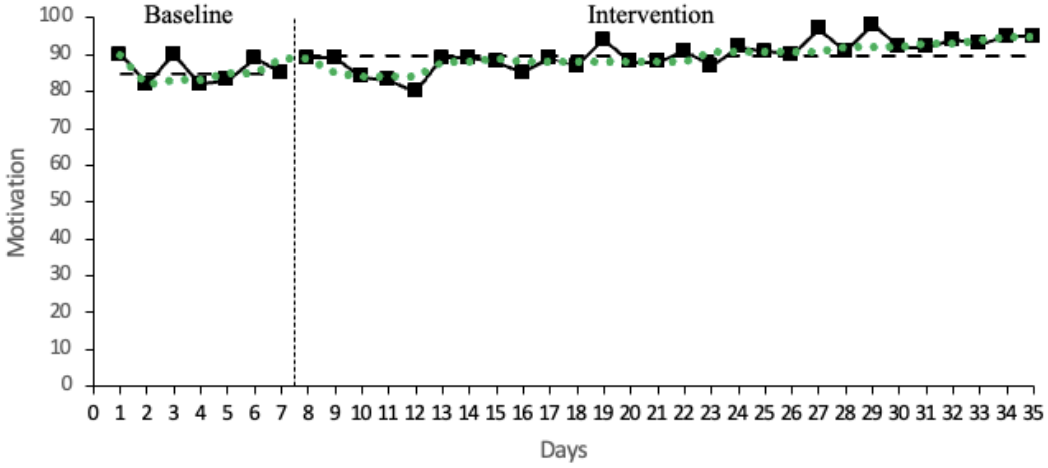


Figure B6 Motivation



Participant C. Participant C provided nine baseline and 21 intervention data points. LOCF was used for the seven missing intervention data points. Figure C1 to C6 displays her idiographic outcome measures. Table 12 displays C's *Tau-U* analyses. Baseline data across all measures were considered stable by *Tau-U* analyses. Visual analysis between baseline and intervention demonstrated a reduction in central tendency for Shame, Guilt and Self-criticism. Shame depicted the sharpest decrease in level. However, trend lines fluctuated throughout the intervention, stabilising as a downward trend towards the end of the phase Compassion, Normalising and Motivation depicted an overall increase in level, with Compassion showing the sharpest increase. Trend lines fluctuated throughout the intervention phase but were more gradual than other variables. Non-overlap *Tau-U* analyses supported visual analysis with a significant decrease in Shame and a significant increase in Compassion scores.

Table 12

Summary of Tau U analyses comparing C's measures from the baseline to intervention phase

Measure	*Tau*	*SD Tau*	*p value*	*90% CI*
Shame	-0.63	0.22	.005**	[-1.00, -0.26]
Guilt	-0.30	0.22	.184	[-0.67, 0.07]
Self-Criticism	-0.46	0.22	.038*	[-0.83, -0.10]
Compassion	0.75	0.22	.001**	[0.38, 1.00]
Normalising	0.25	0.22	.265	[-0.12, 0.62]
Motivation	0.27	0.22	.229	[-0.10, 0.64]

Note. [c] = corrected baseline; *SD* = standard deviation; *CI* = confidence interval;
**= p <.05; **= p<.01, ***= p<.001*

Figure C1 Shame

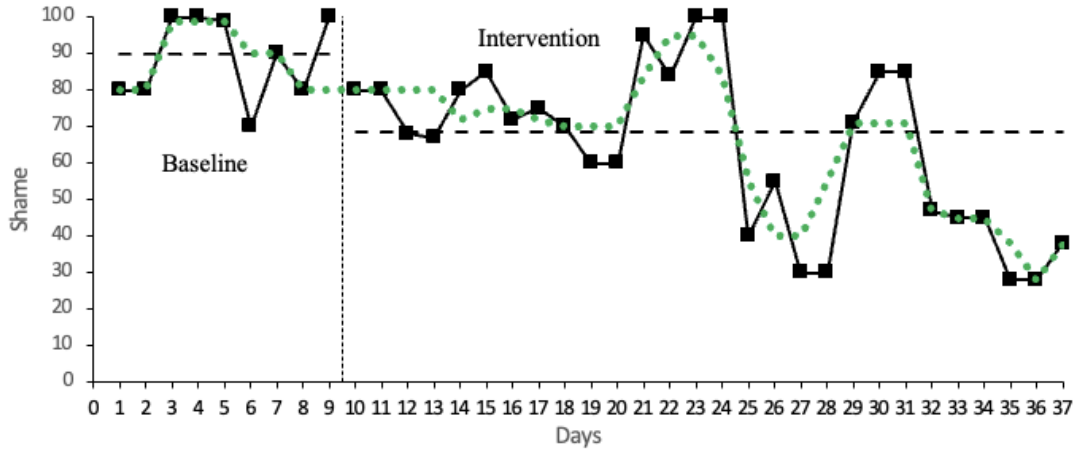


Figure C2 Guilt

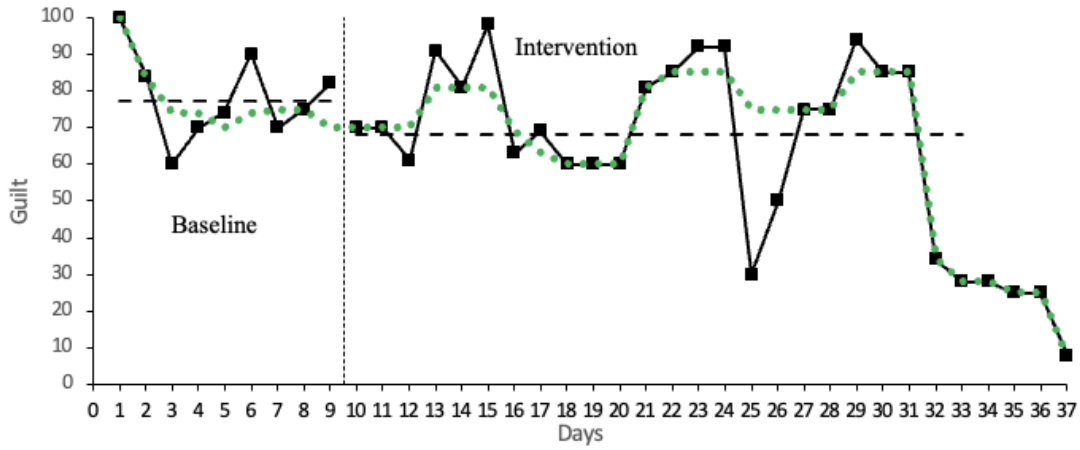


Figure C3 Self-criticism

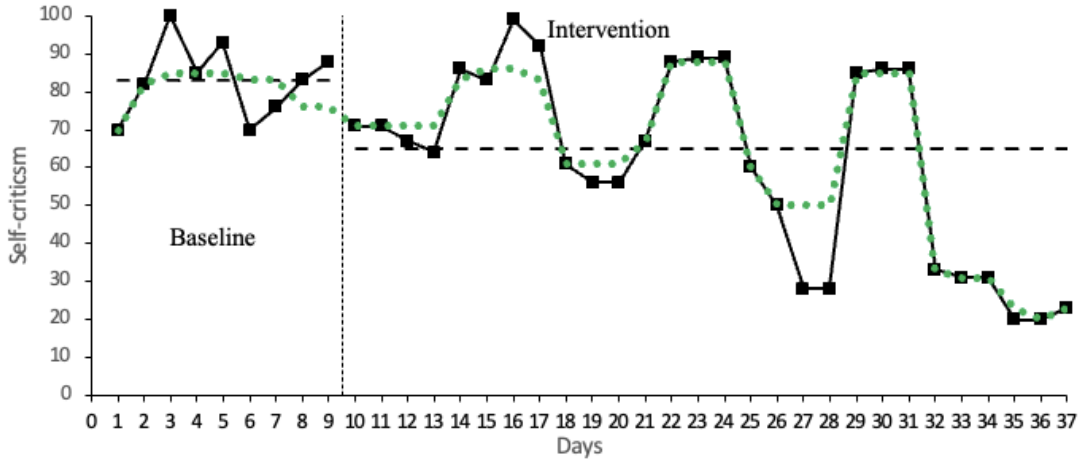


Figure C4 Compassion

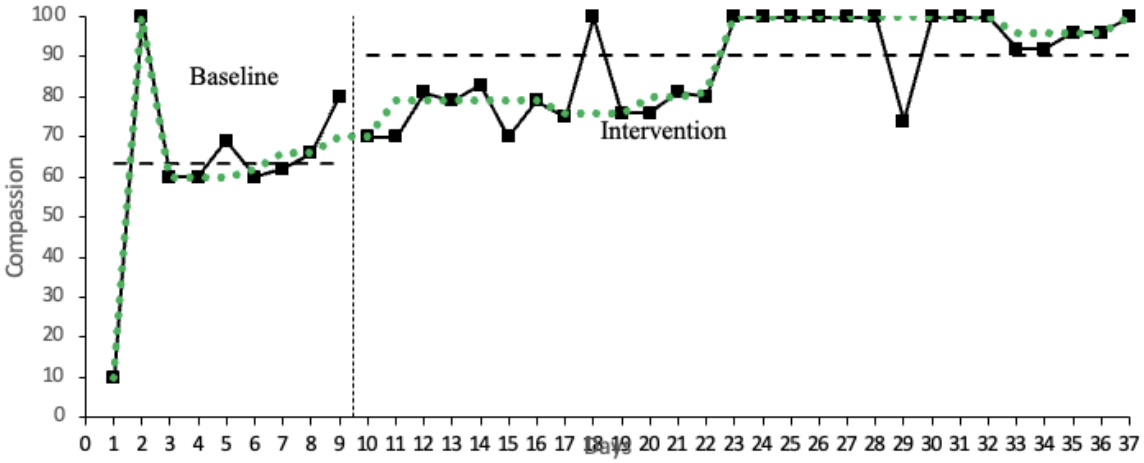


Figure C5 Normalising

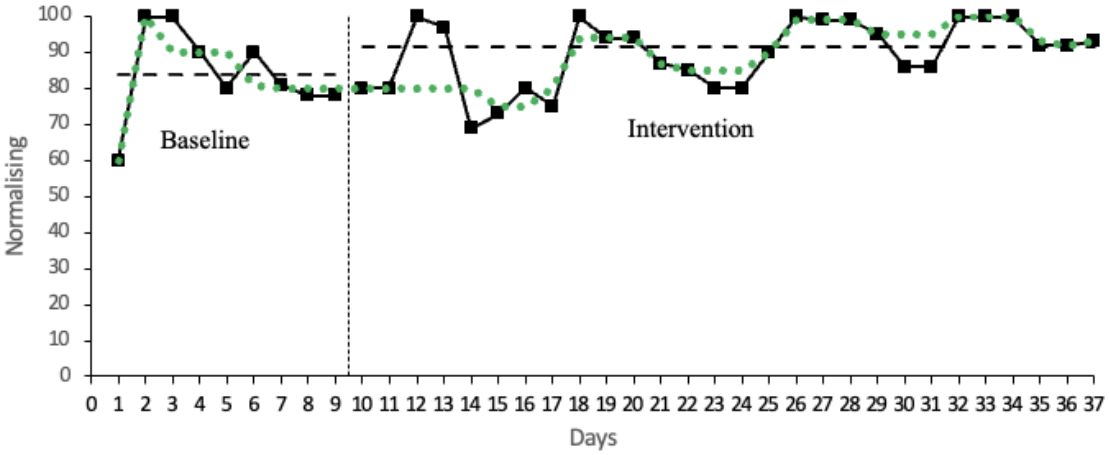
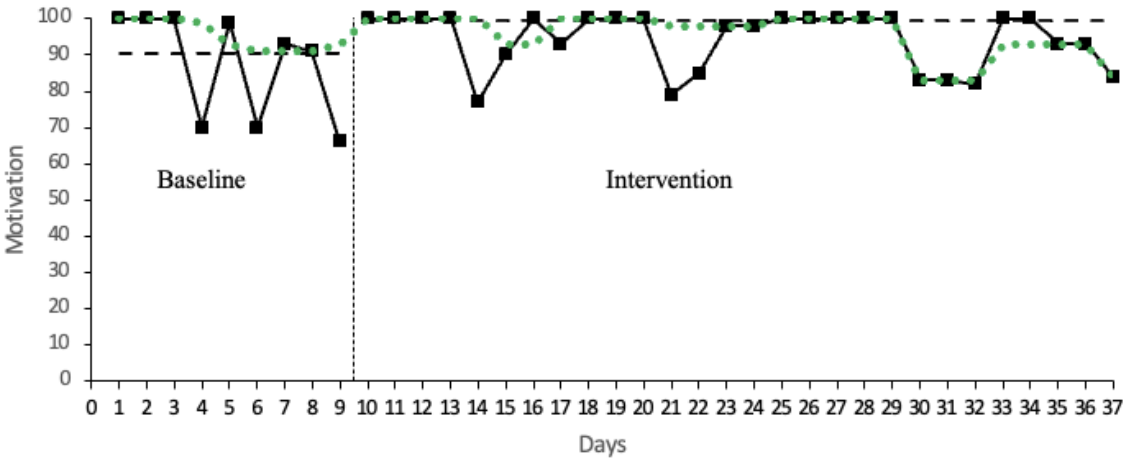


Figure C6 Motivation



Participant D. Participant D provided 11 out of 14 baseline data points and four intervention points. Participant D did not fill in compassion score for most days and informed the researcher that they did not utilise any intervention sessions. Therefore, LOCF and Tau-U analyses were not completed. Visual analysis of D's Shame and Guilt outcome measure indicated high, unchanging level and trend throughout baseline and intervention. Self-criticism scores increased in central tendency and trend from baseline to intervention. Compassion scores remained low throughout the phases. There was a minimal decrease in level for Normalisation and Motivation.

Figure D1 Shame

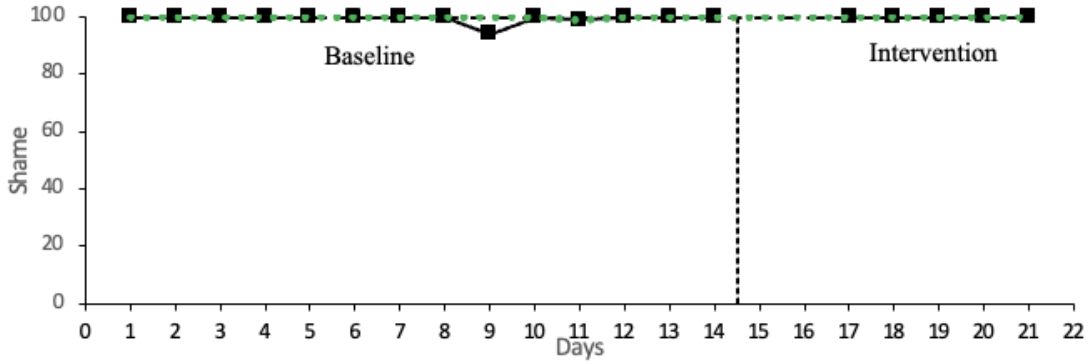


Figure D2 Guilt

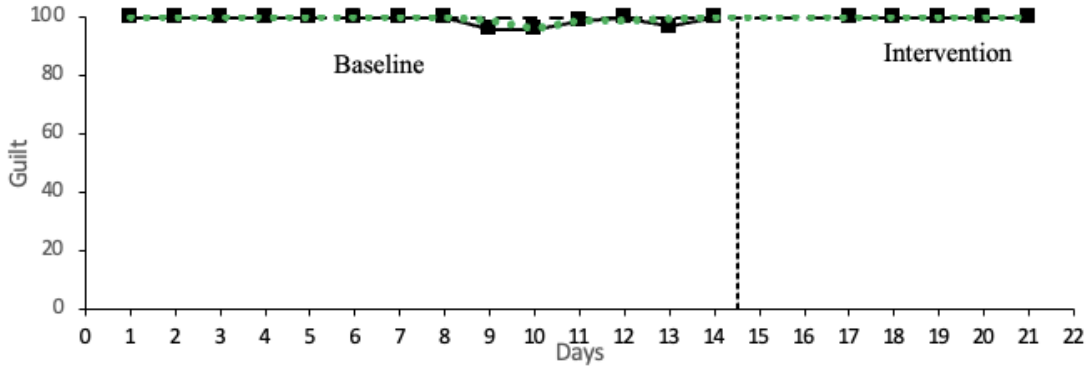


Figure D3 Self-criticism

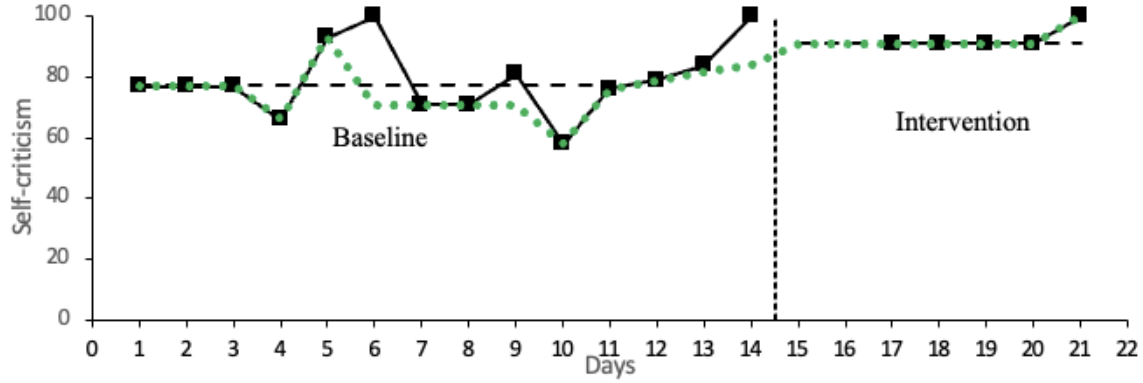


Figure D4 Compassion

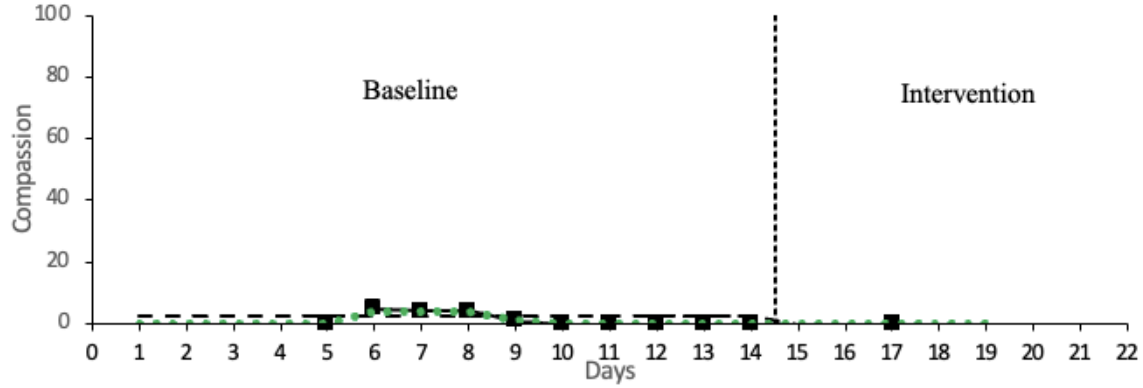


Figure D5 Normalising

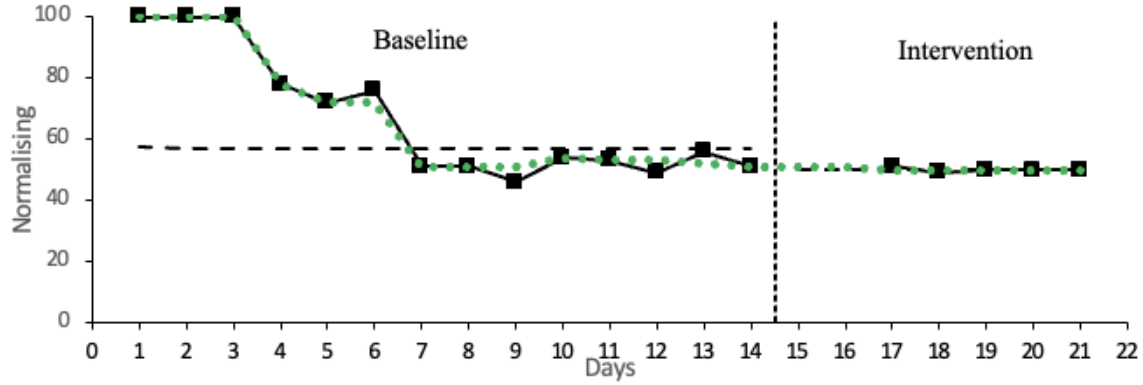
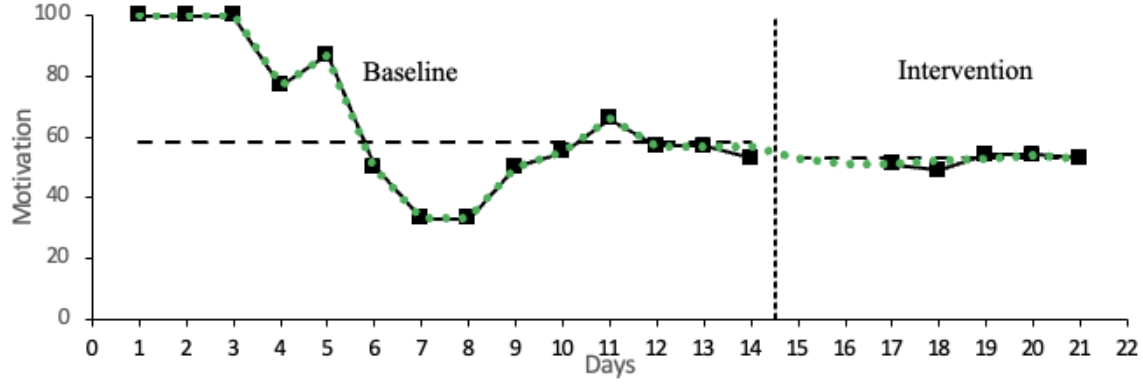


Figure D6 Motivation



Participant E. Participant E provided five baseline and 28 intervention data points. Figures E1 to E6 depict Participant E's outcome on idiographic measures. Table 13 displays her Tau-U analysis. Baseline data across all measures were considered stable by *Tau-U* analyses. Visual analysis between the baseline and intervention phase showed a decrease in levels of Shame, Guilt and Self-criticism with an overall downward trend. An upward trend and increase in level were depicted for Compassion, Normalising and Motivation. Non-overlap *Tau-U* analyses support visual analysis which indicated a significant reduction in Shame and significant improvement in Compassion, Normalisation and Motivation.

Table 13

Summary of Tau U analyses for E's measures from the baseline to intervention phase

Measure	*Tau*	*SD Tau*	*p value*	*90% CI*
Shame	-0.89	0.28	.002**	[-1.00, -0.42]
Guilt	-0.51	0.28	.071	[-0.98, -0.05]
Self-Criticism	-0.54	0.28	.056	[-1.00, -0.08]
Compassion	0.86	0.28	.003**	[0.39, 1.00]
Normalising	0.89	0.28	.002**	[0.43, 1.00]
Motivation	0.96	0.28	<.001***	[0.50, 1.00]

Note. [c] = corrected baseline; *SD* = standard deviation; *CI* = confidence interval;
**= p <.05; **= p<.01, ***= p<.001*

Figure E1 Shame

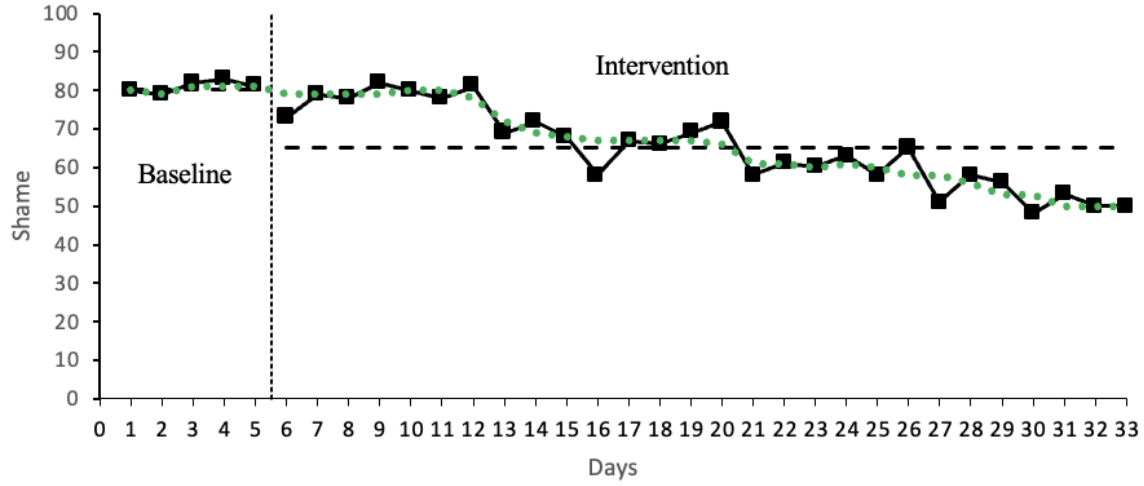


Figure E2 Guilt

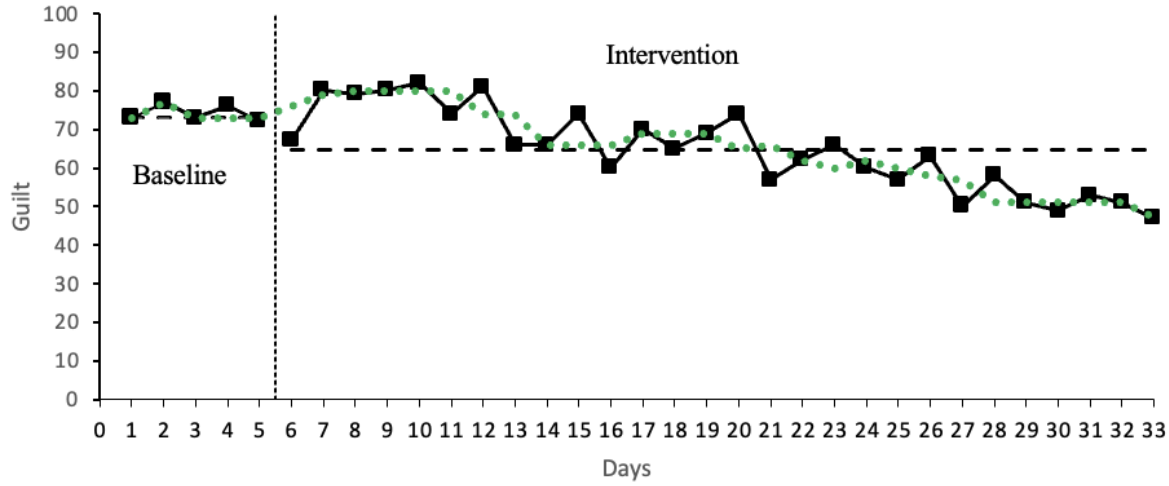


Figure E3 Self-criticism

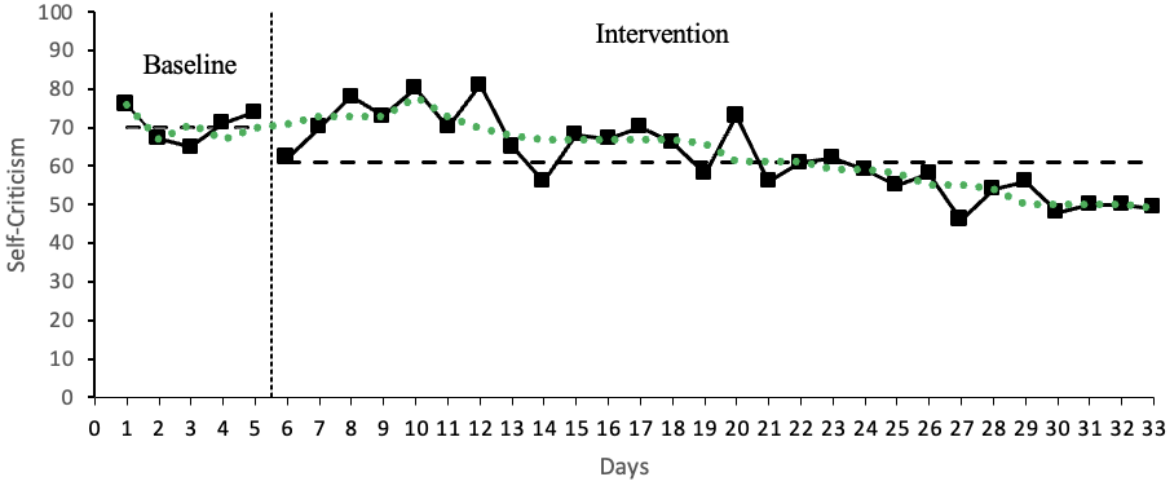


Figure E4 Compassion

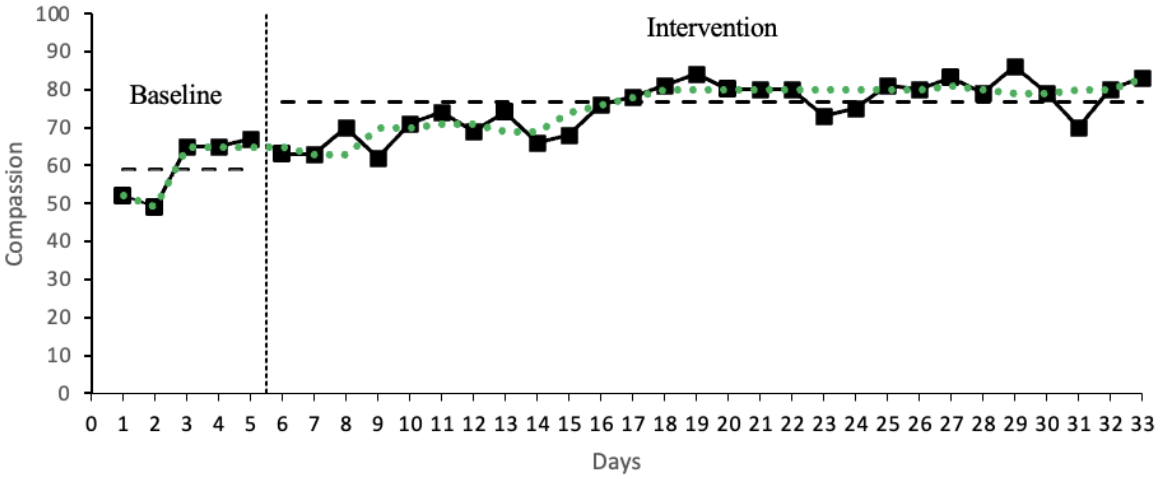


Figure E5 Normalising

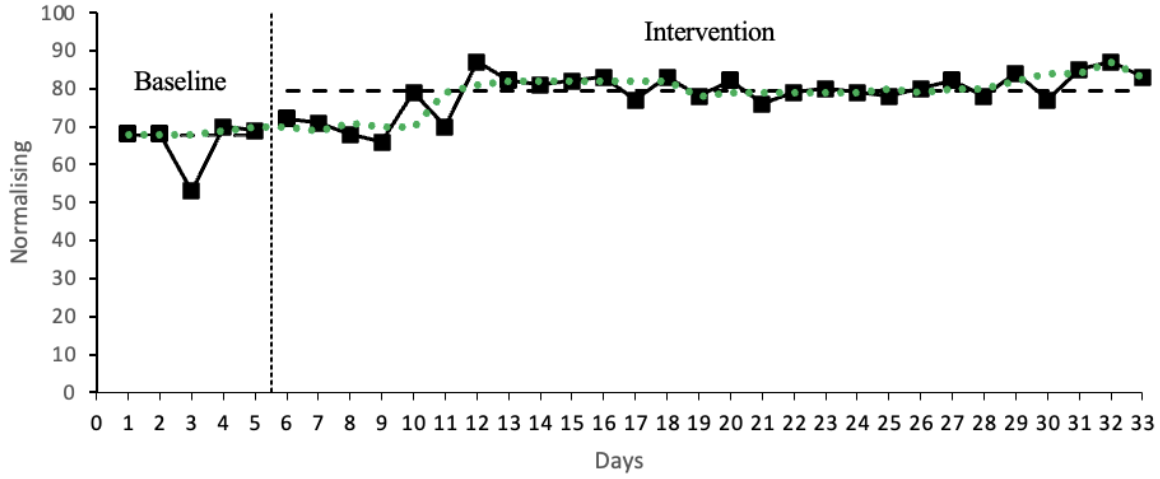
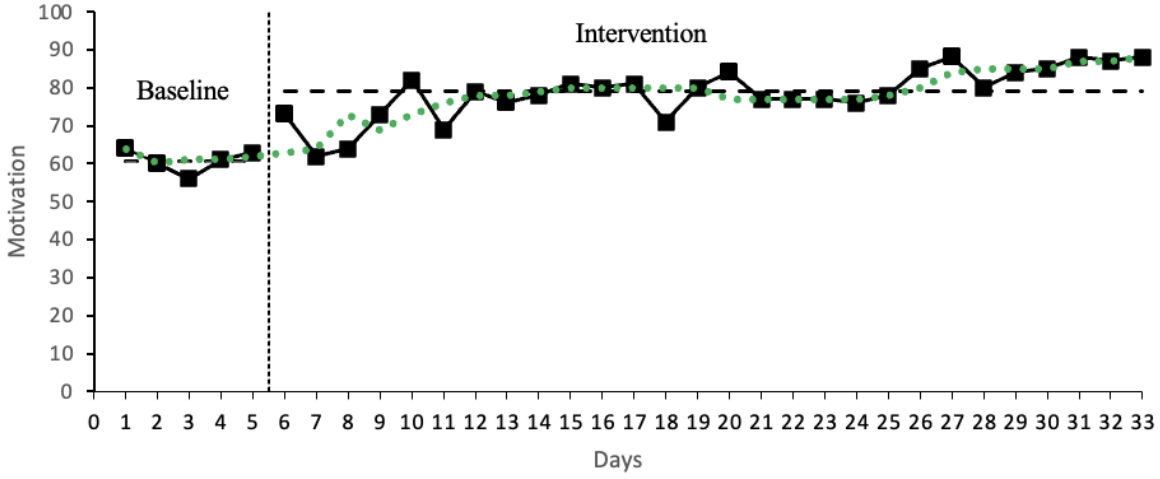


Figure E6 Motivation



Participant F. Participant F provided 10 baseline and 28 intervention points. Figures F1 to F6 depict Participant's F outcome on idiographic measures. Table 14 displays Tau-U analyses. Baseline data across all measures were considered stable by *Tau-U* analyses. Visual analysis showed that participant F rated herself at 100 throughout the baseline phase for Shame and Guilt. This trend is maintained throughout the intervention phase for Shame while for Guilt there was a slight dip towards the end of the intervention phase which then returns to 100. Levels of Self-criticism decreased during the baseline phase and further reduced during intervention. The graphs showed an increase in levels and upward trend for Compassion, Normalisation and Motivation. Non-overlap *Tau-U* analyses between baseline and intervention supported visual analysis with a significant reduction in Self-criticism while there was a significant increase in Compassion, Normalisation and Motivation.

Table 14

Summary of Tau-U analyses comparing F's measures from the baseline to intervention phase

Measure	*Tau*	*SD Tau*	*p value*	*90% CI*
Shame	0.00	0.22	1.000	[-0.35, 0.35]
Guilt	-0.11	0.22	.619	[-0.46, 0.25]
Self-Criticism	-0.73	0.22	< .001***	[-1.00, -0.37]
Compassion	0.55	0.22	.011*	[0.19, 0.90]
Normalising	0.82	0.22	< .001***	[0.46, 1.00]
Motivation	0.63	0.22	.003**	[0.28, 0.99]

Note. [c] = corrected baseline; *SD* = standard deviation; *CI* = confidence interval;
**= p <.05; **= p<.01, ***= p<.001*

Figure F1 Shame

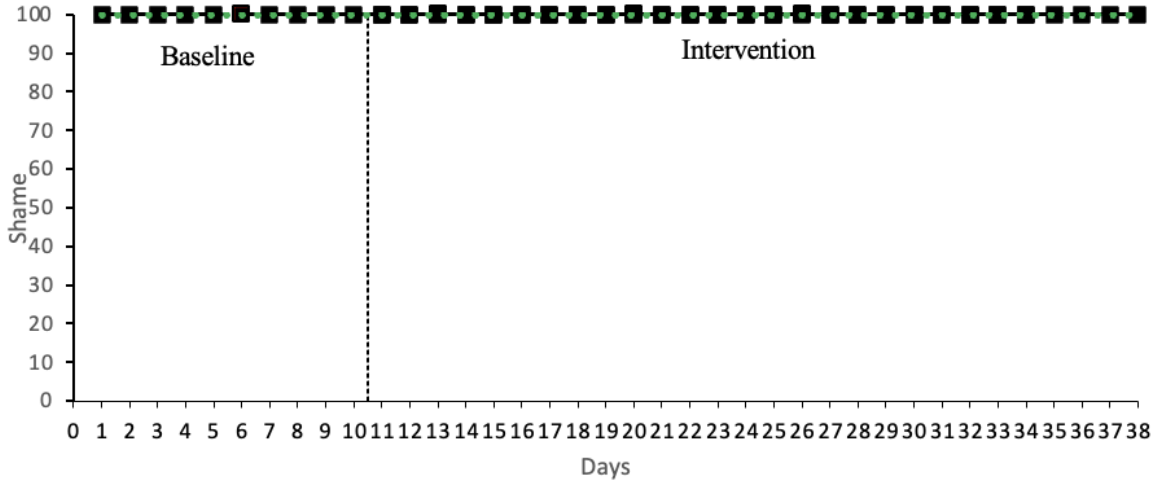


Figure F2 Guilt

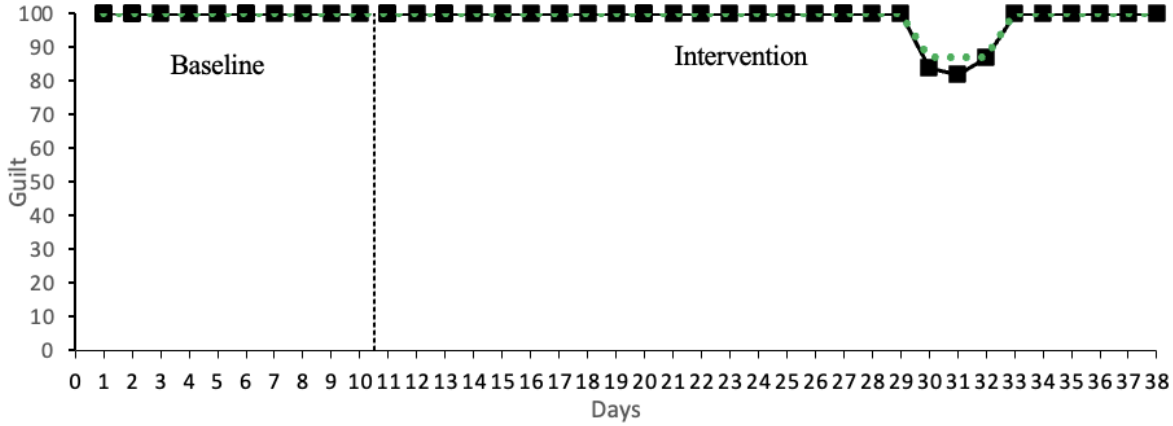


Figure F3 Self-criticism

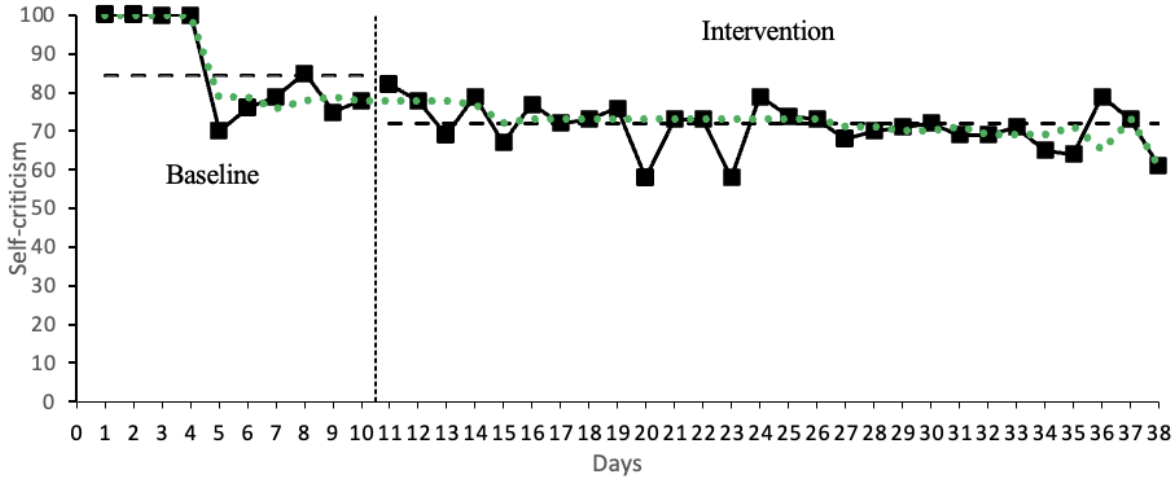


Figure F4 Compassion

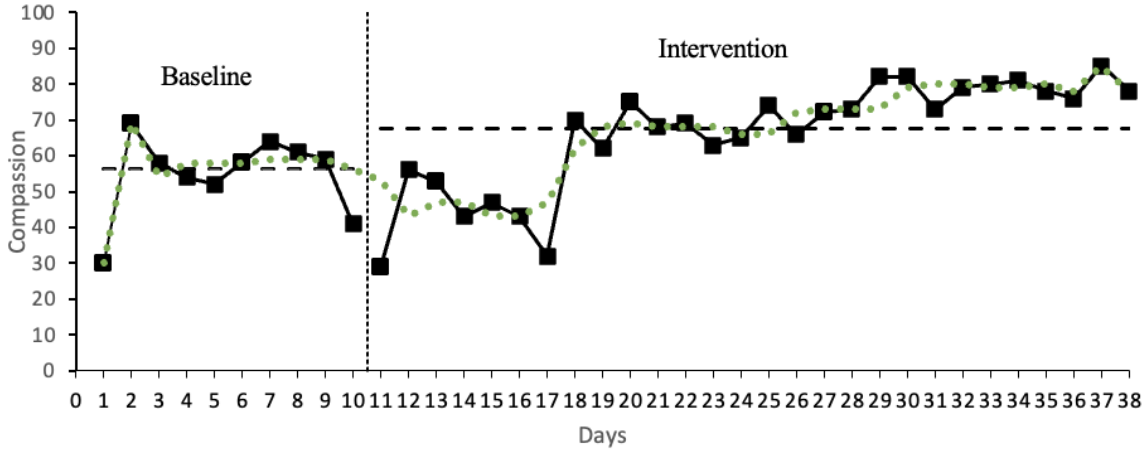


Figure F5 Normalising

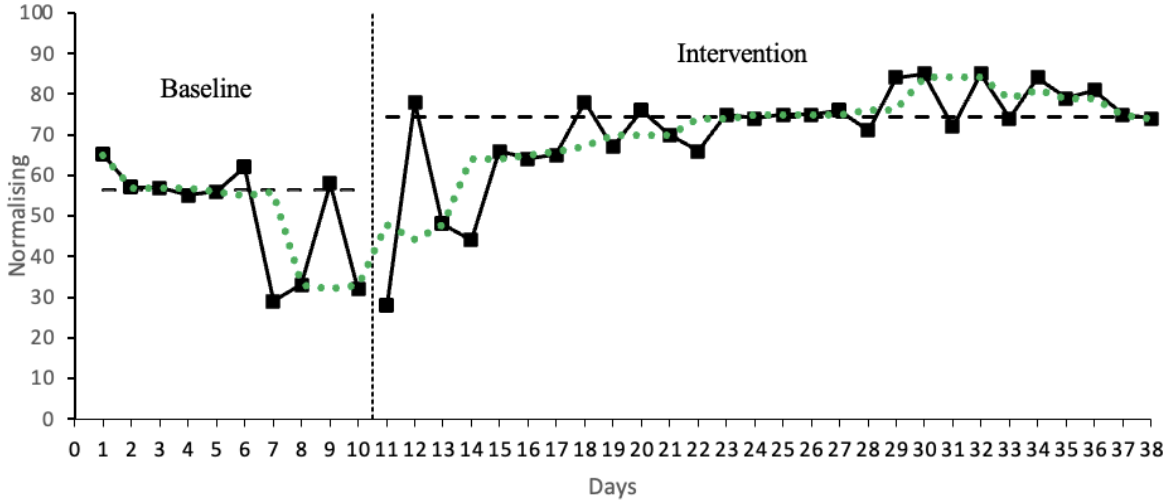
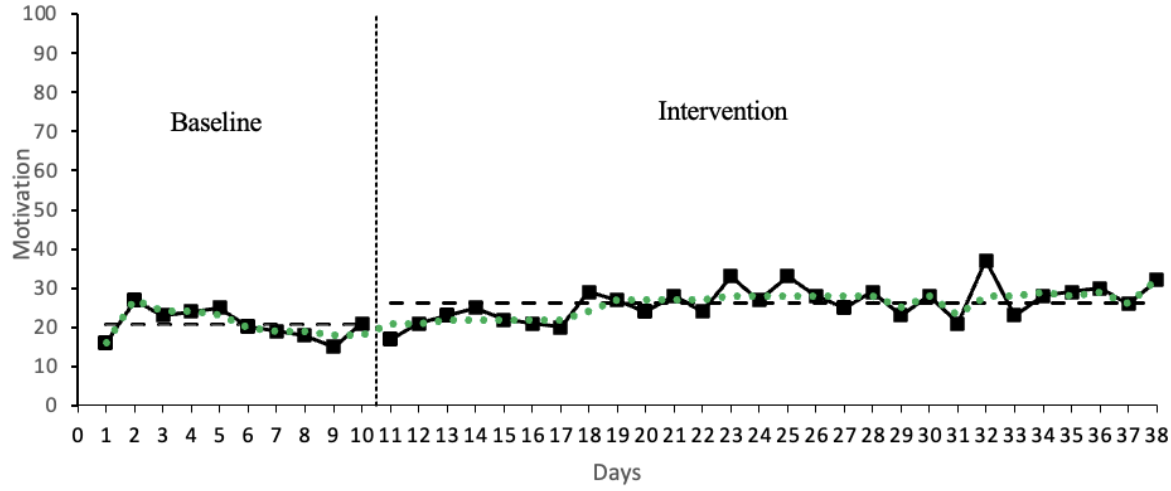


Figure F6 Motivation



Participant G. Participant G completed five baseline and 28 intervention data points. Figure G1 to G6 depict her outcome on idiographic measure. Table 15 displays her *Tau-U* analyses. Baseline data points were deemed stable by *Tau-U* analyses. Visual analysis between the baseline and intervention phase suggests improvement across all scores except Motivation with decreased levels and a downward trend for Shame, Guilt and Self-criticism. There was an increase in level and upward trend for Compassion and Normalisation. There was a decrease in level and downward trend for Motivation. Non-overlap *Tau-U* analyses supported visual analysis with significant decrease in Shame, Guilt, Self-criticism and Motivation and a significant improvement in Compassion and Normalising.

Table 15

Summary of Tau-U analyses comparing G's measures from the baseline to intervention phase

Measure	*Tau*	*SD Tau*	*p value*	*90% CI*
Shame	-0.95	0.28	<.001***	[-1.00, -0.48]
Guilt	-0.96	0.28	<.001***	[-1.00, -0.49]
Self-Criticism	-0.96	0.28	<.001***	[-1.00, -0.49]
Compassion	0.89	0.28	.002**	[0.42, 1.00]
Normalising	0.84	0.28	.003**	[0.38, 1.00]
Motivation	-0.74	0.28	.009**	[-1.00, -0.28]

Note. [c] = corrected baseline; *SD* = standard deviation; *CI* = confidence interval;
**= p <.05; **= p<.01, ***= p<.001*

Figure G1 Shame

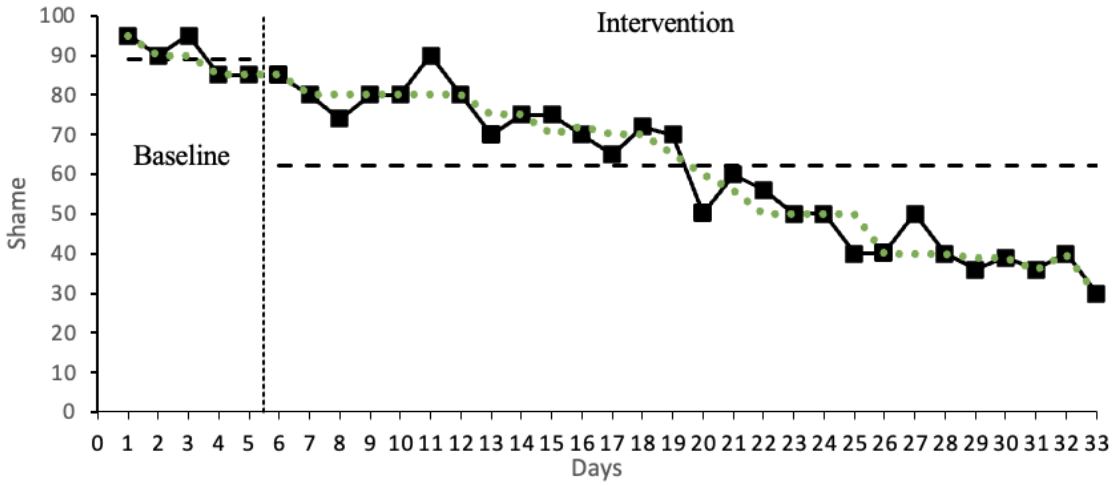


Figure G2 Guilt

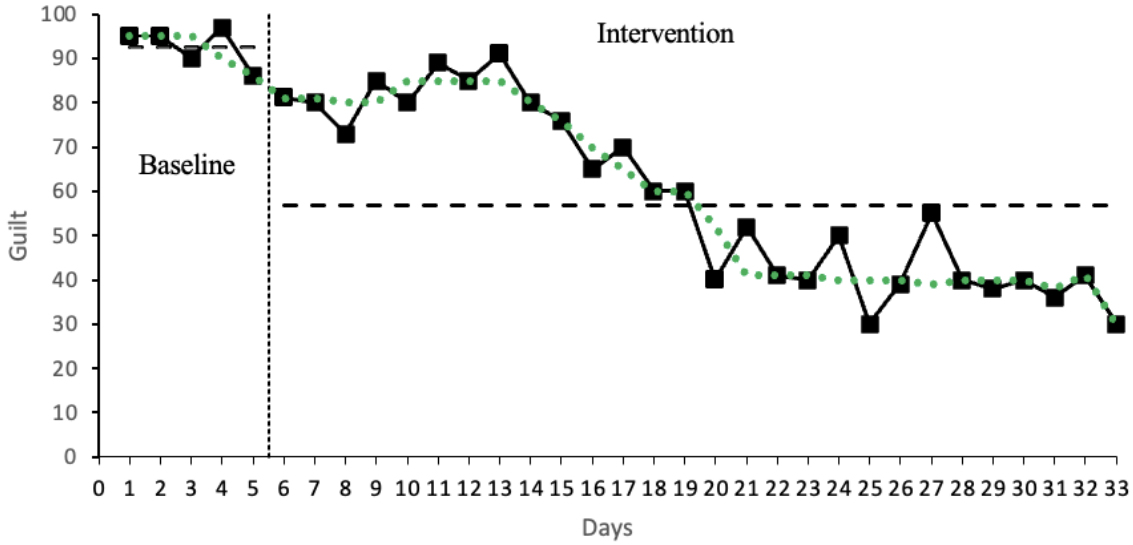


Figure G3 Self-criticism

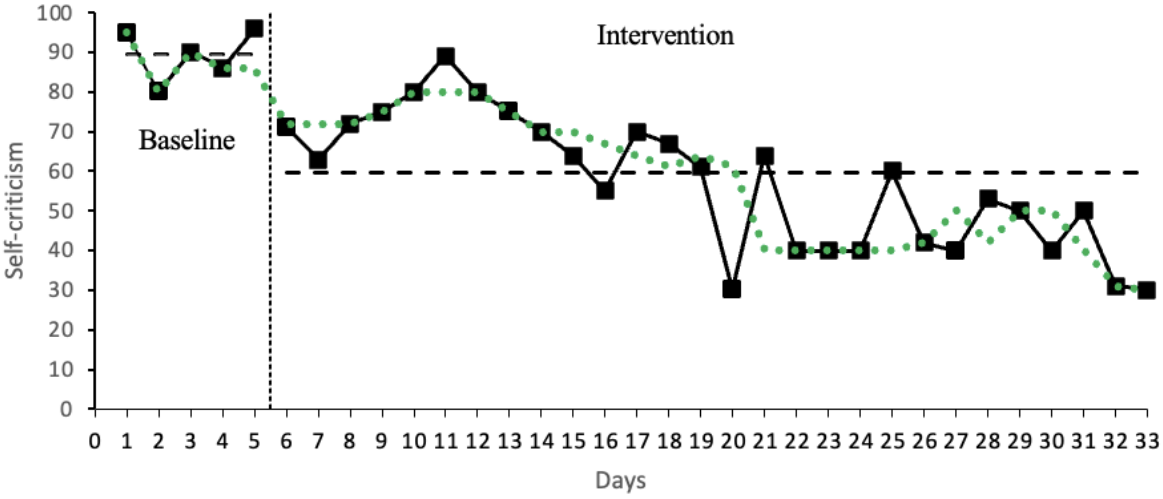


Figure G4 Compassion

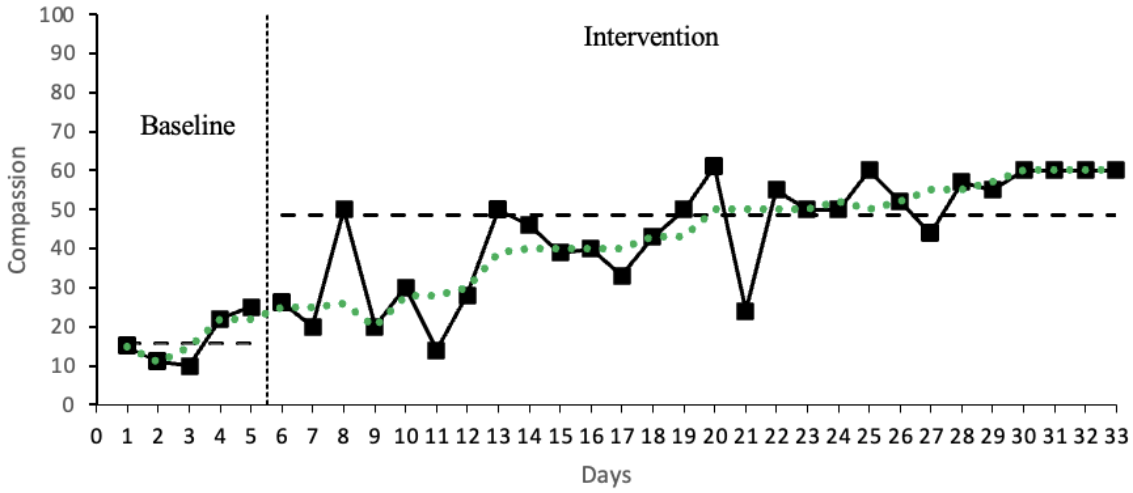


Figure G5 Normalising

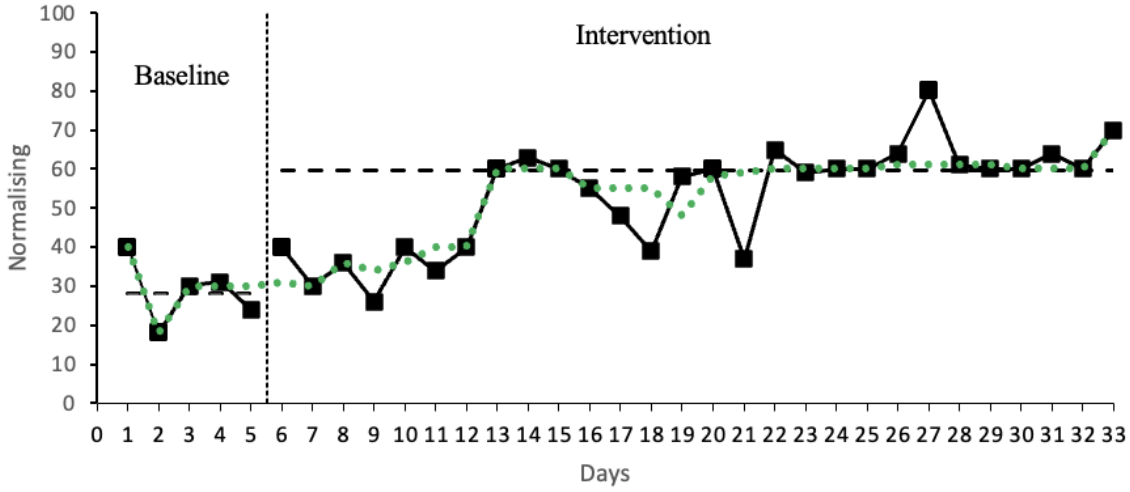
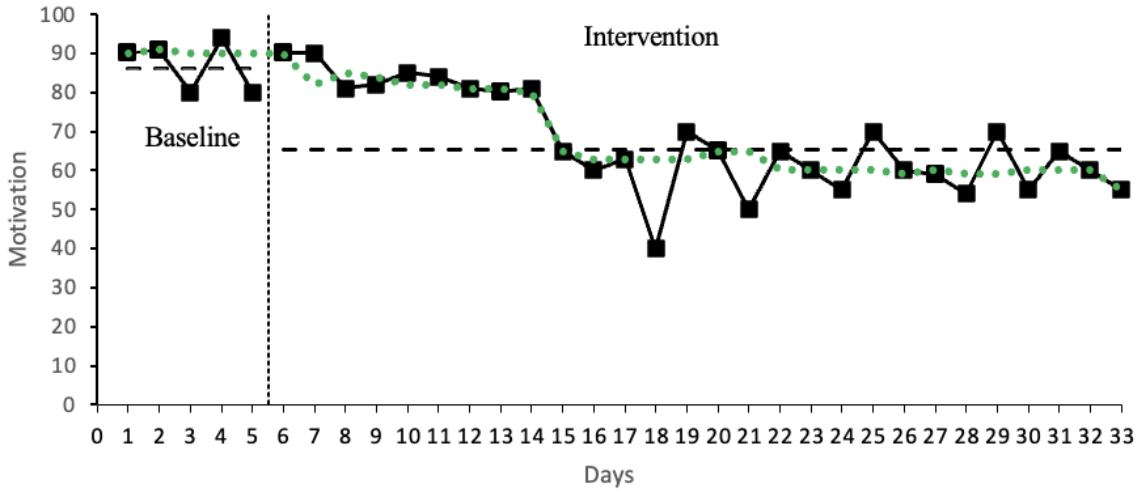


Figure G6 Motivation



Participant H. Participant H provided 14 baseline and 0 intervention data points. Because there were less than three intervention points which was the minimum to meet the standard with reservation, Tau-U analysis was not completed (Kratochwill et al., 2010). Participant H scored 80 and over on Shame, Guilt, Self-criticism, and Motivation. Participant H scored below 50 across all points for Compassion and Normalising.

Figure H1 Shame

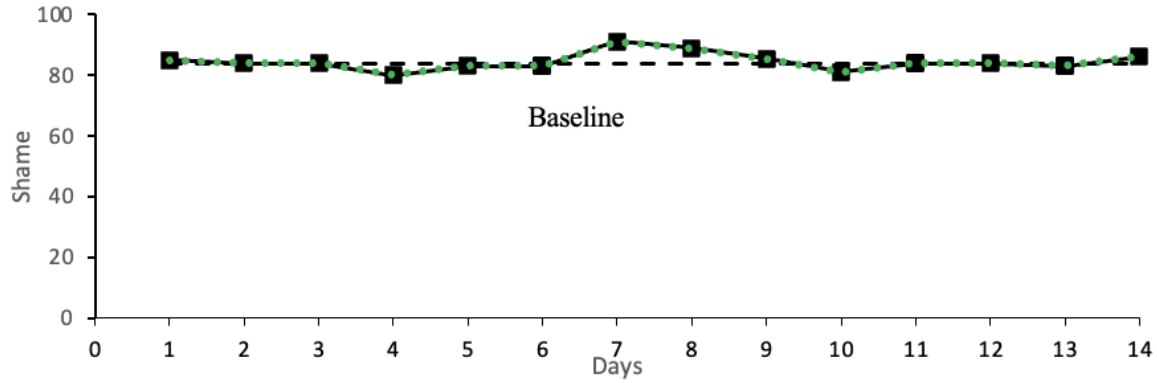


Figure H2 Guilt

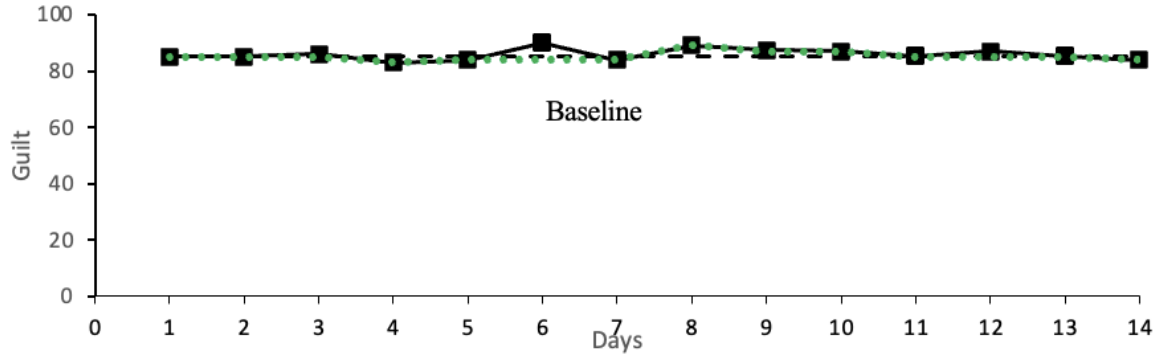


Figure H3 Self-criticism

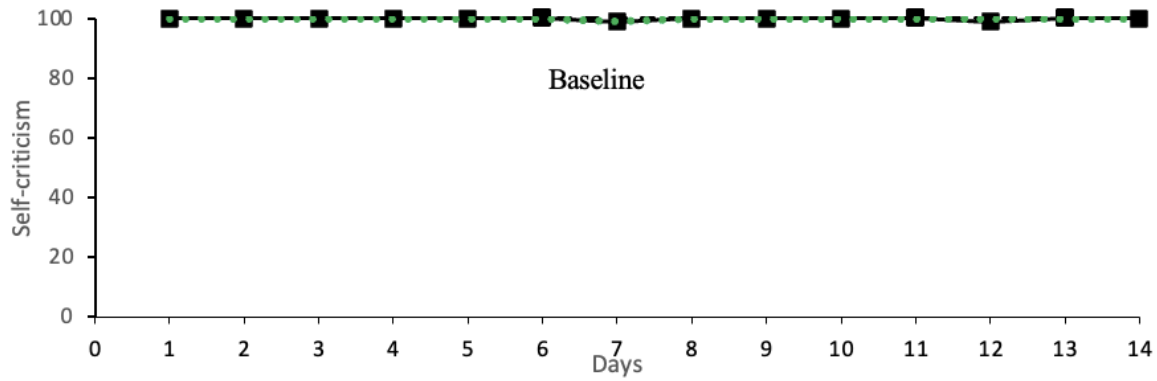


Figure H4 Compassion

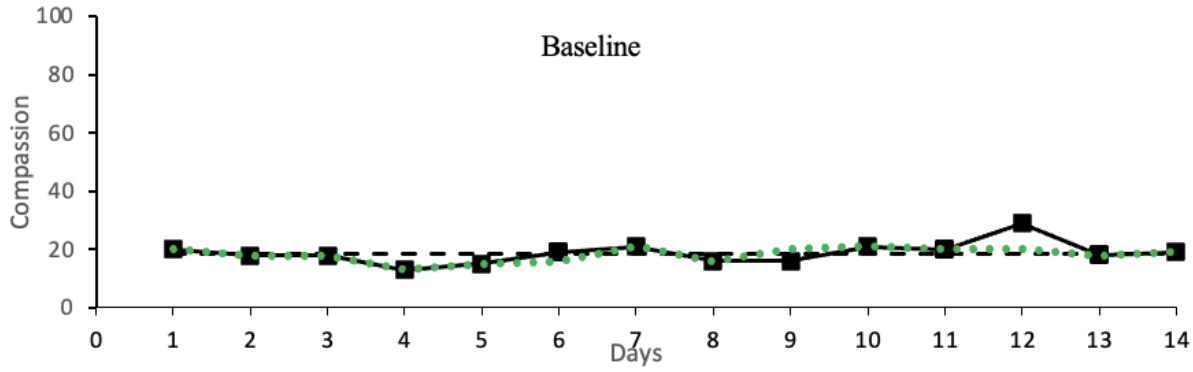


Figure H5 Normalising

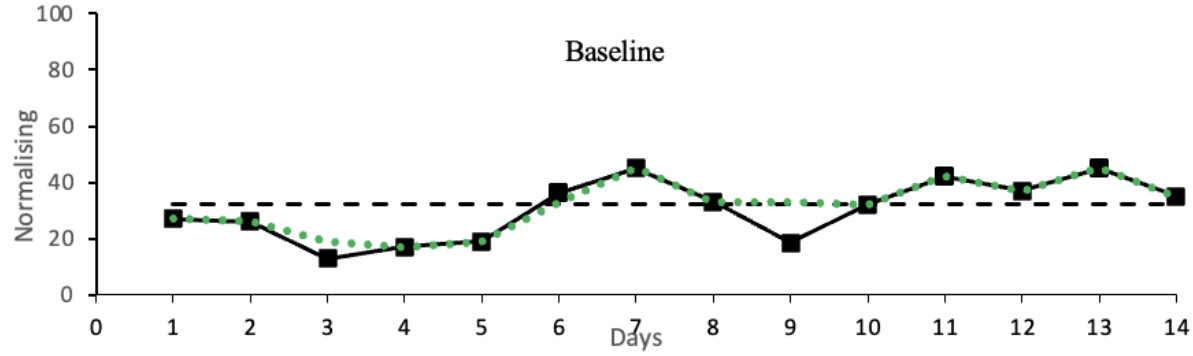
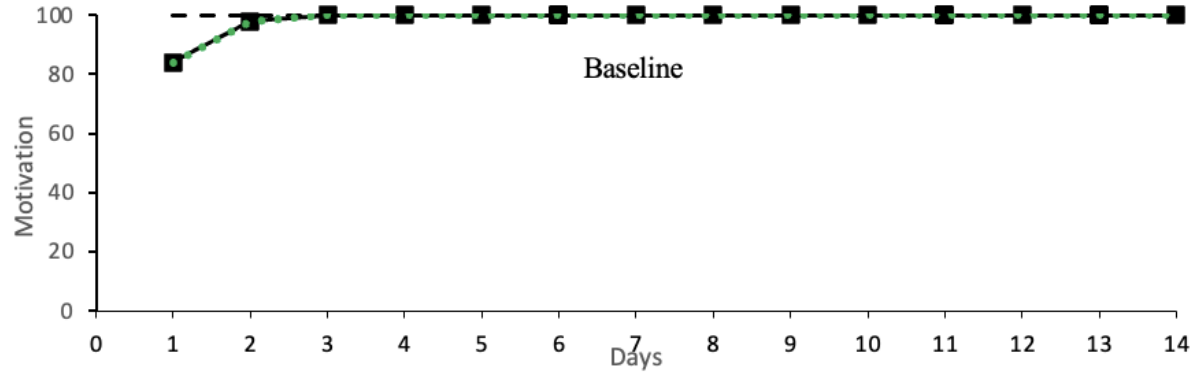


Figure H6 Motivation



Participant I. Participant I provided 11 baseline s and 28 intervention data points. Figures I1 to I6 display her outcome on idiographic measures. Table 16 displays I's *Tau-U* analyses. Criteria for baseline stability were met by all measures except Compassion. Visual analysis between baseline and intervention showed a minimal change in trend or level for Shame and Self-criticism while there was a gradual decrease in Guilt. There was a gradual upward trend and increase in the level of Compassion, Normalising and Motivation. Non-overlap *Tau-U* analyses found a significant decrease in Guilt, significant contra-therapeutic increase in Self-criticism and a significant increase in Motivation. A corrected baseline was used for Compassion and found a significant improvement from baseline to intervention.

Table 16

Summary of Tau-U analyses comparing I's measures from the baseline to intervention phase

Measure	*Tau*	*SD Tau*	*p value*	*90% CI*
Shame	-0.21	0.21	.310	[-0.55, 0.13]
Guilt	-0.62	0.21	.003**	[-0.97, -0.28]
Self-Criticism	0.41	0.21	.048*	[0.07, 0.76]
Compassion[c]	0.78	0.21	< .001***	[0.43, 1.00]
Normalising	0.34	0.21	.098	[0.00, 0.69]
Motivation	0.46	0.21	.028*	[0.11, 0.80]

Note. [c] = corrected baseline; *SD* = standard deviation; *CI* = confidence interval;
**= p <.05; **= p<.01, ***= p<.001*

Figure I1 Shame

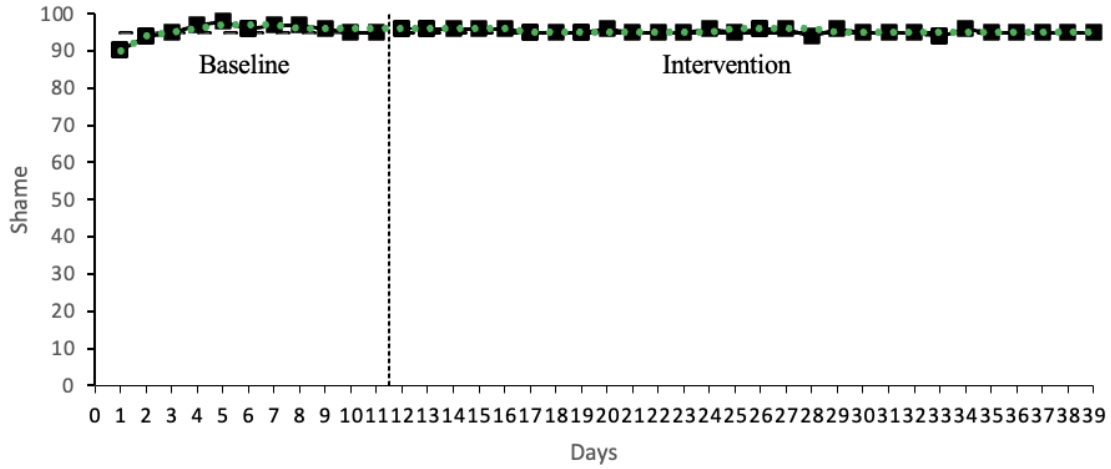


Figure I2 Guilt

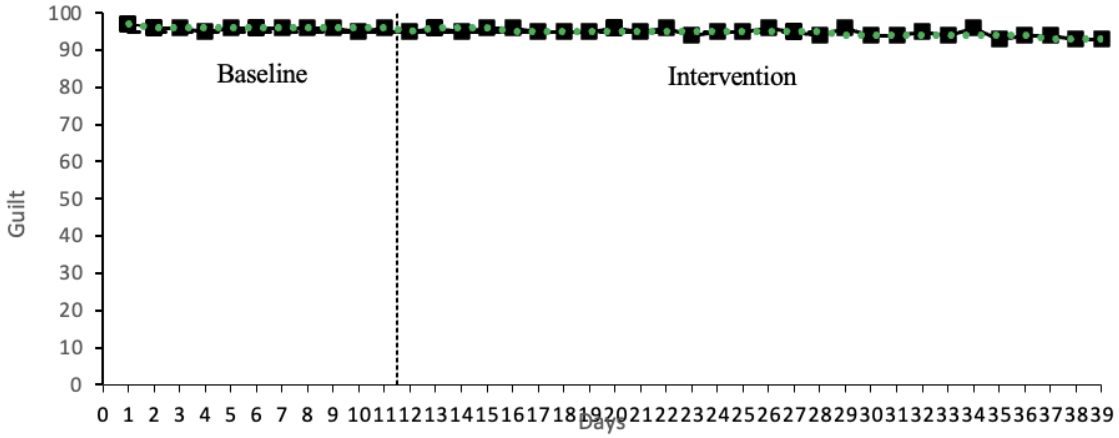


Figure I3 Self-criticism

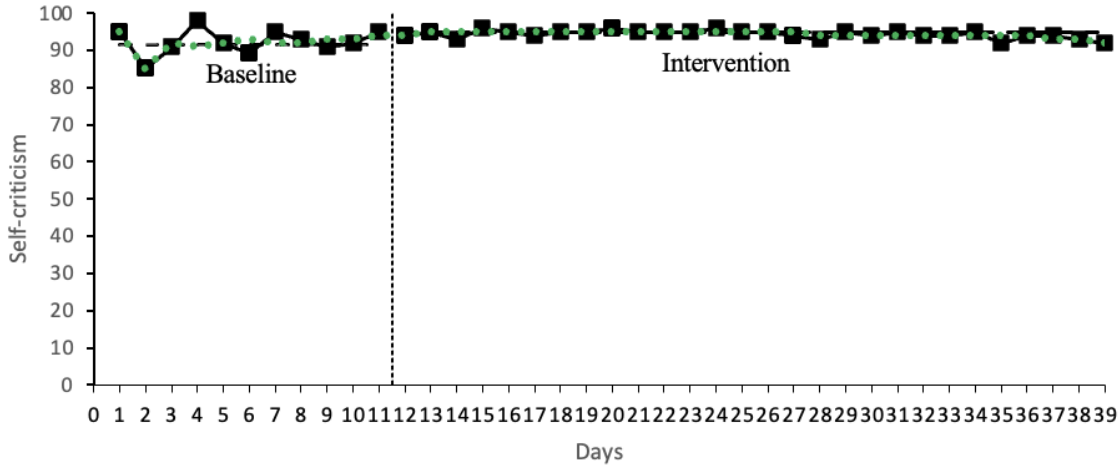


Figure I4 Compassion

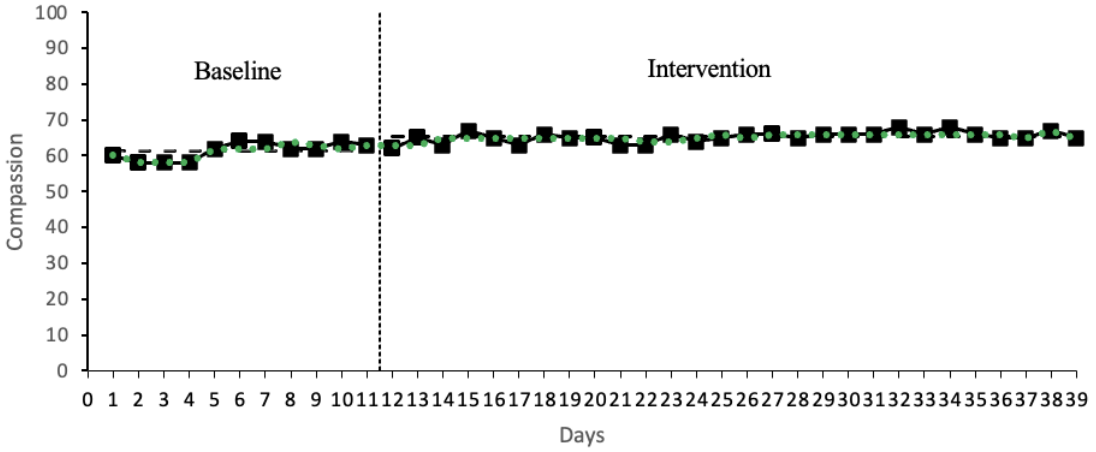


Figure I5 Normalising

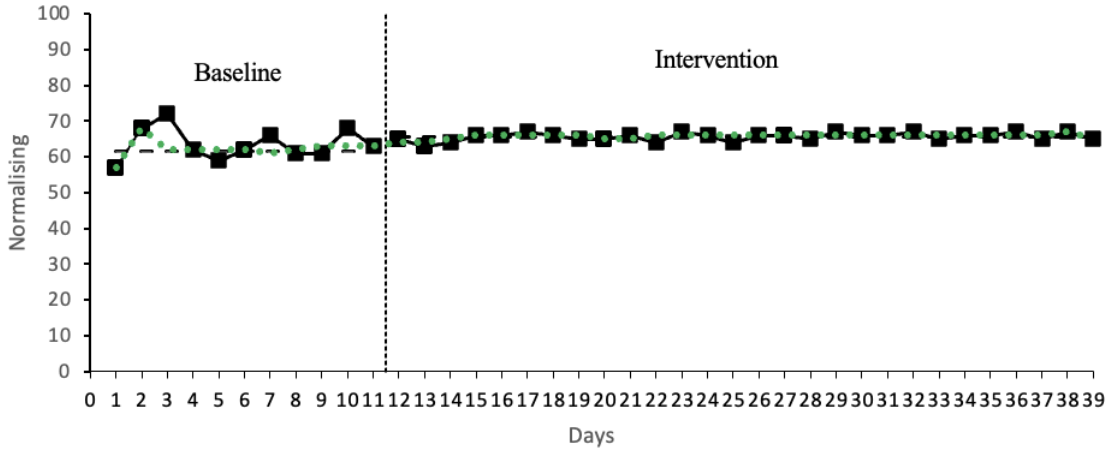
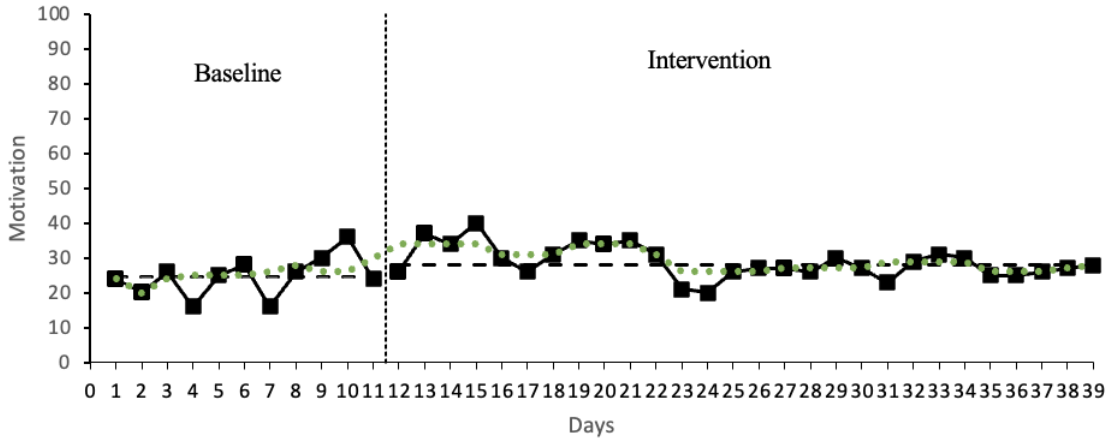


Figure I6 Motivation



Participant J. Participant J provided 12 baseline and 18 intervention data points. Figures J1 to J6 depict her outcome on idiographic measures. Table 17 displays J's Tau-U analysis. Baseline data across all measures were considered stable by *Tau-U* analyses except for Shame and Guilt. Visual analysis for Shame, Guilt and Self-criticism depicted a gradual upward trend in baseline which decreased at the beginning of the intervention phase before increasing again towards the end. Visual analysis for compassion, normalising and motivation showed minimal change between phases There was a visible increase in level for Self-criticism between baseline and intervention, which was supported by a significant increase based on *Tau-U* analysis.

Table 17

Summary of Tau-U analyses comparing J's measures from the baseline to intervention phase

Measure	*Tau*	*SD Tau*	*p value*	*90% CI*
Shame[c]	-0.24	0.20	.238	[- 0.57, 0.09]
Guilt[c]	-0.19	0.20	.346	[-0.53, 0.14]
Self-Criticism	0.80	0.20	<.001***	[0.47, 1.00]
Compassion	0.10	0.20	.637	[- 0.24, 0.43]
Normalising	-0.11	0.20	.595	[-0.44, 0.23]
Motivation	0.06	0.20	.779	[-0.28, 0.39]

Note. [c] = corrected baseline; *SD* = standard deviation; *CI* = confidence interval;
**= p <.05; **= p<.01, ***= p<.001*

Figure J1 Shame

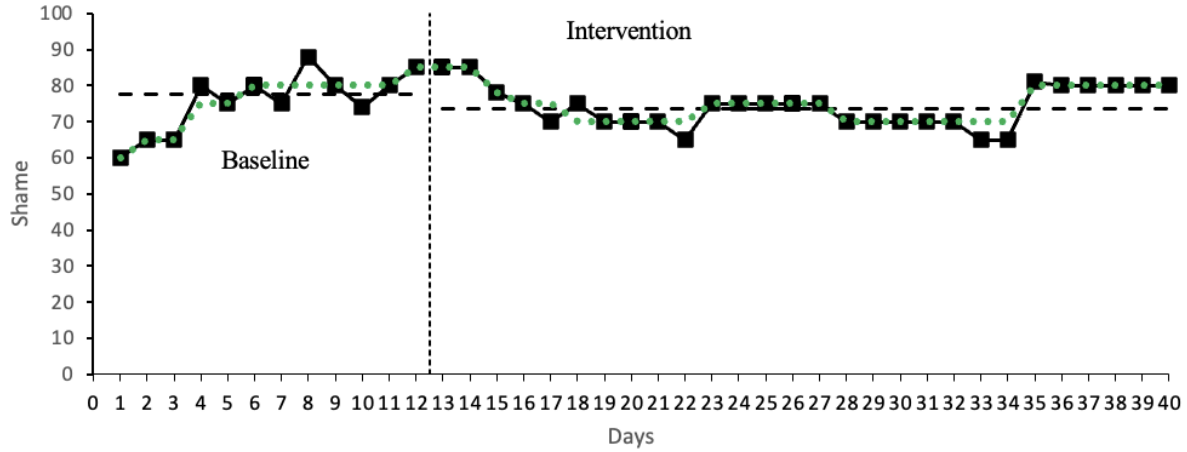


Figure J2 Guilt

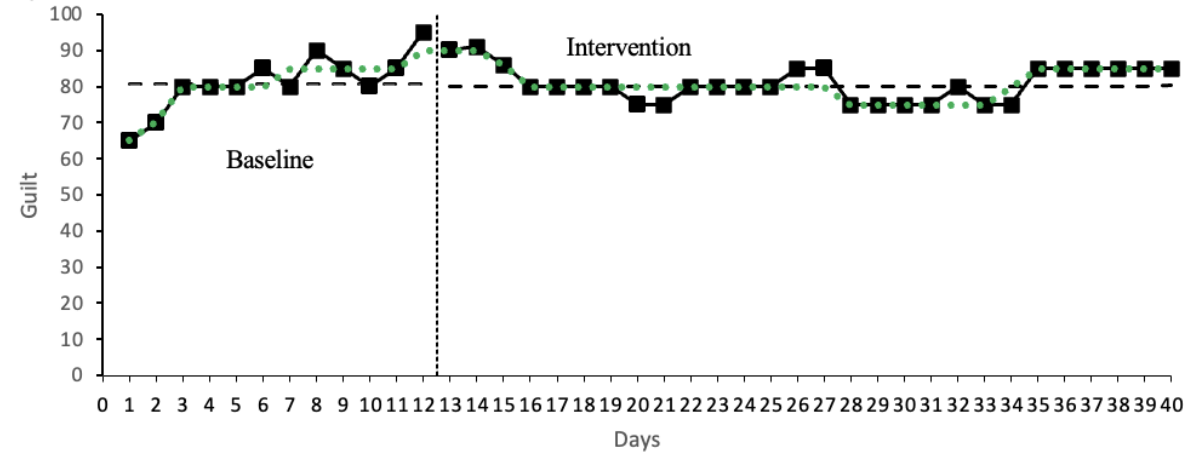


Figure J3 Self-criticism

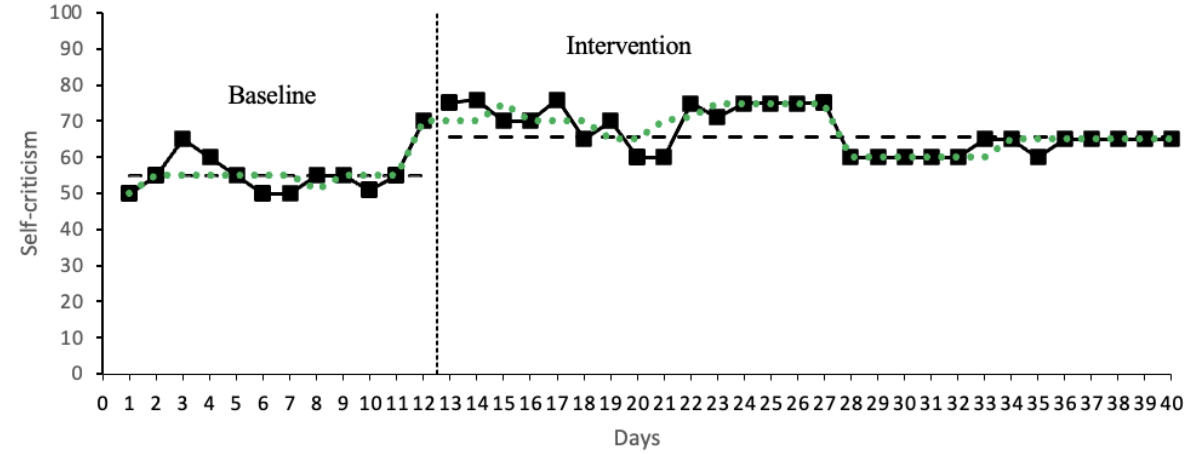


Figure J4 Compassion

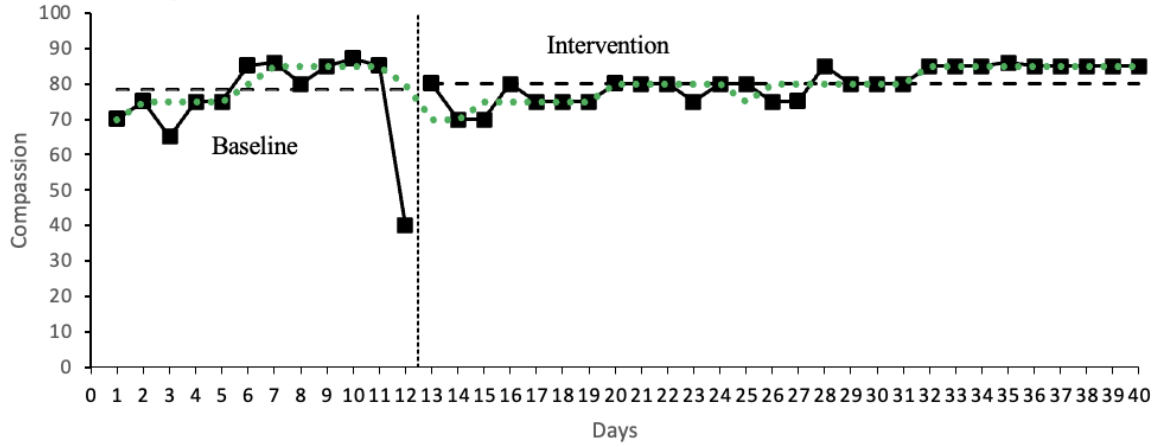


Figure J5 Normalising

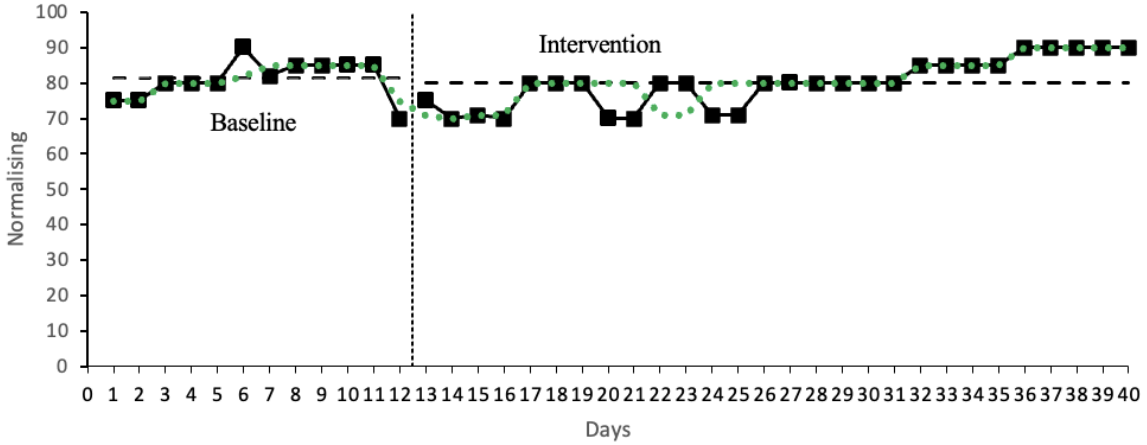
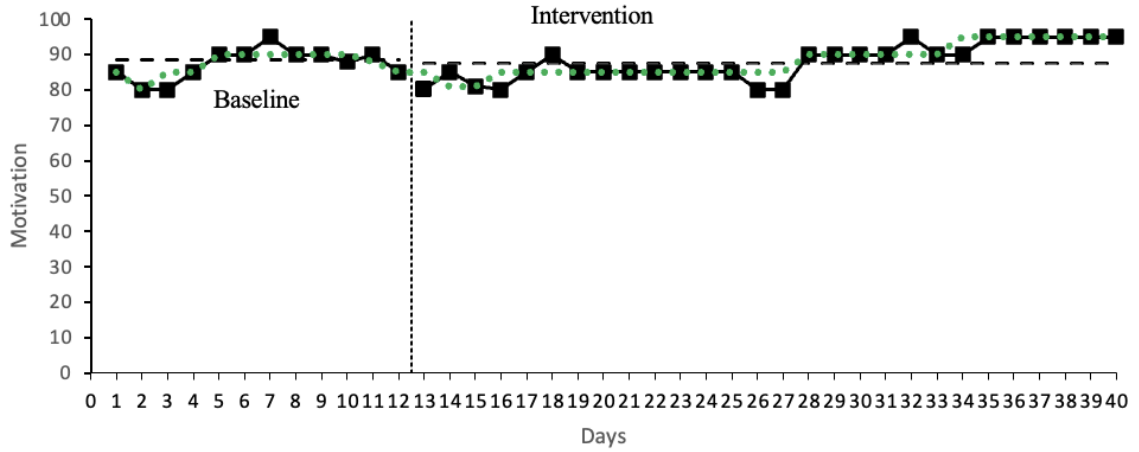


Figure J6 Motivation



Participant K. Participant K provided nine baseline data points and 24 intervention points. LOCF was utilised to impute four missing data points. Figures K1 to K6 depict her outcome on idiographic measures. Table 18 displays K's *Tau-U* analyses. Variability of baseline was deemed stable by *Tau-U* analyses for all measures except Compassion & Motivation where corrected baseline was used. Visual analysis shows a decrease in the level and a downward trend for Shame, Guilt & Self-criticism from baseline to intervention. Conversely, an increase in level and upward trend was seen for Compassion, Normalising and Motivation. Non-overlap *Tau-U* analyses showed a significant decrease in Shame and Self-criticism while there was a significant increase in Compassion, Normalising and Motivation.

Table 18

Summary of Tau-U analyses comparing K's measures from the baseline to intervention phase

Measure	Tau	SD Tau	*p* value	90% CI
Shame	-0.96	0.22	<.001*	[-1.00, -0.60]
Guilt	-0.38	0.22	.089	[-0.75, -0.01]
Self-Criticism	-0.92	0.22	<.001*	[-1.00, -0.55]
Compassion[c]	0.73	0.22	.001**	[0.36, 1.00]
Normalising	0.45	0.22	.043*	[0.08, 0.82]
Motivation[c]	0.64	0.22	.004**	[0.27, 1.00]

Note. [c] = corrected baseline; *SD* = standard deviation; *CI* = confidence interval;
**= p <.05; **= p<.01; ***= p<.001*

Figure K1 Shame

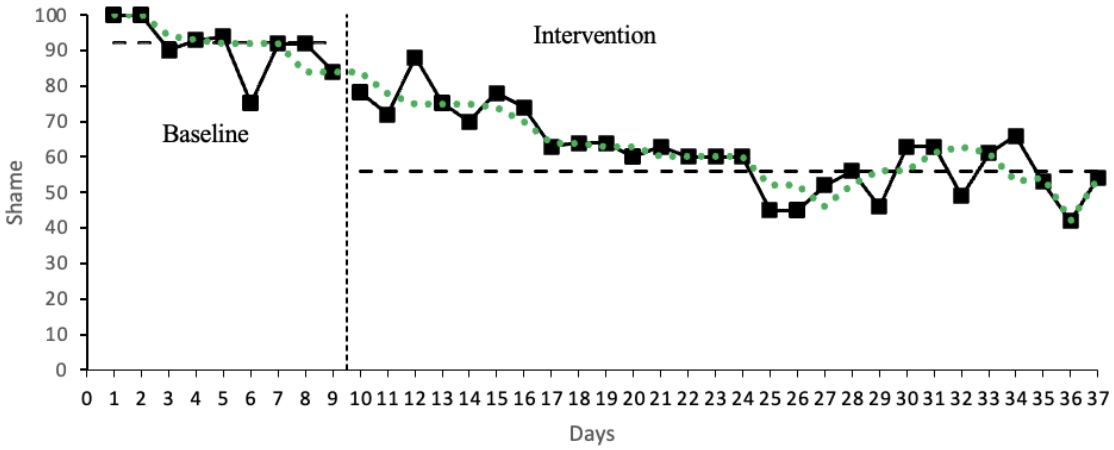


Figure K2 Guilt

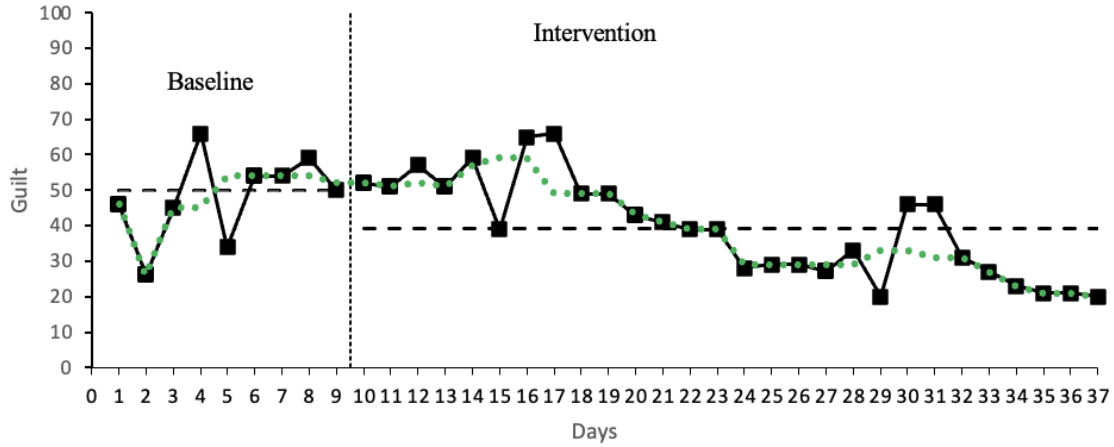


Figure K3 Self-criticism

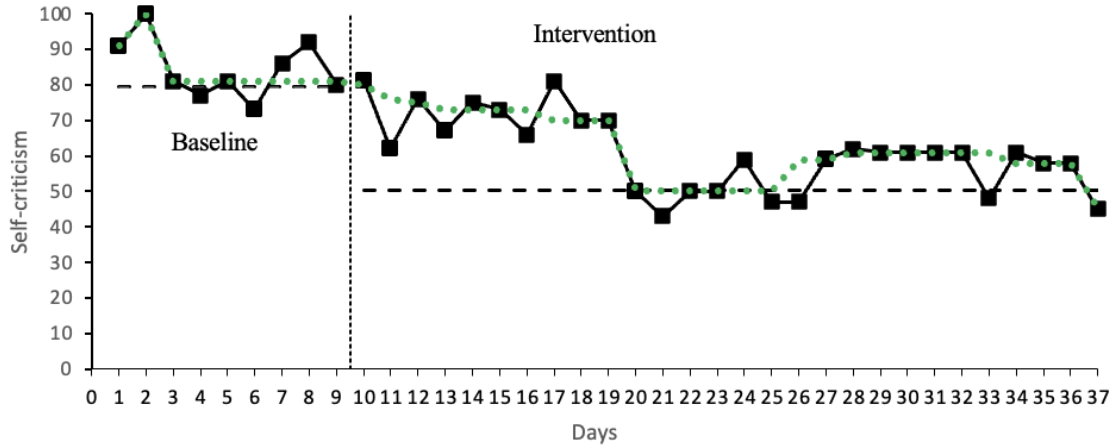


Figure K4 Compassion

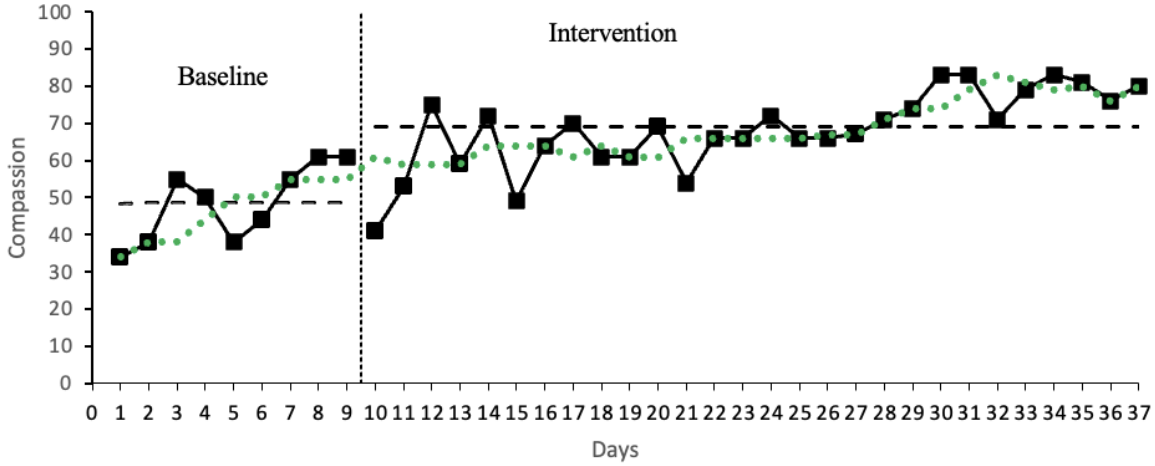


Figure K5 Normalising

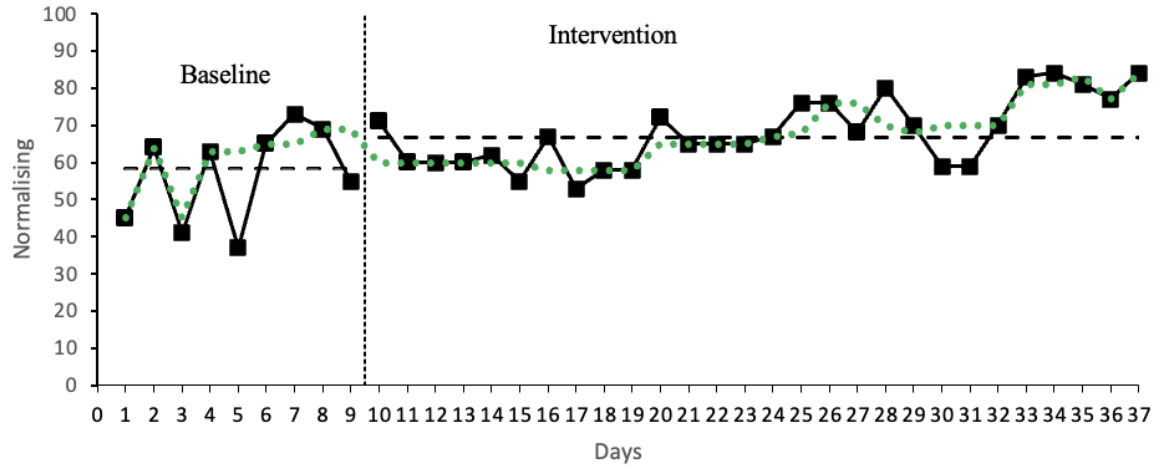
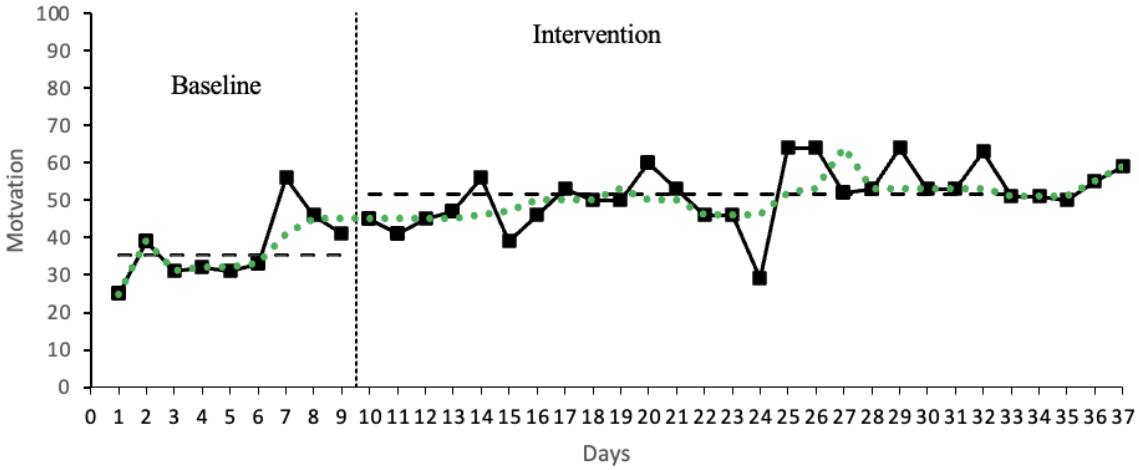


Figure K6 Motivation



Participant L. Participant L provided eight baseline data points and nine intervention points. Participant L had more than 60% of missing data points. LOCF was utilised up to the end of the second session, imputing for five data points. The last observed value was then carried to the end of the intervention phase. Participant L did not formally drop out but stopped responding after the third session materials were sent. Figure L1 to L6 depicts her outcome on idiographic measures. Table 19 displays her *Tau-U* analyses. Criteria for baseline stability was not met for Compassion and corrected *Tau-U* analyses was done. Visual analysis of the variables showed a decrease in level and downward trend for Shame, Guilt, Self-Criticism and a minimal decrease for Compassion and Normalising. Motivation stayed the same at 100 from baseline to intervention. *Tau-U* analyses found a significant reduction in Shame, Guilt and Self-criticism from baseline to intervention.

Table 19

Summary of Tau-U analyses for L's measures from the baseline to intervention phase

Measure	*Tau*	*SD Tau*	*p value*	*90% CI*
Shame	-0.94	0.26	< .001***	[-1.00, -0.51]
Guilt	-0.78	0.26	.003**	[-1.00, -0.35]
Self-Criticism	-0.83	0.26	.002**	[-1.00, -0.40]
Compassion[c]	-0.26	0.26	.322	[-0.69, 0.17]
Normalising	-0.10	0.26	.707	[-0.52, 0.33]
Motivation	0.00	0.26	1.000	[-0.43, 0.43]

Note. [c] = corrected baseline; *SD* = standard deviation; *CI* = confidence interval;
**= p <.05; **= p<.01; ***= p<.001*

Figure L1 Shame

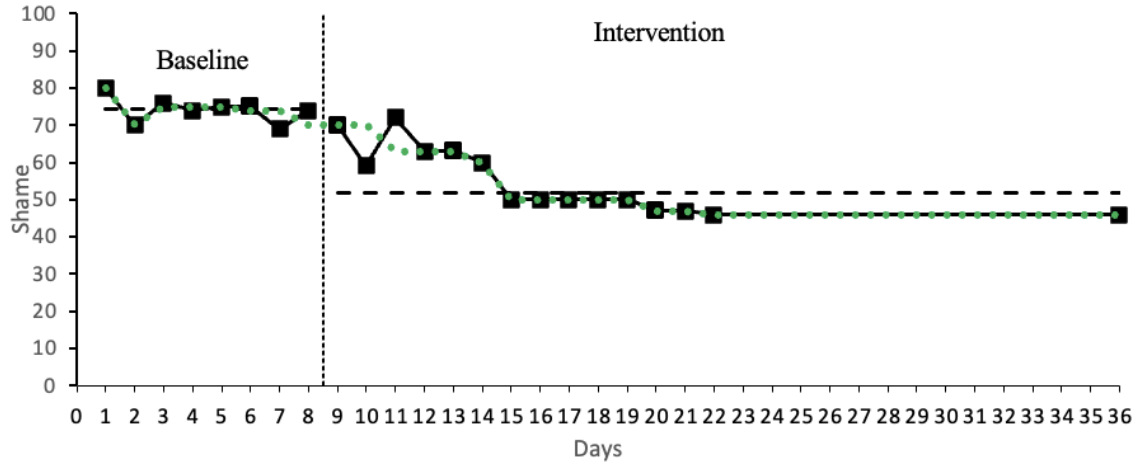


Figure L2 Guilt

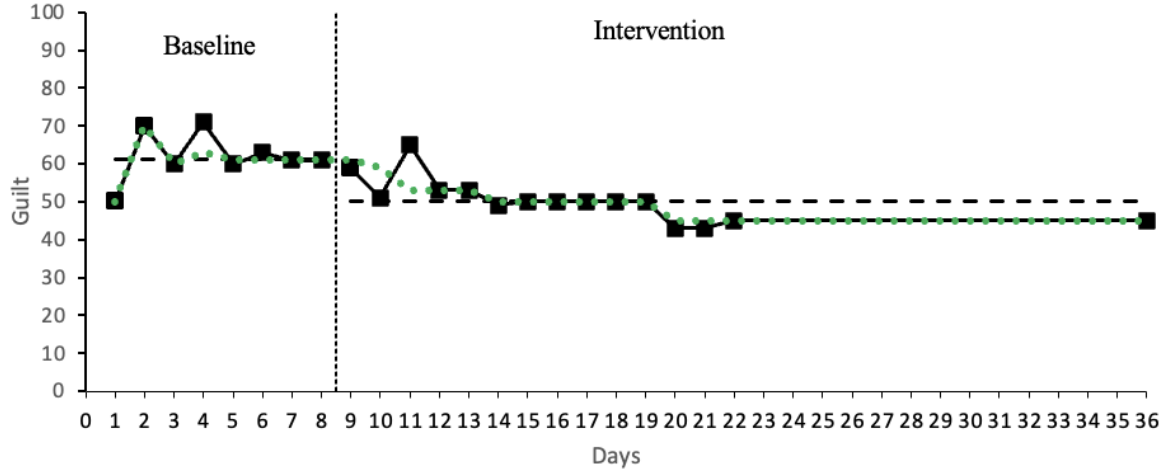


Figure L3 Self-criticism

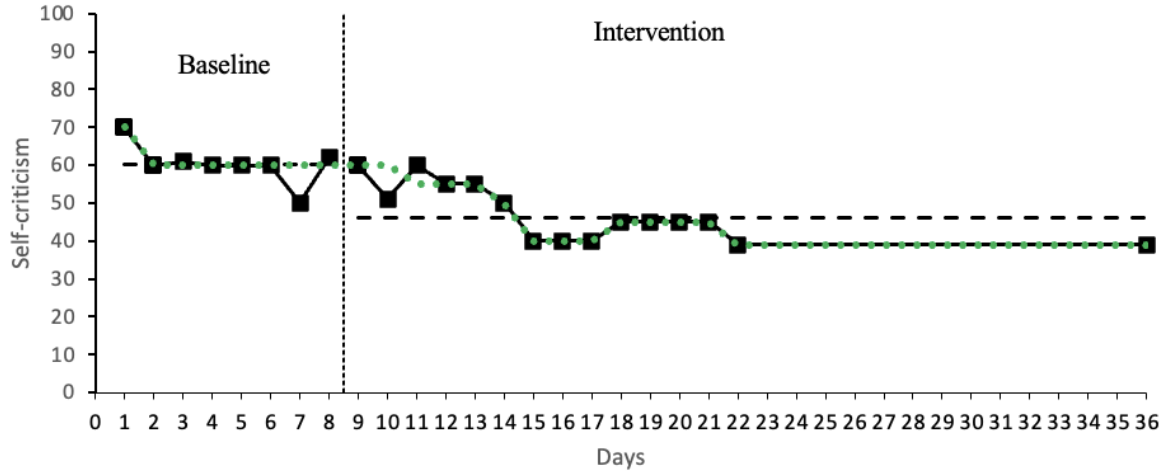


Figure L4 Compassion

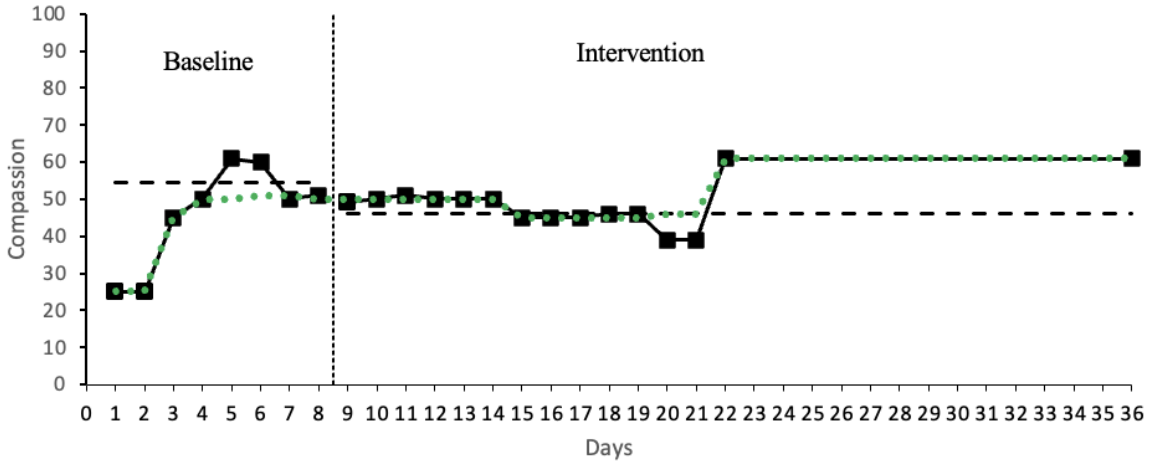


Figure L5 Normalising

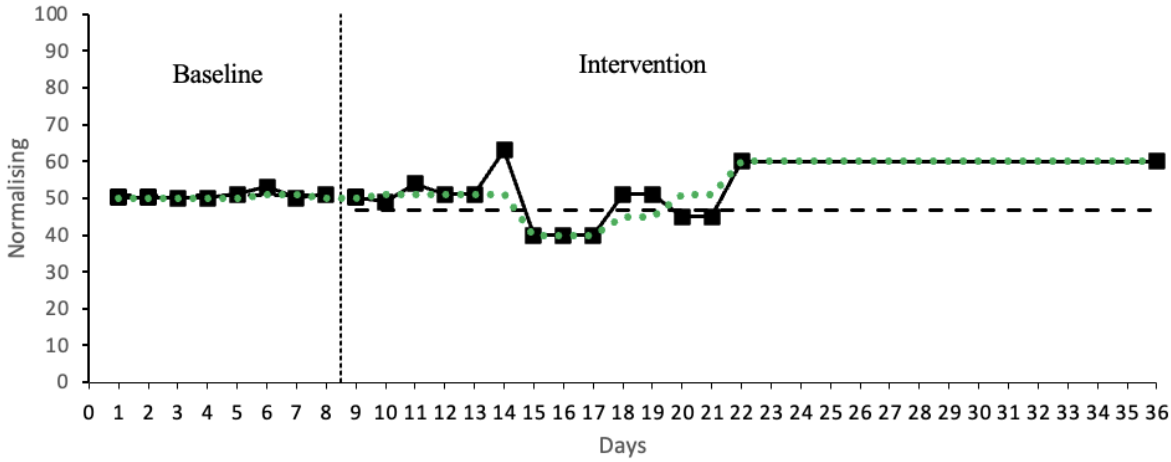
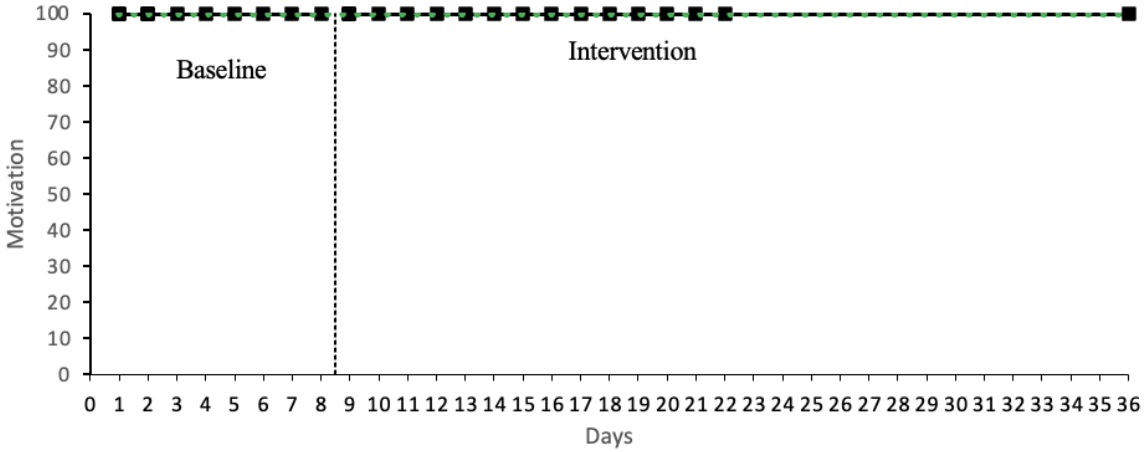


Figure L6 Motivation



Participant M. Participant M provided 10 baseline data points and 12 intervention points. She had more than 60% missing data points. LOCF was utilised up to the end of the second week in the intervention phase, imputing for three data points. The last observed value was then carried to the end of the intervention phase. Participant M did not formally drop out but stopped responding after the third session materials were sent. Figures M1 to M6 depict her outcome on idiographic measures. Table 20 displays her *Tau-U* analyses. Normalising did not demonstrate the criteria for baseline stability. Visual analysis suggested a minimal decrease in level and downtrend for Shame, Guilt and Compassion. An increase in level and upward trend was seen for Self-Criticism. There was a minimal change in the level and trend for Normalising and Motivation. Non-overlap *Tau-U* analyses showed a significant reduction in Shame and a significant deterioration in Self-criticism.

Table 20

Summary of Tau-U analyses M's measures from the baseline to intervention phase

Measure	*Tau*	*SD Tau*	*p value*	*90% CI*
Shame	-0.55	0.24	.021*	[-0.95, -0.16]
Guilt	-0.15	0.24	.542	[-0.54, 0.25]
Self-Criticism	0.49	0.24	.040*	[0.10, 0.89]
Compassion	0.01	0.24	.956	[-0.38, 0.41]
Normalising[C]	0.11	0.24	.637	[-0.28, 0.51]
Motivation	0.09	0.24	.718	[-0.31, 0.48]

Note. [c] = corrected baseline; *SD* = standard deviation; *CI* = confidence interval;
**= p <.05; **= p<.01; ***= p<.001*

Figure M1 Shame

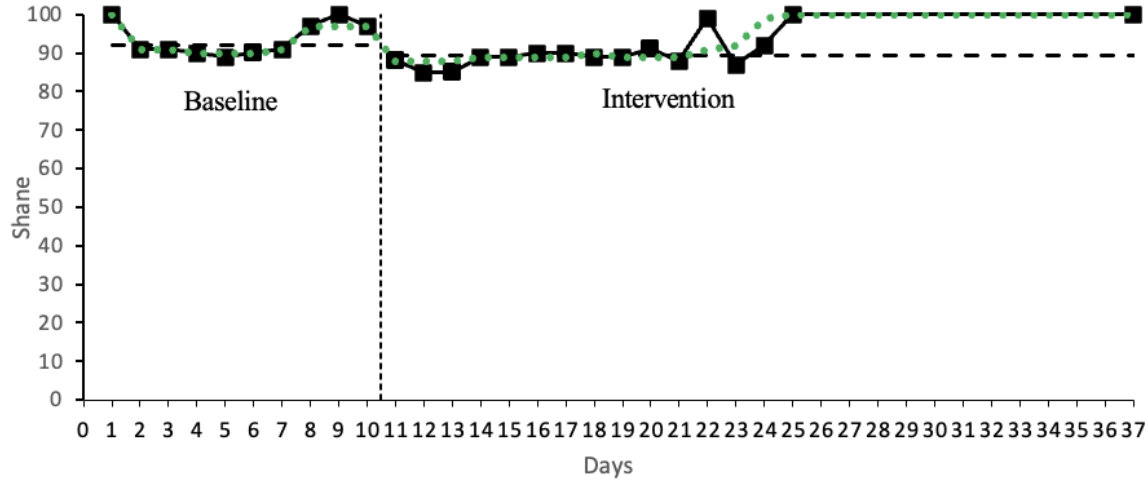


Figure M2 Guilt

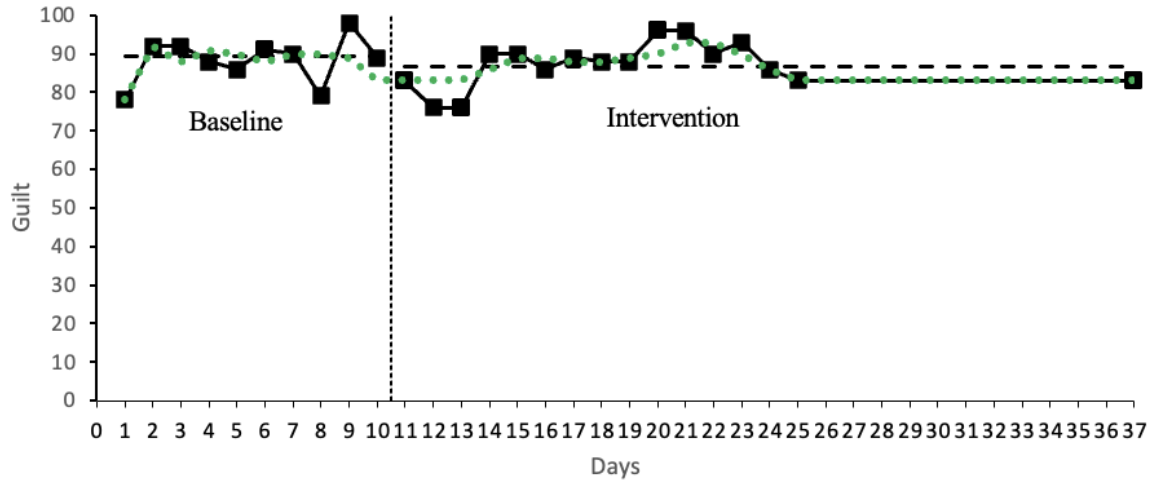


Figure M3 Self-criticism

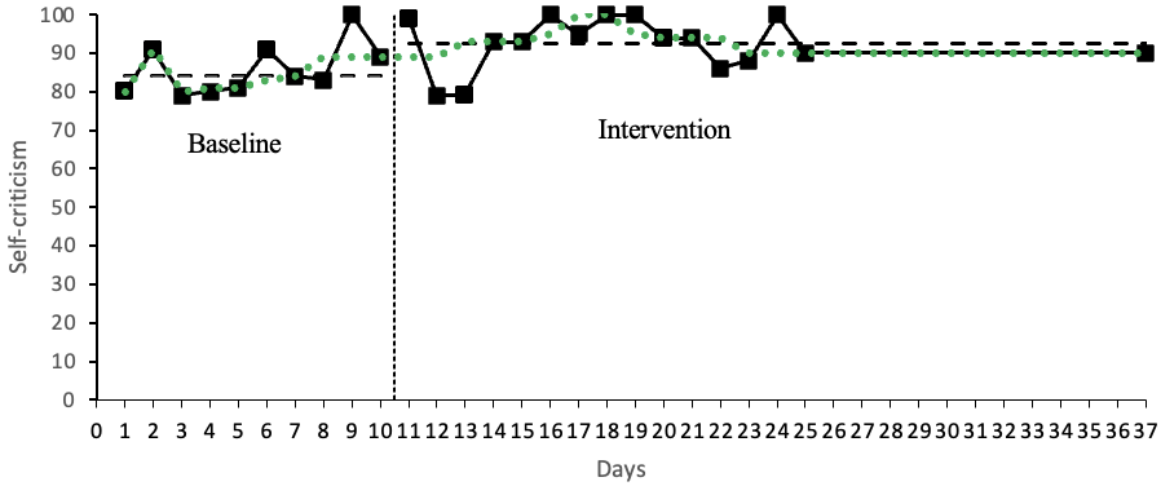


Figure M4 Compassion

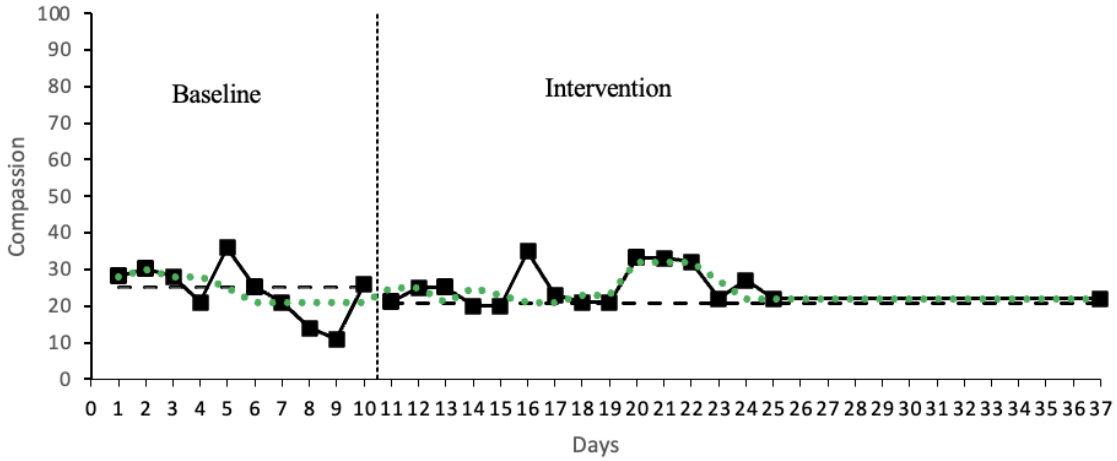


Figure M5 Normalising

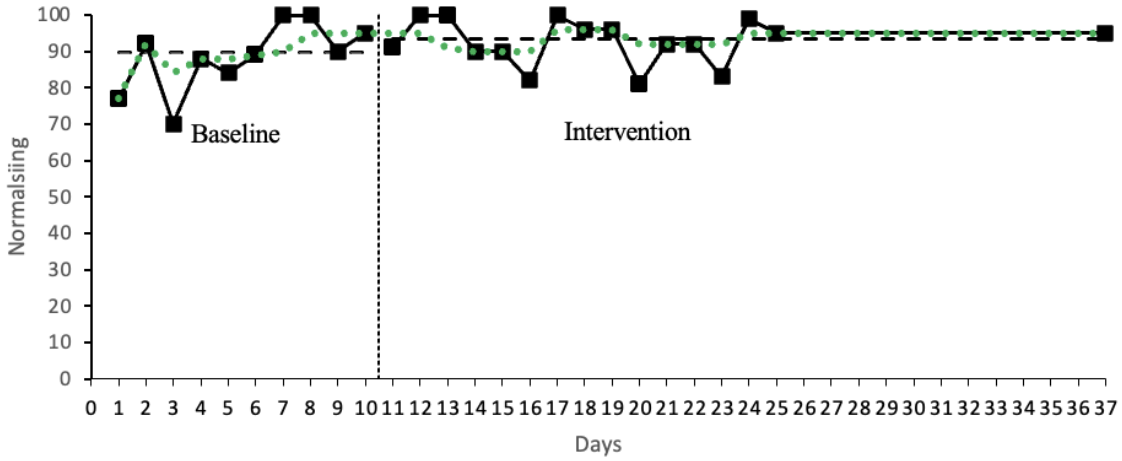
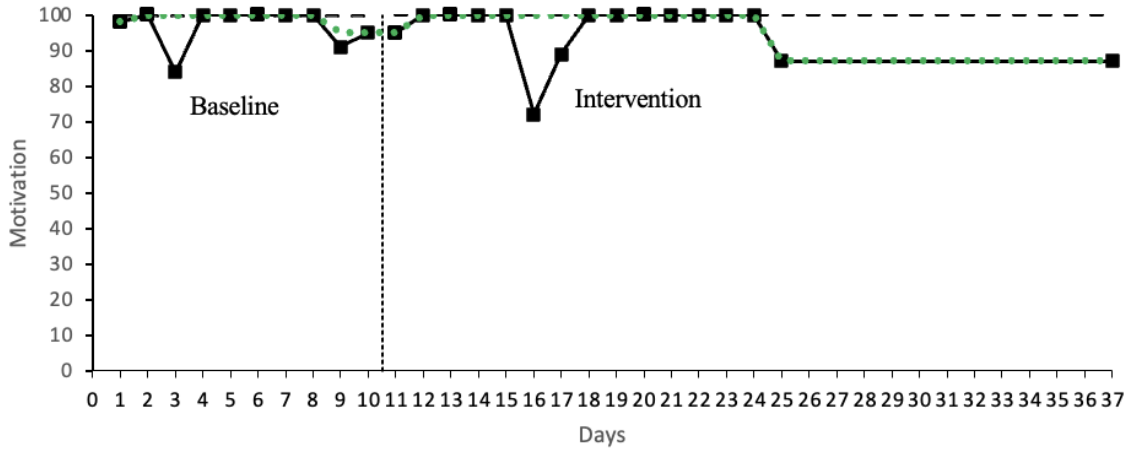


Figure M6 Motivation



Participant N. Participant N provided 10 out of 11 baseline data points and 18 intervention data points. LOCF was utilised to impute one missing baseline data point and 10 missing intervention data points. Figures N1 to N6 depict her outcome on idiographic measures. Table 21 displays participant N's *Tau-U* analyses. Criteria for baseline stability based on *Tau-U* analyses was not met for Shame, Guilt and Compassion. Corrected baselines were used for these outcome measures for *Tau-U* analyses. Regarding visual analysis, there was a downward trend from baseline to intervention for Shame, Guilt and Self-Criticism. An increase in level and upward trend was seen for Compassion, Normalising & Motivation. Non-overlap *Tau-U* analyses suggest significant improvement across all scores from baseline to intervention with a reduction in Shame, Guilt and Self-criticism, while there was an increase in Compassion, Normalisation and Motivation.

Table 21

Summary of Tau-U analyses comparing N's measures from baseline to intervention phase

Measure	*Tau*	*SD Tau*	*p value*	*90% CI*
Shame[c]	-0.83	0.21	<.001***	[-1.00, -0.49]
Guilt[c]	-0.84	0.21	<.001***	[-1.00, -0.50]
Self-Criticism	-0.93	0.21	<.001***	[-1.00, -0.59]
Compassion[c]	0.90	0.21	<.001***	[0.56, 1.00]
Normalising	0.86	0.21	<.001***	[0.52, 1.00]
Motivation	0.86	0.21	<.001***	[0.52, 1.00]

Note. [c] = corrected baseline; *SD* = standard deviation; *CI* = confidence interval;
**= p <.05; **= p<.01; ***= p<.001*

Figure N1 Shame

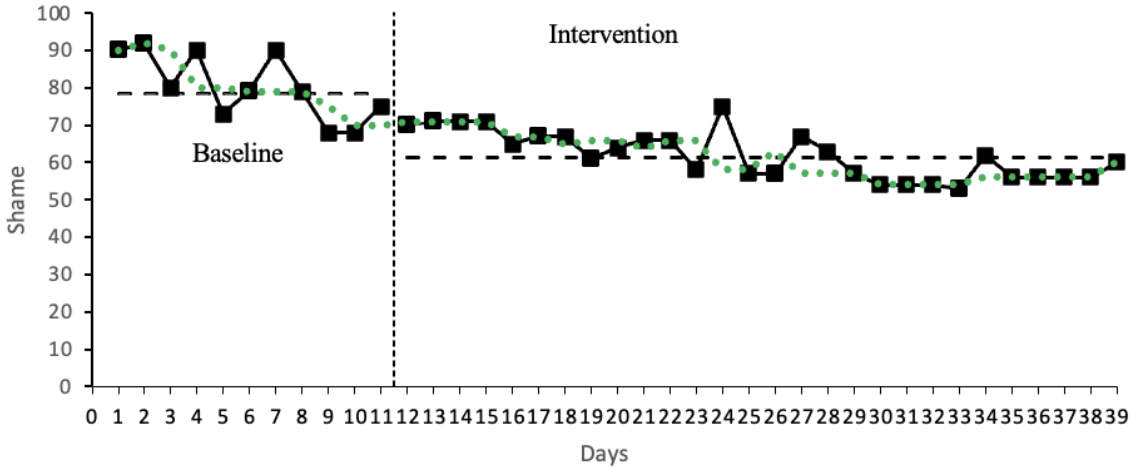


Figure N2 Guilt

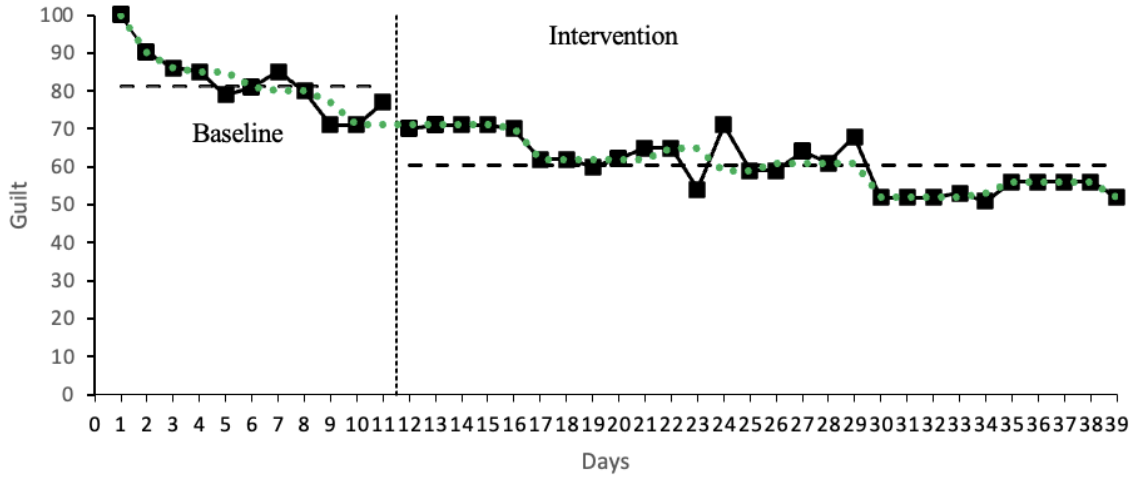


Figure N3 Self-criticism

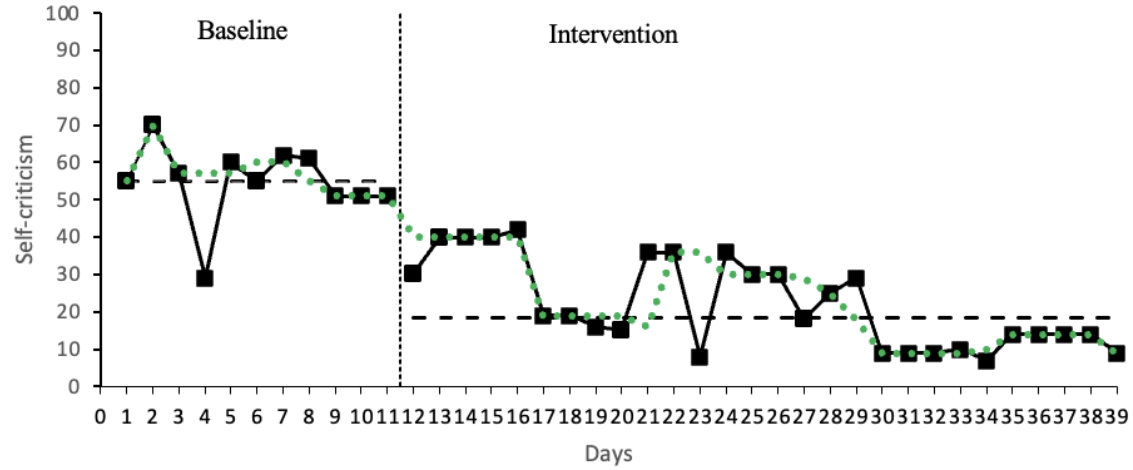


Figure N4 Compassion

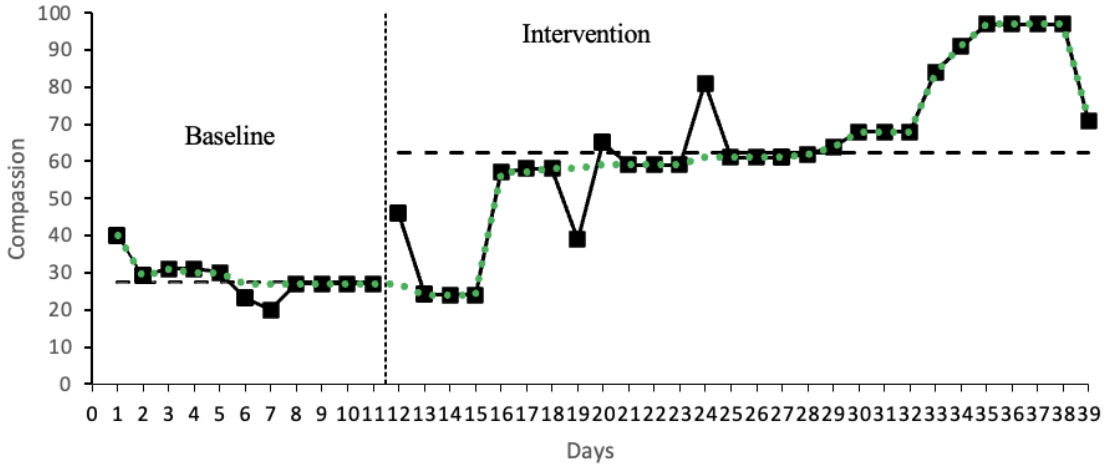


Figure N5 Normalising

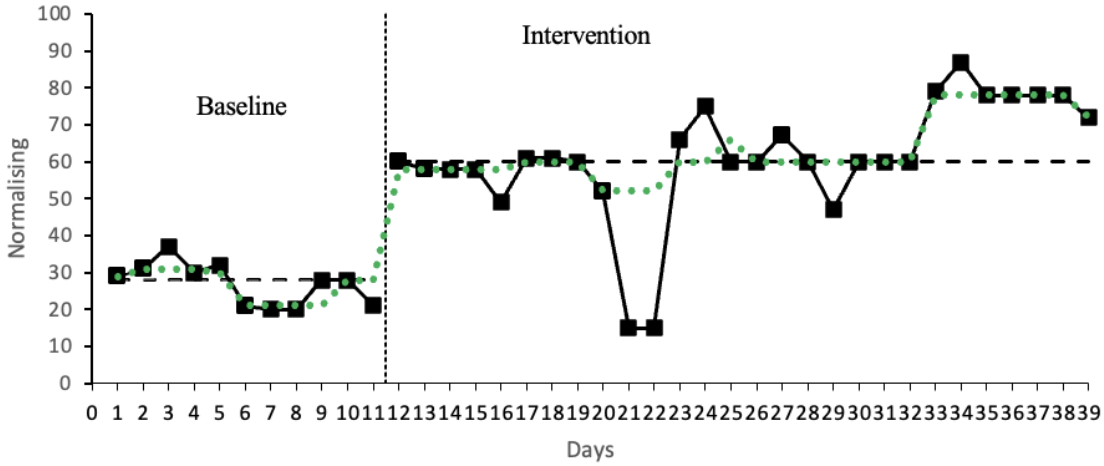
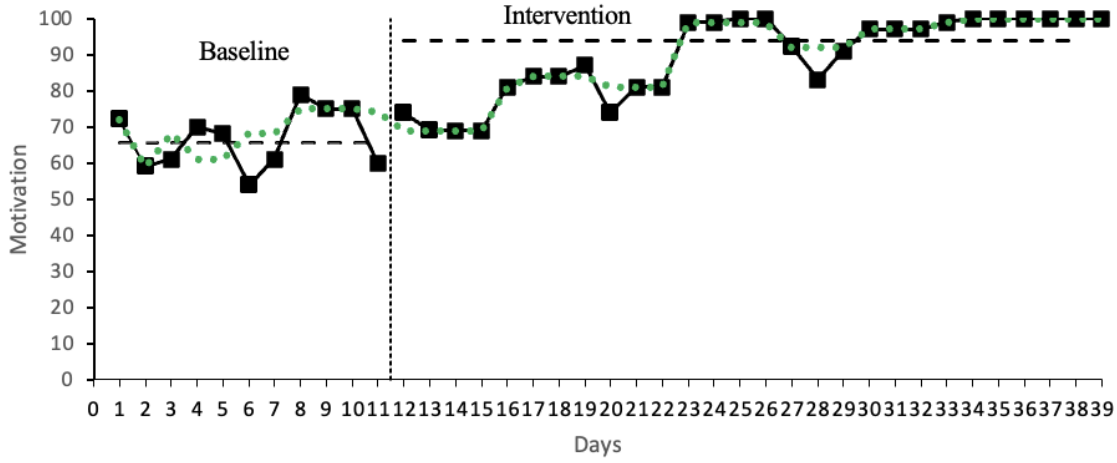


Figure N6 Motivation



Participant O. Participant O provided six baseline data points and 25 intervention points**.** There were three missing data points which were imputed using LOCF. Figures O1 to O6 depict her outcome on idiographic measures. Table 22 displays Participant O's *Tau-U* analysis. Criteria for baseline stability based on *Tau-U* analyses was not met for Compassion and a corrected *Tau-U* was conducted. Visual analysis from baseline to intervention depicted a decrease in level and a downward trend for Shame, Guilt & Self-criticism while there was an increase in level and an upward trend for Compassion. There was minimal change in level or trend for Normalising and Motivation. Visual analysis was supported by Non-overlap *Tau-U* analysis which report a significant reduction in Shame, Guilt and Self-criticism, and a significant increase in Compassion.

Table 22

Summary of Tau-U analyses comparing O's measures from the baseline to intervention phase

Measure	*Tau*	*SD Tau*	*p value*	*90% CI*
Shame	-0.98	0.26	<.001***	[-1.00, -0.60]
Guilt	-0.97	0.26	<.001***	[-1.00, -0.59]
Self-Criticism	-0.98	0.26	<.001***	[-1.00, -0.60]
Compassion[c]	0.73	0.26	.006**	[0.35, 1.00]
Normalising	-0.35	0.26	.190	[-0.73, 0.03]
Motivation	0.38	0.26	.155	[-0.00, 0.75]

Note. [c] = corrected baseline; *SD* = standard deviation; *CI* = confidence interval;
**= p <.05; **= p<.01; ***= p<.001*

Figure O1 Shame

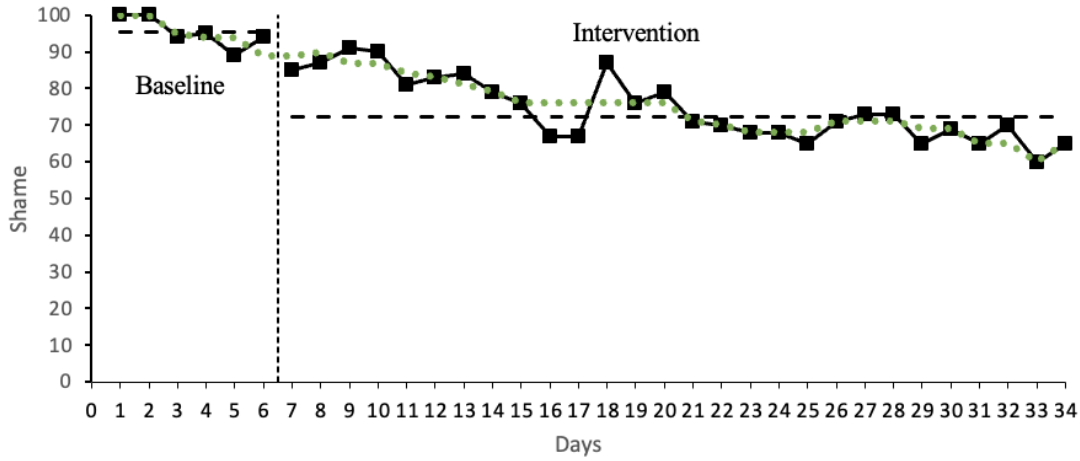


Figure O2 Guilt

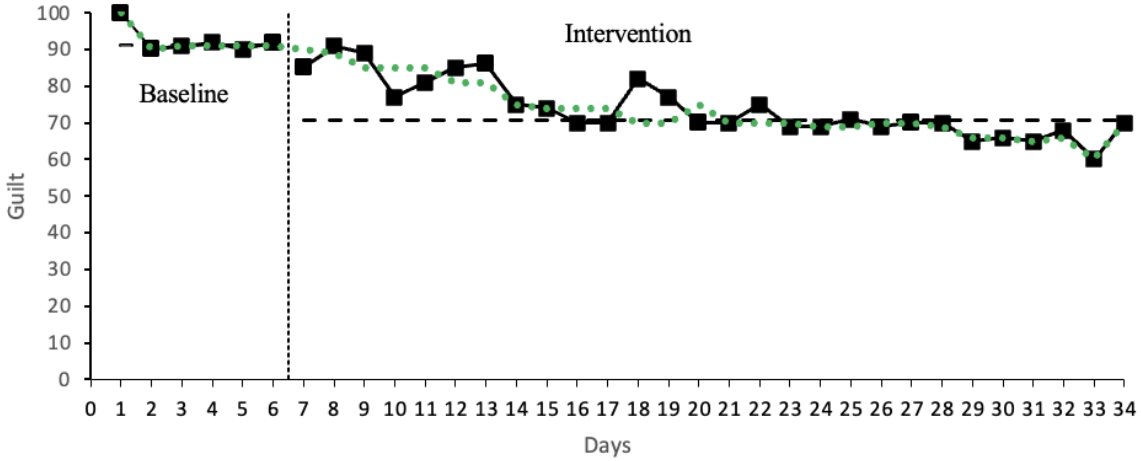


Figure O3 Self-criticism

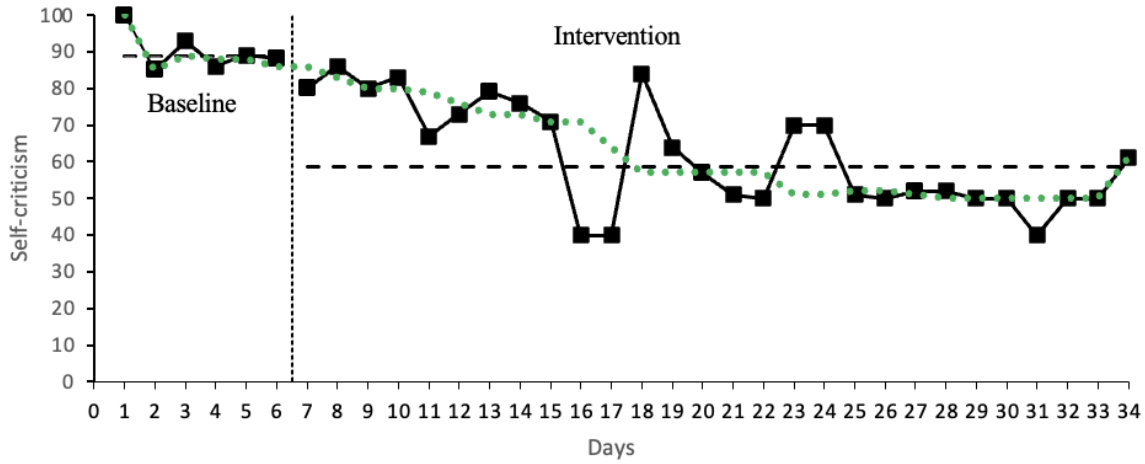


Figure O4 Compassion

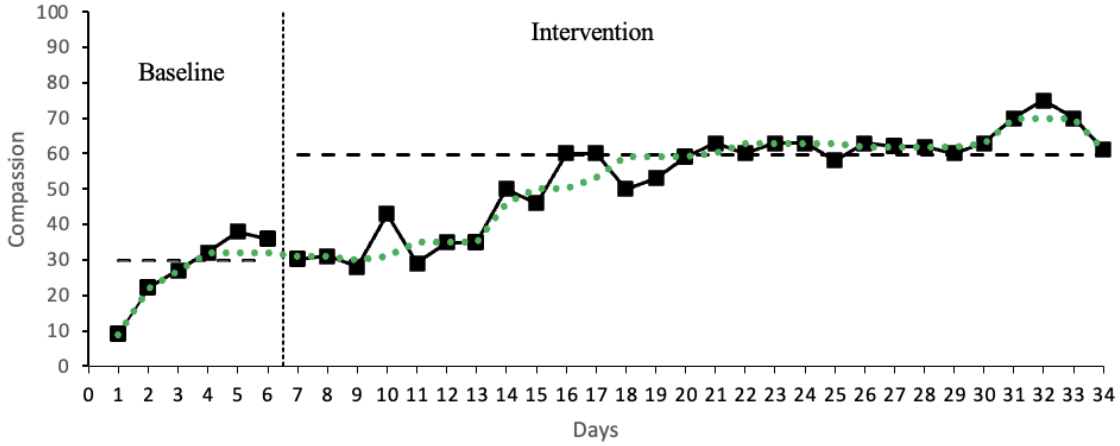


Figure O5 Normalising

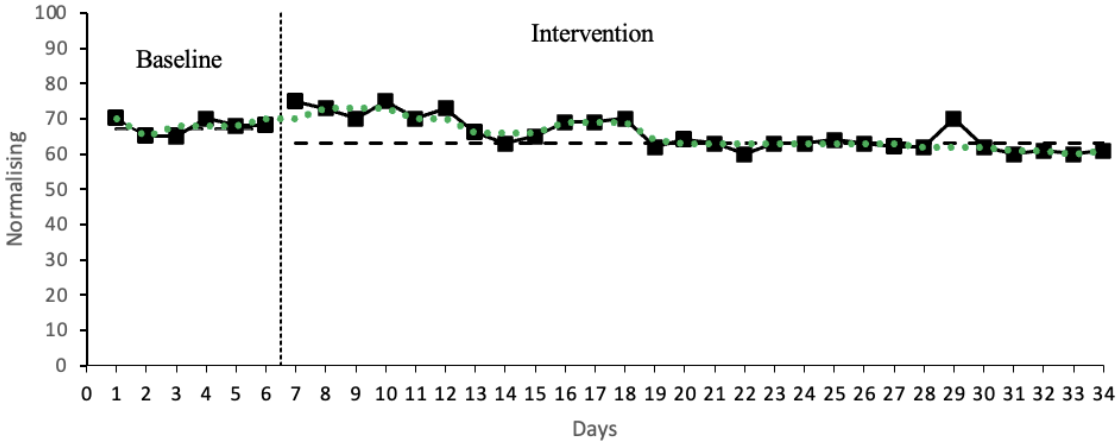
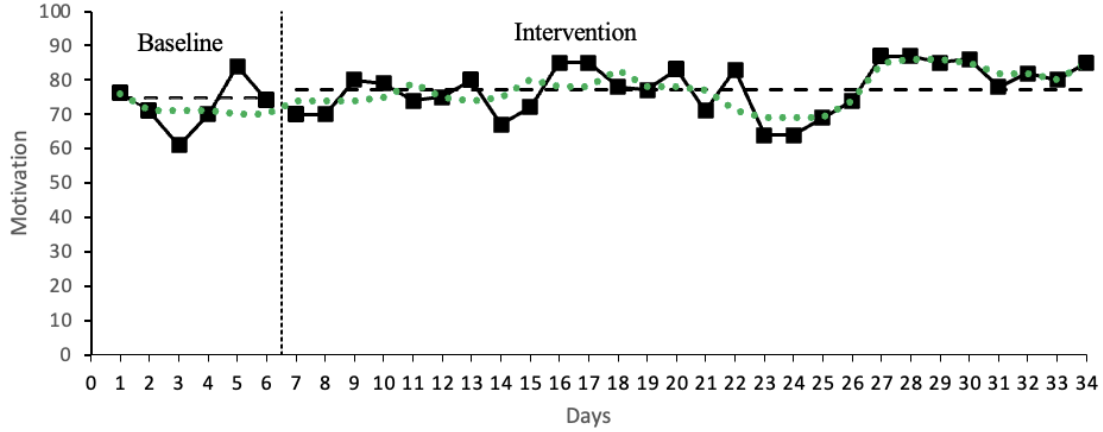


Figure O6 Motivation



Participant P. Participant P provided seven baseline data points and 25 intervention points. LOCF was utilised to impute the three missing data points. Figures P1 to P6 depict her outcome on idiographic measures. Table 23 displays Participant P's *Tau-U* analyses. Criteria for baseline stability was met for all measures. Visual analysis showed a reduction in central tendency and downward trend for Shame, Guilt and Self-Criticism. Self-criticism decreased more sharply from baseline to intervention. An increase in central tendency and upward trend was seen for Compassion, Normalising and more minimally for Motivation. Non-overlap *Tau-U* analyses corroborate the findings and there were significant improvements in all measure with a significant decrease for Shame, Guilt, Self-criticism and significant increase in Compassion, Normalising and Motivation.

Table 23

Summary of Tau-U analyses comparing P's measures from the baseline to intervention phase

Measure	*Tau*	*SD Tau*	*p value*	*90% CI*
Shame	-0.95	0.25	<.001***	[-1.00, -0.55]
Guilt	-1.00	0.25	<.001***	[-1.00, -0.59]
Self-Criticism	-1.00	0.25	<.001***	[-1.00, -0.59]
Compassion	0.98	0.25	<.001***	[0.57, 1.00]
Normalising	1.00	0.25	<.001***	[0.59, 1.00]
Motivation	0.74	0.25	.003**	[0.34, 1.00]

Note. [c] = corrected baseline; *SD* = standard deviation; *CI* = confidence interval;
**= p <.05; **= p<.01; ***= p<.001*

Figure P1 Shame

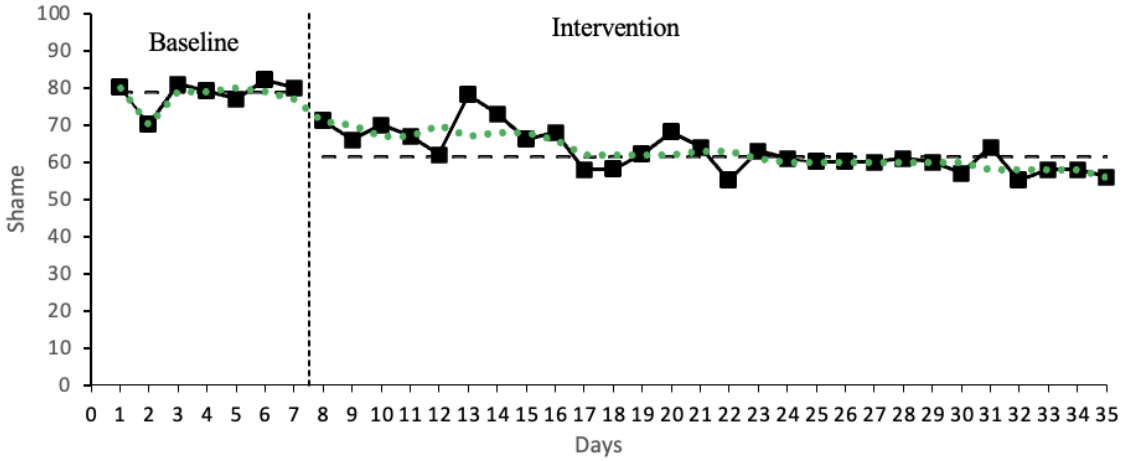


Figure P2 Guilt

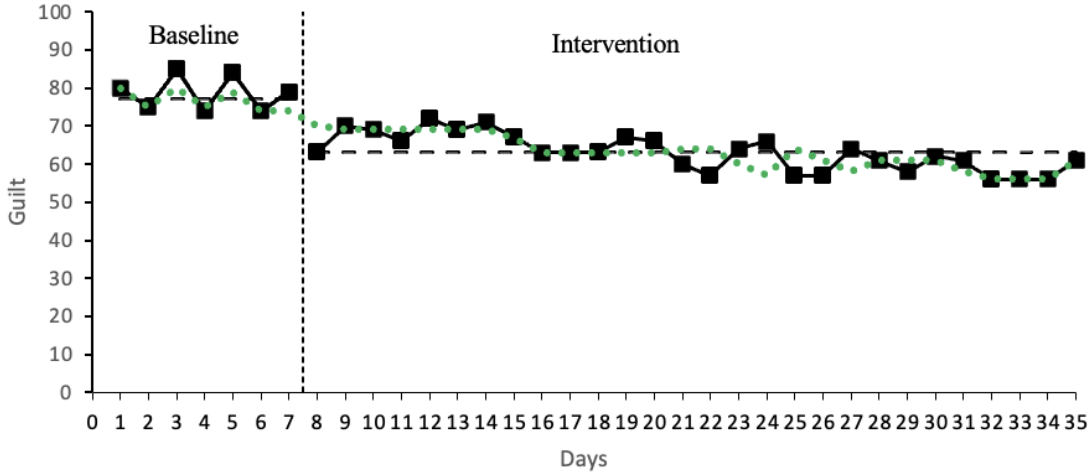


Figure P3 Self-criticism

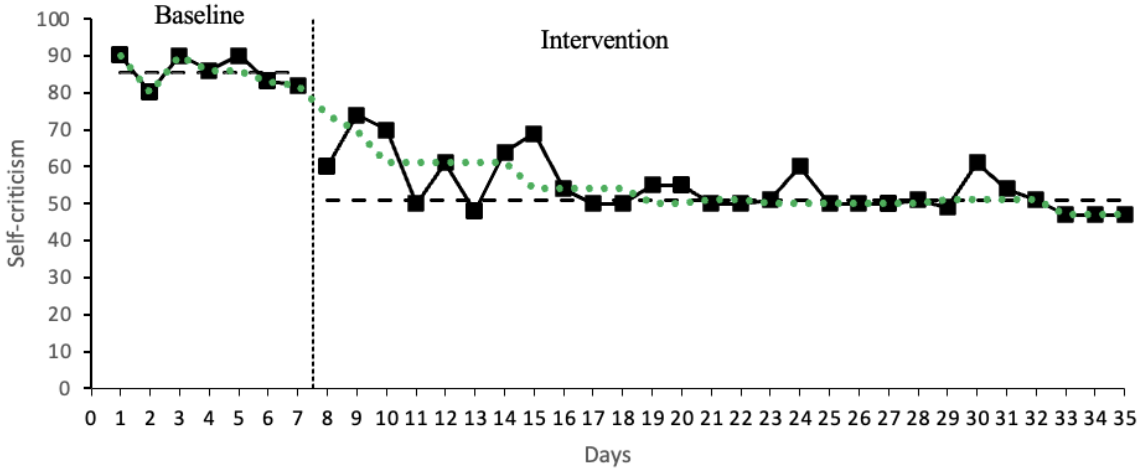


Figure P4 Compassion

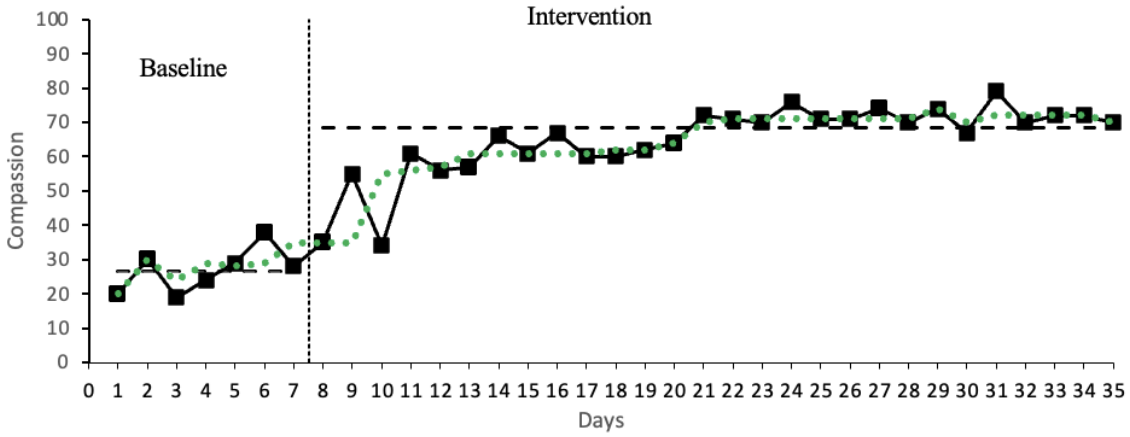


Figure P5 Normalising

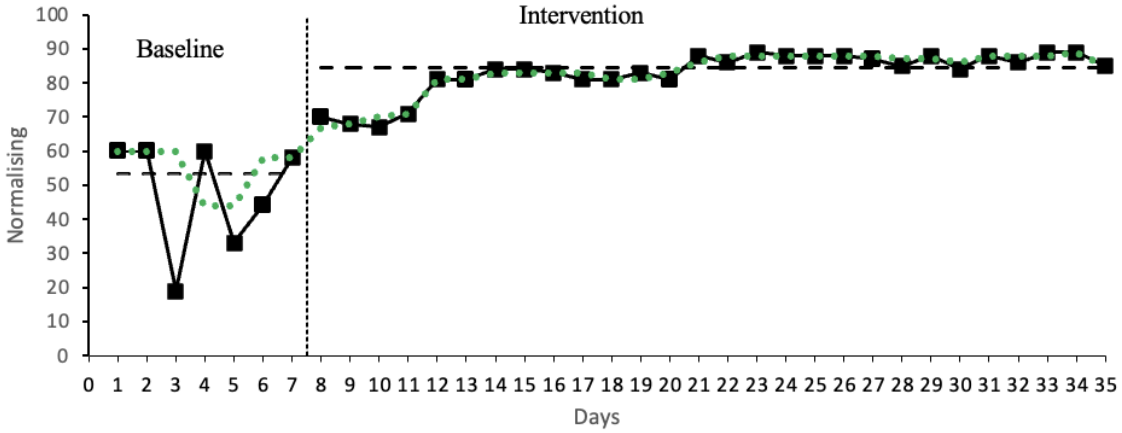
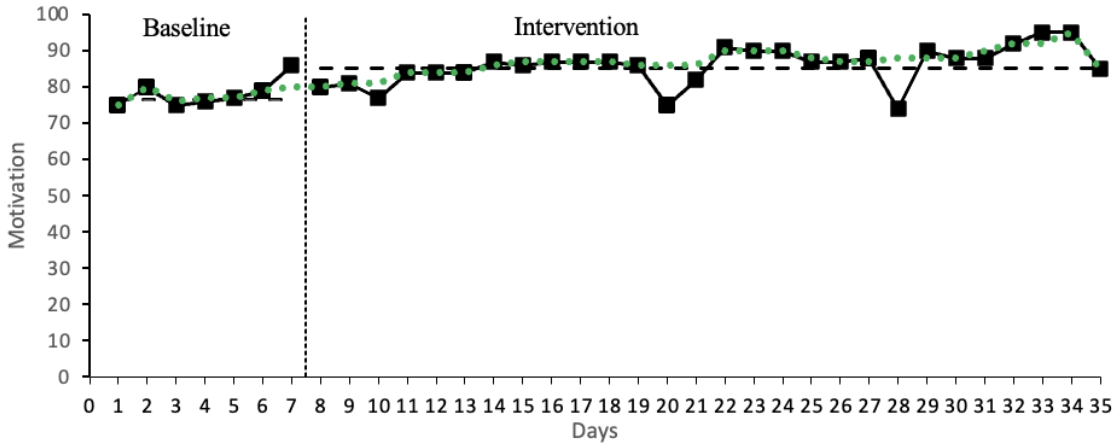


Figure P6 Motivation



Participant Q. Participant Q provided 4 out of 5 baseline data points and 12 intervention points. Participant Q had more than 60% of missing data. LOCF was utilised up to the end of the third week imputing for eight data points. The last observed value was then carried to the end of the intervention phase. Figures Q1 to Q6 depict her outcome on idiographic measures. Table 24 displays *Tau-U* analyses. Baseline was deemed stable based on *Tau-U* analyses. Visual analysis between baseline and intervention showed a decrease in the level and a downward trend for Guilt, Self-criticism, and Compassion. There was an increase in level and upward trend for Shame and Normalising while Motivation stayed consistently at 100 throughout. *Tau-U* analyses supported visual analysis and found a significant decrease in Guilt, Self-criticism & Compassion while there was a significant improvement in Compassion.

Table 24

Summary of Tau-U analyses comparing Q's measures from the baseline to intervention phase

Measure	*Tau*	*SD Tau*	*p value*	*90% CI*
Shame	0.35	0.29	.223	[-0.13, 0.83]
Guilt	-0.85	0.29	.003**	[-1.00, -0.38]
Self-Criticism	-1.00	0.29	<.001***	[-1.00, -0.52]
Compassion	-0.57	0.29	.049*	[-1.00, -0.09]
Normalising	0.89	0.29	.002**	[0.412, 1.00]
Motivation	0.00	0.29	1.000	[-0.47, 0.47]

Note. [c] = corrected baseline; *SD* = standard deviation; *CI* = confidence interval;
**= p <.05; **= p<.01; ***= p<.001*

Figure Q1 Shame

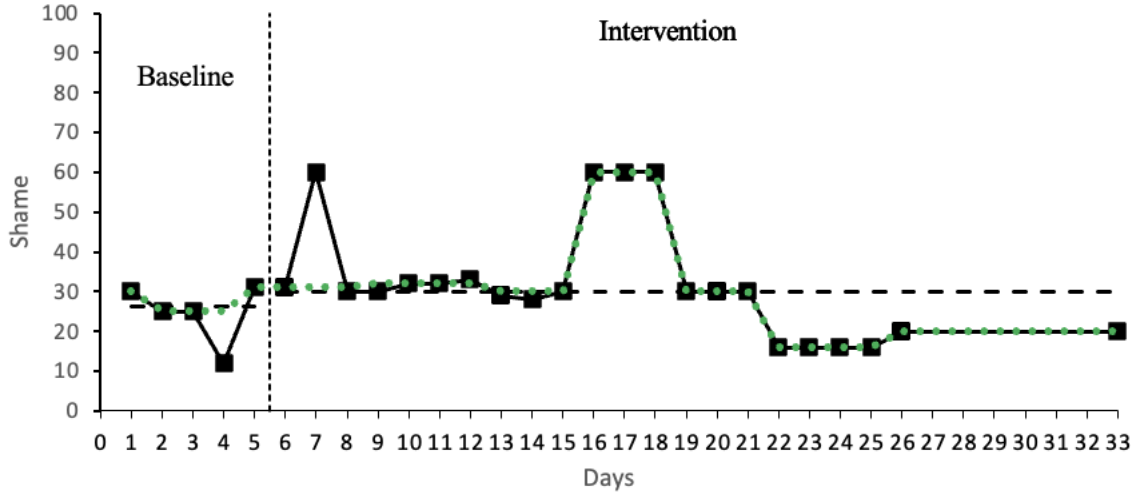


Figure Q2 Guilt

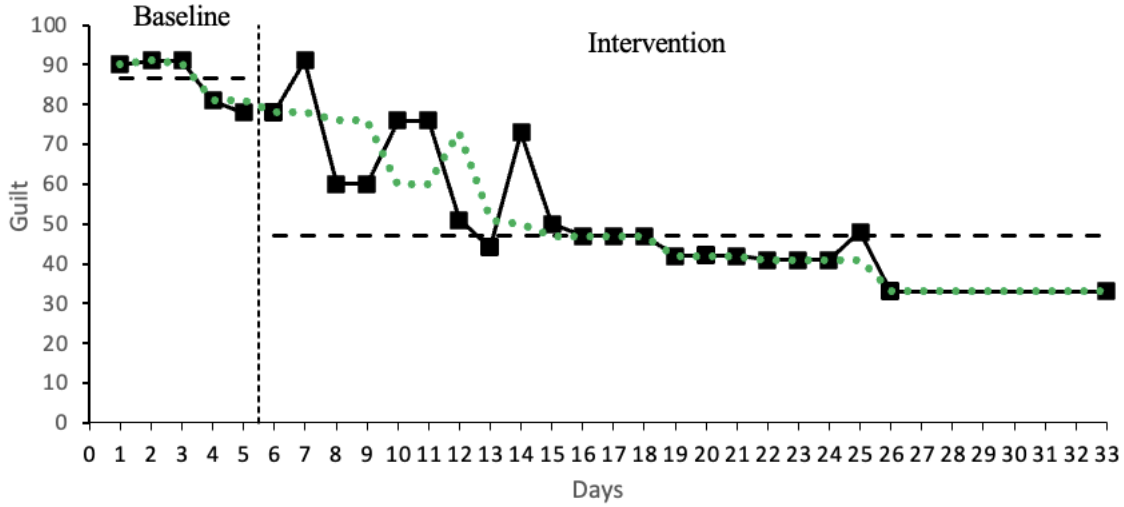


Figure Q3 Self-criticism

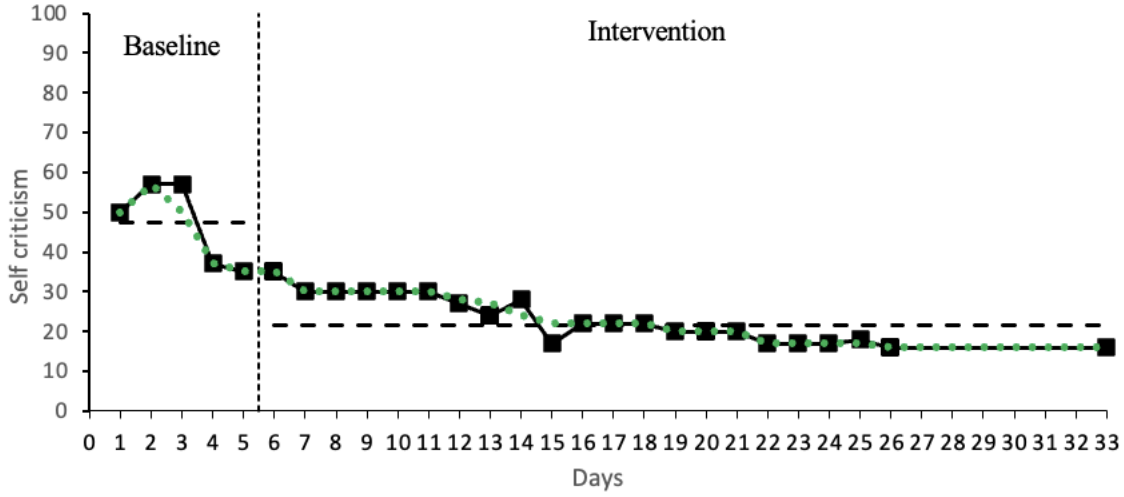


Figure Q4 Compassion

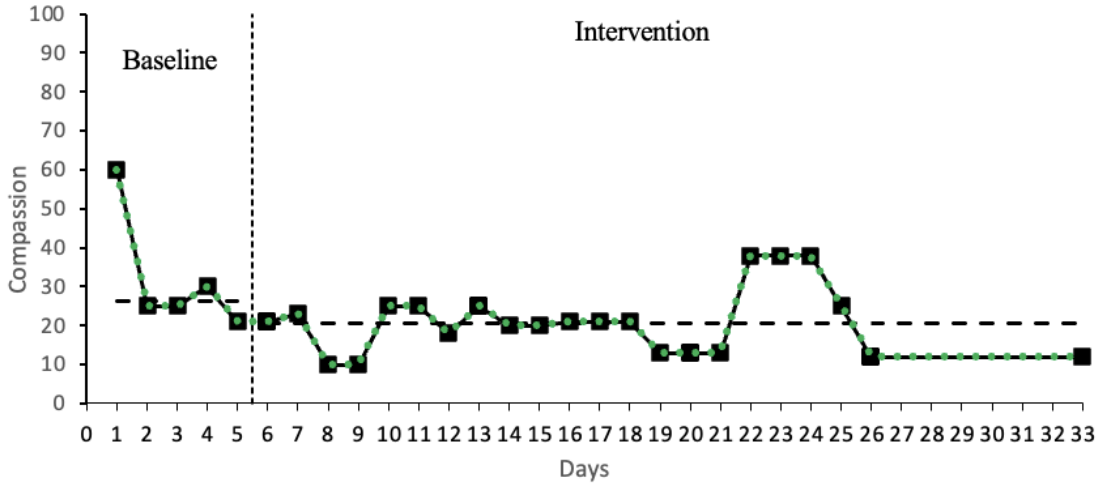


Figure Q5 Normalising

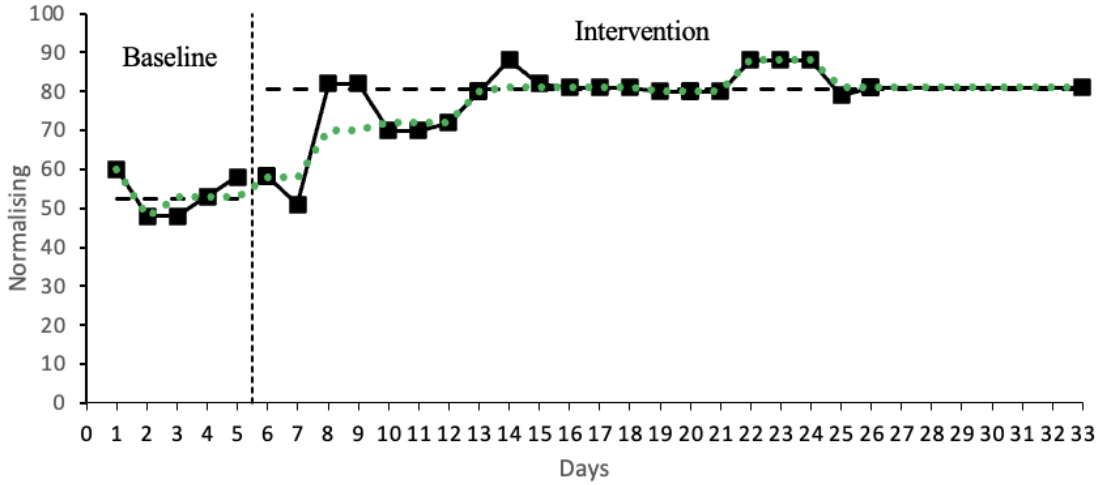
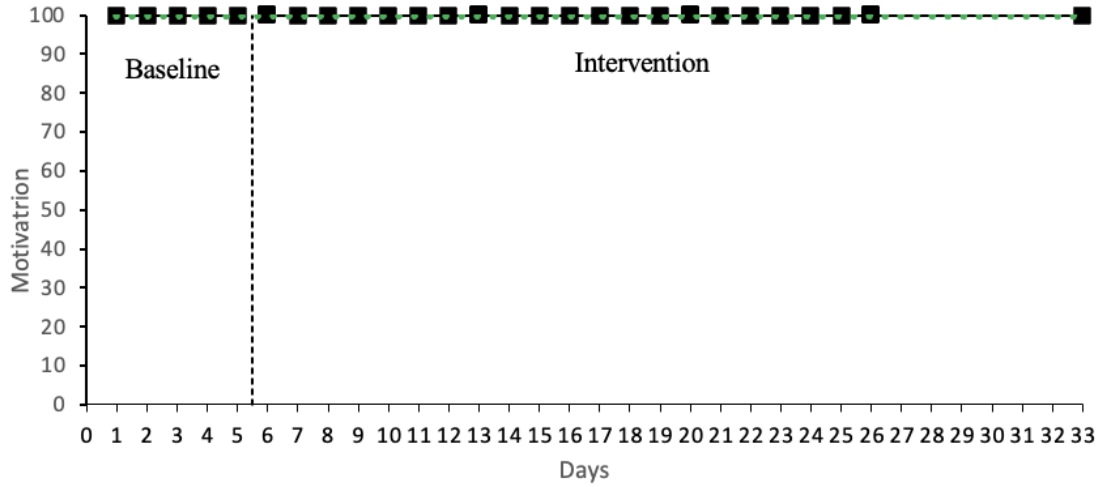


Figure Q6 Motivation



Summary of *Tau-U* Analyses. Table 25 shows the summary of *Tau-U* analyses across participants, excluding participants D and H, who did not meet the minimum data points during the intervention phase. Weighted averages were conducted with scores to calculate an overall omnibus main effect. An Omnibus effect size was calculated including and excluding participant L, M and Q but both tests were significant. Table 26 shows the omnibus effect size across all participants in line with intent-to-treat analysis. The analysis excluded Participant D and H who did not complete any intervention sessions. Across all participants, there was significant improvements between the intervention and baseline phase for Shame, Guilt, Self-criticism, Compassion, Normalising and Motivation. However, casual inferences from significant omnibus effect should be made with caution due to confounding variables.

Table 25

Summary of Tau-U analyses across participants (excluding participant D and H) idiographic measures from baseline to intervention

	Number of participants		
Measure	with significant improvement	no significant change	significant deterioration
Shame	10 (L & M)	5	0
Guilt	8 (L & Q)	7	0
Self-criticism	9 (L & Q)	3	3 (M)
Compassion	11	3 (L&Q)	1 (Q)
Normalising	7 (Q)	8 (L&M)	0
Motivation	8	6 (L, M &Q)	1

Table 26

Omnibus Tau-U Effect Sizes

Measure	*Tau*	*p* value	95% CI
Shame	-0.61	<.001***	[-0.75, -0.47]
Guilt	-0.55	<.001***	[-0.69, -0.42]
Self-Criticism	-0.40	<.001***	[-0.54, -0.26]
Compassion	0.73	<.001***	[0.59, 0.87]
Normalising	0.49	<.001***	[0.35, 0.62]
Motivation	0.42	<.001***	[0.28, 0.56]

Note. ***= p<.001

Sexual Distress

Based on criterion B, six participants met the criteria for RC on sexual distress as seen in Table 27. Only Participant J met the criteria for RC and CSC indicated by the green box on Figure 6A.

Table 27

Summary of participants FSDS-R scores from baseline to follow-up

Participant	**FSDS-R Score**		**Change Score**	**Reliable Change**
	Baseline	**Follow-Up**		
A	28	28	0	No change
B	46	26	20	Improve
C	27	13	14	Improve
F	32	35	-3	No change
G	38	15	23	Improve
J	17	4	13	Improve*
K	32	27	5	No change
O	35	21	14	Improve
P	44	37	7	Improve

Note. Reliable change and clinically significant change (CSC) indicated by Jacobson & Traux, 1991, *=CSC

State Self-Compassion

Based on criteria B, four participants demonstrated significant improvement and reliable change on the state self-compassion score from baseline to follow-up. No participants demonstrated clinically significant change as seen in Table 28.

Table 28

Summary of participants SSCS-S scores from baseline to follow-up

Participant	SSCS-S Score		Change Score	Reliable Change
	Baseline	Follow-Up		
A	2.83	3.00	0	No change
B	2.50	4.33	2	Improve
C	1.50	4.00	3	Improve
F	3.00	3.33	0	No change
G	1.33	4.00	3	Improve
J	3.83	4.67	1	No change
K	2.00	2.00	0	No change
O	1.33	3.17	2	Improve
P	1.83	2.50	1	No change

Note. Reliable change and clinically significant change (CSC) indicated by Jacobson & Traux, 1991, no participants demonstrated CSC

Sexual Functioning

Criterion C was selected to calculate RCI on the Female Sexual Functioning Index due to the overlap in clinical and non-clinical population. Six participants demonstrated

reliable change on sexual functioning with five participants showing significant improvements and one deteriorating as seen in Table 28. Two participants, B and O met the criteria for CSC as seen in Figure 6B.

Table 29

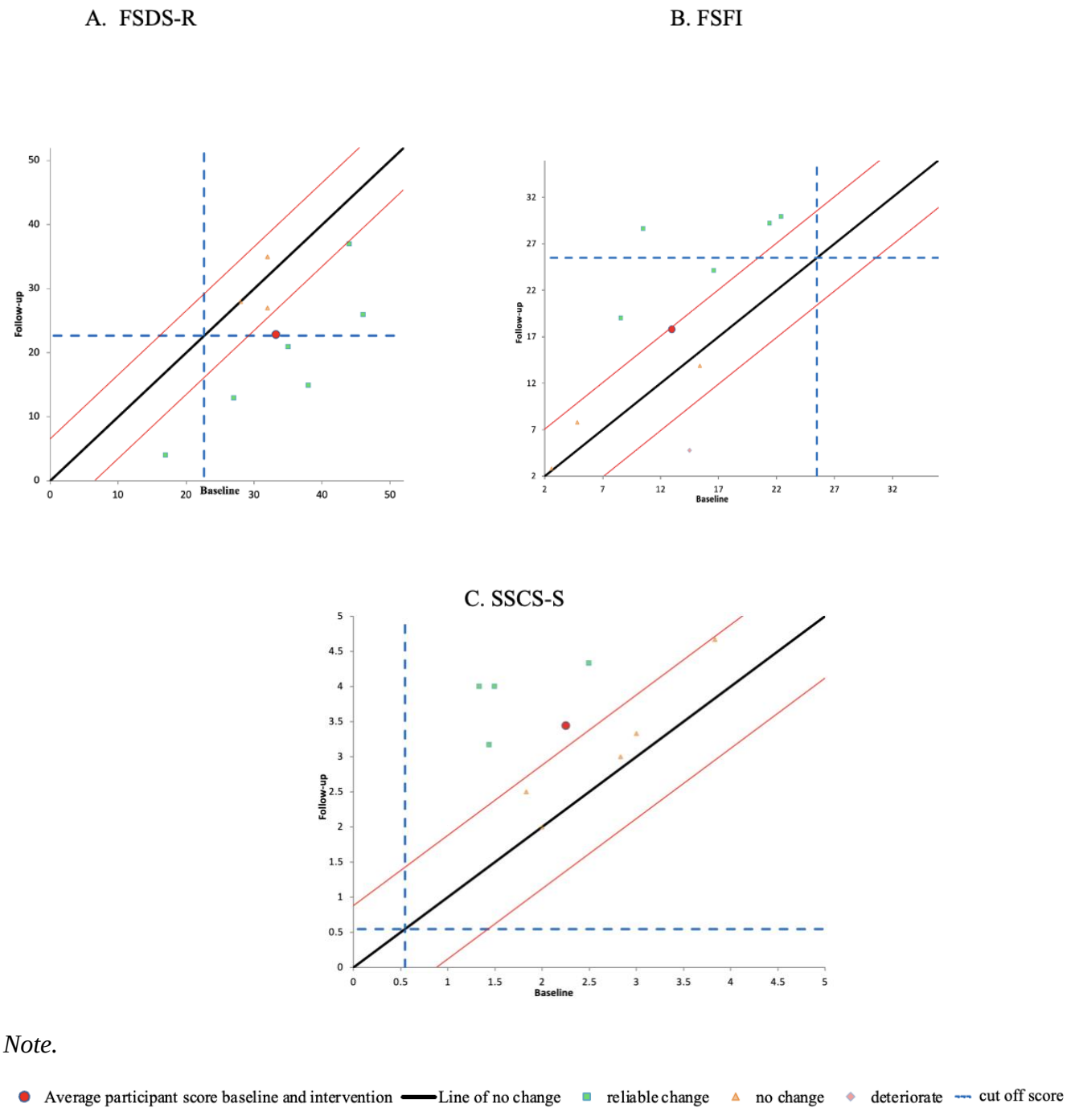
Summary of participants FSFI scores from baseline to follow-up

Participant	FSFI Score		Change Score	Reliable Change
	Baseline	Follow-Up		
A	4.8	7.8	3	None
B	8.6	19	10	Improve*
C	21.4	29.2	8	Improve
F	14.5	4.8	-10	Deteriorate
G	10.5	28.6	18	Improve
J	22.4	29.9	8	Improve
K	2.6	2.8	0	None
O	16.6	24.1	8	Improve*
P	15.4	13.9	-2	None

Note. Reliable change and clinically significant change (CSC) indicated by Jacobson & Traux, 1991 *=CSC

Figure 6

Leeds Reliable Change Indicator graphs for reliable and clinically significant change of baseline to follow-up



Note.

Discussion

This study developed an online guided self-help intervention for sexual distress. The study utilised a multiple baseline SCED to test the feasibility, acceptability, and preliminary effectiveness of the intervention for female survivors of sexual assault. The findings from the study were summarised in consideration of the current evidence base. The strengths and limitations of the study were reviewed as well as the clinical and research implications.

Acceptability and Feasibility

Considering the theoretical framework of acceptability (Sekhon et al., 2017), qualitative feedback highlighted an overall positive attitude towards the intervention. All participants who completed the follow-up questionnaire (*n*=9/15) found the intervention informative and easy to understand. Participants reported finding the video format of the intervention with complimentary handouts to be helpful. More than half of the participants at follow-up reported wanting more sessions, while the remainder felt that four sessions were sufficient. Responses from the CSQ indicated that most participants were satisfied with the intervention. The participant who scored the lowest on the CSQ shared that they had engaged with similar materials before, which is why it was not as helpful. Two participants reported that the daily measures were tedious, but no other participant reported the burden of daily measures. In terms of adverse effects, none of the participants reported adverse effects or requested access to the triage appointment during the intervention. However, at follow-up three participants reported finding the sexual activities list triggering. These participants elaborated that even though it reminded them of activities they could not do, they knew it was an optional activity and it was a helpful inclusion they could use in the future. These findings provide some support for the acceptability of an online intervention for female sexual distress following sexual assault with little to no contact with professionals. However, findings must be interpreted cautiously as not all participants completed the follow-up measures. Women

who completed the feedback form may reflect a subgroup of participants who were satisfied with the intervention or motivated to improve their sexual distress.

Regarding feasibility, recruitment occurred faster than anticipated, with a higher level of interest than the initial recruitment target. The high level of interest shows the demand for interventions in this area. This finding was surprising as previous studies testing interventions for psychosexual distress or that recruited sexual trauma survivors reported difficulties with recruitment (Canada et al., 2007). The study also had high attrition rates, with 79% attrition at the end of the intervention phase and a reasonable attrition rate of 60% at follow-up. Of those who completed the follow-up measure, 88% completed all four intervention sessions. Dropout rates were similar to previous intervention studies for sexual difficulties following sexual assault, reporting dropout rates between 24.1% (Meston et al., 2013) and 33% (Brotto et al., 2012). The two participants who dropped out after baseline and did not engage with the intervention were randomly assigned to 14 days in the baseline phase. Perhaps participants in the longer baseline were not as incentivised to continue in the intervention phase.

Overall, the research question regarding the acceptability and feasibility of the online guided-self-help intervention was partially supported. Previous systematic reviews have highlighted the acceptability and feasibility of internet based psychological therapies for female sexual dysfunction without face to face contract with a therapist (Jones & McCabe, 2011; Zarski et al., 2022).

Preliminary Effectiveness of Intervention

Results suggest that the intervention reduced sexual distress for most participants who completed the follow-up measures. Participants' scores on the FSDS-R from baseline to follow-up showed a reliable decrease for six participants, with one participant having a clinically significant decrease in score. Participants that showed reliable change had varying

lengths of baseline, providing some evidence that improvement in sexual distress may be attributed to the intervention. One reason that more women did not meet the level of clinically significant change at one-month follow-up could be that gains in sexual well-being are only significant after more time has passed. This was reflected in previous studies that found improvements in sexual distress to only be significant at the six-month follow-up (Kilimnik et al., 2020; Meston et al., 2013).

All participants demonstrated improvements on at least one idiographic VAS measure between the baseline and intervention phases. Ten participants demonstrated a significant reduction on the Shame VAS, eight on the Guilt VAS and nine on the Self-criticism VAS. Previous research supports this finding since shame, guilt and self-blame have been identified as underlying mechanisms of psychosexual difficulties in female survivors of childhood sexual abuse (Pulverman et al., 2018). Another significant finding was that Participants I, J & M worsened and had significantly higher levels of Self-criticism on the VAS during the intervention than in the baseline phase. Despite this, at follow-up, participant J showed a clinically significant reduction on sexual distress and reliable improvement on sexual functioning. Considering the competencies of psychosexual engagement and action, it could be that engaging with the intervention increased participants J's awareness of her self-criticism leading to compassionate action and a significant improvement in sexual distress (Gilbert, 2009; Vosper, 2021).

Although there were no studies which conducted equivalent interventions for comparison, previous research found a significant reduction in sexual distress following a mindfulness-based group and an online sexual-schema expressive writing intervention for female survivors of sexual assault (Brotto et al., 2012; Kilimnik et al., 2020). Regarding self-compassion, the state self-compassion scores demonstrated a reliable improvement for four participants at follow-up. Additionally, between the baseline and intervention phase, the

Compassion VAS showed significant improvement for 73% of participants. Approximately 50% of participants significant improved on the Normalising and Motivation VAS. These results suggest the intervention increased levels of compassion in some participants. However, an important consideration was the observation that across participants, instability of baseline was seen for six participants on the Compassion VAS. Even though *Tau-U* controlled baseline trends, variability in the response may suggest poor reliability of the Compassion VAS measure (Morley, 2017). Despite this limitation, there was some preliminary support that the intervention improved levels of self-compassion. One potential mechanism of change is that improved levels of self-compassion facilitated improvements in sexual distress and sexual functioning as it may have encouraged participants to acknowledge and engage with their sexual distress (Gilbert, 2009). Considering the three-systems model of CFT, increasing self-compassion reduced the threat response by activating the soothe and drive system (Gilbert, 2009; Vosper et al., 2021).

Although improving sexual functioning was not the direct goal of the intervention, five participants reliably improved on the FSFI from baseline to follow-up. These participants also showed reliable improvement in sexual distress. These results were consistent with previous studies, which found that sexual abuse moderates the relationship between sexual distress and sexual functioning (Stephenson et al., 2012). An important point is that the FSFI is only valid when individuals are sexually active (Meston et al., 2020). Based on the FSFI responses, three participants scored “no sexual activity” at baseline, two of which were still not sexually active at follow-up. On the other hand, one participant was sexually active at baseline and showed a reliable decrease in sexual functioning at follow-up, where her response suggested she had stopped engaging in sexual activity at follow-up. Analysis of her idiographic measures between baseline and intervention showed a significant improvement in idiographic measures for Self-criticism, Compassion, Normalising and Motivation. In the

qualitative feedback form, this participant reported finding the intervention helpful but reported experiencing increased anxiety which caused her to stop engaging in sexual activity. One explanation is that the intervention increased the participant's awareness of her anxiety, leading her to disengage from sexual activity (Vosper et al., 2021). It is unclear if her increased anxiety is attributed to engaging with the intervention or other extraneous factors. Another important consideration is that a handful of participants were accessing therapy alongside the current intervention. However, an equal number of participants with reliable change were not accessing psychological therapy. Participants were not required to stop accessing therapy while participating in the study, as the intervention was designed to be used alone or alongside additional therapy.

In terms of what participants found most helpful, women reported that learning about the body's response to trauma through a normalising framework, mindfulness, and compassion were the most helpful aspects of the intervention. Compassion is associated with the ability to engage with one's difficulties and move towards alleviating them (Gilbert, 2014). In comparison, shame may block one's ability to engage with their sexual difficulties (Gilbert et al., 2017). Components of the intervention such as psychoeducation of the 'tricky brain', the body's reaction to trauma, the three-systems model and the dual control model of sexual arousal may have de-shamed participants; normalising their experiences and helping women understand their difficulties in context (Gilbert, 2009; Vosper et al., 2021).Previous research supports this finding where female survivors of sexual assault reported improved sexual satisfaction following Relative-emotional therapy which encouraged participant to consider the adaptive nature of their beliefs which helps normalise their difficulties (Rieckert & Möller, 2000). Similarly, reflecting on the individual's belief about safety, trust and intimacy with the self and others improved sexual functioning (Wells et al., 2018).

This reflects the normalising aspect of CFT which acknowledges sexual distress as part of the traumatic experience and reduced feelings of shame (Vosper et al., 2021). CFT has demonstrated its effectiveness in improving levels of shame and self-criticism (Gilbert & Procter, 2006; Irons & Beaumont, 2017). By teaching new skills in approaching touch, such as sensate focus or being present through mindfulness women learned to alleviate their difficulties and improve sexual distress and functioning (Brotto et al., 2012; Gilbert, 2009; Vosper et al., 2021). The literature demonstrates how mindfulness improved sexual well-being and cognitive distraction in women (Newcombe & Weaver, 2016). Mindfulness based-therapies have also been effective in improving sexual distress and enhancing sexual functioning in female survivors of sexual assault (Brotto et al., 2012). Additionally, mindfulness practices overlap with grounding techniques which was a helpful way to deal with flashbacks or dissociation (Daigneault et al., 2016).

Previous research found that individuals with a history of childhood trauma with higher levels of dispositional mindfulness reported higher sexual satisfaction (Godbout et al., 2020). Mindfulness exercises encouraged participants to be non-judgemental about their experience and stay connected to bodily sensations (Paterson et al., 2017; Seal et al., 2011). Previous studies have shown how integrating mindfulness in sex therapy promoted feelings of safety in women to stay connected to their minds and body during sex (Rosenbaum, 2013).

Strengths of the study

One of the biggest strengths of this study was the use of SCED which allowed for individual analysis of participants (Franklin et al., 2014). Although the study adopted a single AB design which limits internal and external validity, incorporating a multiple baseline design improves external validity (Newcombe & Weaver, 2016). Additionally, research has demonstrated SCED as a robust approach when compared to randomised controlled trials, especially in testing a novel intervention (Kratochwill & Levin, 2014). The study also had

sufficient power since there were more than three participants to demonstrate effect replication (Horner et al., 2005). Additionally, omnibus effect sizes were calculated where there were at least three replications effects across participants (Kratochwill et al., 2010; Tate et al., 2016). Secondly, this study developed a novel intervention which, to the researcher's knowledge, was the first integrative online intervention targeting sexual distress in female survivors of sexual assault. Based on the high levels of interest at recruitment, there was a clear demand for the intervention, pointing to the lack of intervention available for sexual distress in female survivors of sexual assault. This suggests that the study had social validity.

Limitations

There were several limitations to this current study.

Sample. One of the shortcomings of the study was potential selection bias. The study used a convenience sample by recruiting through only onesexual violence charity. Although the charity is nationwide, recruitment was limited to women who were aware of the service. The sample may represent women in the population who were highly motivated and would seek help for their difficulties (Logan et al., 2005). Consequently, the sample may overrepresent women who wanted the intervention to improve their difficulties. This could potentially result in outcomes that are skewed in a favourable direction. Aditionally, there exists the possibility of non-response bias, where participants who responded to the initial study advertisement, did not respond to the researcher for a follow-up call due to a lack of motivation to engage in the study. This perpetuates a sample which is highly motivated, making it difficult to generalise findings to the broader population. Another limitation is that 'survivors of sexual assault' were not operationally defined in the study and no further questionnaire was incorporated to gather more detail about the history of sexual trauma. Not all women may identify their experience as 'survivor' or 'sexual assault' and recruitment was limited by language (Ellard-Gray et al., 2015; Orchowski et al., 2013). The limitation of only

recruiting female survivors of sexual assault is that the study is limited to only outcomes from cis-gendered women, limiting generalisability. The study does not consider how the intervention may be viewed by other gender identities. or which aspects of the intervention may be beneficial to survivors of sexual assault independent of gender. Further research should explore similar interventions in different gender populations. Another clear limitation is the lack of diversity in the sample. Despite opening recruitment across the United Kingdom, most of the participants were from White British backgrounds which reduces generalisability.

Measure. One limitation of the current study the use of idiographic measures. These non-validated self-report measures were developed for this project and may be less reliable than multi-item standardised measures (Diamantopoulos et al., 2012). The use of idiographic measures was efficient for the purpose of this study, but their psychometric properties have not been tested. The study also did not include a check of treatment fidelity and participants self-reported their engagement with the materials at follow-up. This makes it difficult to assess treatment adherence.

Analysis. SCED is a fast-developing area and at the time of developing the research protocol, visual analysis and *Tau-U* analyses were chosen as methods of analysis. *Tau-U* was used to control for baseline trend, which is seen as a weak method of trend control compared to other methods, such as Baseline Corrected Tau (Tarlow, 2017). *Tau-U* was also not equipped to manage missing data unlike other methods of analysis, such as multilevel models (Moeyaert et al., 2020). To manage missing idiographic measure data, this study adopted LOCF. One of the limitations of LOCF is that it introduces trends into the data and reduces variability within phases (Peng & Chen, 2021), especially if consecutive sessions were missed, which was common in this study. By implementing LOCF and carrying forward the last observed value for missing data when participants did not complete the intervention

sessions, there was an inflated chance of a type II error. Type II error assumes participants' scores did not change over time and made it more difficult to detect true effects of the intervention. However, it was decided in research supervision that making a type II error and being conservative in line with intent-to-treat analysis was necessary compared to the possibility of a Type I error.

The consequence was that the intervention may seem less effective (Saha & Jones, 2016). Although LOCF prevents type I error, there is still the threat to internal validity due to selection bias as participants who provided less data makes it difficult to examine trend and threatens data interpretation (Kratochwill et al., 2010).

Confounding variables. Lastly, the study must consider the impact of confounding variables on the intervention. Events concurring with the intervention that the researcher was not aware of could have impacted the results (Kratochwill et al., 2010).

Future Implications

Despite these limitations, the current study was feasible for the time frame of the doctoral project. The study demonstrates the potential for an online guided self-help intervention for female survivors of sexual assault. Overall, the study suggests some support for an online guided self-help intervention incorporating Compassion-Focused Therapy, Mindfulness-based therapy, psychosexual and trauma theory for women's sexual difficulties following sexual assault. This is consistent with previous research that suggests integrated intervention considers the biopsychosocial model, which is a more robust method of working with sexual well-being (Maltz, 2002; Weeks, 2005).

Although the results are encouraging, future research is required before inferences about effectiveness can be made regarding the study protocol. Future research should conduct a systemic replication of the developed intervention with more participants or in a different setting (Tate et al., 2016). Drawing from the findings of this study, wherein two participants

who dropped out were allocated to a 14-day baseline period, future research may consider reducing the number of phases used in a multiple baseline design. This amendment should be done considering WWC guidance which requires six phases with more than five data points to meet the standard without reservation (Kratochwill et al., 2010).

Since the study demonstrated the feasibility of the intervention, implementing the intervention should not be a challenge as there were no adverse effects and high levels of interest at recruitment. It will be necessary for future research to adapt the materials to consider gender minorities which is an understudied area of sexual well-being. Future research should also include more empirical studies on compassion for psychosexual difficulties following sexual assault. Research in these areas would support the development of further interventions.

In terms of clinical implications, the intervention materials can be made publicly available once the study is replicated and adapted with participant's feedback. In the UK where the waitlist for the NHS is known to be extensive, sexual well-being clinics or sexual violence charities may be able to offer these kinds of intervention while participants are waiting for treatment. The online nature of the intervention also enables women to seek support where they may face high levels of shame and stigma or are in remote areas. An important consideration is the assumption that every woman should want or need to return to sex after sexual violence. This is a societal assumption which may not be prescribed by all women seeking treatment (Richters et al., 2003).

Conclusion

In conclusion, the current study suggests that an online guided-self-help integrated intervention for sexual distress was acceptable and feasible for female survivors of sexual assault with limitations. The study provides a preliminary indicator of the possible

effectiveness of an online integrative intervention for female survivors of sexual assault in increasing compassion and sexual functioning while reducing shame and sexual distress. Although the results are promising, there are several limitations and future research should examine the intervention in a larger sample of women considering the feedback from the current study. If findings are replicated, there would be more significant support for sharing this intervention on a wider scale.

IV. Integration, Impact & Dissemination

This chapter covers the integration of the systematic review and empirical project. It considers the clinical and academic impacts of the project and outlines the plan for dissemination.

Integration

Sexual violence is a severe problem with physical and psychological consequences. Research in this area has extensively focused on treatment to improve psychological well-being, and less attention has been paid to treatments for psychosexual well-being in this population. The project aim was first to identify and examine the effectiveness of current interventions targeting psychosexual difficulties in female survivors of sexual assault. The second aim was to develop and test a compassion-focused informed online self-help integrative intervention to support women with this experience. I chose this topic because of my interest in working with women who have experienced trauma and have difficulties accessing treatment due to feelings of shame. I am also interested in CFT and felt that completing this project would further my knowledge of the theoretical and practical aspects of the model.

The systematic review and the empirical paper complemented each other as the systematic review provided a conceptual basis for the empirical study by identifying gaps in current treatments for reducing sexual distress following sexual assault. The review outlined current interventions for psychosexual difficulties following sexual assault, which informed the development of an intervention for the empirical study. Even if the identified studies were not eligible for inclusion in the systematic review, such as conceptual papers, together with the identified papers, it guided the production of the intervention materials.

When developing the systematic review research question, I looked for previous systematic reviews. Only one systematic review investigated the effectiveness of psychological interventions for PTSD and if these interventions improved sexual functioning

after sexual assault (O'Driscoll & Flanagan, 2016). Where the previous review examined available treatments for PTSD and the interventions effectiveness on treating sexual functioning, this doctoral thesis's systematic review focused on interventions that directly aimed to alleviate sexual difficulties. The database search was broad, as I was aware of the limited research in this area. Many studies ended up being excluded as they did not include sexual functioning outcome measures or were psychological interventions that did not aim to improve sexual difficulties. This confirmed the limitations of current treatments for sexual assault in targeting sexual difficulties. Similarly, only a small number of studies met the inclusion criteria. Therefore, it was decided that one of the inclusion criteria should be amended to include one more paper. Overall, results from the systematic review suggested that Mindfulness-based therapies, Sexual Schema Expressive Writing, Cognitive Processing & Rational-emotive therapy improved sexual well-being. These interventions were delivered by various modalities, such as individual in-person therapy, group therapy and independent online interventions. The results supported the inclusion of mindfulness techniques in the empirical study and the possibility of conducting the intervention as online guided self-help.

Although these interventions were independent, there were overlaps between the interventions, which may point to the effectiveness of an integrative approach consistent with previous research and implemented in the empirical study (Maltz, 2002; Weeks, 2005).

Reflections on empirical paper

Recruitment.

One of the worries of the project was the potential difficulties with recruitment due to the sensitive nature of the topic. As this project hoped to recruit participants through an NHS sexual well-being clinic, NHS ethics was sought. There were unexpected challenges that arose from seeking NHS ethics. The REC committee were worried about the sensitive nature of the target population and the possible risk involved. Initially, it was optional for

participants to provide their GP details. However, the REC committee asked for this to be amended to a requirement for participation. Two potential participants wrote an email saying they were uncomfortable providing their GP details. The study recognised this as a barrier to accessing the intervention.

To improve recruitment, the project partnered with My Body Back, an organisation that supports women with experiences of sexual assault. Two other relevant charities were approached; one agreed to advertise the study in their newsletter but never responded to further email correspondence. Considerations were taken in producing the study advert by gathering feedback from Experts of Experience and the team at My Body Back. My Body Back shared the study advert in an Instagram post and was surprisingly met with an overwhelming response. Sixty-four interested participants clicked on the study link associated with the advert within 24 hours of the post being uploaded. Although the study had planned to recruit across different charities and within the NHS, the high rates of interest meant that recruitment was closed earlier than anticipated. The high response rates were a strength of the project as it showed the demand for treatment in this area. However, it was also a limitation of the project due to the potential selection bias from a convenience sample through recruitment from one sexual violence charity. This may also be reflected in the participants who dropped out after registering interest. Therefore, the sample was limited to women who were aware of the charity and may not reflect women who were still deciding if they would like to participate or women who would not seek help for their sexual difficulties (Parcesepe et al., 2015; Regehr et al., 2013).

Dilemmas or Methodological Choices.

The study adopted a SCED, which was appropriate for the time frame of the doctoral thesis and for testing the acceptability, feasibility and preliminary effectiveness of a novel intervention (Kazdin, 2019). In addition, SCED provides rich, individualised data, which

provides detailed information for the novel interventions (Lanovaz & Rapp, 2016). However, there were methodology challenges. Firstly, SCED is a fast-developing area. At the time of developing the research protocol, visual analysis and *Tau-U* analyses were chosen for analysis. However, there were limitations to *Tau-U,* and more sophisticated methods have since been developed, such as Multilevel Modelling ,which is more equipped to manage missing data and variability in baseline trends (Moeyaert et al., 2020).

Another limitation of the current study is that it did not include weekly standardised or process measures. Weekly measures were not used as completing multiple questionnaire weekly may be considered burdensome by participants, leading to higher drop-out rates (Rolstad et al., 2011). Another methodological choice was not to include a trauma assessment to gather more detail about participants' history of sexual assault. The use of a trauma assessment was decided against due to the vulnerability of the population and the study having little to no contact with professionals. My supervisor and I were worried that asking direct questions about the trauma might stir up difficult feelings for participants. However, not including a trauma assessment may mean the study missed out on important information about participants. Some research suggests that intervention effects were dependent on an individual's experience of trauma (Brotto et al., 2012) while other studies report that specifics of abuse have little to no impact on sexual outcomes (Kilimnik et al., 2018).

Similarly, the study did not have an exclusion criterion based on women's current sexual activity. Previous studies have excluded women who have not been sexually active as it was argued that it might inflate the difference in FSFI score (Brotto et al., 2012; Kilimnik et al., 2020; Meston et al., 2013). However, it would have been unethical to exclude women from the intervention who were not sexually active, as this is a common experience following sexual assault. Additionally, the study’s primary aim was to assess sexual distress and including non-sexually active increased access to the intervention.

Another choice in the study was to analyse the RCI on the FSFI as one measure instead of calculating the RCI for each FSFI subscale. Calculating the RCI by subscale would have provided more information about which areas of sexual functioning improved. However, since the study's primary outcome was sexual distress, it was decided that RCI would be calculated with the total FSFI score.

A final dilemma was managing missing data, as this was not built into the research protocol. Initially, it was planned that data would be treated as missing at random, and no imputations would be made. Most SCED publications do not have protocols to manage missing data (Au et al., 2017; Ford & Nangle, 2015; Stynes & McHugh, 2023). This dilemma was brought to supervision, and it was decided that in line with the intent-to-treat analysis, LOCF would be implemented (Peng & Chen, 2021). This was decided as best practice considering intention-to-treat analysis (Salim et al., 2008). Not managing missing data leads to the high probability of a type I error due to inflated intervention effect sizes. By implementing LOCF and carrying forward the last observed value for missing data when participants did not complete the intervention sessions, it was more likely that the analysis made a type II error. Although this was not ideal, making a type II error which suggests the intervention was not as effective, was considered a better approach than the chance of a type I error.

Expert by experience involvement

Input from experts by experience was critical for this study to ensure the materials were sensitive to women's experiences of sexual assault. Experts by experience were involved in developing Visual Analogue Scales (VAS), and study materials. Draft versions of the intervention and study poster were shared with a female survivor of sexual assault. Amendments were made based on the feedback, including breaking down psychological terminology into lay language. Regarding the development of the Visual Analogue Scales,

the expert, by experience, considered the six terms we wanted to measure and reviewed the wording. Although the study included experts by experience, there was a limit of two experts by experience throughout the project, which may seem tokenistic and not representative of service user involvement.

Impact

The beneficiaries of this project are specialist sexual health services, organisations or clinicians that work with female survivors of sexual assault, researchers in sexual health and female survivors of sexual assault.

Academic impact

The systematic review outlined possible treatments for survivors of sexual assault who experience sexual difficulties. Although the studies were of low quality and results may have been inflated, the findings suggest that Mindfulness-based therapies, Sexual Schema Expressive writing, Cognitive Processing Therapy and Rational-emotive Therapy improved female psychosexual difficulties following sexual assault. Given the importance of interventions for this population, researchers may be encouraged to conduct higher quality research to address psychosexual difficulties in women following sexual assault.

The empirical study developed a CFT informed psychosexual intervention for female survivors of sexual assault. Vosper et al (2021) had previously proposed compassion-focused psychosexual therapy as a theoretically sound integration with positive findings for sexual pain (Saunders et al., 2022; Vosper et al., 2021). This study provides some support that the theoretical underpinnings of CFT may benefit individuals with psychosexual difficulties following sexual assault. Further research may examine the other mechanisms associated between sexual distress, shame, and self-compassion. These studies can better inform the use of CFT for sexual distress following sexual assault. It will also inform the development of further treatment for female survivors of sexual assault.

Clinical & Wider Impact

The empirical study demonstrated the potential use of an online guided self-help resource for psychosexual difficulties for female survivors of sexual assault. Services and organisations may consider adapting the current materials to suit individuals on the waiting list for treatment. Clinicians who work with survivors of sexual assault may recognise the importance of sexual functioning and consider integrating aspects of psychosexual interventions into current psychological treatment. The current intervention can be made available to services that work with female survivors of sexual assault, such as My Body Back and the Havens.

The project increases awareness of the psychosexual difficulties experienced by female survivors of sexual assault. This is important as it may encourage clinicians working with survivors of sexual assault to consider sexual distress when assessing the impact of sexual trauma. Having interventions developed specially for psychosexual difficulties following sexual assault may be normalising for women who feel isolated in their experience of sexual distress (MacGinley et al., 2019. Additionally, the study was met with high levels of interest, and the qualitative feedback suggested that women viewed the intervention as positive.

Maximising & Evidencing Benefits

To maximise benefits, the project should be disseminated to relevant stakeholders such as sexual health services, clinical psychologists, and survivors of sexual assault. Disseminating the project across different platforms may also alleviate the stigma associated with sexual difficulties following sexual assault. The interventions can be shared with other clinicians through the British Psychological Society Faculty of HIV and Sexual Health, who may be able to offer the intervention to relevant clients.

Additionally, the intervention would benefit from more input through expert by experience involvement. It would be critical to work with other clinicians and researchers to adapt the materials for different groups such as non-binary or trans individuals where there are limited sexual health resources.

To evidence benefits, further studies may consider implementing an extended follow-up period to track changes over time. For services, a standardised audit form can be sent to services who would like to implement the intervention to check if service users benefit from treatment.

Dissemination

Dissemination will be done through a variety of methods. First, I intend to publish the systematic review and empirical paper in relevant journals such as the Journal of Sexual Medicine and the Journal of Sex & Martial Therapy. These journals have strong impact factors of 3.94 and 3.10, respectively. Secondly, I aim to disseminate the findings at various conferences related to sexual health and CFT. In line with HRA best practice, a lay summary of research outcomes will be shared with participants if they have opted to be contacted with the study information (HRA, 2018). I also plan to share the lay summary of findings with My Body Back and other organisations that work with female survivors of sexual assault. A formal summary will be shared with the NHS professionals at Bart's NHS Trust Sexual Well-being Clinic. The study can also be disseminated to other clinicians through the British Psychological Society Faculty of HIV and Sexual Health.

Finally, I plan to adapt the intervention materials with participants' feedback and collaborate with experts by experience and clinicians to make the materials widely available. It would also be helpful to disseminate the findings with services that work with different gender identities to adapt the intervention for different gender orientations.

The empirical study was presented to staff and fellow trainee clinical psychologists within the Doctorate of Clinical Psychology Programme at Royal Holloway, University of London. The thesis will be made available on Pure for students and staff to access. During this presentation, a member of staff thought it might be helpful to consider publishing the materials in a self-help workbook for survivors to work through independently.

V. References

Abavi, R., Branston, A., Mason, R., & Du Mont, J. (2020). An Exploration of Sexual Assault Survivors' Discourse Online on Help-Seeking. *Violence and Victims*, *35*(1), 126–140. https://doi.org/10.1891/0886-6708.VV-D-18-00148

Abdolmanafi, A., Owens, G., Phd, S., Jahromi, R., Peixoto, M., & Nobre, P. (2016). Determinants of Women's Sexual Dissatisfaction: Assessing a Cognitive-Emotional Model. *Journal of Sexual Medicine*, *13*. https://doi.org/10.1016/j.jsxm.2016.08.013

Althof, S. E., Leiblum, S. R., Chevret-Measson, M., Hartmann, U., Levine, S. B., McCabe, M., Plaut, M., Rodrigues, O., & Wylie, K. (2005). Psychological and Interpersonal Dimensions of Sexual Function and Dysfunction. *The Journal of Sexual Medicine*, *2*(6), 793–800. https://doi.org/10.1111/j.1743-6109.2005.00145.x

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC.

Amir-Behghadami, M., & Janati, A. (2020). Population, Intervention, Comparison, Outcomes and Study (PICOS) design as a framework to formulate eligibility criteria in systematic reviews. *Emergency Medicine Journal*, *37*(6), 387–387. https://doi.org/10.1136/emermed-2020-209567

Attkisson, C. C., Larsen, D., Hargreaves, W., LeVois, M., Nguyen, R., & Stegner, B. (1987). Client satisfaction questionnaire (CSQ-8). *Measures for Clinical Practice: A Sourcebook*, *2*.

Au, T. M., Sauer-Zavala, S., King, M. W., Petrocchi, N., Barlow, D. H., & Litz, B. T. (2017). Compassion-Based Therapy for Trauma-Related Shame and Posttraumatic Stress: Initial Evaluation Using a Multiple Baseline Design. *Behavior Therapy*, *48*(2), 207–221. https://doi.org/10.1016/j.beth.2016.11.012

Banbury, S., Lusher, J., Snuggs, S., & Chandler, C. (2021). Mindfulness-based therapies for men and women with sexual dysfunction: A systematic review and meta-analysis. *Sexual and Relationship Therapy*, *0*(0), 1–22. https://doi.org/10.1080/14681994.2021.1883578

Barlow, D. H. (1986). Causes of sexual dysfunction: The role of anxiety and cognitive interference. *Journal of Consulting and Clinical Psychology*, *54*, 140–148. https://doi.org/10.1037/0022-006X.54.2.140

Bartoi, M. G., & Kinder, B. N. (1998). Effects of child and adult sexual abuse on adult sexuality. *Journal of Sex & Marital Therapy*, *24*(2), 75–90. https://doi.org/10.1080/00926239808404921

Basson, R. (2005). Women's sexual dysfunction: Revised and expanded definitions. *CMAJ*, *172*(10), 1327–1333. https://doi.org/10.1503/cmaj.1020174

Becker, J. V. (1989). Impact of sexual abuse on sexual functioning. *Principles and Practice of Sex Therapy: Update for the 1990s., 2nd Ed.*, 298–318.

Becker, J. V., Skinner, L. J., Abel, G. G., & Treacy, E. C. (1982). Incidence and types of sexual dysfunctions in rape and incest victims. *Journal of Sex & Marital Therapy*, *8*(1), 65–74. https://doi.org/10.1080/00926238208405813

Bigras, N., Vaillancourt-Morel, M.-P., Nolin, M.-C., & Bergeron, S. (2021). Associations between Childhood Sexual Abuse and Sexual Well-being in Adulthood: A Systematic Literature Review. *Journal of Child Sexual Abuse*, *30*(3), 332–352. https://doi.org/10.1080/10538712.2020.1825148

Bird, E. R., Seehuus, M., Clifton, J., & Rellini, A. H. (2014). Dissociation during sex and sexual arousal in women with and without a history of childhood sexual abuse. *Archives of Sexual Behavior*, *43*(5), 953–964. https://doi.org/10.1007/s10508-013-0191-0

Bowen, D. J., Kreuter, M., Spring, B., Cofta-Woerpel, L., Linnan, L., Weiner, D., Bakken, S., Kaplan, C. P., Squiers, L., Fabrizio, C., & Fernandez, M. (2009). How We Design Feasibility Studies. *American Journal of Preventive Medicine*, *36*(5), 452–457. https://doi.org/10.1016/j.amepre.2009.02.002

Bradford, A. (2013). Listening to Placebo in Clinical Trials for Female Sexual Dysfunction. *The Journal of Sexual Medicine*, *10*(2), 451–459. https://doi.org/10.1111/j.1743-6109.2012.02941.x

Bradford, A., & Meston, C. M. (2009). Placebo Response in the Treatment of Women's Sexual Dysfunctions: A Review and Commentary. *Journal of Sex & Marital Therapy*, *35*(3), 164–181. https://doi.org/10.1080/00926230802716302

Brotto, L. A., Stephenson, K. R., & Zippan, N. (2022). Feasibility of an Online Mindfulness-Based Intervention for Women with Sexual Interest/Arousal Disorder. *Mindfulness*, *13*(3), 647–659. https://doi.org/10.1007/s12671-021-01820-4

Brotto, L., Basson, R., & Luria, M. (2008). A mindfulness-based group psychoeducational intervention targeting sexual arousal disorder in women. *JOURNAL OF SEXUAL MEDICINE*, *5*(7), 1646–1659. https://doi.org/10.1111/j.1743-6109.2008.00850.x WE - Science Citation Index Expanded (SCI-EXPANDED) WE - Social Science Citation Index (SSCI)

Brotto, L., Seal, B., & Rellini, A. (2012). Pilot study of a brief cognitive behavioral versus mindfulness-based intervention for women with sexual distress and a history of childhood sexual abuse. *Journal of Sex & Marital Therapy*, *38*(1), 1–27. https://doi.org/10.1080/0092623X.2011.569636

Burnam, M. A., Stein, J. A., Golding, J. M., Siegel, J. M., Sorenson, S. B., Forsythe, A. B., & Telles, C. A. (1988). Sexual assault and mental disorders in a community population.

Journal of Consulting and Clinical Psychology, *56*, 843–850. https://doi.org/10.1037/0022-006X.56.6.843

Campbell, R., Dworkin, E., & Cabral, G. (2009). An ecological model of the impact of sexual assault on women's mental health. *Trauma, Violence & Abuse*, *10*(3), 225–246. https://doi.org/10.1177/1524838009334456

Canada, A. L., Schover, L. R., & Li, Y. (2007). A pilot intervention to enhance psychosexual development in adolescents and young adults with cancer. *Pediatric Blood & Cancer*, *49*(6), 824–828. https://doi.org/10.1002/pbc.21130

Christ, T. J. (2007). Experimental control and threats to internal validity of concurrent and nonconcurrent multiple baseline designs. *Psychology in the Schools*, *44*(5), 451–459. https://doi.org/10.1002/pits.20237

Chung, T. H., Hanley, K., Le, Y.-C., Merchant, A., Nascimento, F., De Figueiredo, J. M., Wilcox, H. C., Coryell, W. H., Soares, J. C., & Selvaraj, S. (2023). A validation study of PHQ-9 suicide item with the Columbia Suicide Severity Rating Scale in outpatients with mood disorders at National Network of Depression Centers. *Journal of Affective Disorders*, *320*, 590–594. https://doi.org/10.1016/j.jad.2022.09.131

Classen, C., Palesh, O., Cavanaugh, C., Koopman, C., Kaupp, J., Kraemer, H., Aggarwal, R., & Spiegel, D. (2011). A Comparison of Trauma-Focused and Present-Focused Group Therapy for Survivors of Childhood Sexual Abuse: A Randomized Controlled Trial. *PSYCHOLOGICAL TRAUMA-THEORY RESEARCH PRACTICE AND POLICY*, *3*(1), 84–93. https://doi.org/10.1037/a0020096 WE - Social Science Citation Index (SSCI)

Cohen, J. A. (2004). Trauma-Focused Cognitive-Behavioral Therapy for Sexually Abused Children. *Psychiatric Times*, *21*(10), 52–52.

Daigneault, I., Dion, J., Hebert, M., & Bourgeois, C. (2016). Mindfulness as Mediator and Moderator of Post-traumatic Symptomatology in Adolescence Following Childhood Sexual Abuse or Assault. *MINDFULNESS*, *7*(6), 1306–1315. https://doi.org/10.1007/s12671-016-0571-3 WE - Social Science Citation Index (SSCI)

Davison, S. L., Bell, R. J., LaChina, M., Holden, S. L., & Davis, S. R. (2009). ORIGINAL RESEARCH—PSYCHOLOGY: The Relationship between Self-Reported Sexual Satisfaction and General Well-Being in Women. *The Journal of Sexual Medicine*, *6*(10), 2690–2697. https://doi.org/10.1111/j.1743-6109.2009.01406.x

DeLoveh, H. L. M., & Cattaneo, L. B. (2017). Deciding Where to Turn: A Qualitative Investigation of College Students' Helpseeking Decisions After Sexual Assault. *American Journal of Community Psychology*, *59*(1–2), 65–79. https://doi.org/10.1002/ajcp.12125

DeRogatis, L., Clayton, A., Lewis-D'Agostino, D., Wunderlich, G., & Fu, Y. (2008). Validation of the Female Sexual Distress Scale-Revised for Assessing Distress in Women with Hypoactive Sexual Desire Disorder. *The Journal of Sexual Medicine*, *5*(2), 357–364. https://doi.org/10.1111/j.1743-6109.2007.00672.x

Derogatis, L. R., Rosen, R., Leiblum, S., Burnett, A., & Heiman, J. (2002). The Female Sexual Distress Scale (FSDS): Initial Validation of a Standardized Scale for Assessment of Sexually Related Personal Distress in Women. *Journal of Sex & Marital Therapy*, *28*(4), 317–330. https://doi.org/10.1080/00926230290001448

Diamantopoulos, A., Sarstedt, M., Fuchs, C., Wilczynski, P., & Kaiser, S. (2012). Guidelines for choosing between multi-item and single-item scales for construct measurement: A predictive validity perspective. *Journal of the Academy of Marketing Science*, *40*, 434–449. https://doi.org/10.1007/s11747-011-0300-3

Ellard-Gray, A., Jeffrey, N. K., Choubak, M., & Crann, S. E. (2015). Finding the Hidden Participant: Solutions for Recruiting Hidden, Hard-to-Reach, and Vulnerable Populations. *International Journal of Qualitative Methods*, *14*(5), 1609406915621420. https://doi.org/10.1177/1609406915621420

Ellis, E. M. (1981). Sexual Dysfunction in Victims of Rape: Victims May Experience a Loss of Sexual Arousal and Frightening Flashbacks Even One Year After the Assault. *Women & Health*, *5*(4), 39–48. https://doi.org/10.1300/J013v05n04_04

Eriksen, M. B., & Frandsen, T. F. (2018). The impact of patient, intervention, comparison, outcome (PICO) as a search strategy tool on literature search quality: A systematic review. *Journal of the Medical Library Association : JMLA*, *106*(4), 420–431. https://doi.org/10.5195/jmla.2018.345

Feldman-Summers, S., Gordon, P. E., & Meagher, J. R. (1979). The impact of rape on sexual satisfaction. *Journal of Abnormal Psychology*, *88*, 101–105. https://doi.org/10.1037/0021-843X.88.1.101

Field, N., Mercer, C. H., Sonnenberg, P., Tanton, C., Clifton, S., Mitchell, K. R., Erens, B., Macdowall, W., Wu, F., Datta, J., Jones, K. G., Stevens, A., Prah, P., Copas, A. J., Phelps, A., Wellings, K., & Johnson, A. M. (2013). Associations between health and sexual lifestyles in Britain: Findings from the third National Survey of Sexual Attitudes and Lifestyles (Natsal-3). *The Lancet*, *382*(9907), 1830–1844. https://doi.org/10.1016/S0140-6736(13)62222-9

Finkelhor, D. (1990). Early and long-term effects of child sexual abuse: An update. *Professional Psychology: Research and Practice*, *21*, 325–330. https://doi.org/10.1037/0735-7028.21.5.325

Finkelhor, D., & Browne, A. (1985). THE TRAUMATIC IMPACT OF CHILD SEXUAL ABUSE: A Conceptualization. *American Journal of Orthopsychiatry*, *55*(4), 530–541. https://doi.org/10.1111/j.1939-0025.1985.tb02703.x

Flynn, K. E., Lin, L., Bruner, D. W., Cyranowski, J. M., Hahn, E. A., Jeffery, D. D., Reese, J. B., Reeve, B. B., Shelby, R. A., & Weinfurt, K. P. (2016). Sexual Satisfaction and the Importance of Sexual Health to Quality of Life Throughout the Life Course of US Adults. *The Journal of Sexual Medicine*, *13*(11), 1642–1650. https://doi.org/10.1016/j.jsxm.2016.08.011

Fonseka, T., & Smith, C. (2021). The treatment of trauma-induced sexual pain among women: Clinical considerations for the use of adjunctive EMDR. *CANADIAN JOURNAL OF HUMAN SEXUALITY*, *30*(1), 114–124. https://doi.org/10.3138/cjhs.2020-0035 WE - Emerging Sources Citation Index (ESCI)

Ford, H., & Nangle, D. (2015). Treatment Guided by an Online Course: A Single Case Evaluation of TF-CBT for an Adolescent With Chronic Posttraumatic Stress Disorder. *CLINICAL CASE STUDIES*, *14*(3), 227–243. https://doi.org/10.1177/1534650114553464 WE - Social Science Citation Index (SSCI)

Frank, E., Anderson, C., & Rubinstein, D. (1978). Frequency of Sexual Dysfunction in "Normal" Couples. *New England Journal of Medicine*, *299*(3), 111–115. https://doi.org/10.1056/NEJM197807202990302

Franklin, R. D., Allison, D. B., & Gorman, B. S. (2014). *Design and Analysis of Single-Case Research*. Psychology Press.

Geers, A. L., Weiland, P. E., Kosbab, K., Landry, S. J., & Helfer, S. G. (2005). Goal Activation, Expectations, and the Placebo Effect. *Journal of Personality and Social Psychology*, *89*, 143–159. https://doi.org/10.1037/0022-3514.89.2.143

Gewirtz-Meydan, A. (2022a). Sexual Dysfunction Among Childhood Sexual Abuse Survivors: The "Functional" Dysfunction? *Journal of Sex & Marital Therapy*, *48*(7), 694–705. https://doi.org/10.1080/0092623X.2022.2044944

Gewirtz-Meydan, A. (2022b). Treating Sexual Dysfunctions Among Survivors of Child Sexual Abuse: An Overview of Empirical Research. *Trauma, Violence & Abuse*, *23*(3), 840–853. https://doi.org/10.1177/1524838020979842

Gewirtz-Meydan, A., & Godbout, N. (2023). Between pleasure, guilt, and dissociation: How trauma unfolds in the sexuality of childhood sexual abuse survivors. *Child Abuse & Neglect*, *141*, 106195. https://doi.org/10.1016/j.chiabu.2023.106195

Gewirtz-Meydan, A., & Lahav, Y. (2020). Sexual dysfunction and distress among childhood sexual abuse survivors: The role of post-traumatic stress disorder. *Journal of Sexual Medicine*, *17*(11), 2267–2278. https://doi.org/10.1016/j.jsxm.2020.07.016

Gewirtz-Meydan, A., & Lassri, D. (2023). Sex in the Shadow of Child Sexual Abuse: The Development and Psychometric Evaluation of the Post-Traumatic Sexuality (PT-SEX) Scale. *Journal of Interpersonal Violence*, *38*(5–6), 4714–4741. https://doi.org/10.1177/08862605221118969

Gilbert, P. (2009). Introducing compassion-focused therapy. *Advances in Psychiatric Treatment*, *15*(3), 199–208. https://doi.org/10.1192/apt.bp.107.005264

Gilbert, P. (2014). The origins and nature of compassion focused therapy. *British Journal of Clinical Psychology*, *53*(1), 6–41. https://doi.org/10.1111/bjc.12043

Gilbert, P., Catarino, F., Duarte, C., Matos, M., Kolts, R., Stubbs, J., Ceresatto, L., Duarte, J., Pinto-Gouveia, J., & Basran, J. (2017). The development of compassionate

engagement and action scales for self and others. *Journal of Compassionate Health Care*, *4*(1), 4. https://doi.org/10.1186/s40639-017-0033-3

Gilbert, P., & Procter, S. (2006). Compassionate mind training for people with high shame and self-criticism: Overview and pilot study of a group therapy approach. *Clinical Psychology & Psychotherapy*, *13*(6), 353–379. https://doi.org/10.1002/cpp.507

Godbout, N., Bakhos, G., Dussault, É., & Hébert, M. (2020). Childhood interpersonal trauma and sexual satisfaction in patients seeing sex therapy: Examining mindfulness and psychological distress as mediators. *Journal of Sex & Marital Therapy*, *46*(1), 43–56. https://doi.org/10.1080/0092623X.2019.1626309

Gosney, C. J. (2017). The impact of adult sexual assault on sexual behavior: An exploration of the impact of sexual orientation, gender differences, and coping. *Dissertation Abstracts International: Section B: The Sciences and Engineering*, *77*(7). https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2016-47711-216&site=ehost-live

Günzler, C., & Berner, M. M. (2012). Efficacy of Psychosocial Interventions in Men and Women With Sexual Dysfunctions—A Systematic Review of Controlled Clinical Trials. *The Journal of Sexual Medicine*, *9*(12), 3108–3125. https://doi.org/10.1111/j.1743-6109.2012.02965.x

Guyon, R., Fernet, M., Girard, M., Cousineau, M.-M., Tardif, M., & Godbout, N. (2023). Who am I as a Sexual Being? The Role of Sexual Self-Concept Between Dispositional Mindfulness and Sexual Satisfaction among Child Sexual Abuse Survivors. *Journal of Interpersonal Violence*, *38*(7–8), 5591–5612. https://doi.org/10.1177/08862605221123290

Hall, K. (2007). Sexual dysfunction and childhood sexual abuse: Gender differences and treatment implications. *Principles and Practice of Sex Therapy., 4th Ed.*, 350–378.

Hall, K. (2008). Childhood sexual abuse and adult sexual problems: A new view of assessment and treatment. *Feminism & Psychology*, *18*(4), 546–556.

Hammond, D., & Gast, D. L. (2010). Descriptive Analysis of Single Subject Research Designs: 1983—2007. *Education and Training in Autism and Developmental Disabilities*, *45*(2), 187–202.

Hanh, T. N., & Hoa, M. Q. (1976). The miracle of being awake. *Buddhist Publication Society: Kandy, Sri Lanka*.

Hayes, R. D., Bennett, C. M., Fairley, C. K., & Dennerstein, L. (2006). ORIGINAL RESEARCH—EPIDEMIOLOGY: What can Prevalence Studies Tell Us about Female Sexual Difficulty and Dysfunction? *The Journal of Sexual Medicine*, *3*(4), 589–595. https://doi.org/10.1111/j.1743-6109.2006.00241.x

Hébert, M., & Bergeron, M. (2007). Efficacy of a group intervention for adult women survivors of sexual abuse. *Journal of Child Sexual Abuse: Research, Treatment, & Program Innovations for Victims, Survivors, & Offenders*, *16*(4), 37–61. https://doi.org/10.1300/J070v16n04_03

Higgins, J. A., Mullinax, M., Trussell, J., Davidson, J. K., & Moore, N. B. (2011). Sexual Satisfaction and Sexual Health Among University Students in the United States. *American Journal of Public Health*, *101*(9), 1643–1654. https://doi.org/10.2105/AJPH.2011.300154

Hinchliff, S., Tetley, J., Lee, D., & Nazroo, J. (2018). Older Adults' Experiences of Sexual Difficulties: Qualitative Findings From the English Longitudinal Study on Ageing (ELSA). *The Journal of Sex Research*, *55*(2), 152–163. https://doi.org/10.1080/00224499.2016.1269308

Horner, R. H., Carr, E. G., Halle, J., McGee, G., Odom, S., & Wolery, M. (2005). The Use of Single-Subject Research to Identify Evidence-Based Practice in Special Education. *Exceptional Children*, *71*, 165–179. https://doi.org/10.1177/001440290507100203

Hughes, E., Edmondson, A. J., Onyekwe, I., Quinn, C., & Nolan, F. (2018). Identifying and addressing sexual health in serious mental illness: Views of mental health staff working in two National Health Service organizations in England. *International Journal of Mental Health Nursing*, *27*(3), 966–974. https://doi.org/10.1111/inm.12402

Irons, C., & Beaumont, E. (2017). *The compassionate mind workbook: A step-by-step guide to developing your compassionate self*. Robinson.

Jacobson, N. S., & Truax, P. (1991). Clinical significance: A statistical approach to defining meaningful change in psychotherapy research. *Journal of Consulting and Clinical Psychology*, *59*, 12–19. https://doi.org/10.1037/0022-006X.59.1.12

Janssen, E., & Bancroft, J. (2007). The dual control model: The role of sexual inhibition and excitation in sexual arousal and behavior. In *The psychophysiology of sex* (pp. 197–222). Indiana University Press.

Jones, L. M., & McCabe, M. P. (2011). The Effectiveness of an Internet-Based Psychological Treatment Program for Female Sexual Dysfunction. *The Journal of Sexual Medicine*, *8*(10), 2781–2792. https://doi.org/10.1111/j.1743-6109.2011.02381.x

Kalra, G., & Bhugra, D. (2013). Sexual violence against women: Understanding cross-cultural intersections. *Indian Journal of Psychiatry*, *55*(3), 244. https://doi.org/10.4103/0019-5545.117139

Kazdin, A. E. (2019). Single-case experimental designs. Evaluating interventions in research and clinical practice. *Behaviour Research and Therapy*, *117*, 3–17. https://doi.org/10.1016/j.brat.2018.11.015

Kazdin, A. E. (2011). *Single-case research designs: Methods for clinical and applied settings* (2nd ed.). New York, NY: Oxford University Press.

Kelley, E. L. (2016). Sexual health outcomes of sexual assault survivors: Understanding the complexities of this relationship through consideration of peri- and post-traumatic response and intrapersonal and interpersonal variables. *Dissertation Abstracts International: Section B: The Sciences and Engineering*, *77*(4). https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2016-37859-183&site=ehost-live

Kilimnik, C. D. (2021). *An online expressive writing intervention for the psychosexual well-being of women with a history of childhood sexual abuse: theory, mechanisms, and effectiveness in a randomized clinical trial* (Doctoral dissertation).

Kilimnik, C. D., Boyd, R. L., Stanton, A. M., & Meston, C. M. (2018). Identification of Nonconsensual Sexual Experiences and the Sexual Self-Schemas of Women: Implications for Sexual Functioning. *Archives of Sexual Behavior*, *47*(6), 1633–1647. https://doi.org/10.1007/s10508-018-1229-0

Kilimnik, C. D., & Meston, C. M. (2016). Role of Body Esteem in the Sexual Excitation and Inhibition Responses of Women with and Without a History of Childhood Sexual Abuse. *The Journal of Sexual Medicine*, *13*(11), 1718–1728. https://doi.org/10.1016/j.jsxm.2016.09.004

Kilimnik, C., McMahon, L., & Meston, C. (2020a). A Randomized Active Placebo-Controlled Trial of an Online Expressive Writing Intervention for the Sexual Well-being of WOmen with Childhoos Sexual Abuse Histories. *JOURNAL OF SEXUAL MEDICINE, 17*(7), S15-S15 WE-Science Citation Index Expanded (SCI-EXPANDED) WE-Social Science Citation Index (SSCI).

Kim, J., Talbot, N. L., & Cicchetti, D. (2009). Childhood abuse and current interpersonal conflict: The role of shame. *Child Abuse & Neglect*, *33*(6), 362–371. https://doi.org/10.1016/j.chiabu.2008.10.003

Kingsberg, S. A., Schaffir, J., Faught, B. M., Pinkerton, J. V., Parish, S. J., Iglesia, C. B., Gudeman, J., Krop, J., & Simon, J. A. (2019). Female Sexual Health: Barriers to Optimal Outcomes and a Roadmap for Improved Patient–Clinician Communications. *Journal of Women's Health*, *28*(4), 432–443. https://doi.org/10.1089/jwh.2018.7352

Krasny-Pacini, A., & Evans, J. (2018). Single-case experimental designs to assess intervention effectiveness in rehabilitation: A practical guide. *Annals of Physical and Rehabilitation Medicine*, *61*(3), 164–179. https://doi.org/10.1016/j.rehab.2017.12.002

Kratochwill, T. R., Hitchcock, J., Horner, R. H., Levin, J. R., Odom, S. L., Rindskopf, D. M., & Shadish, W. R. (2010). Single-Case Designs Technical Documentation. *What Works Clearinghouse*. https://eric.ed.gov/?id=eD510743

Kratochwill, T. R., & Levin, J. R. (2014). *Single-case intervention research: Methodological and statistical advances* (pp. xiii, 366). American Psychological Association. https://doi.org/10.1037/14376-000

Kroenke, K., Spitzer, R. L., & Williams, J. B. W. (2003). The Patient Health Questionnaire-2: Validity of a two-item depression screener. *Medical Care*, *41*(11), 1284–1292. https://doi.org/10.1097/01.MLR.0000093487.78664.3C

Lane, J. D., & Gast, D. L. (2014). Visual analysis in single case experimental design studies: Brief review and guidelines. *Neuropsychological Rehabilitation*, *24*(3–4), 445–463. https://doi.org/10.1080/09602011.2013.815636

Lanovaz, M. J., & Rapp, J. T. (2016). Using Single-Case Experiments to Support Evidence-Based Decisions: How Much Is Enough. *Behavior Modification*, *40*(3), 377–395. https://doi.org/10.1177/0145445515613584

Lee, D., & James, S. (2012). *The Compassionate Mind Approach to Recovering from Trauma: Using Compassion Focused Therapy*. Hachette UK.

Leonard, L. M., & Follette, V. M. (2002). Sexual functioning in women reporting a historing a history of child sexual abuse: Review of the empirical literature and clinical implications. *Annual Review of Sex Research*, *13*, 346–388.

Levin, M. E., Stocke, K., Pierce, B., & Levin, C. (2018). Do College Students Use Online Self-Help? A Survey of Intentions and Use of Mental Health Resources. *Journal of College Student Psychotherapy*, *32*(3), 181–198. https://doi.org/10.1080/87568225.2017.1366283

Liberati, A., Altman, D. G., Tetzlaff, J., Mulrow, C., Gøtzsche, P. C., Ioannidis, J. P. A., Clarke, M., Devereaux, P. J., Kleijnen, J., & Moher, D. (2009). The PRISMA Statement for Reporting Systematic Reviews and Meta-Analyses of Studies That Evaluate Health Care Interventions: Explanation and Elaboration. *Annals of Internal Medicine*, *151*(4), W-65. https://doi.org/10.7326/0003-4819-151-4-200908180-00136

Logan, T., Evans, L., Stevenson, E., & Jordan, C. E. (2005). Barriers to Services for Rural and Urban Survivors of Rape. *Journal of Interpersonal Violence*, *20*(5), 591–616. https://doi.org/10.1177/0886260504272899

Lomax, J., & Meyrick, J. (2022). Systematic Review: Effectiveness of psychosocial interventions on wellbeing outcomes for adolescent or adult victim/survivors of recent rape or sexual assault. *Journal of Health Psychology*, *27*(2), 305–331. https://doi.org/10.1177/1359105320950799

Lorenz, T. A., & Meston, C. M. (2012). Associations among childhood sexual abuse, language use and adult sexual functioning and satisfaction. *Child Abuse & Neglect*, *36*(2), 190–199. https://doi.org/10.1016/j.chiabu.2011.09.014

MacGinley, M., Breckenridge, J., & Mowll, J. (2019). A scoping review of adult survivors' experiences of shame following sexual abuse in childhood. *Health & Social Care in the Community, 27*(5), 1135–1146. https://doi.org/10.1111/hsc.12771

MacNeil, S., & Byers, E. S. (1997). The relationships between sexual problems, communication, and sexual satisfaction. *The Canadian Journal of Human Sexuality, 6*(4), 277–284.

Mahar, E. A., O'Kane, K. M. K., Brotto, L. A., & Stephenson, K. R. (2022a). Online and Mobile Psychotherapeutic Treatments for Female Sexual Difficulties: A Review of Recent Empirical Literature. *Current Sexual Health Reports, 14*(4), 174–189. https://doi.org/10.1007/s11930-022-00333-y

Mahar, E. A., O'Kane, K. M. K., Brotto, L. A., & Stephenson, K. R. (2022b). Online and Mobile Psychotherapeutic Treatments for Female Sexual Difficulties: A Review of Recent Empirical Literature. *Current Sexual Health Reports, 14*(4), 174–189. https://doi.org/10.1007/s11930-022-00333-y

Maltz, W. (2001). Sex therapy with survivors of sexual abuse. *New Directions in Sex Therapy: Innovations and Alternatives.*, 258–278.

Maltz, W. (2002). Treating the sexual intimacy concerns of sexual abuse survivors. *Sexual and Relationship Therapy, 17*(4), 321–327. https://doi.org/10.1080/1468199021000017173

Maltz, W. (2012). Healing the sexual repercussions of sexual abuse. *New Directions in Sex Therapy: Innovations and Alternatives., 2nd Ed.*, 267–283.

Manolov, R., Gast, D. L., Perdices, M., & Evans, J. J. (2014). Single-case experimental designs: Reflections on conduct and analysis. *Neuropsychological Rehabilitation, 24*(3–4), 634–660. https://doi.org/10.1080/09602011.2014.903199

Martinson, A. A., Sigmon, S. T., Craner, J., Rothstein, E., & McGillicuddy, M. (2013). Processing of intimacy-related stimuli in survivors of sexual trauma: The role of PTSD. *Journal of Interpersonal Violence*, *28*(9), 1886–1908. https://doi.org/10.1177/0886260512469104

Masters, W. H., & Johnson, V. E. (1966). *Human Sexual Response, Nueva York*.

Masters, W. H., & Masters, V. J. (1980). *Human sexual inadequacy*. Bantam Books. https://scholar.google.com/scholar_lookup?title=Human+sexual+inadequacy&author=Masters%2C+William+H.&publication_year=1980

McCarthy, B. W. (1990). Treating sexual dysfunction associated with prior sexual trauma. *Journal of Sex & Marital Therapy*, *16*(3), 142–146. https://doi.org/10.1080/00926239008405260

McLean, L., Steindl, S., & Bambling, M. (2018). Compassion-Focused Therapy as an Intervention for Adult Survivors of Sexual Abuse. *JOURNAL OF CHILD SEXUAL ABUSE*, *27*(2), 161–175. https://doi.org/10.1080/10538712.2017.1390718 WE - Social Science Citation Index (SSCI)

Meston, C., Lorenz, T., & Stephenson, K. (2013). Effects of expressive writing on sexual dysfunction, depression, and PTSD in women with a history of childhood sexual abuse: Results from a randomized clinical trial. *The Journal of Sexual Medicine*, *10*(9), 2177–2189. https://doi.org/10.1111/jsm.12247

Meston, C. M., Freihart, B. K., Handy, A. B., Kilimnik, C. D., & Rosen, R. C. (2020). Scoring and Interpretation of the FSFI: What can be Learned From 20 Years of use? *The Journal of Sexual Medicine*, *17*(1), 17–25. https://doi.org/10.1016/j.jsxm.2019.10.007

Meston, C. M., & Heiman, J. R. (2000). Sexual abuse and sexual function: An examination of sexually relevant cognitive processes. *Journal of Consulting and Clinical Psychology*, *68*, 399–406. https://doi.org/10.1037/0022-006X.68.3.399

Meston, C. M., Rellini, A. H., & Heiman, J. R. (2006). Women's history of sexual abuse, their sexuality, and sexual self-schemas. *Journal of Consulting and Clinical Psychology*, *74*, 229–236. https://doi.org/10.1037/0022-006X.74.2.229

Meston, C., & Trapnell, P. (2005). Development and Validation of a Five-Factor Sexual Satisfaction and Distress Scale for Women: The Sexual Satisfaction Scale for Women (SSS-W). *The Journal of Sexual Medicine*, *2*(1), 66–81. https://doi.org/10.1111/j.1743-6109.2005.20107.x

Mitchell, K. R., Mercer, C. H., Ploubidis, G. B., Jones, K. G., Datta, J., Field, N., Copas, A. J., Tanton, C., Erens, B., Sonnenberg, P., Clifton, S., Macdowall, W., Phelps, A., Johnson, A. M., & Wellings, K. (2013). Sexual function in Britain: Findings from the third National Survey of Sexual Attitudes and Lifestyles (Natsal-3). *The Lancet*, *382*(9907), 1817–1829. https://doi.org/10.1016/S0140-6736(13)62366-1

Moeyaert, M., Manolov, R., & Rodabaugh, E. (2020). Meta-Analysis of Single-Case Research via Multilevel Models: Fundamental Concepts and Methodological Considerations. *Behavior Modification*, *44*(2), 265–295. https://doi.org/10.1177/0145445518806867

Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. (2009). PRISMA group the PRISMA group preferred reporting items for systematic reviews and meta-analyses. *The PRISMA Statement BMJ*, *339*, b2535.

Montori, V. M., & Guyatt, G. H. (2001). Intention-to-treat principle. *CMAJ*, *165*(10), 1339–1341.

Morland, L. A., Mackintosh, M.-A., Rosen, C. S., Willis, E., Resick, P., Chard, K., & Frueh, B. C. (2015). TELemedicine Versus in-Person Delivery of Cognitive Processing Therapy for Women with Posttraumatic Stress Disorder: A Randomized Noninferiority Trial. *Depression and Anxiety*, *32*(11), 811–820. https://doi.org/10.1002/da.22397

Morley, S. (2017). *Single Case Methods in Clinical Psychology: A Practical Guide*. Routledge. https://doi.org/10.4324/9781315412931

Morley, S., & Dowzer, C. (2014). The Leeds Reliable Change Indicator. *University of Leeds: Leeds, UK*.

Nadelson, C. C. (1982). *Incest and rape: Repercussions in sexual behavior. Psychiatry.*

Neff, K. D. (2003). The Development and Validation of a Scale to Measure Self-Compassion. *Self and Identity*, *2*(3), 223–250. https://doi.org/10.1080/15298860309027

Neff, K. D., Tóth-Király, I., Knox, M. C., Kuchar, A., & Davidson, O. (2021). The Development and Validation of the State Self-Compassion Scale (Long- and Short Form). *Mindfulness*, *12*(1), 121–140. https://doi.org/10.1007/s12671-020-01505-4

Neijenhuijs, K., Hooghiemstra, N., Holtmaat, K., Aaronson, N., Groenvold, M., Holzner, B., Terwee, C., Cuijpers, P., & Leeuw, I. (2019). The Female Sexual Function Index (FSFI)—A Systematic Review of Measurement Properties. *The Journal of Sexual Medicine*, *16*. https://doi.org/10.1016/j.jsxm.2019.03.001

Newcombe, B. C., & Weaver, A. D. (2016). Mindfulness, cognitive distraction, and sexual well-being in women. *The Canadian Journal of Human Sexuality*, *25*(2), 99–108.

Nimbi, F. M., Galizia, R., Rossi, R., Limoncin, E., Ciocca, G., Fontanesi, L., Jannini, E. A., Simonelli, C., & Tambelli, R. (2022). The Biopsychosocial Model and the Sex-Positive Approach: An Integrative Perspective for Sexology and General Health Care.

Sexuality Research and Social Policy, *19*(3), 894–908. https://doi.org/10.1007/s13178-021-00647-x

O'Callaghan, E., Shepp, V., Ullman, S. E., & Kirkner, A. (2019). Navigating Sex and Sexuality after Sexual Assault: A Qualitative Study of Survivors and Informal Support Providers. *Journal of Sex Research*, *56*(8), 1045–1057. https://doi.org/10.1080/00224499.2018.1506731

O'Driscoll, C., & Flanagan, E. (2016). Sexual problems and post-traumatic stress disorder following sexual trauma: A meta-analytic review. *Psychology and Psychotherapy: Theory, Research and Practice*, *89*(3), 351–367. https://doi.org/10.1111/papt.12077

Office for National Statistics (ONS; 2021, May 12) *Crime in England and Wales: Year Ending December 2020*. Crime in England and Wales - Office for National Statistics. https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/bulletins/crimeinenglandandwales/yearendingdecember2020

Orchowski, L. M., Untied, A. S., & Gidycz, C. A. (2013). Social Reactions to Disclosure of Sexual Victimization and Adjustment Among Survivors of Sexual Assault. *Journal of Interpersonal Violence*, *28*(10), 2005–2023. https://doi.org/10.1177/0886260512471085

Ouzzani, M., Hammady, H., Fedorowicz, Z., & Elmagarmid, A. (2016). Rayyan—A web and mobile app for systematic reviews. *Systematic Reviews*, *5*(1), 210. https://doi.org/10.1186/s13643-016-0384-4

Parcesepe, A. M., Martin, S. L., Pollock, M. D., & García-Moreno, C. (2015). The effectiveness of mental health interventions for adult female survivors of sexual assault: A systematic review. *Aggression and Violent Behavior*, *25*, 15–25. https://doi.org/10.1016/j.avb.2015.06.004

Parker, R. I., Vannest, K. J., Davis, J. L., & Sauber, S. B. (2011). Combining nonoverlap and trend for single-case research: Tau-U. *Behavior Therapy*, *42*(2), 284–299. https://doi.org/10.1016/j.beth.2010.08.006

Paterson, L. Q. P., Handy, A. B., & Brotto, L. A. (2017). A Pilot Study of Eight-Session Mindfulness-Based Cognitive Therapy Adapted for Women's Sexual Interest/Arousal Disorder. *The Journal of Sex Research*, *54*(7), 850–861. https://doi.org/10.1080/00224499.2016.1208800

Peng, C.-Y. J., & Chen, L.-T. (2021). Assessing Intervention Effects in the Presence of Missing Scores. *Education Sciences*, *11*(2), Article 2. https://doi.org/10.3390/educsci11020076

Pennebaker, J. W., & Seagal, J. D. (1999). Forming a story: The health benefits of narrative. *Journal of Clinical Psychology*, *55*(10), 1243–1254. https://doi.org/10.1002/(SICI)1097-4679(199910)55:10<1243::AID-JCLP6>3.0.CO;2-N

Plummer, F., Manea, L., Trepel, D., & McMillan, D. (2016). Screening for anxiety disorders with the GAD-7 and GAD-2: A systematic review and diagnostic metaanalysis. *General Hospital Psychiatry*, *39*, 24–31. https://doi.org/10.1016/j.genhosppsych.2015.11.005

Plunkett, A., O'Toole, B., Swanston, H., Oates, R. K., Shrimpton, S., & Parkinson, P. (2001). Suicide Risk Following Child Sexual Abuse. *Ambulatory Pediatrics*, *1*(5), 262–266. https://doi.org/10.1367/1539-4409(2001)001<0262:SRFCSA>2.0.CO;2

Pulverman, C., Kilimnik, C., & Meston, C. (2018). The Impact of Childhood Sexual Abuse on Women's Sexual Health: A Comprehensive Review. *SEXUAL MEDICINE REVIEWS*, *6*(2), 188–200. https://doi.org/10.1016/j.sxmr.2017.12.002 WE - Science Citation Index Expanded (SCI-EXPANDED)

Pulverman, C. S., Boyd, R. L., Stanton, A. M., & Meston, C. M. (2017). Changes in the sexual self-schema of women with a history of childhood sexual abuse following expressive writing treatment. *Psychological Trauma: Theory, Research, Practice, and Policy*, *9*(2), 181–188. https://doi.org/10.1037/tra0000163

Pulverman, C. S., Kilimnik, C. D., & Meston, C. M. (2018). The impact of childhood sexual abuse on women's sexual health: A comprehensive review. *Sexual Medicine Reviews*, *6*(2), 188–200.

Pulverman, C. S., Lorenz, T. A., & Meston, C. M. (2015). Linguistic changes in expressive writing predict psychological outcomes in women with history of childhood sexual abuse and adult sexual dysfunction. *Psychological Trauma: Theory, Research, Practice, and Policy*, *7*(1), 50–57. https://doi.org/10.1037/a0036462

Pulverman, C. S., & Meston, C. M. (2020a). Sexual dysfunction in women with a history of childhood sexual abuse: The role of sexual shame. *Psychological Trauma: Theory, Research, Practice, and Policy*, *12*(3), 291–299. https://doi.org/10.1037/tra0000506

Pulverman, C. S., & Meston, C. M. (2020b). Sexual dysfunction in women with a history of childhood sexual abuse: The role of sexual shame. *Psychological Trauma: Theory, Research, Practice, and Policy*, *12*(3), 291–299. https://doi.org/10.1037/tra0000506

Quinn, C., Platania-Phung, C., Bale, C., Happell, B., & Hughes, E. (2018). Understanding the current sexual health service provision for mental health consumers by nurses in mental health settings: Findings from a Survey in Australia and England. *International Journal of Mental Health Nursing*, *27*(5), 1522–1534. https://doi.org/10.1111/inm.12452

Regehr, C., Alaggia, R., Dennis, J., Pitts, A., & Saini, M. (2013). Interventions to Reduce Distress in Adult Victims of Rape and Sexual Violence: A Systematic Review.

Research on Social Work Practice, *23*(3), 257–265. https://doi.org/10.1177/1049731512474103

Rellini, A. (2008). Review of the empirical evidence for a theoretical model to understand the sexual problems of women with a history of CSA. *Journal of Sexual Medicine*, *5*(1), 31–46. https://doi.org/10.1111/j.1743-6109.2007.00652.x

Resick, P. A., Nishith, P., & Griffin, M. G. (2003). How Well Does Cognitive-Behavioral Therapy Treat Symptoms of Complex PTSD? An Examination of Child Sexual Abuse Survivors Within A Clinical Trial. *CNS Spectrums*, *8*(5), 340–355.

Richters, J., Grulich, A. E., de Visser, R. O., Smith, A. M. A., & Rissel, C. E. (2003). Sex in Australia: Sexual difficulties in a representative sample of adults. *Australian and New Zealand Journal of Public Health*, *27*(2), 164–170. https://doi.org/10.1111/j.1467-842X.2003.tb00804.x

Rieckert, J., & Möller, A. T. (2000). Rational-emotive behavior therapy in the treatment of adult victims of childhood sexual abuse. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, *18*(2), 87–102. https://doi.org/10.1023/A:1007824719770

Rolstad, S., Adler, J., & Rydén, A. (2011). Response Burden and Questionnaire Length: Is Shorter Better? A Review and Meta-analysis. *Value in Health*, *14*(8), 1101–1108. https://doi.org/10.1016/j.jval.2011.06.003

Rosen, C. B., J. Heiman, S. Leiblum, C. Meston, R. Shabsigh, D. Ferguson, R. D'Agostino, R. (2000). The Female Sexual Function Index (FSFI): A Multidimensional Self-Report Instrument for the Assessment of Female Sexual Function. *Journal of Sex & Marital Therapy*, *26*(2), 191–208. https://doi.org/10.1080/009262300278597

Rosen, R. C., & Bachmann, G. A. (2008). Sexual Well-Being, Happiness, and Satisfaction, in Women: The Case for a New Conceptual Paradigm. *Journal of Sex & Marital Therapy*, *34*(4), 291–297. https://doi.org/10.1080/00926230802096234

Rosenbaum, T. Y. (2013). An integrated mindfulness-based approach to the treatment of women with sexual pain and anxiety: Promoting autonomy and mind/body connection. *Sexual and Relationship Therapy*, *28*(1–2), 20–28. https://doi.org/10.1080/14681994.2013.764981

Rust, J., & Golombok, S. (1985). The Golombok-Rust Inventory of Sexual Satisfaction (GRISS). *British Journal of Clinical Psychology*, *24*(1), 63–64. https://doi.org/10.1111/j.2044-8260.1985.tb01314.x

Saha, C., & Jones, M. P. (2016). Type I and Type II error rates in the last observation carried forward method under informative dropout. *Journal of Applied Statistics*, *43*(2), 336–350. https://doi.org/10.1080/02664763.2015.1063112

Salim, A., Mackinnon, A., Christensen, H., & Griffiths, K. (2008). Comparison of data analysis strategies for intent-to-treat analysis in pre-test–post-test designs with substantial dropout rates. *Psychiatry Research*, *160*(3), 335–345. https://doi.org/10.1016/j.psychres.2007.08.005

Sapra, A., Bhandari, P., Sharma, S., Chanpura, T., & Lopp, L. (n.d.). Using Generalized Anxiety Disorder-2 (GAD-2) and GAD-7 in a Primary Care Setting. *Cureus*, *12*(5), e8224. https://doi.org/10.7759/cureus.8224

Saunders, F., Vosper, J., Gibson, S., Jamieson, R., Zelin, J., & Barter, J. (2022). Compassion Focused Psychosexual Therapy for Women Who Experience Pain during Sex. *OBM Integrative and Complementary Medicine*, *7*(2), Article 2. https://doi.org/10.21926/obm.icm.2202017

Schnurr, P. P., Lunney, C. A., Forshay, E., Thurston, V. L., Chow, B. K., Resick, P. A., & Foa, E. B. (2009). Sexual function outcomes in women treated for posttraumatic stress disorder. *Journal of Women's Health*, *18*(10), 1549–1557. https://doi.org/10.1089/jwh.2008.1165

Schwarz, E. R., Kapur, V., Bionat, S., Rastogi, S., Gupta, R., & Rosanio, S. (2008). The prevalence and clinical relevance of sexual dysfunction in women and men with chronic heart failure. *International Journal of Impotence Research*, *20*(1), Article 1. https://doi.org/10.1038/sj.ijir.3901613

Scoglio, A. A. J., Rudat, D. A., Garvert, D., Jarmolowski, M., Jackson, C., & Herman, J. L. (2018). Self-compassion and responses to trauma: The role of emotion regulation. *Journal of Interpersonal Violence*, *33*, 2016–2036. https://doi.org/10.1177/0886260515622296

Scott Tilley, D., Young, C. C., Richmond, M., & Humphrey, J. (2023). Mindfulness-based interventions for adult survivors of sexual assault: A scoping review. *Journal of Sexual Aggression*, 1–17. https://doi.org/10.1080/13552600.2023.2187471

Seal, B., Brotto, L., & Rellini, A. (2011). A BRIEF COGNITIVE BEHAVIOURAL VERSUS MINDFULNESS-BASED INTERVENTION AMONG WOMEN WITH SEXUAL DISTRESS AND A HISTORY OF CHILDHOOD SEXUAL ABUSE. *JOURNAL OF SEXUAL MEDICINE*, *8*, 64-65 WE-Science Citation Index Expanded (SCI-EXPANDED) WE-Social Science Citation Index (SSCI).

Sekhon, M., Cartwright, M., & Francis, J. J. (2017). Acceptability of healthcare interventions: An overview of reviews and development of a theoretical framework. *BMC Health Services Research*, *17*(1), 88. https://doi.org/10.1186/s12913-017-2031-8

Serati, M., Salvatore, S., Siesto, G., Cattoni, E., Zanirato, M., Khullar, V., Cromi, A., Ghezzi, F., & Bolis, P. (2010). Female Sexual Function during Pregnancy and after Childbirth. *The Journal of Sexual Medicine*, *7*(8), 2782–2790. https://doi.org/10.1111/j.1743-6109.2010.01893.x

Smith, J. D. (2012). Single-Case Experimental Designs: A Systematic Review of Published Research and Current Standards. *Psychological Methods*, *17*(4), 10.1037/a0029312. https://doi.org/10.1037/a0029312

Sørensen, T., Giraldi, A., & Vinberg, M. (2017). Sexual distress and quality of life among women with bipolar disorder. *International Journal of Bipolar Disorders*, *5*(1), 29. https://doi.org/10.1186/s40345-017-0098-0

Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A Brief Measure for Assessing Generalized Anxiety Disorder: The GAD-7. *Archives of Internal Medicine*, *166*(10), 1092–1097. https://doi.org/10.1001/archinte.166.10.1092

Sprei, J. E., & Courtois, C. A. (1988). The treatment of women's sexual dysfunctions arising from sexual assault. *Treatment of Sexual Problems in Individual and Couples Therapy.*, 267–299.

Staples, J., Rellini, A. H., & Roberts, S. P. (2012). Avoiding Experiences: Sexual Dysfunction in Women with a History of Sexual Abuse in Childhood and Adolescence. *Archives of Sexual Behavior*, *41*(2), 341–350. https://doi.org/10.1007/s10508-011-9773-x

Stephenson, K., & Kerth, J. (2017). Effects of Mindfulness-Based Therapies for Female Sexual Dysfunction: A Meta-Analytic Review. *Journal of Sex Research*, *54*, 1–18. https://doi.org/10.1080/00224499.2017.1331199

Stephenson, K. R., Hughan, C. P., & Meston, C. M. (2012). Childhood sexual abuse moderates the association between sexual functioning and sexual distress in women. *Child Abuse & Neglect*, *36*(2), 180–189. https://doi.org/10.1016/j.chiabu.2011.09.015

Stephenson, K. R., & Meston, C. M. (2010a). Differentiating Components of Sexual Well-Being in Women: Are Sexual Satisfaction and Sexual Distress Independent

Constructs? *The Journal of Sexual Medicine*, *7*(7), 2458–2468. https://doi.org/10.1111/j.1743-6109.2010.01836.x

Stephenson, K. R., & Meston, C. M. (2010b). When Are Sexual Difficulties Distressing for Women? The Selective Protective Value of Intimate Relationships. *The Journal of Sexual Medicine*, *7*(11), 3683–3694. https://doi.org/10.1111/j.1743-6109.2010.01958.x

Stephenson, K. R., & Meston, C. M. (2012). Consequences of impaired female sexual functioning: Individual differences and associations with sexual distress. *Sexual and Relationship Therapy*, *27*(4), 344–357. https://doi.org/10.1080/14681994.2012.738905

Stynes, G., & McHugh, L. (2023). Brief acceptance and commitment therapy for shame among adults with experience of mental health difficulties using a randomized multiple baseline, single case experimental design (SCED). *Stigma and Health*.

Sundgren, M., Damiris, I., Stallman, H., Kannis-Dymand, L., Millear, P., Mason, J., Wood, A., & Allen, A. (2022). Investigating psychometric measures of sexual wellbeing: A systematic review. *Sexual and Relationship Therapy*, *0*(0), 1–26. https://doi.org/10.1080/14681994.2022.2033967

Tarlow, K. R. (2017). An Improved Rank Correlation Effect Size Statistic for Single-Case Designs: Baseline Corrected Tau. *Behavior Modification*, *41*(4), 427–467. https://doi.org/10.1177/0145445516676750

Tate, D. F., Finkelstein, E. A., Khavjou, O., & Gustafson, A. (2009). Cost Effectiveness of Internet Interventions: Review and Recommendations. *Annals of Behavioral Medicine*, *38*(1), 40–45. https://doi.org/10.1007/s12160-009-9131-6

Tate, R. L., Perdices, M., Rosenkoetter, U., Shadish, W., Vohra, S., Barlow, D. H., Horner, R., Kazdin, A., Kratochwill, T., McDonald, S., Sampson, M., Shamseer, L., Togher,

L., Albin, R., Backman, C., Douglas, J., Evans, J. J., Gast, D., Manolov, R., … Wilson, B. (2016). The Single-Case Reporting Guideline In BEhavioural Interventions (SCRIBE) 2016 Statement. *Physical Therapy*, *96*(7), e1–e10. https://doi.org/10.2522/ptj.2016.96.7.e1

Taylor, J. F., Rosen, R. C., & Leiblum, S. R. (1994). Self-report assessment of female sexual function: Psychometric evaluation of the brief index of sexual functioning for women. *Archives of Sexual Behavior*, *23*(6), 627–643. https://doi.org/10.1007/BF01541816

ter Kuile, M., Phd, S., & van Lankveld, J. (2010). Cognitive Behavioral Therapy for Sexual Dysfunctions in Women. *The Psychiatric Clinics of North America*, *33*, 595–610. https://doi.org/10.1016/j.psc.2010.04.010

Thompson, K. M., Crosby, R. D., Wonderlich, S. A., Mitchell, J. E., Redlin, J., Demuth, G., Smyth, J., & Haseltine, B. (2003). Psychopathology and sexual trauma in childhood and adulthood. *Journal of Traumatic Stress*, *16*(1), 35–38. https://doi.org/10.1023/A:1022007327077

Ullman, S. E. (2004). Sexual assault victimization and suicidal behavior in women: A review of the literature. *Aggression and Violent Behavior*, *9*(4), 331–351. https://doi.org/10.1016/S1359-1789(03)00019-3

ULLMAN, S. E., & FILIPAS, H. H. (2001). Correlates of Formal and Informal Support Seeking in Sexual Assault Victims. *Journal of Interpersonal Violence*, *16*(10), 1028–1047. https://doi.org/10.1177/088626001016010004

van Berlo, W., & Ensink, B. (2000). Problems with sexuality after sexual assault. *Annual Review of Sex Research*, *11*, 235–257.

Vannest, K. J., Parker, R. I., Gonen, O., & Adiguzel, T. (2016). Single case research: Web based calculators for SCR analysis (Version 2.0)[Web-based application]. *College Station: Texas A&M University*.

Velten, J. (2017). The Dual Control Model of Sexual Response: Relevance of Sexual Excitation and Sexual Inhibition for Sexual Function. *Current Sexual Health Reports*, *9*(2), 90–97. https://doi.org/10.1007/s11930-017-0108-3

Vosper, J., Irons, C., Mackenzie-White, K., Saunders, F., Lewis, R., & Gibson, S. (2021). Introducing compassion focused psychosexual therapy. *Sexual and Relationship Therapy*, 1–33. https://doi.org/10.1080/14681994.2021.1902495

Weaver, T. L. (2009). Impact of Rape on Female Sexuality: Review of Selected Literature. *Clinical Obstetrics and Gynecology*, *52*(4), 702. https://doi.org/10.1097/GRF.0b013e3181bf4bfb

Weeks, G. (2005). The emergence of a new paradigm in sex therapy: Integration. *Sexual & Relationship Therapy*, *20*. https://doi.org/14681990412331333955

Weiner, L., & Avery-Clark, C. (2014). Sensate Focus: Clarifying the Masters and Johnson's model. *Sexual and Relationship Therapy*, *29*(3), 307–319. https://doi.org/10.1080/14681994.2014.892920

Wells, S. Y., Glassman, L. H., Talkovsky, A. M., Chatfield, M. A., Sohn, M. J., Morland, L. A., & Mackintosh, M.-A. (2019). Examining Changes in Sexual Functioning after Cognitive Processing Therapy in a Sample of Women Trauma Survivors. *Women's Health Issues*, *29*(1), 72–79. https://doi.org/10.1016/j.whi.2018.10.003

Wessely, S., Bryant, R. A., Greenberg, N., Earnshaw, M., Sharpley, J., & Hughes, J. H. (2008). Does Psychoeducation Help Prevent Post Traumatic Psychological Distress? *Psychiatry: Interpersonal and Biological Processes*, *71*(4), 287–302. https://doi.org/10.1521/psyc.2008.71.4.287

World Health Organization. (2006). *Defining sexual health: Report of a technical consultation on sexual health, 28-31 January 2002, Geneva*. World Health Organization.

Zarski, A.-C., Berking, M., Fackiner, C., Rosenau, C., & Ebert, D. D. (2017). Internet-Based Guided Self-Help for Vaginal Penetration Difficulties: Results of a Randomized Controlled Pilot Trial. *The Journal of Sexual Medicine, 14*(2), 238–254. https://doi.org/10.1016/j.jsxm.2016.12.232

Zarski, A.-C., Velten, J., Knauer, J., Berking, M., & Ebert, D. D. (2022). Internet- and mobile-based psychological interventions for sexual dysfunctions: A systematic review and meta-analysis. *Npj Digital Medicine, 5*(1), Article 1. https://doi.org/10.1038/s41746-022-00670-1

Zippan, N., Stephenson, K. R., & Brotto, L. A. (2020). Feasibility of a Brief Online Psychoeducational Intervention for Women With Sexual Interest/Arousal Disorder. *The Journal of Sexual Medicine, 17*(11), 2208–2219. https://doi.org/10.1016/j.jsxm.2020.07.086

Zwickl, S., & Merriman, G. (2011). The association between childhood sexual abuse and adult female sexual difficulties. *Sexual and Relationship Therapy, 26*(1), 16–32. https://doi.org/10.1080/14681994.2010.530251

VI. Appendices

Appendix A

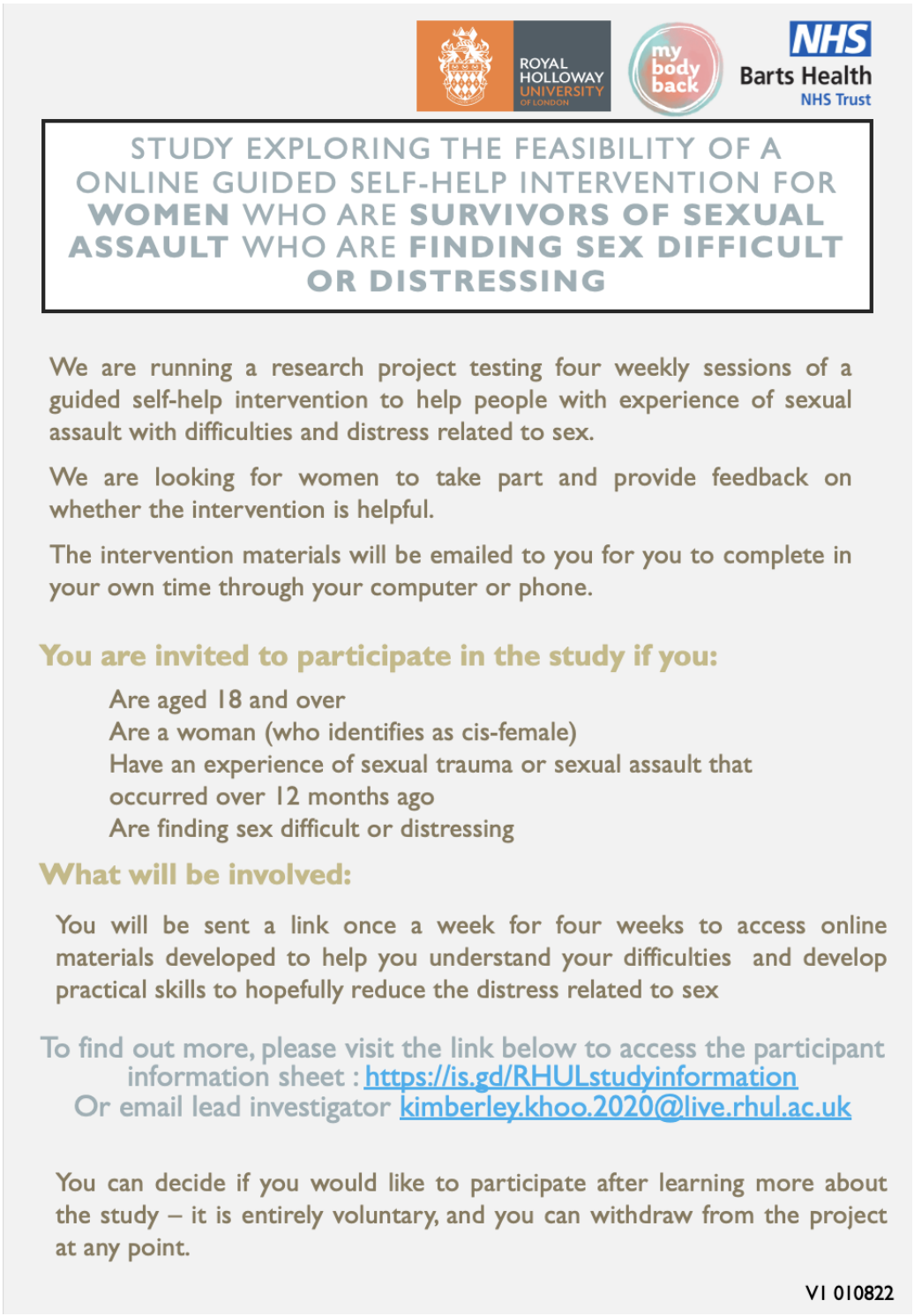
Search terms for each database

Data base	Search terms (title and abstract only)
Psychinfo	'psychological interventions' or 'psychosocial' or 'psychotherapy' or 'behavioural interventions' or 'psychosexual therapy' or 'therapy' or 'cbt' or 'act' or 'dbt' or 'cft' or 'compassion-focused therapy' or 'mindfulness' or 'schema therapy' or 'narrative therapy' or 'expressive writing' or 'therapeutic writing' or 'emdr' or 'psychosexual' AND 'sexual assault' or 'rape' or 'sexual violence' or 'sexual abuse' OR 'sexual trauma' OR 'childhood sexual abuse' OR 'forced sex' OR 'sexual victimization' AND 'sexual distress' OR 'sexual functioning' or 'sexual dysfunction' or 'sexual well-being' or 'sexual problems' OR 'sexual difficulties' OR 'hyposexual' OR 'sexual satisfaction' OR 'sexual desire' OR 'sexual disorders' OR 'sexual pain'
PubMed	(('psychological interventions'[Title/Abstract] OR 'psychosocial'[Title/Abstract] OR 'psychotherapy[Title/Abstract] OR 'behavioral interventions'[Title/Abstract] OR 'psychosexual therapy'[Title/Abstract] OR 'therapy'[Title/Abstract] OR 'cbt'[Title/Abstract] OR 'act'[Title/Abstract] OR 'dbt'[Title/Abstract] OR 'cft'[Title/Abstract] OR 'compassion-focused therapy'[Title/Abstract] OR 'mindfulness'[Title/Abstract] OR 'schema therapy'[Title/Abstract] OR 'narrative therapy'[Title/Abstract] OR 'expressive writing'[Title/Abstract] OR 'therapeutic writing'[Title/Abstract] OR 'emdr'[Title/Abstract] OR 'psychosexual'[Title/Abstract]) AND ('sexual assault'[Title/Abstract] OR 'rape'[Title/Abstract] OR 'sexual violence'[Title/Abstract] OR 'sexual abuse'[Title/Abstract] OR 'sexual trauma'[Title/Abstract] OR 'childhood sexual abuse'[Title/Abstract] OR 'forced sex'[Title/Abstract] OR 'sexual

	victimization'[Title/Abstract])) AND (‘sexual distress’[Title/Abstract] OR ‘sexual functioning’[Title/Abstract] OR ‘sexual dysfunction’[Title/Abstract] OR ‘sexual well-being’[Title/Abstract] OR ‘sexual problems’[Title/Abstract] OR ‘sexual difficulties’[Title/Abstract] OR ‘hyposexual’[Title/Abstract] OR ‘sexual satisfaction’[Title/Abstract] OR ‘sexual desire’[Title/Abstract] OR ‘sexual disorders’[Title/Abstract] OR ‘sexual pain’[Title/Abstract])
Web of Science	((TI=(('sexual distress' OR 'sexual functioning' or 'sexual dysfunction' or 'sexual well-being' or 'sexual problems' OR 'sexual difficulties' OR 'hyposexual' OR 'sexual satisfaction' OR 'sexual desire' OR 'sexual disorders' OR 'sexual pain'))) OR AB=(('sexual distress' OR 'sexual functioning' or 'sexual dysfunction' or 'sexual well-being' or 'sexual problems' OR 'sexual difficulties' OR 'hyposexual' OR 'sexual satisfaction' OR 'sexual desire' OR 'sexual disorders' OR 'sexual pain'))) AND ((TI=('sexual assault' or 'rape' or 'sexual violence' or 'sexual abuse' OR 'sexual trauma' OR 'childhood sexual abuse' OR 'forced sex' OR 'sexual victimization')) OR AB=(('sexual assault' or 'rape' or 'sexual violence' or 'sexual abuse' OR 'sexual trauma' OR 'childhood sexual abuse' OR 'forced sex' OR 'sexual victimization'))) AND ((TI=('psychological interventions' or 'psychosocia'l or 'psychotherapy or ‘behavioral interventions’ or ‘psychosexual therapy’ or 'therapy' or ‘cbt’ or ‘act’ or ‘dbt’ or 'cft' or 'compassion-focused therapy' or 'mindfulness' or ‘schema therapy' or ‘narrative therapy’ or ‘expressive writing’ or ‘therapeutic writing’ or ‘emdr’ or 'psychosexual’)) OR AB=('psychological interventions' or 'psychosocia'l or 'psychotherapy or ‘behavioral interventions’ or ‘psychosexual therapy’ or 'therapy' or ‘cbt’ or ‘act’ or ‘dbt’ or 'cft' or 'compassion-focused therapy' or 'mindfulness' or ‘schema therapy' or ‘narrative therapy’ or ‘expressive writing’ or ‘therapeutic writing’ or ‘emdr’ or 'psychosexual’))

Appendix B

Recruitment leaflet



Appendix C

Participant Information Sheet

Online guided self-help intervention for sexual distress following sexual assault: A single case experimental study

My name is Kimberley Khoo and I am a Trainee Clinical Psychologist at Royal Holloway, University of London, UK. I would like to invite you to take part in my research project. If you are interested in taking part, please let me know by contacting me via **Kimberley.khoo.2020@live.rhul.ac.uk**. I would be very pleased to provide you with a more detailed information sheet about the project that describes what your participation would involve. Thank You.

You are invited to take part in a research project. Before you decide to consent to take part it is important for you to understand why the research is taking place and what your participation will involve. Please take time to read the following information carefully and discuss it with others if you wish. Contact us if anything is not clear or if you would like more information. Please consider carefully whether you wish to consent to take part.

Invitation and Brief Summary:
We would like to invite you to take part in this research study. Joining the study is completely up to you. You don't have to take part if you don't want to and you can decide to withdraw from the study at any time even after consenting to join the project.

We know that lots of people who have an experience of sexual assault may experience distress or difficulties when returning to sex. In this study, we are testing a new online intervention designed to help women with the experience of sexual trauma to gain more confidence in sexual well-being and compassion towards themselves when they experience sexual distress. The sessions aim to help individuals understand their difficulties, learn some practical strategies, and encourage participants to take action to reduce their sexual distress. The guided self-help intervention involves four online sessions completed weekly. We will also ask you to complete some very brief questions every day.

What is the purpose of the study?
Previous research has shown that people who have experienced a form of sexual assault at some point in their lifetime are more likely to feel less enjoyment with sex and have the

tendency to experience increased self-critical thoughts and shame. This contributes to sexual distress. There is very little support available to help with this.

This study is being conducted in connection with My Body Back and Bart's NHS Foundation Trust Sexual Wellbeing Clinic. These are services accessed by women with experience of sexual assault who may have difficulties with sex. Both services are very sought often with long waiting lists. We are testing out a self-help option that can be done alongside individual therapy or while individuals are on a waiting list to improve on service provision and provide more options. We have designed the materials based on what research tells us might be helpful, but we need to see if people want to use it and find it useful, in real life.

Who can take part?

This study is for **women** (who identify as cis-female) who have **experienced sexual assault** in adulthood and/or childhood (with the experience occurring **over** 12 months ago) **and** are finding sex distressing or difficult. You will need to be a **resident of the UK** and **above the age of 18**. You will also need an email address and access to a smartphone or computer to receive the materials for the project.

As this is a self-help resource with little to no contact with professionals, you would need to be motivated to engage throughout the study and complete the daily measures. If you are finding the materials distressing, you will be able to email the chief investigator who will arrange a one-session meeting with Bart's NHS Sexual Wellbeing Service to help you find out about helpful services and check on your safety. We will also provide you with sign-posting materials should you require extra support.

Who is running the study?

The study is being led by a Trainee Clinical Psychologist, Kimberley Khoo and is being funded by Royal Holloway University of London as part of the doctorate program in clinical psychology. The project is being supervised by Dr Jane Vosper, Clinical Psychologist at Bart's NHS Trust Sexual Wellbeing Service and Dr Andy Macleod at Royal Holloway, University of London. The study is being run in conjunction with My Body Back.

The study has gained ethical approval from an NHS Research Ethics Committee.

What's Involved?

If you decide to take part, we will ask you to complete a set of screening questionnaires online to assess your eligibility for the study. If eligible, we will ask you to read a consent form, providing consent to take part in this study. You will complete two questionnaires on sexual distress and one on self-compassion. You will then have a call with the lead researcher, Kimberley who will briefly introduce you to the intervention and answer any questions you may have.

After which, you will start the first phase of the study which we call the baseline period. During this phase, you will be asked to rate on a slider how often you feel shame, guilt, self-compassion and motivation to make changes in relation to sexual difficulties. You will complete these questionnaires once a day for several days ranging from 5 to 14 days. These questionnaires should take no longer than two minutes a day to complete on your phone.

You will then be provided access to the online guided self-help material which is sent weekly and accessed through Qualtrics, an online survey platform. We will ask you to listen to videos and read the handout provided. You will be invited to try out some of the coping skills and exercises. This should take about 15 – 20 minutes once a week. You can use it as often as you like, but we recommend practicing some of the skills for a few minutes most days. We will send you an email each week to remind you to practice the skills. You will then be asked to complete the same measures used during the baseline period every day. After completing the 4-week intervention, the chief investigator will be in touch after 1 month to ask you to complete the sexual distress questionnaires again and to provide feedback on the intervention.

What will happen with the results?

The results of the study will be written up as part of a thesis that will be reviewed by examiners, who will also ask questions about the study. This will be based on an oral presentation. The thesis will be available online on Royal Holloway, University of London website and a hard copy kept by the university.

The research team also hopes to publish the study in relevant scientific journals and to present the results at conferences. Your involvement in the project is confidential and no personal identifying information will be included. The results will also be shared with My Body Back and other charities that help women who have been sexually assaulted. You can also request to receive a summary of the findings of the study by email.

What are the benefits and risks of taking part?

There are several benefits to taking part in this study. You will be able to access evidence-based self-help materials which will focus on helping you to feel safe, calm and contented returning to sex. The exercises included in the materials have been shown to be beneficial for psychological well-being. They will hopefully lead you to be more compassionate with yourself and feel more confident in building on your sexual well-being.

In terms of risk, we will not ask direct questions about your experience of sexual assault but you may find it upsetting to complete the screening questionnaire and to think about things as you work through the material provided. This is completely understandable and we hope that you will find the exercises in the materials can help you feel better. We have included signposting information in the intervention with services you can contact for additional support. If you are experiencing adverse effects due to the self-help intervention, you can be provided one 30-minute personal support session with a clinician at Bart's Sexual Wellbeing Service.

To access this support, email the chief investigator, Kimberley Khoo between 9.00am and 4.00pm from Monday to Friday, informing her of any increased distress you have experienced due to the self-help intervention and provide consent to be contacted by a clinician. The clinicians at Bart's Sexual Well-being Service will be able to offer one 30-minute personal support session to check on your safety and well-being. These appointments occur based on the availability on the clinicians at Bart's Sexual Wellbeing Clinic which may not be immediate. We aim to set up an appointment with a clinician within two weeks of receiving your email.

Besides this one appointment, we cannot provide further advice or medical treatment and you should contact your GP if you have concerns regarding your mental or physical health. You will be asked to provide details of your GP if you would like to participate in this study. Your GP will NOT be notified of your involvement in the study or provided any information you contributed whilst participating. We will only contact your GP if you make us aware of identified risks. These risks include severe self-harming, suicidal risk or a significant deterioration of your mental health. Under these circumstances, confidentiality may be breached and the chief investigator may contact your GP as we need to keep you safe.

If you feel that using the materials is unhelpful, you can simply stop with no consequences.
This study has been reviewed and approved in accordance with an NHS Ethics Committee as well as the Royal Holloway University Ethics Committee.

Have experts by experience been involved in the design of this study?
Yes, the researcher has consulted with two survivors of sexual assault to review the materials and study design. This was to check on the sensitivity of materials and to check if there were any areas researchers had not thought to include in the materials that might be relevant and helpful to consider.

Information about data storage:
The project follows the General Data Protection Regulation protocol (GDPR, 2018) to ensure your data is recorded and stored appropriately. All computerized data will be stored and encrypted on a password-protected USB drive that adheres to the NHS confidentiality standards. The data will be stored for up to 5 years for audit purposes but will contain no identifiable information and will be password protected. Consent forms will be kept for up to 2 years.

All participant-related data (i.e., email address, telephone number, and GP details) which has been collected for participants to be sent links to the materials and contacted about the study results, will be stored in a password-protected file on an encrypted USB drive only accessible to the lead researcher, Kimberley. This data will be kept until the end of the research project (i.e., June 2023). The results of your questionnaires will be stored on a separate database

anonymously which can only be accessed by the research team. No personally identifiable information will be included in the write-up of the research.

Taking part in the research is completely voluntary. You can stop being part of the study at any time, without giving a reason, but we will keep information about you that we already have unless you have asked us to destroy it. We need to manage your records in specific ways for the research to be reliable. This means that we won't be able to let you see or change the data we hold about you.

Please be aware that your participation in this study will not have any bearing on your access to My Body Back or any NHS service. Your access to services will not change if you decide that you do not want to take part, or if you withdraw your data during or after the study.

Where can you find out more about how your information is used?
You can find out more about how we use your information

- at www.hra.nhs.uk/information-about-patients/
- at www.hra.nhs.uk/patientdataandresearch
- by asking one of the research team
- by sending an email to Kimberley.khoo2020@live.rhul.ac.uk

Extra information:
If you have any questions at this stage, or if you have any concerns during the study you can contact the lead researcher, Trainee Clinical Psychologist Kimberley Khoo. Emails are monitored from 9.00 am to 4.00pm from Monday to Friday.

- Email: Kimberley.khoo2020@live.rhul.ac.uk
- You can also contact the supervisors and collaborators of the project, Dr Andy Macleod (A.Macleod@rhul.ac.uk)

Please be aware that you can withdraw your information from the study at any point until the end of April 2023 by contacting Kimberley at the above email address.

This study is testing out a self-help intervention in the form of online materials. You are not being offered any personal therapy or treatment by the research team.

What if I want to complain?
If you are unhappy with any part of the study, please contact Kimberley Khoo or the study supervisor, Dr Andy Macleod, using the details above. If you wish to complain about how your data is being used, you should contact the research team in the first instance. If you are not happy after that, you can contact Royal Holloway's Research Ethics Committee via ethics@rhul.ac.uk. If you wish to make a formal complaint, please email

integrity@rhul.ac.uk. You may also email the Data Protection Officer. The research team can give you details of the right Data Protection Officer. If you are not happy with their response you can complain to the Information Commissioner's Office (www.ico.org.uk or 0303 123 1113).

Data protection

This research commits to abide by the Data Protection Act (2018). For detailed information about what this means for research participants, please visit the Research Participant Privacy Notice: *https://intranet.royalholloway.ac.uk/research/documents/researchpdf/new-intranets/research-participant-privacy-notice.pdf*

General Data Protection Regulation Statement

Important General Data Protection Regulation information (GDPR). Royal Holloway, University of London is the sponsor for this study and is based in the UK. We will be using information from you to undertake this study and will act as the data controller for this study. This means that we are responsible for looking after your information and using it properly. Any data you provide during the completion of the study will be stored securely on hosted on servers within the European Economic Area'. Royal Holloway is designated as a public authority and in accordance with the Royal Holloway and Bedford New College Act 1985 and the Statutes which govern the College, we conduct research for the public benefit and in the public interest. Royal Holloway has put in place appropriate technical and organisational security measures to prevent your personal data from being accidentally lost, used or accessed in any unauthorised way or altered or disclosed. Royal Holloway has also put in place procedures to deal with any suspected personal data security breach and will notify you and any applicable regulator of a suspected breach where legally required to do so. To safeguard your rights, we will use the minimum personally-identifiable information possible (i.e., the email address you provide us). The lead researcher will keep your contact details confidential and will use this information only as required (i.e., to provide a summary of the study results if requested and/or for the prize draw). The lead researcher will keep information about you and data gathered from the study, the duration of which will depend on the study. Certain individuals from RHUL may look at your research records to check the accuracy of the research study. If the study is published in a relevant peer-reviewed journal, the anonymised data may be made available to third parties. The people who analyse the information will not be able to identify you. You can find out more about your rights under the GDPR and Data Protection Act 2018 by visiting https://www.royalholloway.ac.uk/about-us/more/governance-and-strategy/data-protection/ and if you wish to exercise your rights, please contact dataprotection@royalholloway.ac.uk

NB: You may retain this information sheet for reference and contact us with any queries.

Thank you for taking the time to read this information sheet and for considering taking part in this study.

Appendix D

Recruitment Poster for My Body Back

Appendix E

Signposting and Support Handout

Mental Health Support Lines:

Samaritans – Offers free 24/7 support.

Call 116 123 or email jo@samaritans.org (24 hours, every day)

SHOUT – Offers free 24/7 mental health support text service if you prefer not to talk.

Text SHOUT to 85258 (24 hours, every day)

Campaign Against Living Miserably (CALM) – Offers our of hours support (5pm – midnight, everyday)

Call 0800 58 58 58 or their webchat service through the website

SANEline – Offers out of hours mental health support (4pm to 10pm everyday)

0300 304 7000

Support related to sexual violence and abuse:

Rape Crisis England & Wales - Provides information and support to survivors of sexual violence, sexual assault and sexual abuse across England and Wales.

Freephone 0808 802 9999 (12 to 2.30pm, then 7 to 9.30pm, every day)

www.rapecrisis.org.uk

Rape Crisis Scotland - Provides information and support to survivors of sexual violence, sexual assault and sexual abuse across Scotland.

Freephone 0808 801 0302 (6pm to 12am, every day) www.rapecrisisscotland.org.uk

Nexus NI - Offers free counselling for people who have experienced sexual violence, sexual assault and sexual abuse across Northern Ireland. http://nexusni.org/

Galop - Galop gives advice and support to people who have experienced biphobia, homophobia, transphobia, sexual violence or domestic abuse. They also support lesbian, gay,

bi, trans and queer people who have had problems with the police or have questions about the criminal justice system. Helpline: 020 7704 2040 http://www.galop.org.uk

National Association for People Abused in Childhood (NAPAC) - Offers support to adult survivors of childhood abuse. Support line 0808 801 0331 (10am to 9pm, Monday to Thursday, and 10am to 6pm on Friday) https://napac.org.uk/

Southall Black Sisters - Campaigning, information and advice for women affected by gender-based violence. Helpline: 0208 571 0800 http://www.southallblacksisters.org.uk/

FORWARD - Advice, support and specialist health care for girls and women affected by FGM. FORWARD is staffed by sensitive and approachable African women who as well as English speak Arabic and several other African languages.

Helpline: +44 (0)20 8960 4000 http://www.forwarduk.org.uk/resources/support

Guided meditations for self-compassion:

- http://self-compassion.org/category/exercises/#guided-meditations

Mindfulness apps

- Headspace
- The Mindfulness App
- Mindfulness Daily
- ACT Coach
- Calm

Sexual pain: http://www.scarleteen.com/node/85

A website dedicated to exploring the many ways that women can experience sexual pleasure. Includes videos and tutorials: www.omgyes.com

Appendix F

Intervention Handouts and Script

Session 1 – Introduction & Psychoeducation

Script

Introduction:
Hello and welcome to the first session of guided self-help for sexual distress. Over the next 4 sessions we hope to cultivate a more compassionate view towards yourself by deepening your understanding of yourself and your difficulties, and how your experience of sexual trauma is affecting your sex life and the it affects your mind and body.

We have based this information from scientific research and throughout the sessions, we will also be going through a range of exercises for you to practice and ask for you to note down any reflections you feel comfortable writing. You have the choice of which exercises you want to try and which you would prefer to opt out of. It is completely okay to step away from any of the exercises over the next 4 weeks, you do what feels right for you. Even choosing to sign up for this 4-week intervention is a big step and we hope that this guide will help you feel more confident in returning to sex and treat yourself with more kindness when approaching sex even if it feels like it may be difficult.

Breathing exercise:
Breathing is a great form of mindfulness which cultivates our ability to be present in the moment. We will learn more about mindfulness in the next session. To help you prepare for today's session I would like to bring you to the present moment, let's get into a comfortable position and start by taking a deep breath and relaxing any tension you may feel in your body. Take yourself away from any distractions and if you feel comfortable to do so. you can close your eyes and take a minute or two to allow your attention to settle on your breathing – not really thinking about anything. Alternatively, or when you are ready, take one last deep breathe, stretch wiggle your finger and toes and bring yourself back in to the room.

Reflection:
To begin the session, I would like you to think about how you want to feel about your sex life and what about sex is important to you. Is it pleasure? Connection? Is not important to you. Take as much time as you need to reflect on this. If how you want to feel about your sex life is a 10 on a scale of 0 to 10, how close are you to feeling the way you want about your sex life? What number would you rate your sex life currently from 0 to 10.

How difficult experiences get in the way:
Research has shown how it is common and understandable for sexual trauma to affect someone's experiences of sex. For some people this changes the way they have sex or can lead to increased anxiety & fear of having sex and discomfort during sex. On the handout are a list of common experiences survivors of sexual trauma encounter when returning to sex. These experiences are understandable after trauma which is a violation of your safety and this is the way your brain is trying to protect you from being hurt again but it overcompensates, causing these symptoms. If you have any of these experiences currently, it is not your fault! You did not choose or want to react in these ways but our brains automatic response is to keep you safe.

The main task of all living things is survival and humans have evolved in many ways to detect and respond to threat to ensure we survive. The brain has also evolved to detect threat. The amygdala is the part of the brain that protects us from threat – it is the human built in threat alarm system. To protect us, the amygdala is constantly looking out for threat and lives by the rule 'better safe than sorry' so any small signs of danger can cause the alarm system to go off and our brain is told that we are in danger and prepares our body and mind to defend itself. This response occurs so quickly and automatically that sometimes it sets off our threat system before we are conscious of what is happening.

For example, if we are in a forest and see something moving on the ground we might feel scared and jump back before we realise it's a harmless bird. The role of the amygdala is to keep us safe and to react quickly before the thinking part of our brain identifies the movement as something that isn't dangerous.

Unfortunately, the amygdala is unable to distinguish between danger in the present from past events we remember in our minds. This is why the threat system may be activated when you have memories of trauma even if you rationally know you are in a safe place. Your brains is trying to keep you safe and prevent anything frightening from happening again. During the trauma, the amygdala collects information so that it can recognise warning signs in the future to prevent the event from occurring again. Anything that even vaguely reminds the amygdala of the original traumatic event, including the act of sex in a safe place on your own or with a trusted partner can trigger the threat system, When the 'alarm system' goes off because our threat system is triggered, it can interfere with the ability to have sex. I hope you will be reassured that many of the difficulties you experience are the results of the way the human brain is designed and to deal with threat.

The way our bodies respond sexually is related to a whole range of factors, many of which are outside our control such as the response of the threat system. One thing we can do to reduce the emphasis on the threat system is to activate our soothing system.

The soothing system is part of the three systems model and is linked to feelings of being safe and soothed. It is associated with being relaxed, connecting to others and experiencing compassion. Often for sex to be enjoyable we need : human connection, feeling safe, feeling wanted and our wishes respected. And a feeling of safety and no active threat. – these are all factors associated with the soothing system which is needed for arousal and enjoyable sex.

Three Systems:
We have already introduced how the threat system can interfere during sex. We also briefly talked about how the soothing system is what makes us feel safe during sex allowing for arousal. These two systems, described above, are part of a three systems model. The third system is the drive system and it's involved in wanting and pursuing sex. From an evolutionary perspective, the principle aim of sex is reproduction. However, we know that is not everybody's drive for sex today.

After experiencing trauma, the threat system becomes more sensitive and is easily triggered, overruling the drive and soothing systems as your brain tries to protect you from being hurt again even if you are with a trusted partner. This may cause people to feel:

- → unsafe, scared of sex etc.
- → shame about what happened, disgusted with self or others.

Version 1. 01.08.22
IRAS ID: 313482

- → Some people worry that what happened to them was their fault, so might feel shame and feel undeserving of sex or closeness
- → Might have critical thoughts like "I'm disgusting" or "I'm not worth it"

Our brains and bodies are not designed to have sex "perfectly" (e.g. in the way our **culture** currently says we should) … we're evolved to survive…

It is understandable that if someone has had a threatening or unwanted sexual experience, sex might be experienced as threatening. A new sexual encounter might automatically trigger memories of the unwanted sexual experience **OR** sex drive might increase – as the brain's way of managing the increased threat. This can be **automatic and unconscious**, and happen even if the person doesn't want it to. The brain is doing what it thinks is helpful, even if it doesn't feel helpful.

Building Compassion:
Over the next few weeks, we will work on acknowledging the difficulties and shame related to sex while building on the soothing system through different exercises. Increasing our soothing system will help increase our drive and alleviate the threat system. We do this by trying to be more compassion with ourselves. This includes

- → Understanding the way, we are and why we may act/feel this way – being wise about sex and our bodies
- → Treating ourselves with warmth and kindness
- → Being encouraging to ourselves
- → Being non-judgmental about our experiences

Being compassionate will also allow us to be aware and engage with distress and difficulty without turning away from it and increase our motivation and courage to try to alleviate the distress.

Practice:
At the bottom of your handout there are some practice activities we encourage you to try throughout the week. It is perfectly okay to do all of them, some of them or none of them as long as you are doing what feels right for you. There is no pressure or need to be harsh with yourself if you were unable to incorporate these practices during the week, you are doing the best you can and being here for this first session is enough. Thank you for joining this week, this is a brief reminder to fill out the measures and questionnaires so that we can see how this intervention is helpful for survivors of sexual trauma. Thank you very much and I hope you found today's session helpful, we will see you next week.

Handout

Aims of session 1

- To think about what you'd like from your sex life
- To understand the links between difficult experiences and sex
- To understand why our brains and bodies act the way they do
- To build compassion towards the ways our minds and bodies behave

Mindful Breathing Exercise

Reflection: How would you like to feel about your sex life?

How difficult experiences get in the way

- Difficult / traumatic experiences can affect experiences of sex
- For some people, this can lead to anxiety, fear, discomfort around sex, or change the way you have sex
- This is very understandable as our brains are programmed to protect us and keep us safe – it's not your fault!!!

Listed below are common experiences survivors of sexual trauma have when returning to sex based on scientific research.

- → Decreased sexual satisfaction[1] ,[2]
- → Decreased frequency of sex[2,3]
- → Fear of sex[2]
- → Difficulties with arousal/desire during sex[2,4]
- → Painful sex[5]
- → Lower sex drive
- → Higher sex drive[5,6]
- → Feelings of shame & self-blame[6, 7]
- → Avoidance of sex and/or connection [1]
- → Flashbacks[1]
- → Difficulties in trusting others[6]
- → Difficulties with relationships and communications[6]

These difficulties can be unpleasant but are understandable & expected responses to trauma. Having these experience does not mean you want or choose to have them –it is just the brain's automatic way of trying to protect us.

---

[1] Norris, J., & Feldman-Summers, S. (1981). Factors related to the psychological impacts of rape on the victim. *Journal of Abnormal Psychology*, *90*(6), 562.

[2] Van Berlo, W., & Ensink, B. (2000). Problems with sexuality after sexual assault. *Annual review of sex research*, *11*(1), 235-257.

[3] Feldman-Summers, S., Gordon, P. E., & Meagher, J. R. (1979). The impact of rape on sexual satisfaction. *Journal of Abnormal Psychology*, *88*(1), 101.

[4] Becker, J. V., Skinner, L. J., Abel, G. G., Axelrod, R., & Cichon, J. (1984). Sexual problems of sexual assault survivors. *Women & Health*, *9*(4), 5-20.

[5] Weaver, T. L. (2009). Impact of rape on female sexuality: Review of selected literature. Clinical Obstetrics and Gynecology, 52(4), 702-711.

[6] O'Callaghan, E., Shepp, V., Ullman, S. E., & Kirkner, A. (2019). Navigating sex and sexuality after sexual assault: A qualitative study of survivors and informal support providers. The Journal of Sex Research, 56(8), 1045-1057.

[7] Hamrick, L. A., & Owens, G. P. (2019). Exploring the mediating role of self-blame and coping in the relationships between self-compassion and distress in females following the sexual assault. Journal of clinical psychology, 75(4), 766-779.

Version 1. 01.08.22
IRAS ID: 313482

The brains alarm system

The amygdala is the part of the brain that protects us from threat – think of it as the brains alarm system. It is constantly looking out for threat and lives by the rule 'better safe than sorry' so any small signs of danger can cause the alarm system to go off and our brain is told that we are in danger and prepares our body and mind to defend itself. This responds occurs so quickly and automatically that sometimes it sets off our threat system before we are conscious of what is happening.

When this alarm system goes off because our 

system is triggered, it can interfere with our ability to become aroused and enjoy sex.

What we need is to activate our 

system. However, the way in which our bodies respond sexually is related to a whole range of factors – many of which are completely outside of our control.

- → Human connection, feeling safe, feeling wanted and our wishes respected – basic human needs related to the soothing system

- → A feeling of safety and no active threat

However, when you have experienced trauma, your body and brain tries to protect yourself from being hurt again even when are with a trusted partner.

Sex & Emotions: Three Systems

We have already introduced how the threat system can interfere during sex. We also showed how the soothing system is what makes us feel safe during sex allowing for arousal, these two systems are part of the three systems model as seen above. The third system is the drive system and it's involved in wanting and pursuing sex. From an evolutionary perspective, the principle aim of sex is reproduction.

Three Systems after Trauma

After experiencing trauma, the threat system becomes more sensitive and is easily triggered, overruling the drive and soothing systems. This causes people to feel

- → unsafe, scared of sex etc.
- → shame about what happened, disgusted with self or others.
- → Some people worry that what happened to them was their fault, so might feel shame and feel undeserving of sex or closeness
- → Might have self-blaming
- → critical thoughts like "I'm disgusting" or "I'm not worth it"
- →

Our brains and bodies are not designed to have sex "perfectly" (e.g. in the way our **culture** currently says we should) … we're evolved to survive…

It is understandable that if someone has had a threatening or unwanted sexual experience, sex might be experienced as threatening	A new sexual encounter might automatically trigger memories of the unwanted sexual experience
‚Sex drive might increase – as the brain's way of managing the increased threat - this can be an automatic process and happens even if the person does not want it to	The brain is doing what it thinks is helpful, even if it doesn't feel helpful

A Compassionate Approach

Increasing our soothing system will help increase our drive and alleviate the threat system. We do this by trying to be more compassion with ourselves. This includes

- → Understanding the way, we are and why we may act/feel this way – being wise about sex and our bodies
- → Treating ourselves with warmth and kindness
- → Being encouraging to ourselves
- → Being non-judgmental about our experiences

Being compassionate will also allow us to be aware and engage with distress & difficulty without turning away from it and increase our motivation and courage to try to alleviate the distress

Week 1 Practice:

How does the threat system get in the way of your sex life?

Acknowledging these difficulties and the emotions such as anger/shame that come along with them is the first step in building the soothing system to allow yourself to let go of some of these difficult feelings.

Session 2 – Being in the present moment and Grounding techniques

Script

Hello and welcome to the second session. Today's session focuses on being in the present moment. These days we are so busy multitasking and doing many things that we may not be living our lives fully present. Additionally, we also know that the experience of trauma can make it even harder to be present because our minds may be elsewhere thinking about past events and at times, you may get involuntarily pulled into flashbacks or trauma memories without wanting to experience these memories.

In this session, we will learn about being present also known as mindfulness and learning about grounding techniques. As with each week, the core of these sessions is to build compassion towards the way our minds and bodies behave. We will practice some mindfulness exercises and I invite you to participate in whatever way feels right for you. With each exercise, you can choose if you want to try it and even if you choose not to, that's okay. You have showed up today and that can be enough.

Mindfulness - Living Everyday on Autopilot
We do many things every day without thinking or being aware of what we are doing. Think about times you are travel between two places and don't really remember the journey. Still, before you know it, you've arrived at your destination. **We call this autopilot mode**. In many ways, it can help us – routine tasks can be done easily, without thought. However, it also means we do many things without much awareness of what is happening and fail to be fully present and get the most from the experience. Living in autopilot also means our minds are less focused on what we are doing, and instead, it may be elsewhere. If you've had an experience of sexual assault, your mind may wander onto things associated with that experience even when you are doing something completely different. However, it is also common to think about the past experience of sexual assault when you are intimate with a partner. In the same way a task such as making a cup of tea becomes an automatic habit, so can worrying thoughts, unhelpful behaviours, and difficult feelings become an automatic habit if we are not conscious of being in the present.

Mindfulness offers a way to step out of autopilot and the unhelpful habits that come with it. It can help us get more from our day-to-day experience – to be more present in the things that we do. But it can also allow us to step back from difficult emotions – to be less caught up in them.

Mindfulness can be described as: awareness of present moment with acceptance. So, what do we mean by this? If we take each of the three phrases underlined above in turn, we can understand this statement better.

Awareness can be broken down into three steps:

Stop or slow down
When we are acting in autopilot we respond to situations, thoughts and emotions in automatic ways. The first step towards being more mindful, is to stop or slow down what you were doing – give yourself some space. Giving yourself some space can allow your mind to settle and provides a basis for reacting in a different way.

Observe

The next step is to observe what is going on for us. To do this, we first focus our attention on something – this can be on anything – e.g. and object around us, sounds that are going on around us. Most commonly, we can focus our attention on our breath. As we do so, we begin to notice the things that take our attention away from our breath. We notice where our attention goes.

Return

Once we have noticed that we have become distracted, that something has taken our attention away from our breath, we can note what has taken our attention away, and then return our attention back to our breath.

Present Moment

Sometimes we can be completely absorbed in the activity we are doing. However sometimes many things can take our attention away from our present experience. Mindfulness is a way to bring us back to the present moment.

Acceptance

The present moment is affected by how we view or judge it. To accept the present is to experience it without judging it. It is to see things in the moment as they are, not as we might want or expect them to be, or what we fear they might become. We are accepting our experience, pleasant or unpleasant, as it is.

How can mindfulness help after trauma?
Studies have found that mindfulness helps reduce distracting thoughts, increases focus on physical sensation, and is helpful for sexual difficulties. It helps us learn to be in the moment by being aware of our physical sensations. And we want to build on compassion and activate our soothing system which we can do through mindfulness.

However, some survivors of sexual trauma may find mindfulness difficult or triggering and dissociates. Mindfulness may be quite distressing if it means sitting with sensations and emotions that are usually avoided. and If your mind 'shuts off' during your experience of trauma, the feeling of 'shutting off' can occur again when you're faced with similar or difficult emotions. If you experience these difficulties, it's okay. It's a protective mechanism to keep you safe. You can opt-out of the mindfulness exercise and practice being present in a different way. One way to do this is through everyday mindfulness.

Everyday Mindfulness
In any task we do, we can be mindful and present. Choose a routine task and each day for the next week; see if you can remember to pay attention while doing it. You do not have to slow it down or even enjoy it. Simply do what you normally do, but see if you can be fully alive to it as you do so.

Examples like: Brushing your teeth. Drinking a hot drink.

We are going to now have a short mindfulness practice – if you know mindfulness is difficult for you because of your experience of sexual trauma, you can skip the practice and I invite you

to do anything you find soothing or if you feel up for it, practice one of the everyday mindfulness activities instead. However, if you would like to give the activity a go, then continue and remember you have control and can stop and move on from this exercise at any point.

To begin, find a comfortable sitting position and if you feel comfortable, closing your eyes.

Mindfulness Attention Practice – based on Paul Gilbert's exercise. From *Compassionate-Mind Guide to Recovering from Trauma and PTSD Deborah A. Lee*

Before we move on I just want you to notice how you feel after that practice, you may feel relaxed, you may feel more tense or you may have noticed how you're not use to being present and your mind continued to wander. It's normal if this happens – Mindfulness is like a muscle and the more you practice the easier it gets. If you found the practice difficult as it triggered difficult feelings, you did your best to try out the exercise and should feel proud for being brave to do so. Instead of doing the mindfulness practice in future sessions, you can opt to do whatever you feel comfortable doing.

To finish the session today we will think about managing flashbacks during sex and grounding techniques you can use. Flashbacks are very common In any traumatic experience. And when you are a survivor sexual trauma, it is common for women to avoid sex because of the associations it brings up and the feelings, sensations and memories sex can trigger. It can be challenging to return to sex even if you are on your own or with a trusted partner. This is not because you chose or want to relive your past but experiencing flashbacks is understandably challenging and scary – it is not your fault that you experience them.

To manage flashbacks during sex, it can be helpful to have a conversation with your partner when you're not having sex. You can discuss why flashbacks occur and that they are not because of anything your partner has done wrong. You can also share or discuss the knowledge you've gained from this intervention with your partner. Remind your partner the confusion is not about them – it's about the situation. We know these conversations can be difficult – we have included a short brief handout (appendix B in your handout sheets) that you could share with your partner if you find it difficult to discuss your traumatic experience and your level of comfort during sex (Appendix B).

During this talk you can discuss with your partner the level of comfort with sex – are there any dos or don'ts specific to you? Anything you would prefer your partner to do/not do? This can start very simple e.g. holding hands, dancing, cuddling up in bed with a film. It can then branch into sexual things you feel comfortable with. We have included a sexual activities list and body map in your handout (Appendix C/D) to introduce the conversation. There is no pressure to do anything you are not comfortable doing, it's okay if this conversation takes time.
If you have been with the same partner prior to experiencing trauma, you may feel bad about having to change the way you have sex but it is not your fault. It may be more uncomfortable having these conversations with a casual partner but it's an important one to have to ensure you feel safe and more confident.

During the discussion, you can plan of action with your partner with the aim to activate your soothing system. The plan can include

- Signal that flashback is occurring (e.g. specific arm pat, or word)

- An Okay to pause and take some time
- Might need to express emotion e.g. cry
- Use grounding technique (next slide)
- As part of grounding - discuss with partner in advance how you would like them to respond in this situation. E.g. you might like partner to say, "it's okay, you are safe with me, I will not hurt you." You might like them to hold you while you feel sad, or for them to sit and listen to how you feel.
- Breathe

This might occur a few times in sex before gradually over time you feel more comfortable and safe. Requires patience and compassion, both self-to-self and other-to-self.
If you have found things that have worked you can use those, these are only some ideas, you might have different ideas

Grounding Techniques are used to remind you where you are and that you are safe. It can be really helpful to discuss possible grounding techniques you can use with a sexual partner and communicate that with them. It can also be helpful to reflect on what you can use on your own. When thinking of grounding techniques, think about all 5 senses and how you can use your touch, smell, taste, sight and sound. You can write you own ideas below.

- Grounding object
- Sexual grounding object
- A phrase or object that reminds you WHERE you are and that you are SAFE. E.g. Item of clothing, a particular object (e.g. a stress ball, a ring, a special item) Or a piece of paper with the phrase "you are at your home, you are not in danger, you are safe".
- Using 5 senses for grounding
    - Smell: essential oils. Candles
    - Taste: mint/gum/sour candy
    - Touch: weighted blanket, furry objects
    - You can also use the 54321-grounding technique included in your handout

With everything, there is no need to blame or be critical of yourself if you have to make a plan to be intimate and feel safe. Your threat system may activate when you are trying to have sex alone or with a partner because of your experience of trauma and that is not because you want or choose to have sexual distress – it's how our brains have evolved and are hardwired. It may also be uncomfortable to have these conversations with a partner, and that's understandable. It may be difficult to find the right words, feelings of shame or guilt, and some people may feel very vulnerable talking about this to anyone. If you experience any of this, it's not your fault. You have the power to choose when you are ready to have these conversations.
Practicing being present and having a plan should your threat system activate are ways we try to activate the soothe system to help you feel prepared and more confident in returning to sex.

Week 2 Practice:

1. Practise everyday mindfulness/ grounding technique - choose one task to focus on for the whole week.
2. Listen to mindfulness audio every day to practice being in the present moment

Session 2: Handout

Living Everyday on Autopilot

We do many things every day without thinking or being aware of what we are doing. Think about times you are travelling between two places and you don't really remember the journey but before you know it, you've arrived at your destination. **We call this autopilot mode**. In many ways it can help us – routine tasks can be done easily, without thought. However, it also means we end up doing many things without much awareness of what is happening and fail to be fully present and getting the most from the experience. Living in autopilot also means our minds are less focused on what we are doing and instead it may be elsewhere. If you have an experience of sexual assault, your mind may often wander onto things associated with that experience even when you may be doing something completely different. However, it is also common to think about the past experience of sexual assault when you are intimate with yourself or a partner.

Mindfulness offers a way step out of autopilot and the unhelpful habits that come with it. It can help us to get more from our day to day experience – to be more present in the things that we do. But it can also help us to step back from difficult emotions – to be less caught up in them.

What is Mindfulness?

Mindfulness: awareness of present experience with acceptance. It's intentional, accepting and non-judgmental focus of one's attention on the present moment

Awareness

1. Stop or slow down

When we are acting in autopilot we respond to situations, thoughts and emotions in automatic ways. The first step towards being more mindful, is to stop or slow down what you were doing – give yourself some space. Giving yourself some space can allow your mind to settle and provides a basis for reacting in a different way.

2. Observe

The next step is to observe what is going on for us. To do this, we first focus our attention on something – this can be on anything – e.g. and object around us, sounds that are going on around us. Most commonly, we can focus our attention on our breath. As we do so, we begin to notice the things that take our attention away from our breath. We notice where our attention goes.

3. Return

Once we have noticed that we have become distracted, that something has taken our attention away from our breath, we can note what has taken our attention away, and then return our attention back to our breath.

Version 1. 01.08.22
IRAS ID: 313482

Present Moment

Sometimes we can be completely absorbed in the activity we are doing. However sometimes many things can take our attention away from our present experience. Mindfulness is a way to bring us back to the present moment.

Acceptance

The present moment is affected by how we view or judge it. To accept the present is to experience it without judging it. It is to see things in the moment as they are, not as we might want or expect them to be, or what we fear they might become. We are accepting our experience, pleasant or unpleasant, as it is.

How can mindfulness and being present help after trauma?

Studies have found that mindfulness helps reduce distracting thoughts and increase focus on physical sensation and is helpful for sexual difficulties. It helps us learn to be in the moment by being aware of our physical sensations. Research has also shown that regular mindfulness practice increases genital response and psychological arousal.

However, we also know it can be really difficult for survivors of sexual trauma to practice mindfulness and may make you feel more disconnected or cause you to dissociate. This is understandable as your brain is trying to protect you from experiencing difficult emotions. If you are struggling to practice mindfulness that's okay. You can do other practices to be present!

Everyday Mindfulness

Choose a routine task and, each day for the next week; see if you can remember to pay attention while you are doing it. You do not have to slow it down or even enjoy it.

Examples of routine tasks:

- Brushing your teeth
- Drinking tea, coffee, juice
- Walking to the shops
- Having a shower
- …… (your choice!)

Practice: being present with mindfulness

Reflection: How was that?

Managing flashbacks during sex

Example actions to include

- Using specific grounding techniques
- A signal to inform your partner that you're having a flashback or want to stop
- Agreeing to pause if things begin to be difficult
- Acknowledging difficult emotions (e.g. fear/anger/disgust/shame)
- Breathing together and engaging soothing system

Grounding Techniques are used to remind you where you are and that you are safe. It can be really helpful to discuss possible grounding techniques you can use with a sexual partner and communicate that with them. It can also be helpful to reflect on what you can use on your own. When thinking of grounding techniques, think about all 5 senses and how you can use your touch, smell, taste, sight and sound. You can write you own ideas below.

54321 Grounding

Take a moment and take a few deep breaths invite your body back into the moment, slowing everything down. Then, become aware of your environment.

- **Look For 5 Things You Can See**: Notice the wood grain on the desk in front of you. Or the precise shape of your fingernails. Become aware of the glossy green of the plant in the corner. Take your time to really *look* and acknowledge what you see.
- **Become Aware Of 4 Things You Can Touch:** The satisfyingly rough texture of the car seat. Your cotton shirt against your neck. If you like, spend a moment literally touching these things. Maybe notice the sensation of gravity itself, or the floor beneath you.
- **Acknowledge 3 Things You Can Hear:** Don't judge, just hear. The distant traffic. The voices in the next room. As well as the space between sounds.

- **Notice 2 Things You Can Smell:** If at first you don't feel like you can smell anything, simply try to sense the subtle fragrance of the air around you, or of your own skin.
- **Become Aware Of 1 Thing You Can Taste:** The lingering suggestion of coffee on your tongue, maybe?

Repeat this process as many times as necessary. Take your time and notice how you feel afterward.

With everything, there is no need to blame or be critical toward yourself if you have to make a plan in order to be intimate and feel safe. Your threat system may activate when you are trying to have sex alone or with a partner because of your experience of trauma and that is not because you want or choose to have sexual distress – it's the way our brains have evolved and are hardwired. Practicing mindfulness and having a plan ready should your threat system activate are ways we try to activate the soothe system to help you feel prepared and more confident in returning to sex.

Week 2 Practice:

3. Practise everyday mindfulness/ grounding technique - choose one task to focus on for the whole week.
4. Listen to mindfulness audio every day to practice being in the present moment

Session 3 – Desire and the sensual self

Script

Welcome to session 3. This week we will focusing on a very important relationship, the relationship you have with yourself.

To start the session, I would like you to reflect on all our beliefs about sex and how we learn about sex. If we start thinking about the natural behaviours we do as humans, such as walking and talking - these are things we naturally learnt to do. We needed a lot of support, coaching, guidance and patience from supportive caregivers to learn to walk. Even once we've learnt to walk, we might injure ourselves later in life (e.g. break a leg) and need to learn again. Recovery will be more effective with the help of compassion from others, patience and practice. Sex isn't any different to this – it's also something we learn. There's a myth that because sex is natural, we should instantly be 'good' at it. This isn't the case. Learning about what our bodies need and enjoy, and what our partners find pleasurable can take time. We might even have events later in life which set us back (e.g. infections/menopause/illness/child birth/trauma). Following this, sex might require re-learning and we might have to change our beliefs about sex. Sex is not static – sex is something that shifts and develops/changes over time and is something you can work on.

What are your beliefs about sex and where do they come from? Some example beliefs include

- **Sex should always end in an orgasm**
- **If I'm in love, it should be easy**
- **Sex is only done in marriage**
- **Sex always involves vaginal penetration**
- **Everyone else is having great sex**
- **Sex should always be a deeply emotional experience OR the opposite, sex is only physical**

These beliefs can come from family, culture, religion and societal norms. However, these beliefs can be unhelpful and make you feel worse about yourself. Many sexual difficulties result from one's own assumptions and expectations about sex. This is not because you are doing anything wrong, but we are taught to believe certain things about sex.

Desire
Similarly, we may have beliefs about desire arousal during sex.

Desire and arousal arise due to complex brain processes. Emily Nagoski is a sex educator and researcher, she explains how we can think of the processes that are involved in desire as a sexual accelerator that notices all sexually relevant information in your environment to turn you on BUT we also have the sexual brakes which notices all the reasons not to be turned on right now and neurologically tells your sexual system to turn off.

The process of being aroused is a two-way process of turning on the accelerator and turning off the brakes. Everyone accelerator and brakes have different sensitivities.

Difficulties with desire and arousal occurs if you cannot turn on the accelerator or more often, because there's too much stimulation on the brake.

Reflection: at this point it may be helpful to Reflect on what may turn on your sexual accelerator or what may cause your brakes to get stimulated – you may not have any answers and that's okay – there is not right or wrong answers here. It is just something that may be helpful for some of you to think about.

Unfortunately, the process gets more complex research has shown that if you are a stressed or in a threatened state of mind – **your tricky brain will interpret almost any sensation as something to be avoided, as a potential threat and turn off the sexual accelerator while hitting hard on the sexual brakes .** Telling your sexual system to turn off leading to reduced or no desire.

This is common for many individuals with or without an experience of sexual trauma and is not your fault. Some people may blame themselves for having increased or reduced desire after an experience of sexual assault but this is not something you have done to yourself. it's how your brain works to protect you even when it is unhelpful –The main goal of this intervention is not necessarily to increase desire or arousal for sex but to understand why you may be experiencing some of your difficulties and treat yourself more kindly since your challenges are not your fault. However, if you want to work on your desire, we have included some ideas in your hand out if you are ready to try.

Inner Sex Critic

One thing that does hit the brakes are self-blaming self- critical thoughts. It is a very common experience for survivors of sexual assault to have an inner sex critic who may be harsh and blaming towards yourself – this voice tells you things such as:

Why can't you do this?
There's something wrong with you
You'll never have a proper relationship
Everyone else finds sex easy
You'll never be able to enjoy sex
It's all pointless
You're weird
It's your fault
You don't deserve to have enjoyable sex?

The inner sex critic is part of the threat system, which is trying to protect you from getting hurt or experiencing trauma again. However … it often does more damage than good. The inner sex critic can take different forms at different times. Sometimes it repeats what others have said or societal messages or expectations. Listening to the inner critic can be very painful and shouting at it to "shut up" doesn't usually work. It is one of the reasons we covered mindfulness as being present in the moment and how it helps you acknowledge the inner sex critic without buying into what they are saying.

Mindfulness gives us a way to acknowledge the inner sex critic without buying into what they are saying. It can also be helpful to think about what you may say to a friend if they experience

the same difficulty. Would you tell them it's their fault they have sexual distress and weird that they can't do it? It is also helpful to develop an inner compassionate self to help you be kinder with yourself and build resilience to the inner sex critic.

We will now do a short exercise to develop your **compassionate self developed by Paul Gilbert–** as always if you do not feel comfortable doing this exercise, you can opt out before we begin and take some time now to do something nice for yourself. You also have the option to stop the exercise once we begin.

Sensual Self

Sexual trauma influences your sexual identity with a partner but more importantly, with yourself. When you have an experience of trauma it can trigger feelings of shame or guilt for feeling sexual or good about yourself. You may also let the needs of others overshadow your own needs and it is important to turn towards yourself by doing things every day for no one else's needs but your own.

Redefining your sexual self builds more ownership of your body, and helps you be in touch with your feelings and needs.

The sensual self is how you view sexually outside of relationships with other people/ It can help build confidence in yourself and if you would like to return to sex, it can help increase desire and motivation for sex.

This could include wearing clothes that you enjoy, seeing someone on the street that you find attractive, moving your body in a way that feels good for you or wearing makeup that you love. Many of these things are part of the sexual self. These are also more gentle ways to explore your sexual self in small steps before considering being intimate with someone else. It may be helpful to think of rebuilding your sensual self as taking yourself on an adventure of learning more about yourself and what you enjoy.

Remember it takes time to rebuild your sensual self and learn to prioritise yourself after sexual trauma, so don't worry if this feels like a slow process, that's normal.

One way to work on the relationship with yourself and rebuild your sexual self is turning towards yourself with compassion and kindness. As a practice exercise for this week, I invite you to write yourself a compassionate letter. This letter is written by you and addressed to you.

The idea behind the compassionate letter comes from Paul Gilbert to help people engage with their difficulties with a focus on understanding and warmth towards themselves. It is to turn towards yourself in a non-judgemental way with a position of kindness and understanding of your difficulties instead of being harsh or blaming of yourself. (Appendix C). Towards the end of the compassionate letter you may also want to focus on being compassionate to your sensual self and consider how you can incorporate activities to build on yourself sensual self but what you decide to do is up to you,

We know it may not be easy to be compassionate with yourself and it is understandable if you find this exercise difficult. Not many people are used to being kind to themselves but we encourage you to try to do this exercise and see what happens over time. Research has also found that expressive writing can help people deal with difficult life experiences. When writing

the letter, we encourage you to be empathetic and warm – as if you were writing to a loved one. Avoid going into 'I should or should not', 'why don't you' advice – be supportive and encouraging. We have included a guidance for this in this week's handout and encourage you to try the exercise sometime this week. However, if you are not able to now it's okay to opt out of the exercise. This letter will be your practice for this week, thank you for attending the session today, next week will be our final session.

Session 3: Handout

Re-learning Sex

Reflection: What are your beliefs about sex? Where do they come from?

Desire in Relationship

Emily Nagoski simplifies the complex sexual processes that occur during arousal into two mechanisms – the sexual accelerator and the brakes. The accelerator and brakes are constantly seeking out information from everything you hear, see, touch, taste, smell and imagine.

Sexual Accelerator

- notices all the sexually relevant information in the environment and TURNS ON arousal

Sexual Brakes

- notices all the relevant information and reasons not to be aroused and TURNS off arousal

The process of being aroused is a two-way process of turning on the sexual accelerator and stepping off the brakes. Difficulties with arousal mostly arise as there's too much stimulation to the brake and all kinds of things can hit the brake.

Reflection: What are the things that hit your sexual accelerator – TURN ON

What are the things that hits the brake – TURN OFF

Version 1. 01.08.22
IRAS ID: 313482

However, it's not just what the sexual accelerator and brake notices in your environment because research has shown that if you are a stressed out or in a threatened state of mind – **your tricky brain will interpret almost any sensation as something to be avoided, as a potential threat and turn off the sexual accelerator while hitting hard on the sexual brakes .**

Ideas to release the brake

- Begin with non-sexual touch either on your own or with a partner. There is no pressure for this touch to become sexual unless you feel comfortable for it to. Affection can signal to your brain that you are in a safe place and reduce stress.
- Create a stress free environment for yourself when you want to have sex on your own or with your partner– this can look like whatever you want – lights on/off, having candles, calming music.
- Practice being present in the moment and focus on the sensations you feel currently
- Accepting yourself as you are and not being critical about what you are doing or how you look. This is much easier said than done but being self-blaming or listening to the inner self critic will hit the brakes.

Inner Sex Critic

Having an inner sex critic who criticises you is something that can step on the sexual brakes. If you experience an inner sex critic, this is not your fault, it is also really common for survivors of sexual assault to have an inner sex critic who tells you things such as:

The inner sex critic is part of the threat system which is trying to protect you from getting hurt or experiencing trauma again. However … it often does more damage than good and can slam on the your brakes cause difficulties in desire and other areas of your sex life.

Mindfulness gives us a way to acknowledge the inner sex critic without buying into what they are saying. It can also be helpful to think about what you may say to a friend if they experience the same difficulty. Would you tell them it's their fault they have sexual distress and weird that they can't do it?

Compassionate Self Exercise

Reflection:

Activities to build on sensual self

Sexual trauma can change the way we view our selves sensually. Redefining your sensual self is an important step in gaining control over your body and becoming in tune with your emotional feelings. The sensual self is how you view sexually outside of relationships with other people/ It can help build confidence in yourself and if you would like to return to sex, it can help increase desire and motivation for sex.

1. Turning towards yourself with compassion
2. Doing things for yourself and not for others
    - → Wearing clothes you love
    - → Wearing make up that makes you feel confident
    - → Using products you like the feel of such as a nice moisturiser or hair mask
    - → Doing your hair in a way that you like
    - → Wearing jewellery that makes you feel good
    - → Getting a temporary tattoo that you like
3. Appreciating your body
    - → Moving your body in a way you like – exercise, dancing, walking.
    - → Taking care of your body by stretching or pampering yourself with a face mask
    - → Giving yourself massages

Practice: Compassionate Letter Writing

The idea behind the compassionate letter comes from Paul Gilbert to help people engage with their difficulties with a focus on understanding and warmth towards themselves. It is to turn towards yourself in a non-judgemental way with a position of kindness and understanding of your difficulties instead of being harsh or blaming of yourself.

Session 3 Practice Ideas

1. Listen back to the compassionate self audio throughout the week
2. Just as we discussed being mindful everyday, try to practice being compassionate with yourself daily
3. Gently explore your sensual self in any way that feels right for you
4. If you feel ready, write yourself a compassionate letter using the guidance provided in Appendix C

Session 4 – Psychosexual techniques and relationships with others

Script

Welcome to the final session. In the first session we covered your threat alarm system and how your body and brain tries to protect you after an experience of trauma. In the second session, we focused on being in the present moment through mindfulness and everyday mindfulness. We also covered grounding techniques which can be used to bring you back to the present moment. In the third session, we thought about the relationship you have with yourself and the tendency for people with experience of sexual trauma to develop a harsh inner critic. Throughout the last 3 sessions, we have woven in the idea of being kinder and more compassionate to yourself as a way to inhibit the threat system and trigger the soothing system. Being more understanding of yourself is an indirect way to aid in your confidence or motivation to return to sex. In our final session today, we will be introducing the conditions of good sex model and think more about your relationships with others as well as cover a range of psychosexual exercises that you can do alone or with a partner. As always, you have the choice to decide if you would like to try out these exercises. There is no pressure to do anything if you are not comfortable. We have included the links to handout for the exercises in the email instead of including it in this material so you have the choice to view them if you are interested and comfortable.

Let's begin with a short exercise and start by being compassionate with yourself as you have done so well to attend each week. As always, you can opt of this exercise and do something nice for yourself instead such as just taking a few deep breaths or preparing a nice warm or cool drink.

Compassionate Colour Exercise – by Paul Gilbert

To begin this session, we want to introduce this model of good sex. The conditions for good sex triangle consists of being in the moment, physical touch and psychological arousal. The conditions that you feel are important for psychological arousal and physical touch differ from person to person. Each condition also impacts each other. This triangle is a good way for you to reflect on your sex life currently. It can help you understand which area you may have more difficulties

In the last 4 weeks, we have covered being in the present moment and aspects of psychological arousal. Later we will think more about enjoying physical touch.

However, you can also see how communication with a sexual partner is an important condition and although we have briefly mentioned this in session 2 when we discussed grounding, we also want to think of how your relationship with others may change after sexual trauma.

<u>Relationship with others</u>
After traumatic sexual experiences, some people might notice a difference in their relationships or interactions with partner/s. – remember that this is not your doing but a common experience of anyone who has experienced trauma. Some partners may be understanding by responding with empathy and patience in relation to sexual intimacy
Others may struggle to understand, and could take a less helpful stance

If you are currently with a sexual partner/s, or would like to enter into a romantic or sexual relationship in the future, it can be helpful to reflect on the dynamics between you and your partner/s and consider the following:

- → How understood do you feel? How safe do you feel to engage in sex? How supportive is your partner of your needs and the pace you would like to take things?Are your 'conditions for enjoying sex and intimacy' being met?

If you find it difficult to be intimate with a partner, it may be helpful to first practice on your own

Self-Practice – from sexualwellbeing for all

Mindful Self-Practice is A good way to feel more in tune with your own body and develop your sensuality is through exploring physical touch. One way to do this is through masturbation. I know it may be a awkward topic but self-practice is a great way to get to know your body, find out what you like but also helps you regain some control over your body. This can also feel like a safer first step before being intimate with a partner. Being mindful during self-practice means trying to focus on the physical sensations instead of allowing your mind to wander worrying about performance or self-criticism. If you are interested to try self-practice we have included a link to a more detailed handout by sexualwellbeingforall. If you are not comfortable with masturbation that's okay too, this can be about exploring touch in a way that feels safe for you and just getting to know your body.

https://sexualwellbeingforall.files.wordpress.com/2019/05/mindful-self-practice-for-those-with-a-vulva-1.pdf

Sensate Focus

If you have a trusted partner who you want to try an exercise with, you can try sensate focus which is practicing intimacy without genital contact. Sensate Focus is a set of exercises geared towards couples where the focus of sex is shifted from pursuing a particular outcome (e.g. penetration or orgasm), to a slower appreciation of physical intimacy and sensations. Sensate focus does not involve penetrative sex or other sex acts that can feel uncomfortable, painful or triggering, as the idea is to instead engage in various forms of giving and receiving touch that feel comfortable, unpressured and at a pace that feels right for you. Removing the pressure to achieve orgasm or have penetrative sex allows the partners to connect more deeply within the present moment. Often, the pressure to "perform" during sex can lead to anxiety, tension and less enjoyment. Sensate focus is about being in the moment and using your five senses (hearing, seeing, touching, listening and tasting) to help you and your partner focus on the sensations that are produced by exploring each other's bodies. These exercises start with an agreement for no genital contact, and gradually progress through a series of stages at a pace that feels comfortable for both partners.

Sensate focussing exercises are done in three stages. In order to get the maximum benefit, try to practice each stage 3 times per week for two or three weeks before advancing to the next stage – however, that is just a suggestion and you can do whatever feels best and right for you. Remember it is okay if you do not progress past the first stage, and if the first stage feels too much to start with it is okay to do adapt this, e.g. to start with doing this fully clothed or to

specify parts of the body that you feel comfortable touching or being touched (e.g. just the hands or feet).

For detailed information about this exercise visit
https://sexualwellbeingforall.files.wordpress.com/2019/07/sensate-focus-2019.pdf

Another way we can improve the conditions of sex is through psychological arousal and to do this we can use fantasies. Fantasies are internal images and stories which are very common for everyone to experience. Sexual fantasies can be used to help trigger sexual arousal. Often we cannot control sexual fantasies and it is common for violent fantasies to be experienced following sexual assault. This is not something you choose to experience, it is the way our brains process and codes our experiences. Even if you become aroused by an unwanted fantasy, it doesn't mean you enjoy/enjoyed it or want it - tricky brain can make associations that we don't necessarily want. This is termed arousal non-concordance when your brain is aroused by something you don't want. It is common and okay.

Just like the inner critic, we cannot force violent fantasies away but we can learn to develop new fantasies as our brains able to learn new skills. . Some people may feel guilty about having unwanted fantasies but there is no such thing as wrong thoughts or feelings. What is more important is how you treat yourself when these difficulties arise. We can try be kinder to ourselves about the fantasies we have and reduce the shame associated with the fantasies

Sexual fantasies are normal and involves you trusting yourself and letting your imagination go.

With any of these practices, they may feel like a big step and that's understandable and okay, go at your own pace.

Returning to sex after trauma is understandably challenging and there is no reason to be critical or harsh with yourself if you're finding it more difficult. As we mentioned in the first session, your tricky brain sets off your threat system thinking it is protecting you. It is also an experience many survivors of sexual trauma experience, there is nothing wrong with you if you have any difficulties or no difficulties returning to sex. Over the last four sessions we hope we have deepened your understanding of your difficulties and through that understanding you have learnt to be more compassionate with yourself as your current experience is not your fault.

We hope that you have learnt some new skills as well to help you reduce the negative experience you may have during sex. We encourage you to continue practicing any of the exercises you found helpful throughout the four weeks. You will also be able to keep the handouts and refer back to them at any time.

We would like to thank you for attending each week and for continuing to fill in the measures. Your participation will aid future research into providing resources for survivors of sexual trauma with difficulties returning to sex. Thank you for taking part in this study, please fill in measures for the week. Afterwhich, we will be in touch with you in four weeks to check in on how you are doing.

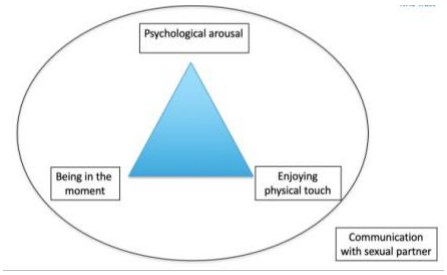
Version 1. 01.08.22
IRAS ID: 313482

Session 4: Handout

Exercise: Compassionate Colour

Reflections:

Conditions for good sex



Relationships

After traumatic sexual experiences, some people might notice a difference in their relationships or interactions with partner/s.

- Some partners may be understanding by responding with empathy and patience in relation to sexual intimacy
- Others may struggle to understand, and could take a less helpful stance

If you are currently with a sexual partner/s, or would like to enter into a romantic or sexual relationship in the future, it can be helpful to reflect on the dynamics between you and your partner/s and consider the following:

- How understood do you feel?
- How safe do you feel to engage in sex?
- How supportive is your partner of your needs and the pace you would like to take things?
- Are your 'conditions for enjoying sex and intimacy' being met?

Activities involving physical touch

Self Practice or masturbation is another technique you can use to feel more in tune with your own body. It can help you regain some control over your body and understand more about what feels pleasureable for you.

For detailed information about this exercise:
https://sexualwellbeingforall.files.wordpress.com/2019/05/mindful-self-practice-for-those-with-a-vulva-1.pdf

Sensate Focus is a set of exercises geared towards couples where the focus of sex is shifted from pursuing orgasmic outcome, to a slower appreciation of physical intimacy and sensations. Removing the pressure to achieve orgasm allows the partners to connect more deeply within the present moment

For detailed information about this exercise:
https://sexualwellbeingforall.files.wordpress.com/2019/07/sensate-focus-2019.pdf

Sexual Fantasies are images and stories that trigger arousal and helpful in providing conditions for good sex. You can use fantasies to help with arousal and desire. However, it is also common for violent fantasies to be experience after sexual trauma. Even if you become aroused by an unwanted fantasy, it doesn't mean you enjoy/enjoyed it or want it - tricky brain can make associations that we don't necessarily want. Some people may feel guilty about having unwanted fantasies but there is no such thing as wrong thoughts or feelings. What is more important is how you treat yourself when these difficulties arise.

Using fantasies are a great way to elicit sexual arousal and is completely normal & natural healthy expression of your sexuality. Fantasies can be about whatever you want and you can use then during self practice or with a partner – try it if you are comfortable and if you aren't that's alright.

Week 4 Practice:

If you feel comfortable, try any or all of the exercises covered in this session throughout the week. There is no need to force yourself if you don't feel ready – you are in control and have the choice.

Thank you for engaging in these materials over the last 4 weeks. We hope you continue to practice being kind and compassionate with yourself even if you are still finding returning to sex difficult. That's okay. You took a big step to continue to engage in these materials and that is enough.

Communicating with a partner about level of comfort with sex after trauma

Ground Rules & Boundaries:

Ground rules should be established before the discussion to create an environment that allows partners to share their feelings in a safe way. It may be helpful to write these down to refer back to if needed. You may not agree on everything and that's okay, having ground rules ensures each view is expressed and respected.

Listening: Listening actively, trying to understand your partners point of view. Being emphatic and listening with your full heart. Understanding their difficulties, desire, feelings and action.

During this talk you can discuss with your partner

- → The impact of sexual trauma and how it affects the way survivors return to sex – this is physiological and biological response that you have no control over and is not your fault. (You may choose to share or discuss the brains alarm system from session 1)
- → the level of comfort with sex – are there any dos or don'ts specific to you? Anything you would prefer your partner to do/not do? This can start very simple e.g. holding hands, dancing, cuddling up in bed with a film. It can then branch into sexual things you feel comfortable with. You can compare ideas with your partner and see if anything on your 'safe' list also appeals to them.
- → Go through the sexual activities list and body map together
- → What sexual terms are off limits?
- → Agree to stay away from shaming each other
- → Be as specific as you can, giving examples of what you mean and offer different options for solutions with the understanding that these options can be negotiated and compromised on.
- → Tell your partner what they do well, not just what needs to be changed
- → Grounding techniques that you can use together
- → Safe words to use if either of you are feeling uncomfortable at any point and how that is not a sign of rejection but a pause to look after yourself.

Sexual Activities List and Body Map

Using the sexual activities list and/or body map as guidance to reflect on areas you are happy to explore with your partner or the areas you are less happy to explore.

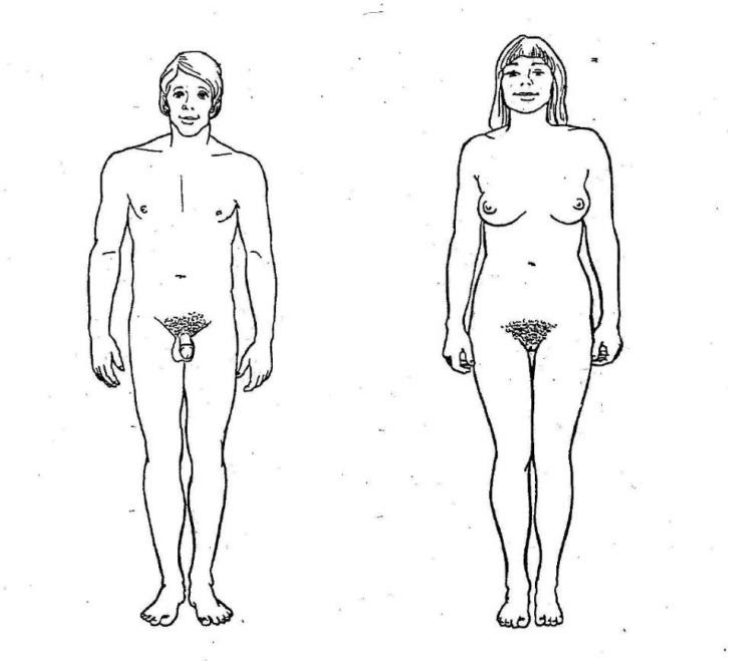
You **do not** need to share this list with your partner, this list is for you to use. Share only what you are comfortable with.

Anal Sex	Massage	*You can include your own activities as well*
Cuddling	Masturbation	
Cunnilingus	Sexting	_____
Ejaculation	Sex Toys	_____
Eye Contact	Slapping (where)	_____
Face Sitting	Phone Sex	_____
Fellatio	Teasing	_____
Foot Play	Tickling (where)	_____
Fingering	Touching (where)	_____
Hand Holding	Vaginal Pentetration	_____
Handjob	Watching	_____
Hair Pulling	69	_____
Kissing (where)		_____
Lingerie		

Version 1. 01.08.22
IRAS ID: 313482

Looking at the images below, reflect on what areas you are happy to explore and which areas you are not ready to.

This activity can be done on your own before discussion with a partner if you feel ready to do so.. You do not need to share the body map with them if you are not comfortable



Appendix G

Participant Demographic Information

Participant	Length of Baseline	Age	Ethnicity	Employment Status	Current therapy	Previous therapy?
A	6	35	White British	Employed	Yes - Talk therapy	Yes - Counselling
B	7	38	Asian Pakistani British	Employed	On waiting list for psychosexual services	Yes - Talk therapy
C	9	27	White British	Employed	Yes - Integrative	Yes - CBT
D	14	33	White British	Employed	Yes - DBT	Yes - EMDR
E	5	33	White British	employed	No	Yes - Talk therapy
F	10	42	White British	Employed	Yes - Integrative	Yes - CBT
G	5	34	White British	Employed	No	Yes - Counselling
H	14	32	Arab and White British	Employed	Yes - Parent-Infant Therapy	Yes - Psychodynamic Psychotherapy
I	11	33	White British	Employed	No	Yes - CBT
J	12	27	White British	Employed	No	Yes - DBT
K	9	35	White British	Employed	Yes - Integrative	Yes - DBT
L	8	32	White Scottish	Employed	No	No
M	10	34	White British	Employed	No	Yes - Counselling
N	11	20	White British	Employed	No	No
O	6	28	White British	Student	Yes - Counselling	No
P	7	22	White and Black Caribbean	Student	No	Yes - EMDR
Q	5	36	White British	Employed	No	Yes - EMDR

Appendix H

Participant Consent Form

Department of Psychology
Royal Holloway, University of London
Egham, Surrey
TW20 0EX
www.royalholloway.ac.uk/psychology

CONSENT FORM

Guided self-help for sexual distress following sexual assault: A single case experimental study

Please initial in the box

I confirm that I have read the information sheet for the above study and have had the opportunity to consider the information. If I asked questions (by emailing the researcher), they answered these entirely to my satisfaction. ☐

I understand that my participation is entirely voluntary and that I am free to withdraw at any time without giving any reason ☐

I agree that if I decide to withdraw from the study then the researchers can continue to use the date and information, I have already given them unless I ask for this to be destroyed. ☐

I understand that my decision to participate (or not to participate) will have no bearing on my access to My Body Back or NHS services. ☐

I understand that all data will be kept confidential and that no personal identifying information will be disclosed in any reports on the project or to any other party, ☐

I understand this is a self-help intervention that I will work through on my own and does not entail personal support from a psychology team. ☐

I understand that I can contact the chief researcher if I find the intervention triggering and provide consent to be contacted by a clinician from Bart's NHS Trust Sexual Wellbeing Service for one 30-minute personal support session which includes a safety check and signposting to additional resources/services. I understand that besides this the researcher cannot provide advice or medical treatment and I should contact my GP or seek support. ☐

Version 2. 10.10.22 IRAS ID: 313482

I consent to provide my GP information to the chief investigator. I understand that my GP will not be notified of my involvement in the study or provided any information I have contributed whilst taking part in the study.

GP Name and Address:

I understand that confidentiality may be breached, and the chief investigator may contact my GP if I make them aware of the increased risk of self-harm, suicidal risk or significant deterioration of my mental health. ☐

I understand that the results for the research will be written up as part of a thesis, and may be shared outside of Royal Holloway, University of London (i.e., NHS Trust, HIV organisation, scientific journal or relevant conferences). ☐

I consent to be contacted after the study to hear about the results. If yes, please provide contact details overleaf. ☐

I agree to take part in the above study. ☐

Please type your name in the box below to confirm your consent:

Please type today's date:

Please provide your email address **and** mobile number for contact purposes

Version 2. 10.10.22 IRAS ID: 313482

Appendix I

HRA Letter

Miss Kimberley Khoo
Apt 104, 3 Pearson Square
London
W1T3BGN/A

Email: approvals@hra.nhs.uk
HCRW.approvals@wales.nhs.uk

29 November 2022

Dear Miss Khoo

HRA and Health and Care Research Wales (HCRW) Approval Letter

Study title:	**Online guided self-help intervention for sexual distress following sexual assault: A single case experimental study**
IRAS project ID:	**313482**
Protocol number:	**N/A**
REC reference:	**22/LO/0658**
Sponsor	**Doctorate in Clinical Psychology, Royal Holloway University of London**

I am pleased to confirm that **HRA and Health and Care Research Wales (HCRW) Approval** has been given for the above referenced study, on the basis described in the application form, protocol, supporting documentation and any clarifications received. You should not expect to receive anything further relating to this application.

Please now work with participating NHS organisations to confirm capacity and capability, in line with the instructions provided in the "Information to support study set up" section towards the end of this letter.

How should I work with participating NHS/HSC organisations in Northern Ireland and Scotland?
HRA and HCRW Approval does not apply to NHS/HSC organisations within Northern Ireland and Scotland.

If you indicated in your IRAS form that you do have participating organisations in either of these devolved administrations, the final document set and the study wide governance report (including this letter) have been sent to the coordinating centre of each participating nation. The relevant national coordinating function/s will contact you as appropriate.

Please see IRAS Help for information on working with NHS/HSC organisations in Northern Ireland and Scotland.

How should I work with participating non-NHS organisations?
HRA and HCRW Approval does not apply to non-NHS organisations. You should work with your non-NHS organisations to obtain local agreement in accordance with their procedures.

What are my notification responsibilities during the study?

The standard conditions document "*After Ethical Review – guidance for sponsors and investigators*", issued with your REC favourable opinion, gives detailed guidance on reporting expectations for studies, including:

- Registration of research
- Notifying amendments
- Notifying the end of the study

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

Who should I contact for further information?
Please do not hesitate to contact me for assistance with this application. My contact details are below.

Your IRAS project ID is **313482**. Please quote this on all correspondence.

Yours sincerely,

Katherine Ashley-Barber
Approvals Specialist

Email: approvals@hra.nhs.uk

Copy to: Dr John Francis (sponsor contact)

Appendix J

Research Protocol Registration

ClinicalTrials.gov PRS
Protocol Registration and Results System

ClinicalTrials.gov Protocol Registration and Results System (PRS) Receipt
Release Date: May 16, 2023

ClinicalTrials.gov ID: NCT05717023

Study Identification

Unique Protocol ID:	3379
Brief Title:	Guided Self-help Following Sexual Assault - SCED
Official Title:	Online Guided Self-help Intervention for Sexual Distress Following Sexual Assault: A Single Case Experimental Study
Secondary IDs:	

Study Status

Record Verification:	May 2023
Overall Status:	Completed
Study Start:	February 17, 2023 [Actual]
Primary Completion:	April 21, 2023 [Actual]
Study Completion:	May 16, 2023 [Actual]

Sponsor/Collaborators

Sponsor:	Royal Holloway University
Responsible Party:	Principal Investigator Investigator: Kimberley Khoo [kkhoo] Official Title: Principal Investigator, Trainee Clinical Psychologist Affiliation: Royal Holloway University
Collaborators:	National Health Service, United Kingdom

Oversight

U.S. FDA-regulated Drug:	No
U.S. FDA-regulated Device:	No
U.S. FDA IND/IDE:	No
Human Subjects Review:	Board Status: Approved Approval Number: 22/LO/0658 Board Name: NHS Health Research Authority Board Affiliation: NHS England Phone: Email: approvals@hra.nhs.uk Address: NHS England

Data Monitoring:	

Study Description

Brief Summary: This single-case experimental design aims to evaluate the acceptability & feasibility of an online guided self-help intervention for female survivors of sexual assault who experience difficulties returning to sex.

The main questions it aims to answer are:

• Is the intervention viewed as acceptable by female survivors of sexual assault? Acceptability is defined as as how willing participants are to use the materials and their satisfaction with its content.

The secondary question is, are there initial indicators that the intervention is effective? Effectiveness is measured by a reduction in the measure of sexual distress and improvement of sexual satisfaction – specifically confidence and motivation in practising strategies that will improve their experience of sex.

Participants will complete the intervention independently. There will be 4-sessions which involve watching videos, with one session completed weekly. The developed materials aim to to help women understand their difficulties, learn practical strategies and build confidence in returning to sex. The materials are also guided by a piloted group for sexual distress by Bart's National Health Service (NHS) trust Sexual Wellbeing Service. The NHS is the publicly funded healthcare system in England.

Detailed Description: The study adopts a non-concurrent AB single-case experimental design (SCED) with follow-up. Although AB designs are not sufficient to test treatment effectiveness, using this study type informs the feasibility of the intervention. In addition, a multiple baseline approach was adopted where participants will be randomly allocated to different lengths of baselines ranging from 5 to 14 days in Phase A. Phase B consists of a 4- week intervention period where participants complete idiographic measures daily. Follow-up will be completed one month after the intervention.

Potential participants will complete an online screening questionnaire via Qualtrics. Eligible participants who provide consent will complete the baseline questionnaires such as the Female Sexual Function Index, Female Sexual Distress Scale and State Self Compassion Scale. Afterwards, participants will be randomly allocated to different baseline lengths (5 to 14 days) for Phase A.

Participants complete visual analogue scales daily for the length of Phase A. Following Phase A, participants begin Phase B, completing the intervention weekly for four weeks. Visual analogue scales are completed daily during phase B.

Follow-up occurs four weeks after Phase B. Participants complete the Female Sexual Function Index, Female Sexual Distress Scale, State Self Compassion Scale, Client Satisfaction Questionnaire and a qualitative feedback form.

Conditions

Conditions: Sexual Assault
Sexual Dysfunction
Sex Disorder

Keywords: sexual distress

Study Design

Study Type:	Interventional
Primary Purpose:	Treatment
Study Phase:	N/A
Interventional Study Model:	Single Group Assignment Single case experimental design
Number of Arms:	1
Masking:	None (Open Label)
Allocation:	N/A
Enrollment:	20 [Actual]

Arms and Interventions

Arms	Assigned Interventions
Experimental: Online guided self-help intervention for sexual distress following sexual assault The intervention only has one arm. All participants will be provided 4 sessions of guided self-help intervention to be completed once weekly.	Behavioral: Online guided self-help intervention for sexual distress following sexual assault 4 Sessions of guided self-help will be shared with the participants. These will be in the form of handout and video recordings that participant access through Qualtrics. The intervention is based on research on sexual trauma, psychosexual difficulties and materials developed by Bart's NHS Foundation Trust Sexual Wellbeing Service. It has been made in collaboration with clinicians within the service, experts by experience and the chief investigator.Within the document there are scripts for each session which are read out in the video recordings. The handouts depict the visual images for the video and the materials provided to participant.

Outcome Measures

Primary Outcome Measure:

1. Client Satisfaction Questionnaire (CSQ)
   The client satisfaction questionnaire is an 8-item questionnaire scored on a 4-point scale and will be provided to participants at follow up to ask the acceptability and satisfaction towards the intervention. Permission has been asked to adapt the questionnaire to focus on satisfaction for the intervention instead of service satisfaction. Total scores range from 8 to 32 with higher scores indicating higher satisfaction.

   [Time Frame: At follow up, 8 weeks]

2. Feedback Form
   A short qualitative feedback form will be provided to participants. This form has been developed with experts by experience and will have open ended questions for participants to provide more detailed feedback about the intervention. The questionnaire is only used at follow up.

   [Time Frame: At follow up, 8 weeks]

Secondary Outcome Measure:

3. Baseline Visual Analogue Scales
   Visual analogue scales are scales with two ends. Participants will be asked to rate on the line how much they agree or disagree with a statement. Visual analogue scales are used to measure the following concepts: shame, guilt, self-

criticism, compassion, normalising and motivation. The scales were developed for this research project in collaboration with experts by experience.

[Time Frame: Completed daily up to 2 weeks]

4. Intervention Visual Analogue Scales
Visual analogue scales are scales with two ends. Participants will be asked to rate on the line how much they agree or disagree with a statement. Visual analogue scales are used to measure the following concepts: shame, guilt, self-criticism, compassion, normalising and motivation. The scales were developed for this research project in collaboration with experts by experience.

[Time Frame: Completed daily up to 1 month]

5. Female Sexual Distress scale - Revised (FSDS-R)
The Female Sexual Distress Scale - Revised is used to assess distress related to sex in women. This 13-item self-report questionnaire is scored has five points, (0: never; 1: rarely; 2: occasionally; 3: frequently; 4: always). Total scores range from 0 to 52 with higher scores indicating higher levels of sexual distress.

[Time Frame: Baseline and 8 weeks]

6. Female Sexual Function Index (FSFI)
The Female Sexual Function Index is a 19-item questionnaire that measures six domains: desire, arousal, lubrication, orgasm, satisfaction and pain. The questionnaire uses a 5-point likert scale and is scored from 1 to 5. Total score range from 2 to 36 with lower scores indicating higher levels of difficulties.

[Time Frame: Baseline and 8 weeks]

7. State Self Compassion Questionnaire (SSCS-S)
The State Self Compassion Questionnaire is a 6-item questionnaire scored on a 5-point scale from 1 (not very true for me) to 5 (very true for me). The scale was not develop to indicate high or low levels of state self-compassion rather it is to be used in a comparative manner to examine the change in compassion after the intervention. The minimum score is 1 and the maximum score is 5.

[Time Frame: Baseline and 8 weeks]

Eligibility

Minimum Age:	18 Years
Maximum Age:	
Sex:	Female
Gender Based:	Yes Cis female
Accepts Healthy Volunteers:	Yes
Criteria:	Inclusion Criteria: • Cis female • Experience of sexual assault (in adulthood or childhood but not within the previous 12 months) • Experiencing sexual distress/difficulties • United Kingdom Resident • Willingness to complete guided self help • Aged 18 and above • Ability to read and understand English to provide informed consent and meaningfully engage with the self-help materials • Ability to access online guided self-help material through a computer or phone Exclusion Criteria: • experiencing severe acute mental health difficulties

- sexual assault occurring within the last 12 months
- currently experiencing more than fleeting suicidal thoughts or engaging in severe self-harming (individuals who have been sexually assaulted are likely to experience suicidal thoughts or self harm behaviours, individuals with fleeting suicidal thoughts or superficial self harm with strong protective factors may be included however, since there is no contact with mental health professionals during the intervention unless participants reach out for triage, it is difficult to assess risk and participants have to be excluded if they do not have social support systems of are currently accessing psychological support).

Contacts/Locations

Central Contact Person: Kimberley Khoo
Telephone: 07492418618
Email: kimberley.khoo.2020@live.rhul.ac.uk

Central Contact Backup:

Study Officials: Jane Vosper
Study Principal Investigator
Bart's NHS Foundation Trust

Locations: **United Kingdom**
Bart's Sexual Wellbeing Service, National Health Service
London, United Kingdom
Contact: Jane Vosper, DClinPsy

IPDSharing

Plan to Share IPD: No

References

Citations:

Links:

Available IPD/Information:

Documents

Study Protocol and Statistical Analysis Plan: research protocol
Document Date: October 10, 2022
Uploaded: 01/16/2023 14:24

Study Protocol: intervention manual
Document Date: August 1, 2022
Uploaded: 01/16/2023 14:29

Appendix K

RHUL ethics

From: Ethics Application System <ethics@rhul.ac.uk>
Date: Friday, 28 October 2022 at 20:05
To: Khoo, Kimberley (2020) <Kimberley.Khoo.2020@live.rhul.ac.uk>, Macleod, A <A.Macleod@rhul.ac.uk>, Ethics <Ethics@rhul.ac.uk>
Subject: Result of your application to the Research Ethics Committee (application ID 3379)

PI: Andy Macleod and Jane Vosper
Project title: Online guided self-help intervention for sexual distress following sexual assault: A single case experimental study

REC ProjectID: 3379

Your application has been approved by the Research Ethics Committee.
Please report any subsequent changes that affect the ethics of the project to the University Research Ethics Committee ethics@rhul.ac.uk

Appendix L

Screening Questionnaire

Guided self-help for sexual distress following sexual assault: A single case experimental study

Department of Psychology
Royal Holloway, University of London
Egham, Surrey
TW20 0EX
www.royalholloway.ac.uk/psychology

Thank you for being interested in this study. The next step is to complete a screening questionnaire. This questionnaire aims to determine if this study would be appropriate for you. The questionnaire does not ask you direct questions about your experience of sexual assault; however, it could potentially elicit difficult emotions. Please keep this in mind if you decide to proceed with the questionnaire.

At the end of the questionnaire, we have included the chief investigator's email along with signposting information about services you can contact if you require additional support.

Screening Questionnaire

	Please tick
1. I am a survivor of sexual trauma/assault	☐
2. I have had an experience of sexual assault that occurred over 12 months ago	☐
3. I am currently experiencing difficulties or distress related to sex	☐
4. I am currently receiving any form of psychological intervention or therapy	☐
5. I have access to a smart phone or computer in order to engage in the self-help materials	☐

Version 2. 10.10.22 IRAS ID: 313482

6. Over the past two weeks, have you been bothered by thoughts that you would be better off dead or hurting yourself in some ways?

   Not at all / Several days / More than half of the days / Nearly every day (please circle one)

7. Do you feel supported by friends and /or family? ☐

8. Over the past two weeks, how often have you been bothered by the following problem?
   a. **Little interest or pleasure in doing things** (please circle one)
      (Not at all / Several days / More than half of the days / Nearly every day)

   b. **Feeling down, depressed or hopeless** (please circle one)
      (Not at all / Several days / More than half of the days / Nearly every day)

9. Over the past two weeks how often have you been bothered by the following problems?
   a. Feeling nervous, anxious or on edge
      (Not at all / Several days / More than half of the days / Nearly every day)

   b. Not being able to stop or control worrying
      (Not at all / Several days / More than half of the days / Nearly every day)

Please type your initials in the box below to confirm your consent:

Please type today's date:

Appendix M

Demographic Information Sheet

Department of Psychology
Royal Holloway, University of London
Egham, Surrey
TW20 0EX
www.royalholloway.ac.uk/psychology

Demographic information sheet

Age	
Ethnicity	
City/ Region you live in the UK	
Employment Status	
GP Details	
If you are currently receiving any form of psychological therapy, what type of therapy are you receiving and how many sessions have you been offered? If not applicable write NA	
If you have previously received any form of psychological therapy, what type of therapy did you have and how many sessions did you receive? If not applicable write NA	
Email address only for contact purpose:	
Phone number only for contact purpose:	

Appendix N

FSDS-R

Guided self-help for sexual distress following sexual assault: A single case experimental study

Department of Psychology
Royal Holloway, University of London
Egham, Surrey
TW20 0EX
www.royalholloway.ac.uk/psychology

Female Sexual Distress Scale-Revised (FSDS-R; Derogatis et al., 2002)

When answering the questions below, think about how often that problem has bothered you or caused you distress during the past 30 days including today. Please select one answer and do not skip any items.

In the last 30 days, how often did you feel:					
1. Distressed about your sex life	Never	Rarely	Occasionally	Frequently	Always
2. Unhappy about your sexual relationship	Never	Rarely	Occasionally	Frequently	Always
3. Guilty about sexual difficulties	Never	Rarely	Occasionally	Frequently	Always
4. Frustrated by your sexual problems	Never	Rarely	Occasionally	Frequently	Always
5. Stressed about sex	Never	Rarely	Occasionally	Frequently	Always
6. Inferior because of sexual problems	Never	Rarely	Occasionally	Frequently	Always
7. Worried about sex	Never	Rarely	Occasionally	Frequently	Always
8. Sexually inadequate	Never	Rarely	Occasionally	Frequently	Always
9. Regrets about your sexuality	Never	Rarely	Occasionally	Frequently	Always
10. Embarrassed about sexual problems	Never	Rarely	Occasionally	Frequently	Always
11. Dissatisfied with your sex life	Never	Rarely	Occasionally	Frequently	Always
12. Angry about your sex life	Never	Rarely	Occasionally	Frequently	Always
13. Bothered by low sexual desire	Never	Rarely	Occasionally	Frequently	Always

Derogatis, L. R., Rosen, R., Leiblum, S., Burnett, A., & Heiman, J. (2002). The Female Sexual Distress Scale (FSDS): Initial validation of a standardized scale for assessment of sexually related personal distress in women. Journal of Sex &Marital Therapy, 28(4), 317-330.

Version 1. 01.08.22

Appendix O

FSFI

Guided self-help for sexual distress following sexual assault: A single case experimental study

Department of Psychology
Royal Holloway, University of London
Egham, Surrey
TW20 0EX
www.royalholloway.ac.uk/psychology

Female Sexual Function Index (FSFI; Rosen et al., 2000)

1. Over the past 4 weeks, how often did you feel sexual desire or interest?

   5 = Almost always or always
   4 = Most times (more than half the time)
   3 = Sometimes (about half the time)
   2 = A few times (less than half the time)
   1 = Almost never or never

2. Over the past 4 weeks, how would you rate your level (degree) of sexual desire or interest?

   5 = Very high
   4 = High
   3 = Moderate
   2 = Low
   1 = Very low or none at all

3. Over the past 4 weeks, how often did you feel sexually aroused ("turned on") during sexual activity or intercourse?

   5 = Almost always or always
   4 = Most times (more than half the time)
   3 = Sometimes (about half the time)
   2 = A few times (less than half the time)
   1 = Almost never or never
   0 = No sexual activity

4. Over the past 4 weeks, how would you rate your level of sexual arousal ("turn on") during sexual activity or intercourse?

   5 = Very high
   4 = High
   3 = Moderate
   2 = Low
   1 = Very low or none at all
   0 = No sexual activity

5. 5. Over the past 4 weeks, how confident were you about becoming sexually aroused during sexual activity or intercourse?

   5 = Very high confidence
   4 = High confidence
   3 = Moderate confidence
   2 = Low confidence
   1 = Very low or no confidence
   0 = No sexual activity

6. Over the past 4 weeks, how often have you been satisfied with your arousal (excitement) during sexual activity or intercourse

   5 = Almost always or always
   4 = Most times (more than half the time)
   3 = Sometimes (about half the time)
   2 = A few times (less than half the time)
   1 = Almost never or never
   0 = No sexual activity

7. Over the past 4 weeks, how often did you become lubricated ("wet") during sexual activity or intercourse?

Version 1. 01/08/22

5 = Almost always or always
4 = Most times (more than half the time)
3 = Sometimes (about half the time)
2 = A few times (less than half the time)
1 = Almost never or never
0 = No sexual activity

8. Over the past 4 weeks, how difficult was it to become lubricated ("wet") during sexual activity or intercourse?

0 = No sexual activity
1 = Extremely difficult or impossible
2 = Very difficult
3 = Difficult
4 = Slightly difficult
5 = Not difficult

9. Over the past 4 weeks, how often did you maintain your lubrication ("wetness") until completion of sexual activity or intercourse?

5 = Almost always or always
4 = Most times (more than half the time)
3 = Sometimes (about half the time)
2 = A few times (less than half the time)
1 = Almost never or never
0 = No sexual activity

10. Over the past 4 weeks, how difficult was it to maintain your lubrication ("wetness") until completion of sexual activity or intercourse?

0 = No sexual activity
1 = Extremely difficult or impossible
2 = Very difficult
3 = Difficult
4 = Slightly difficult
5 = Not difficult

11. Over the past 4 weeks, when you had sexual stimulation or intercourse, how often did you reach orgasm (climax)?

5 = Almost always or always
4 = Most times (more than half the time)
3 = Sometimes (about half the time)
2 = A few times (less than half the time)
1 = Almost never or never
0 = No sexual activity

12. Over the past 4 weeks, when you had sexual stimulation or intercourse, how difficult was it for you to reach orgasm (climax)

0 = No sexual activity
1 = Extremely difficult or impossible
2 = Very difficult
3 = Difficult
4 = Slightly difficult
5 = Not difficult

13. Over the past 4 weeks, how satisfied were you with your ability to reach orgasm (climax) during sexual activity or intercourse?

5 = Very satisfied
4 = Moderately satisfied
3 = About equally satisfied and dissatisfied
2 = Moderately dissatisfied
1 = Very dissatisfied
0 = No sexual activity

14. Over the past 4 weeks, how satisfied have you been with the amount of emotional closeness during sexual activity between you and your partner?

    5 = Very satisfied
    4 = Moderately satisfied
    3 = About equally satisfied and dissatisfied
    2 = Moderately dissatisfied
    1 = Very dissatisfied
    0 = No sexual activity

15. Over the past 4 weeks, how satisfied have you been with your sexual relationship with your partner?

    5 = Very satisfied
    4 = Moderately satisfied
    3 = About equally satisfied and dissatisfied
    2 = Moderately dissatisfied
    1 = Very dissatisfied

16. Over the past 4 weeks, how satisfied have you been with your overall sexual life?

    5 = Very satisfied
    4 = Moderately satisfied
    3 = About equally satisfied and dissatisfied
    2 = Moderately dissatisfied
    1 = Very dissatisfied

17. Over the past 4 weeks, how often did you experience discomfort or pain **during** vaginal penetration?

    0 = Did not attempt intercourse
    1 = Almost always or always
    2 = Most times (more than half the time)
    3 = Sometimes (about half the time)
    4 = A few times (less than half the time)
    5 = Almost never or never

18. Over the past 4 weeks, how often did you experience discomfort or pain **following** vaginal penetration?

    0 = Did not attempt intercourse
    1 = Almost always or always
    2 = Most times (more than half the time)
    3 = Sometimes (about half the time)
    4 = A few times (less than half the time)
    5 = Almost never or never

19. Over the past 4 weeks, how would you rate your level (degree) of discomfort or pain during or following vaginal penetration.

    0 = Did not attempt intercourse
    1 = Very high
    2 = High
    3 = Moderate
    4 = Low
    5 = Very low or none at all

Rosen, C. Brown, J. Heiman, S. Leiblum, C. Meston, R. Shabsigh, D. Ferguson, R. D'Agostino, R. (2000). The Female Sexual Function Index (FSFI): a multidimensional self-report instrument for the assessment of female sexual function. Journal of sex & marital therapy, 26(2), 191-208.

Version 1. 01/08/22

Appendix P

SSCS-S

Department of Psychology
Royal Holloway, University of London
Egham, Surrey
TW20 0EX
www.royalholloway.ac.uk/psychology

Online guided self-help intervention for sexual distress following sexual assault: A single case experimental study

The State Self-Compassion Scale Short Form (SSCS-S)

Think about the sexual distress and difficulties you are experiencing right now that is painful or difficult. Please indicate how well each statement applies to how you are feeling toward yourself right now as you think about this situation, using the following scale:

Not at all true for me 1 2 3 4 **Very true for me** 5

	Not at all true for me				Very True for me
1. I'm giving myself the caring and tenderness I need.	1	2	3	4	5
2. I'm obsessing and fixating on everything that's wrong.	1	2	3	4	5
3. I'm remembering that there are lots of others in the world feeling like I am.	1	2	3	4	5
4. I feel intolerant and impatient toward myself.	1	2	3	4	5
5. I'm keeping things in perspective.	1	2	3	4	5
6. I feel like I'm struggling more than others right now.	1	2	3	4	5

Reference: Neff, K. D., Tóth-Király, I., Knox, M. C., Kuchar, A., & Davidson, O. (2021). The Development and Validation of the State Self-Compassion Scale (Long-and Short Form). Mindfulness, 12(1), 121-140.

Permission given by Dr Neff to situate and adapt the questionnaire to sexual difficulties (31st July 2022)

Version 1. 01/08/22

Appendix Q

Idiographic Visual Analogue Scale Measures

Guided self-help intervention for sexual distress following sexual assault: A single case experimental study

Department of Psychology
Royal Holloway, University of London
Egham, Surrey
TW20 0EX
www.royalholloway.ac.uk/psychology

Visual Analogue Scales

Please mark on the scale below how much you agree/disagree with each statement.

Shame: I feel shame when I experience sexual distress

Disagree Agree

Guilt: I have feelings of guilt when I experience sexual distress

Disagree Agree

Self-criticism : When I experience sexual distress, how often do I blame myself or my body?

Never Often

Version 1: 01.06.22
IRAS ID: 313482

Compassion: When I experience sexual distress, I try to show myself warmth and comfort through my difficulties

Disagree Agree

Normalising: I understand my difficulties in the context of my experience

Disagree Agree

Motivation : I am motivated to put things in place to improve/ address the difficulties in my sex life

Disagree Agree

Version 1. 01.08.22
IRAS ID: 313482

Appendix R

Client Satisfaction Questionnaire

(not include due to copyright reasons)

Appendix S

Study Feedback Form

Department of Psychology
Royal Holloway, University of London
Egham, Surrey
TW20 0EX
www.royalholloway.ac.uk/psychology

Study Feedback Form

We are interested in your honest opinions, whether they are positive or negative. Please answer all of the questions. Thank you very much. We appreciate your help.

What was most helpful about the four week intervention?
(e.g certain activity/skill, handouts, development of compassion, normalising etc)

What was **not** helpful about the intervention? Is there any activity that you feel should have been excluded?

Was the four week intervention sufficient or should it be longer or shorter?

Were the concepts easy to understand and follow? What could have been explained better?

We are keen to know if there is anything you would have liked to know more about

Version 1. 01.08.22
IRAS ID: 313482

In terms of where you are in your journey, was this the right time for you to complete this intervention? Would it have been more helpful to do it sooner or after more time has passed.

Any other comments you would like to share?

Thank you very much for engaging with the intervention and providing important feedback!

Appendix T

Participants response to feedback form

Table T1

How many sessions of the 4-week intervention did you complete in full? Did you manage to complete them in the suggested time frame (once weekly for 4 weeks)? Please provide as much detail as possible**.**

Participant	Response
A	I completed all 4 but it took 5 weeks as I was very busy in week 4
B	I believe I completed in full
C	I completed all four of the sessions, although I usually completed them the day after I received them rather than the day of. I attempted some of the exercises as outlined in the handover - about half - usually a few days after the initial session to let it sink in. I thought the sessions were digestible and self-contained enough to do weekly and appreciated that the handouts were optional as it's sometimes difficult for me to feel "locked into/committed to" sex-related activities. I have found myself thinking of/repeating some of the activities again, particularly those relating to mindfulness.
F	I completed all the sessions and gained some insight and understanding of why I feel the way I do. Felt good to be understood. It was quite intense, not so much the materials weekly but the questionnaires daily. I was glad to be reminded to complete them daily, however I was starting to question my responses. Shouldn't I be getting better by now? Do they want to see change? It felt repetitive but it was easy and not too time consuming.
G	I completed all of them.
J	I completed all of them and all the activities. I didn't write the full letter however, I couldn't get in the headspace for it.
K	I completed 3 in full. I did the first 2 in full on the right day as requested, the third one I did the day after but in full. The 4th one I didn’t ever really get a chance to do properly as I was too busy that day and the day after so never got round to doing it. I found it quite difficult having to complete the sessions on a set day, and I had no choice over which day it would be. For me it was a Wednesday which is quite a busy day. It would have been easier if I’d been able to complete the session at any point during that week rather than on the day the materials were sent to me. Had I realised I would’ve started the initial questionnaires a couple of days later and I would’ve had Friday as my session day.
O	I completed all sessions in the suggested time frame
P	I managed to complete them all. Sometimes I struggled to do the daily survey at the same time every day due to being very busy.

Table T2

What was most helpful about the four week intervention?
(e.g certain activity/skill, handouts, development of compassion, normalising)

Participant	Response
A	I think the science behind how your brain reacts would be the most helpful but it wasn't new to me
B	Grounding exercises and tools. Understanding the role mindfulness can play in really being in our bodies
C	I think the two most helpful aspects of the intervention were: 1) the normalisation work - by placing less of an emphasis on "progress" or reaching a goal/objective, and spending more time accepting that my responses and feelings were normal, I ironically felt more empowered to explore sex alone and with my partner. I have really moved away from "I should be doing this" or "I should be having this amount of sex, in this particular way", and instead have embraced what I need. 2) - the mindfulness work. I think this works particularly well in a sexual wellbeing context, because so much about sex is understanding and being in your own body fully. I found the mindfulness work very grounding and relaxing, and it's probably the aspect I've taken forward into my own life the most since the intervention.
F	The points that have stuck is the threat and soothing circles and the idea of talking to my husband about sexual activities with rules and not having intercourse as the end goal. However, I have not managed to have this conversation as yet as it is still hard for me to talk about. But I do have that intention and will refer back to those handouts. We are not engaging in any sexual activity and haven't done for a while as my anxiety has been high.
G	The self-compassion and not criticising myself as being the cause of our sexual difficulties.
J	It didn't feel as 'medical' as I thought it would. There was something about hearing about pleasure discussed in this way. Including talking about masturbation, fantasy's and different types of sex. There was no shame around any of it. For some reason I expected to talk about sex without actually talking about sex. The hand outs have been particularly useful to use as a tool to aid my recovery.
K	Session 1 - normalising difficulties with sex after sexual assault and explaining some of the psychology behind what’s happening eg the threat system
O	Mindfulness has helped me to return to the moment when I have struggled and felt barriers coming up during sex. Being informed about how my body may be reacting to traumatic experiences also helped me to put things into perspective and blame myself and my body less.
P	The compassion element of the intervention really helped me be kinder to myself and reframe my negative self-talk. It reminded me that my experiences are valid and understandable. I am not going crazy.

Table T3.

What was not helpful about the intervention? Is there any activity that you feel should have been excluded?

Participant	Response
A	Mindfulness is so widespread now, don't know what it adds. Maybe I've just engaged with a lot of help though and this might not be the case for new survivors
B	n/a
C	I actually feel that all of the video content was helpful. Some aspects of the handouts were not helpful to me, or else I did not want to engage with them (for instance, the list of sexual activity isn't something I'd personally engage with at this time) but I think that they were framed as optional so I didn't feel like I had to engage if I didn't want to.
F	I did not like the handout which had a list of sexual acts, that made me feel really uncomfortable and created a lot of self doubt mainly because I didn't know what things were. As I was abused when I was young, I haven't ever explored sex as a pleasure or had experience of/talked about trying other things. Which has actually led me to feel quite vulnerable and is something I'm talking to my therapist about.
G	I did not feel comfortable doing some of the activities recommended to complete with my partner, but I was able to talk more about what I was comfortable with without feeling guilty about him being disappointed.
J	The letter writing and more emotional side of things were good, but to begin with felt more just like DBT I have received before. I started to disconnect with the programme after that session, however by the next one it turned things back round and I could see this was something different to what I've done before. I think for people like myself who've been in the mental health system for a while, you can sometimes be quick to jump to "been here and done this before". I can see their may be value in it for those who haven't done that positive self-talk stuff before.
K	I felt a lot of the content assumed you already had a partner or had been sexually active before the assault so had some kind of normality to return to. It would have been helpful to cover how to even get your head around considering a sexual relationship when all you’e known re sex has been forced. I know some people will have partners so the partner stuff would be relevant for them, but I feel the materials ignored my scenario which made me feel quite abnormal. If people who understand these things and are trying to help don‚Äôt consider my situation then it must be really really abnormal to have had my virginity taken by assault and then to avoid sex for many years afterwards. It made me feel a bit hopeless if that scenario isn,’t considered normal and therefore there’s no help to address it.
O	Some more information/coaching around sensate would be good. I want to try it with my partner but it feels like a lot which is overwhelming.
P	Maybe more on how to cope and overcome pain during penetration.

Table T4

Was the four-week intervention sufficient or should it be longer or shorter?

Participant	Response
A	I think I would have struggled to maintain longer
B	it was fine
C	It could maybe have been a little longer - perhaps one or two more sessions. I would have found it helpful to do another session of mindfulness to really come round to this way of thinking, and to have mindfulness as a grounding technique throughout all of the other sessions focusing more directly on sex.
F	I would like it to be longer to have a chance to go back and listen to things explained differently or with a different view. I did think it maybe more useful to have each session start the same, having a chance to ground yourself and arrive so-to-speak and then going on to the intended content. The first session felt a bit vague and as an anxious person I get told to breathe properly all the time. It's useful as a reminder though.
G	I think it is sufficient, but I don't think it has solved all of my issues, but it has made me feel less worried about having sexual difficulties/low sex drive.
J	I think it would be great to have a couple more sessions. I think there could be value to doing a guided body exploring session (basically the touch based activities.) but in the same type of style as the other sessions/videos rather than it being on a sheet. I know some people may feel a bit uncomfortable by it, however I feel for some of us like myself. It could actually be really powerful.
K	I think it would’ve been better if it had been longer and the sessions could go into more depth and explore more things.
O	Could have been longer
P	I think it was a good length for starting the healing process for me. I used this in combination with sex therapy so it felt like a good combination. If used on its own it may be useful if it was longer.

Table T5

Were the concepts easy to understand and follow? What could have been explained better?

Participants	Response
A	Yes
B	yes they were. I have a good understanding of trauma so it was easy to understand
C	Yes, I found everything really easy to follow and it made a lot of sense. The video format was really useful for me - I think I would've found it hard if it was all just handouts. Equally, I found it quite comforting and empowering to be able to work through at my own pace, without a therapist or person (for example). It worked for me to explore the concepts privately, in my own time at my own pace. I will say that sometimes the videos formatted quite small on my screen and I did not have the option to maximise them - but this might just be a formatting issue.
F	Yes, I liked the visuals and wo ders if there could be more visuals or at least a calming scene to look at while listening? The repeated phrases and implications of saying it is not your fault, be kind to yourself, be gentle on yourself, you are in control, do what you need was good and I can never hear those enough!
G	Yes, it was well explained and a good pace. The fact that it was on youtube meant I could speed up some recordings and use captions.
J	I think it was all explained rather well and simply.
K	I think everything was easy to follow. I think I understood most concepts easily partly because I've had a lot of therapy and covered it before. However, I think everything just needed more depth, rather than scratching the surface of an issue and then moving on.
O	I think it was easy to understand
P	Yes everything was explained in a way that I understood.

Table T6

We are keen to know if there is anything you would have liked to know more about

Participant	Response
A	No
B	n/a
C	I'm interested in the mindfulness aspect - are these exercises specific to survivors of sexual assault, or more general? I found them to be very empowering and really think they benefitted me (as someone who has never really engaged with mindfulness before, and has maybe been a bit skeptical).
F	Could it have a section about the medical side of things, such as cervical screening, pregnancy?
G	I think the sessions actually taught me a lot! I have always avoided reading about sexuality / wanting to deal with this because I felt like I was unworthy (which I realise is a normal thing to feel). As a result of this training I feel like I have reflected on how I feel about sex and am more open and less scared of having sex because I feel more in control. Thank you for this.
J	It would be good to have the voices of other lived experience in there.
K	How to communicate with a new partner what you have been through, so that they understand and don’t run a mile. When to have that conversation. How to have that conversation and how to manage the fear of doing so
O	Sensate
P	More about experiencing pain during sex and why this occurs. Some more information about destigmatizing sexual distress.

Table T7

In terms of where you are in your journey, was this the right time for you to complete this intervention? Would it have been more helpful to do it sooner or after more time has passed? Any other comments you would like to share

Participant	Response
A	I think it would have been more helpful sooner. As said above, I think I have engaged with a lot of different kinds of help so there wasn't much new here
B	It was fine n/a
C	I think it was the right time for me. I wonder if I was someone who had had a more recent experience of Sexual Assault/Abuse if I might need a more two-way interaction with a 1:1 therapist, but as someone who has already had that type of treatment, this felt really well-timed. Thanks so much for giving me the opportunity to take part. I feel like I have benefitted from doing so, and it has given me a sense of confidence in myself and my sexual needs that I did not have previously.
F	I think it was the right time for me. Even though the abuse happened over a number of years and many years ago, it's only now that I'm processing it with a therapist (20 year gap). I feel it will never feel comfortable exploring this but I'm glad I did. Thank you! For doing this research and for the content Kimberley clearly explained everything and I knew I could email if I was having difficulty. I did twice, once was a technology issue and once because I found the content triggering which I have described above. It may look like I didn't progress much but I feel that small step in doing this is huge for me.
G	It would have been useful for me to do this sooner, but it has been difficult for me to discuss my issues. I have had several years of therapy and I feel like this would have been useful before having some therapy sessions because I could have felt less embarrassed about things with my therapist. I might even go back now and have a discussion with her about these issues that are affecting me in the present (rather than focussing on my past experiences and how they have affected me for so long). I really like that the sessions contain stuff that is completely optional and that you emphasise that we are in control. I am very grateful for the opportunity and I really hope that this training can be made available to others like me who might benefit.

J	I think it would have been good to have done this a sooner. My trauma was 10 years a go now, however I've been living with effects ever since. Just thank you for the opportunity! If there's anything else I can do. A testimonial, video or anything I would be happy to help!
K	I think it would've been better if I had got to the stage where I already had a partner and was able to think about improving my sex life with them, rather than the stage I'm at where sex feels totally overwhelming. Thank you for this self help guidance. Even if some of the content isn't relevant to me right now, I hope it will be one day.
O	I am about 10 years on from my assault. I think that this would have been most beneficial earlier in my journey but not too soon after the assault as I wouldn't have been ready. Maybe 2 or 3 years in.
P	I think it may have been useful sooner. Maybe 6 months after the sexual assault. That's everything thank you.

Appendix U

Table of participant missing data with session numbers

Participant / Day	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1																	
2				X													
3				X													X
4																	
5																	
6																	
7																	
8				X													
9		X															X
10																	
11			X													X	X
12																	
13												X	X				
14	X	X												X			
15				X				X					X	X			
16	X			X				X				X					
17	X							X				X			X		X
18								X						X			X
19								X			X	X	X			X	X
20			X	X				X				X					
21	X	X						X		X							X
22				X				X						X			
23				X				X			X	X	X				X
24			X	X				X		X		X	X		X		X
25	X			X				X				X	X				
26	X			X				X			X	X	X	X			
27				X				X		X		X	X			X	X
28	X		X	X				X				X	X		X		X
29	X			X				X				X	X				X
30				X				X		X		X	X				X
31			X	X				X		X	X	X	X	X			X
32				X				X				X	X	X			
33				X				X				X	X				
34			X	X				X		X		X	X				
35				X				X				X	X				
36			X	X				X				X	X	X			
37				X				X		X		X	X	X			
38				X				X		X		X	X	X			
39				X				X		X			X				
40				X				X		X			X				

Note: baseline phase, X = missing data

Appendix V

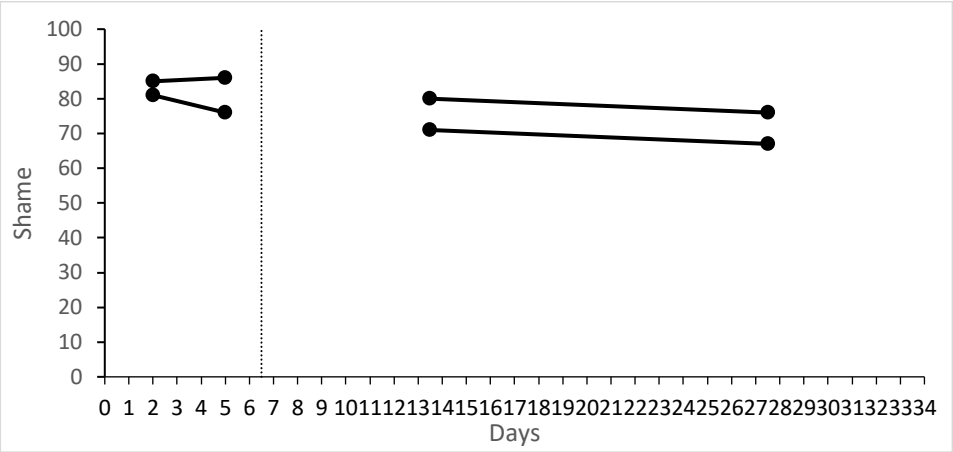
Reference data used to calculate the Reliable Change Index and Clinically Significant Change

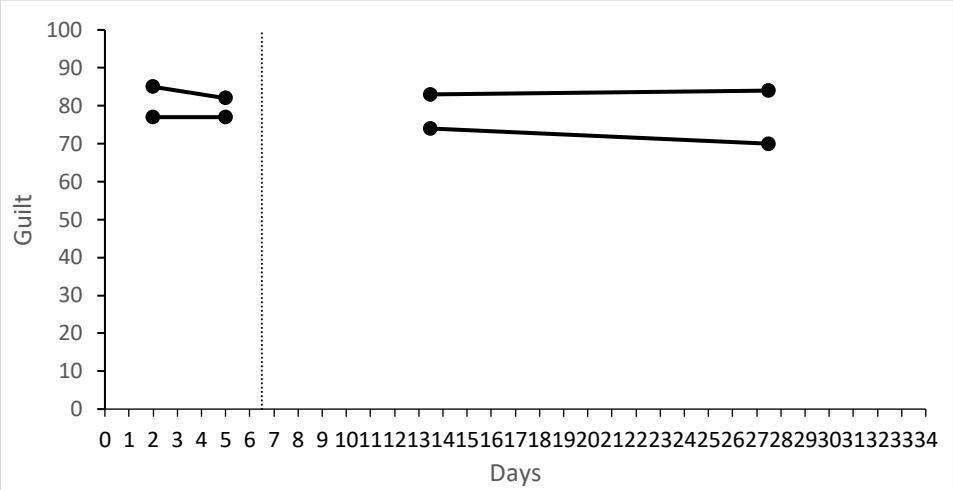
Measure	Direction of Clinical Gain	Cronbach's Alpha (source)	Clinical reference data (source)	Non-Clinical reference data (source)	CSC criterion
FSDS-R	Increase	0.93	25.79 (1.61)	2.58 (1.27) day	B
FSFI total	Increase	0.97 (Rosen et al., 2002)	19.2 (6.63) 26.55 (Meston et al) clinical revelant cut off score with and without FSD	30.5 (5.29)	B
FSFI desire	Increase	0.92 (Rosen et al., 2002)	4.7 (2.12)	6.9 (1.89)	C
FSFI arousal	Increase	0.95 (Rosen et al., 2002)	9.7 (4.78)	16.8 (3.62)	B
FSFI lubrication	Increase	0.96 (Rosen et al., 2002)	10.9 (5.48)	18.6 (3.17)	B
FSFI orgasm	Increase	0.94 (Rosen et al., 2002)	7.1 (4.08)	12.7 (3.16)	C
FSFI satisfaction	Increase	0.89 (Rosen et al., 2002)	8.2 (3.59)	12.8 (3.03)	C
FSFI pain	Increase	0.94 (Rosen et al., 2002)	10.1 (4.64) (Rosen et al., 2002)	13.9 (2.79) (Rosen et al., 2002)	C
SSCS-S	Increase	0.86 Neff et al., 2021		2.98 (0.99) Neff et al., 2021	B

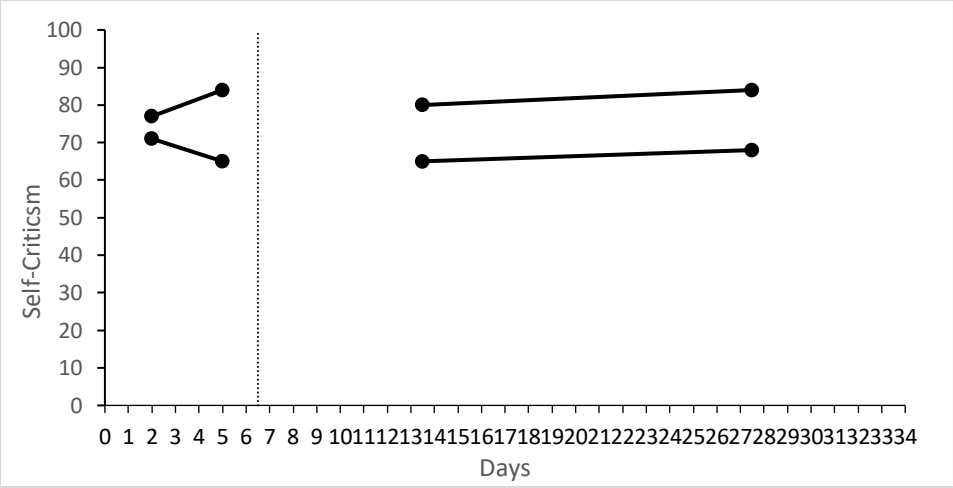
Appendix W

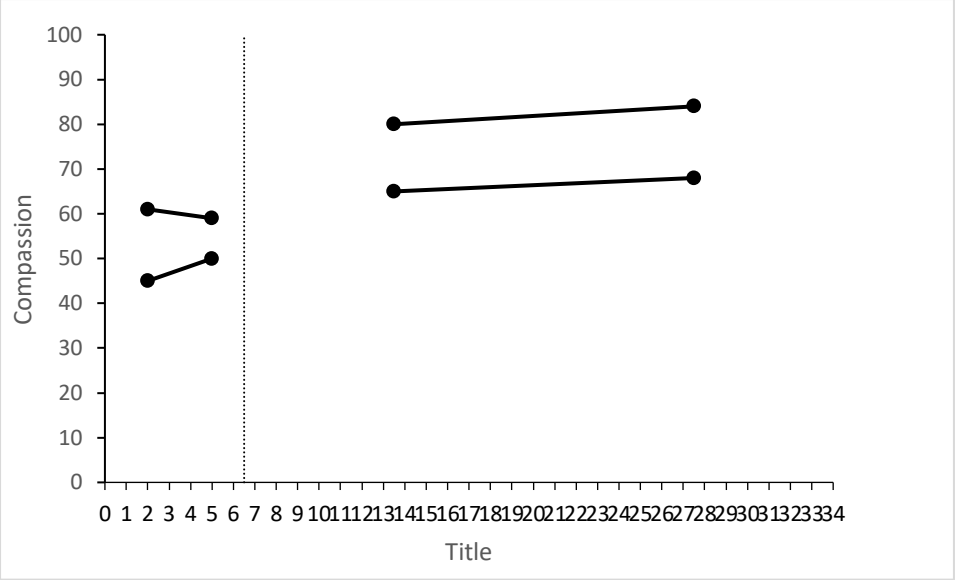
Variability analysis

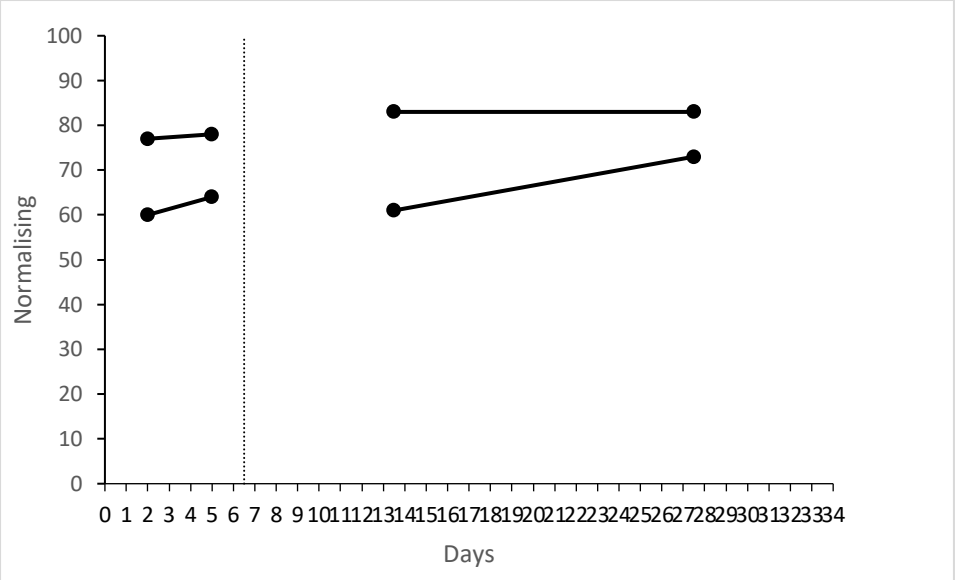
1. PA's Variability Analysis by Trended Range

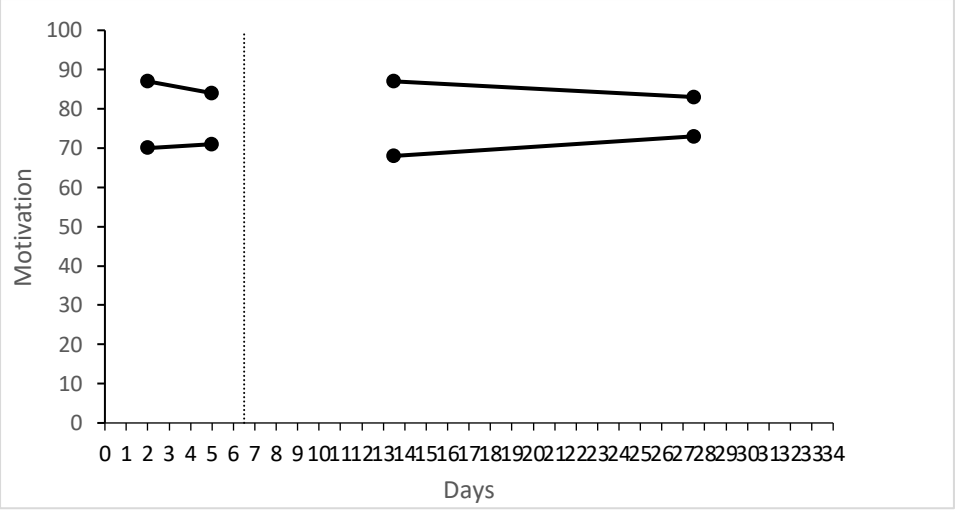




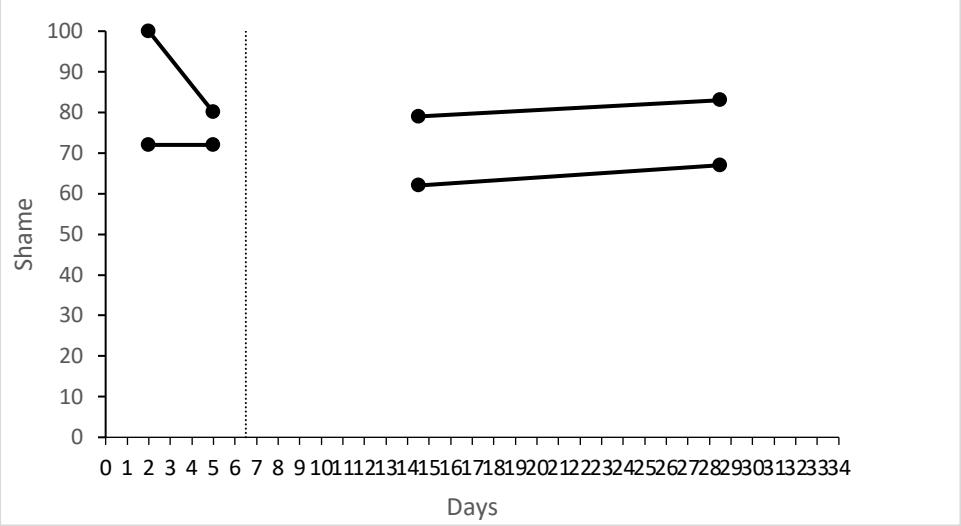


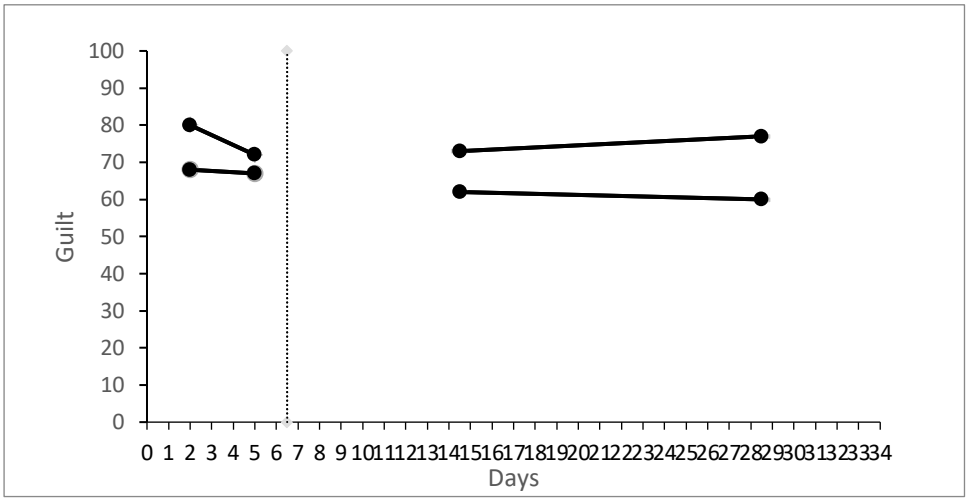

Compassion
Title

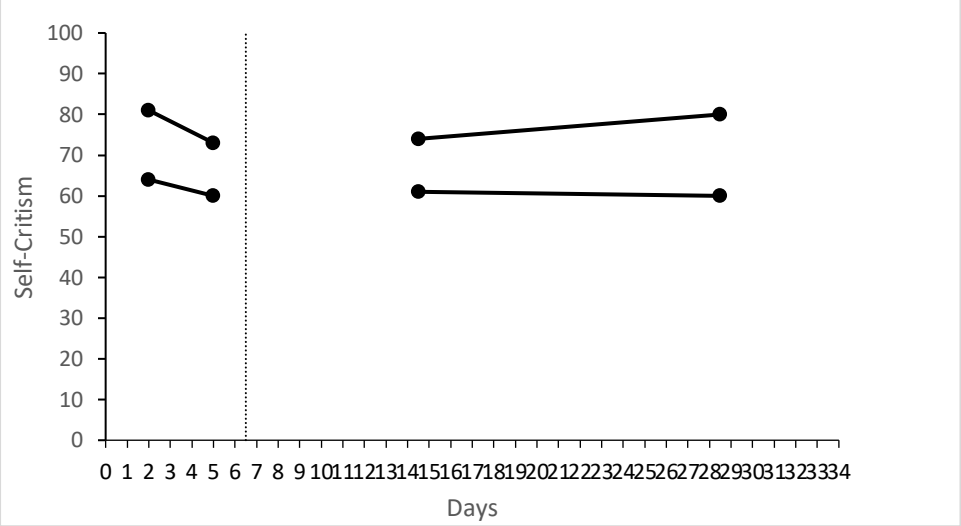

Normalising
Days

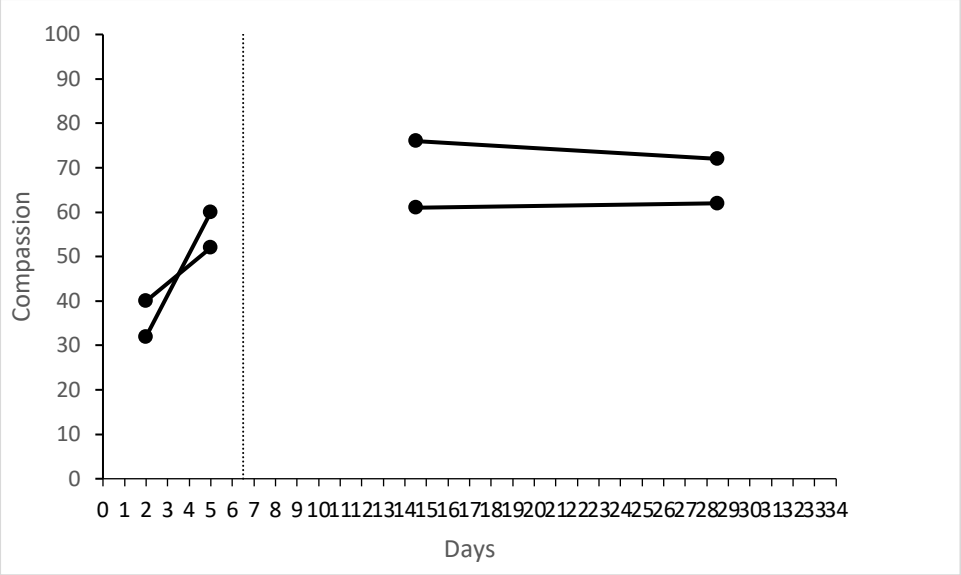

Motivation
Days

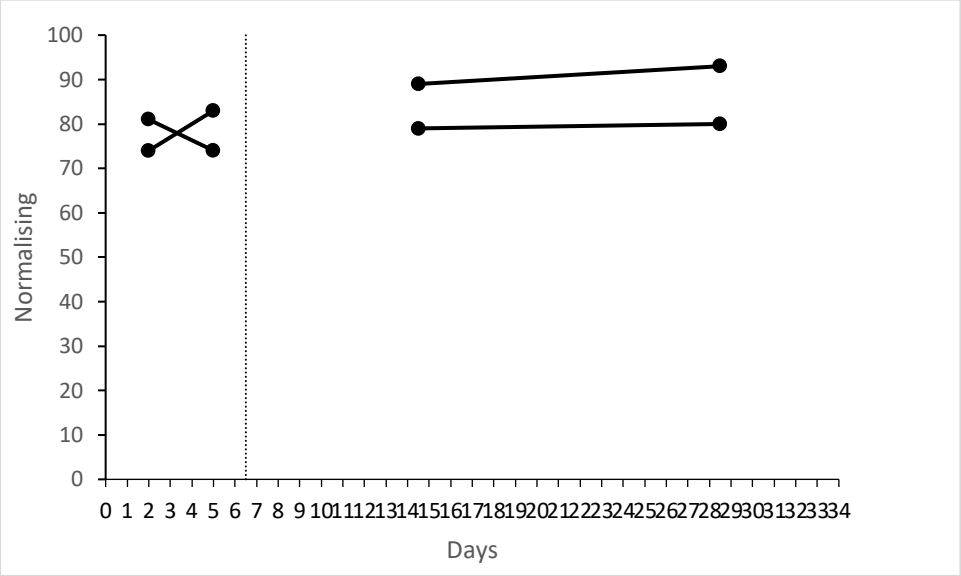
2. PB's Variability Analysis by Trended Range

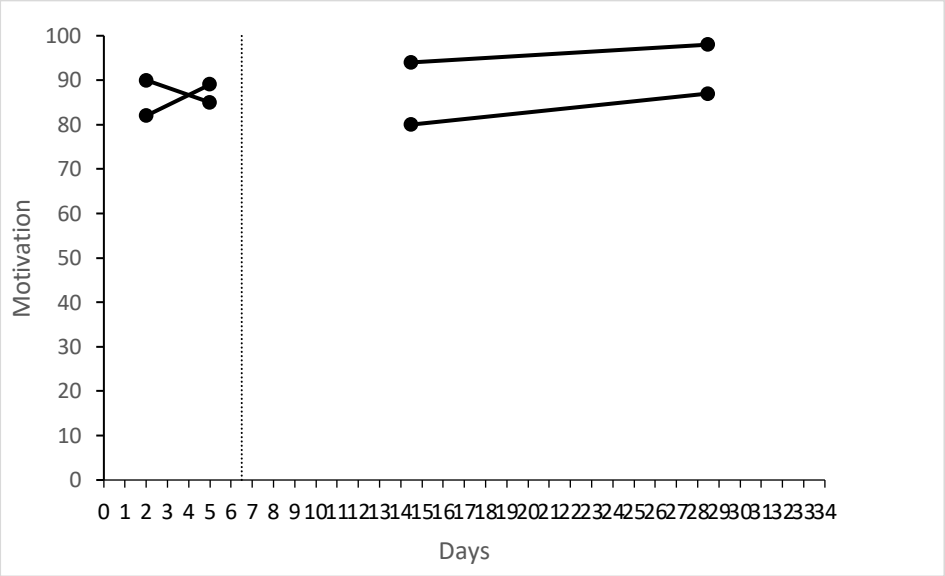




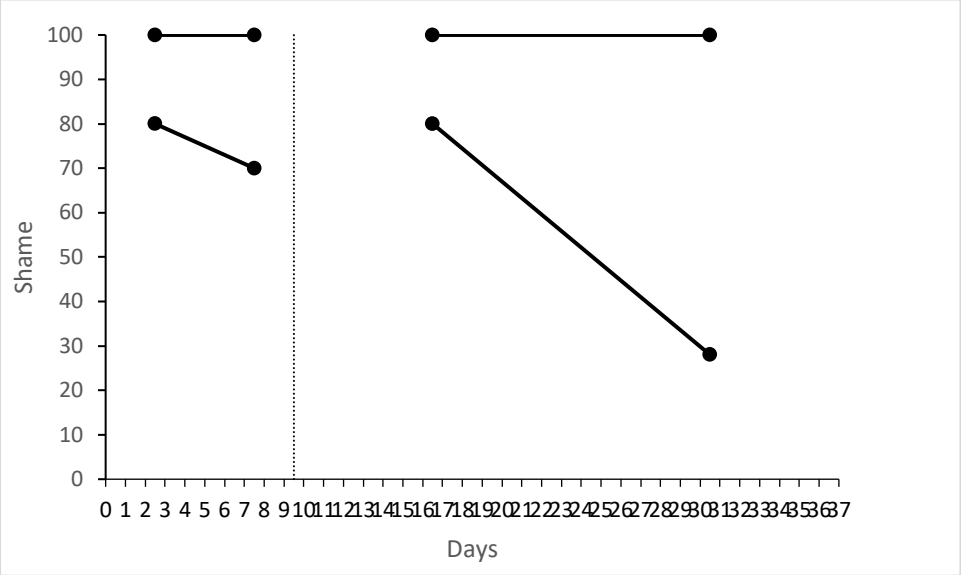


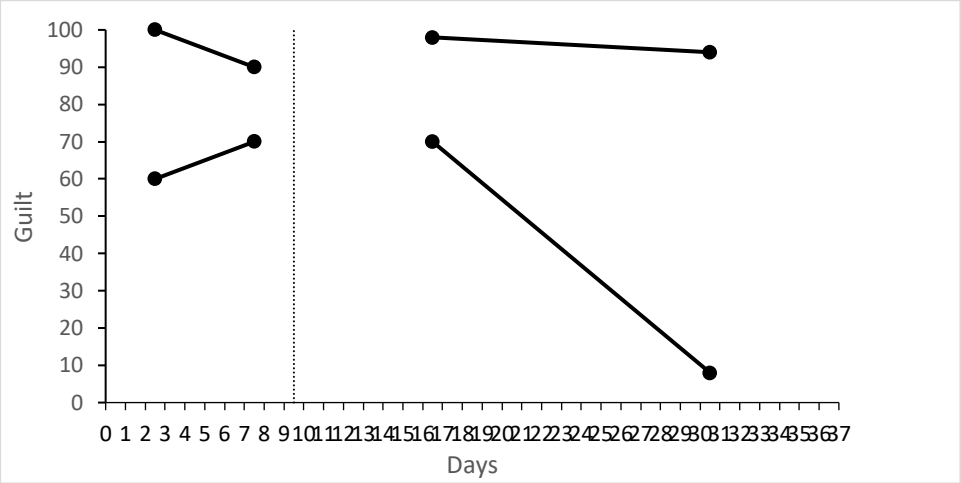

Compassion
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34
Days

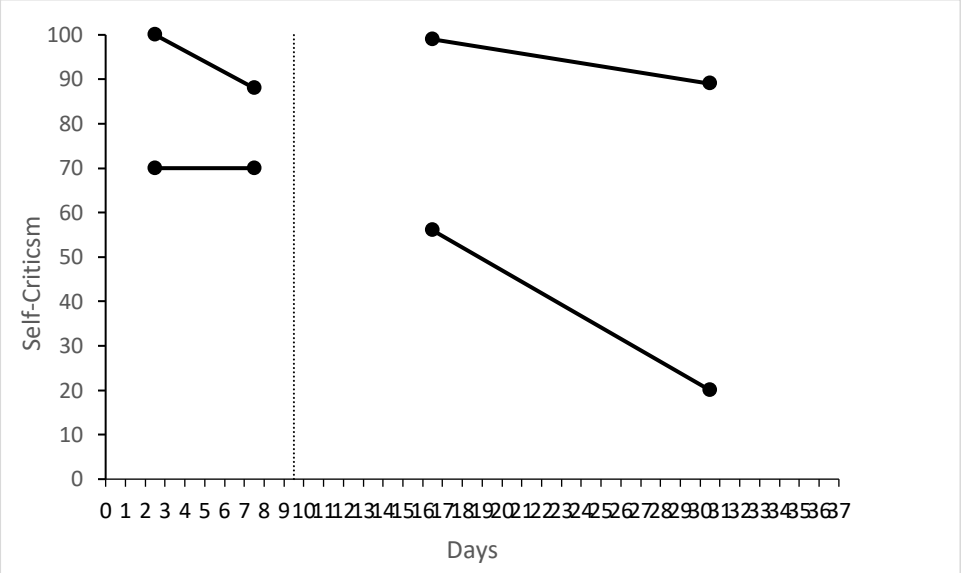

Normalising
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34
Days

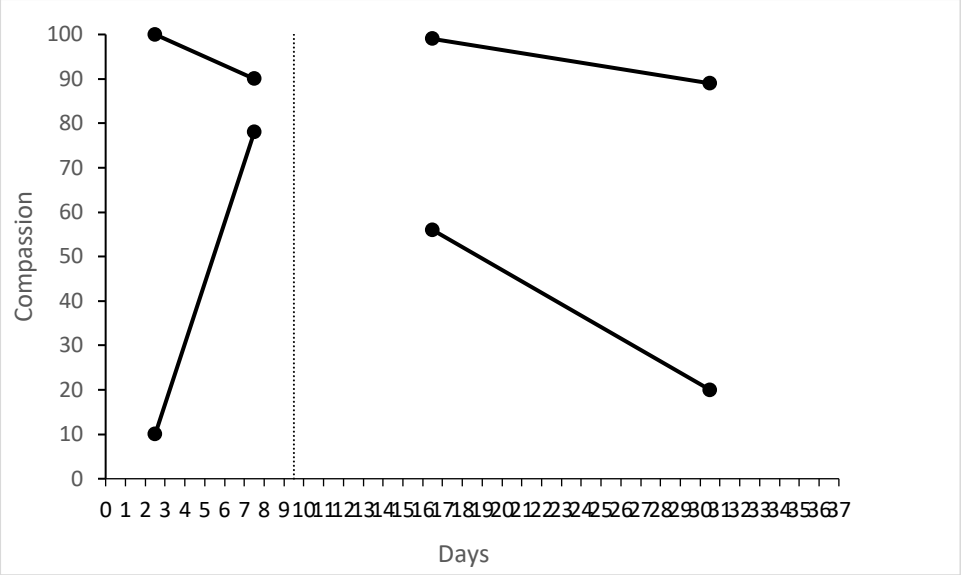

Motivation
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34
Days

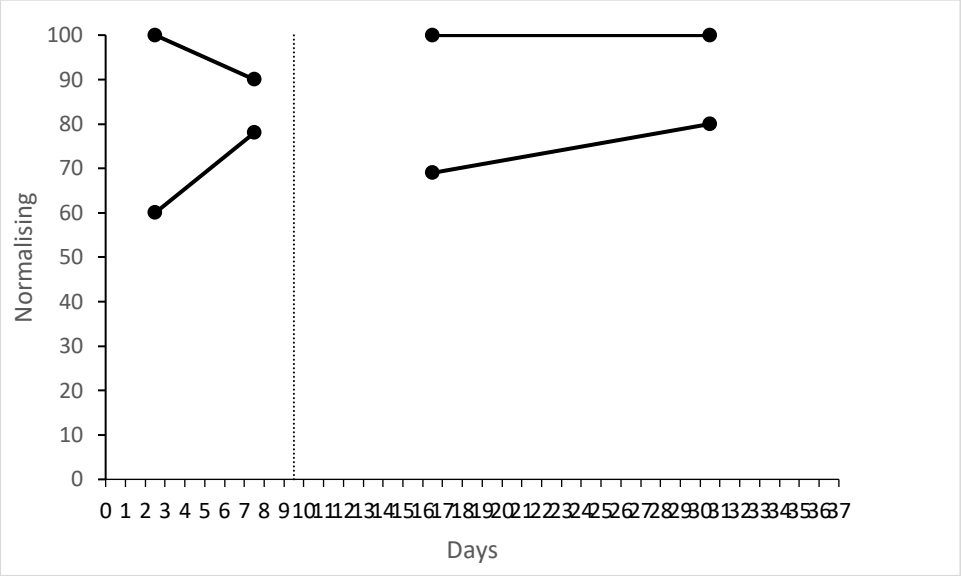
3. PC's Variability Analysis by Trended Range

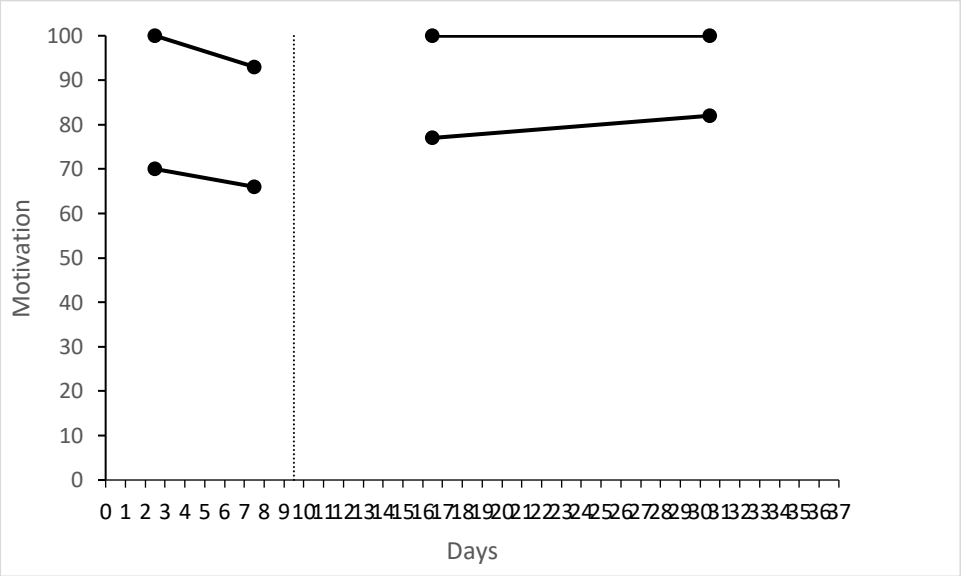




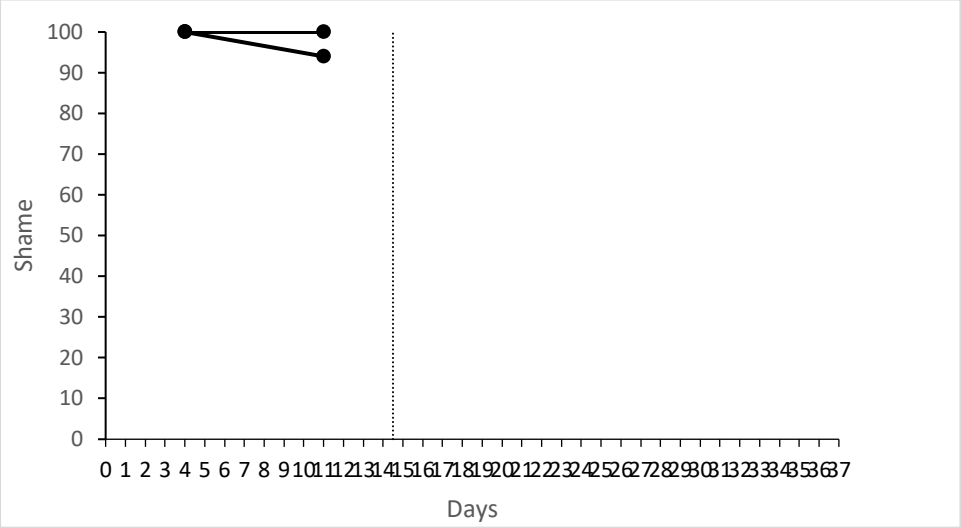


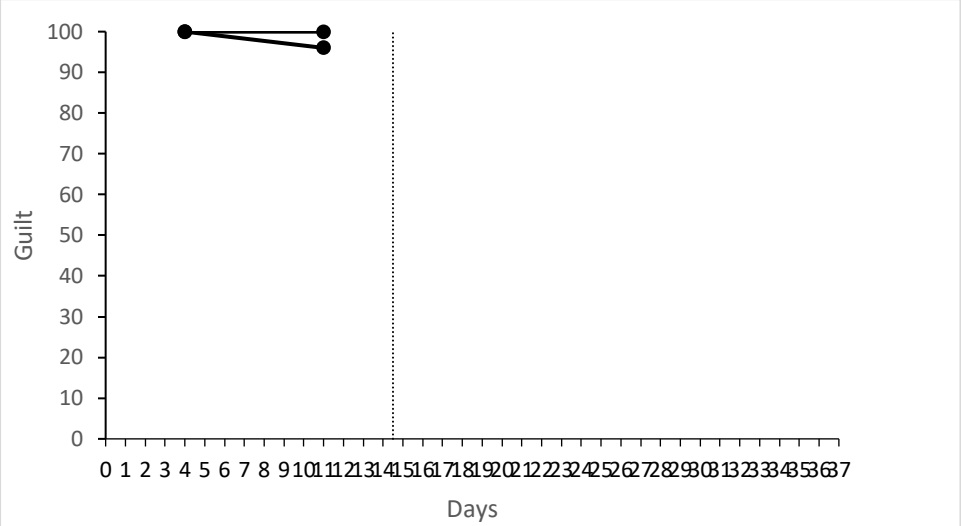

Compassion
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
Days

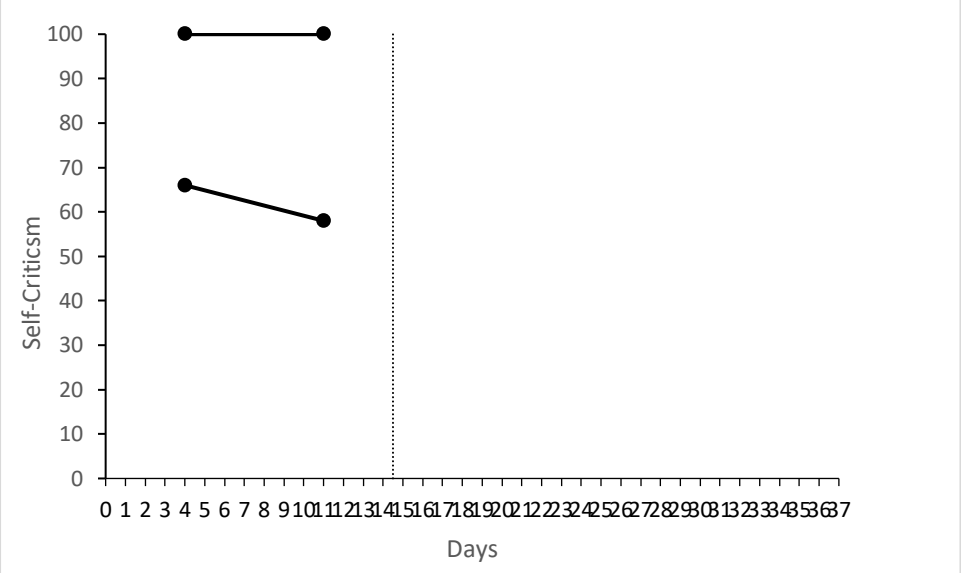

Normalising
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
Days

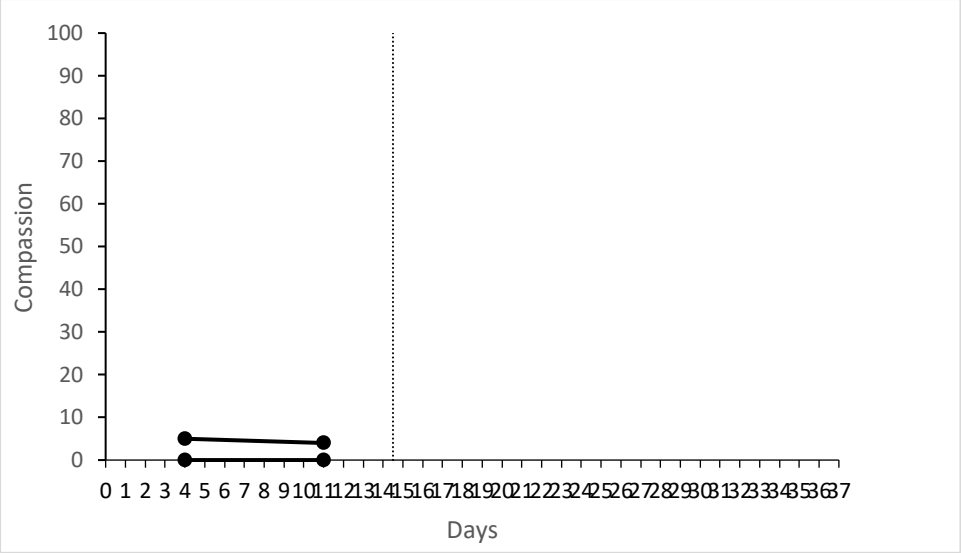

Motivation
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
Days

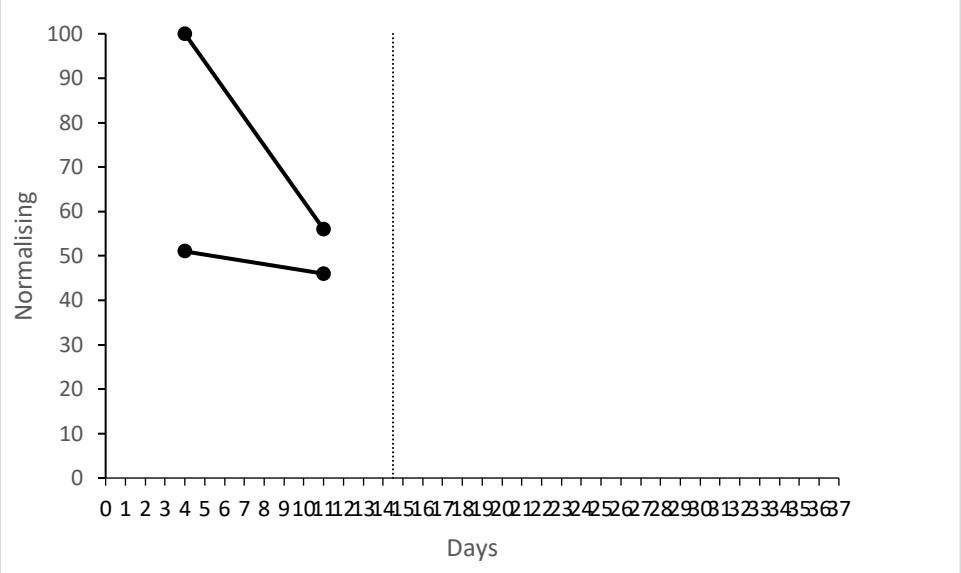
4. PD's Variability Analysis by Trended Range

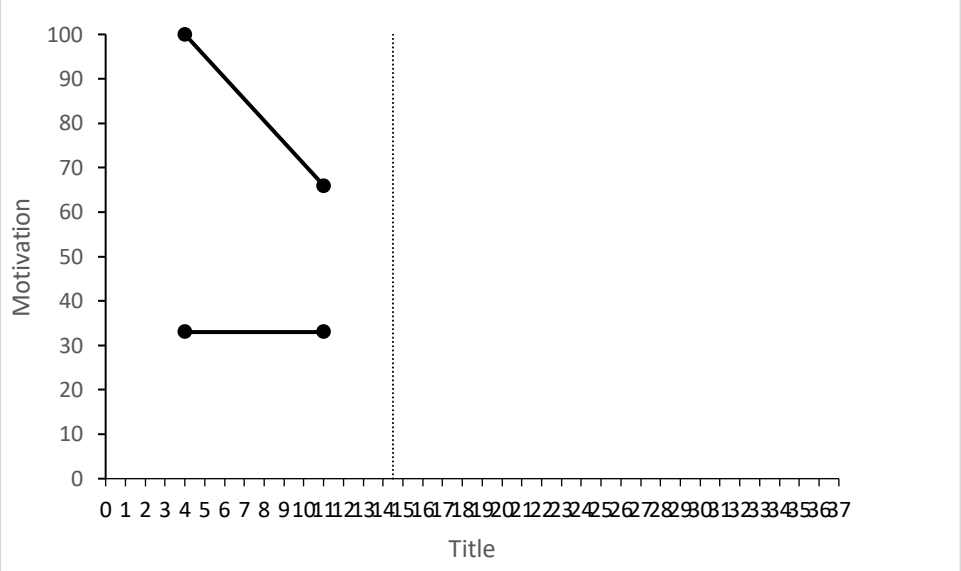




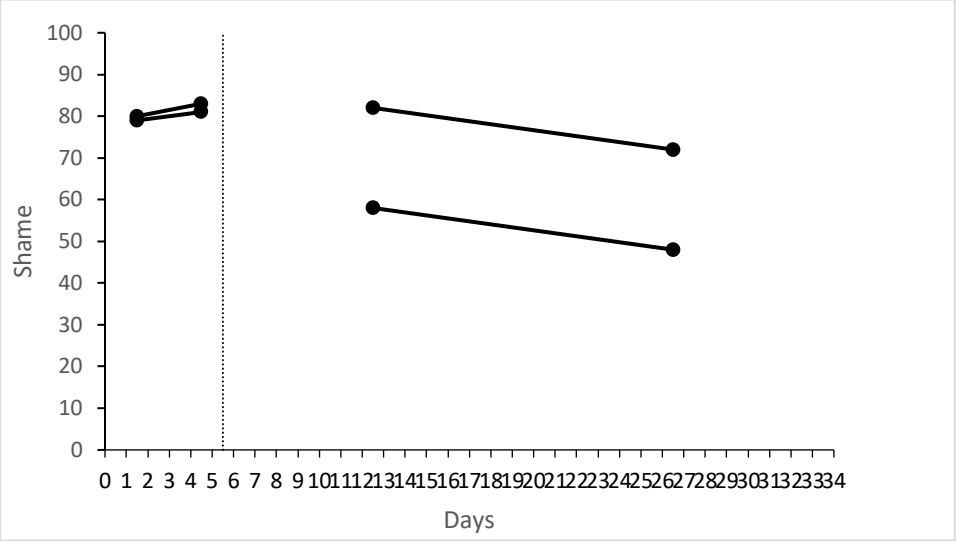


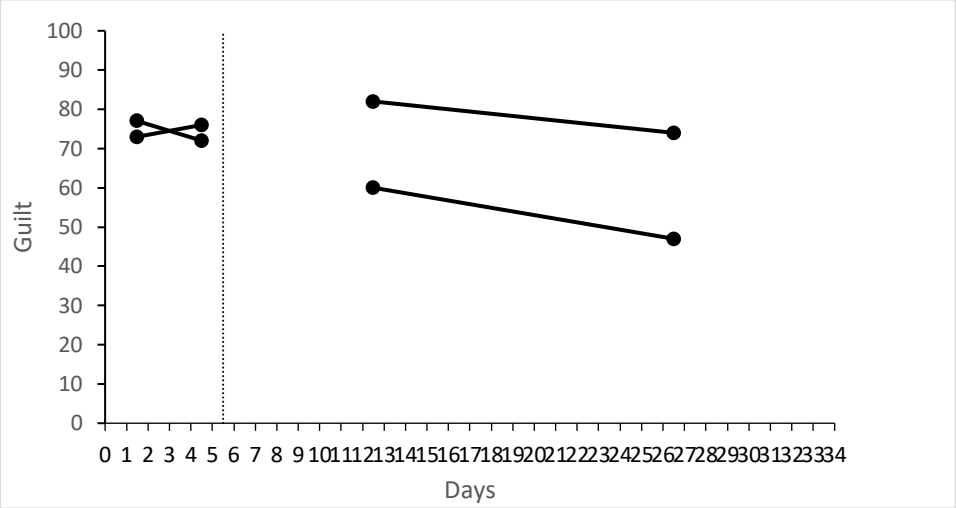

Compassion
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
Days

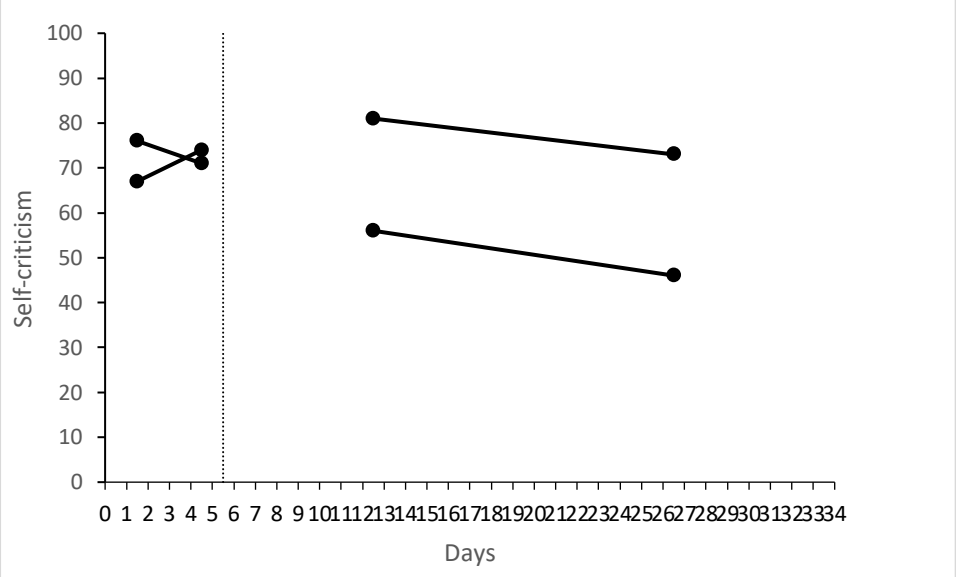

Normalising
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
Days

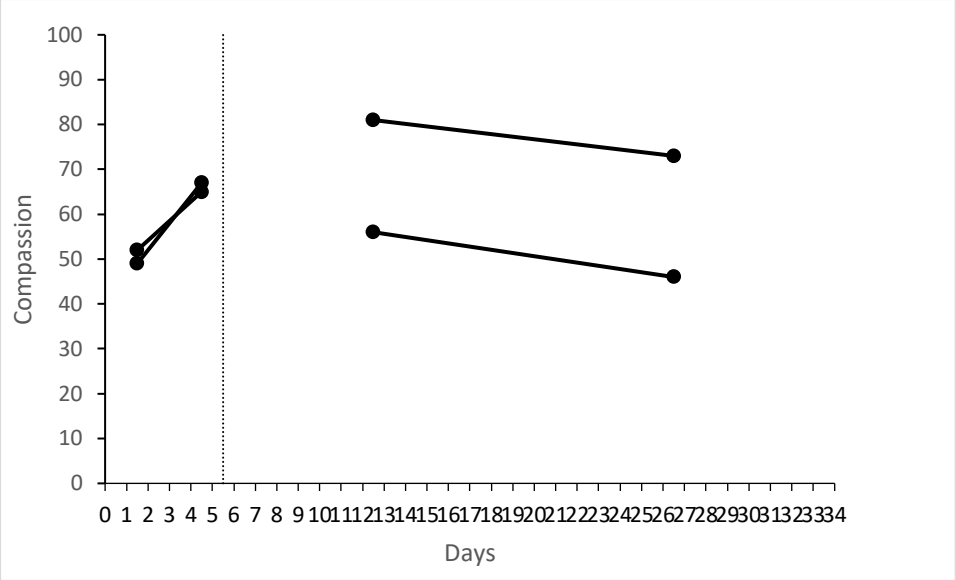

Motivation
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
Title

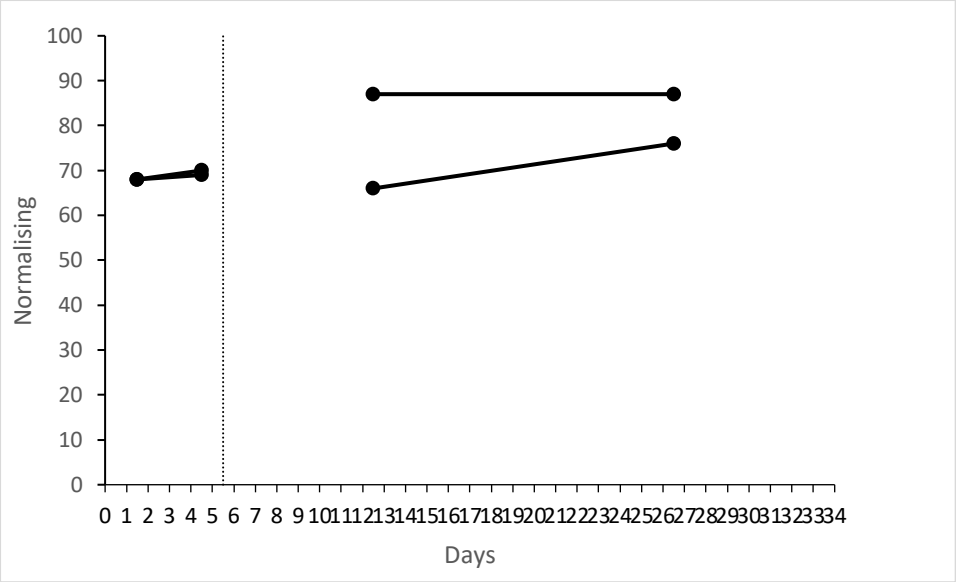
5. PE's Variability Analysis by Trended Range

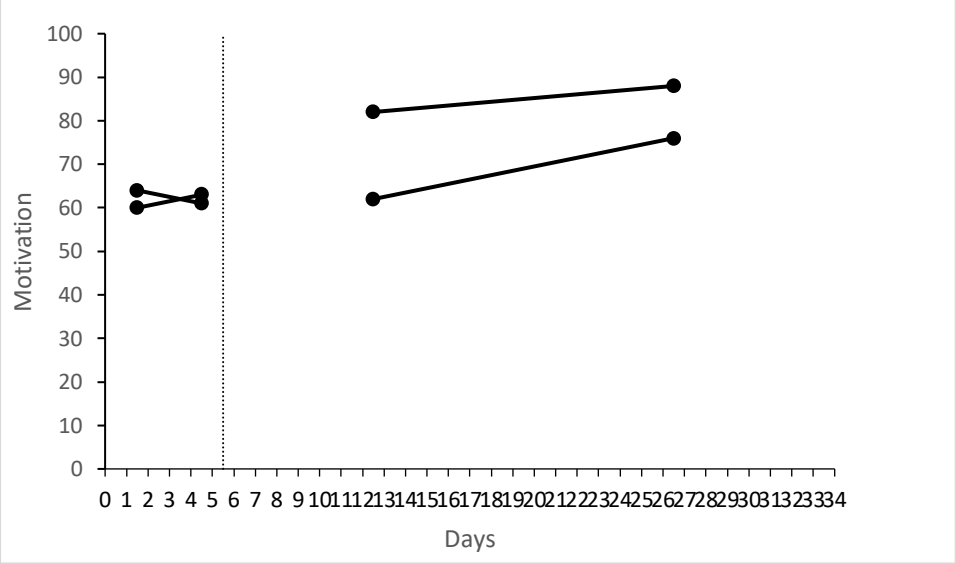




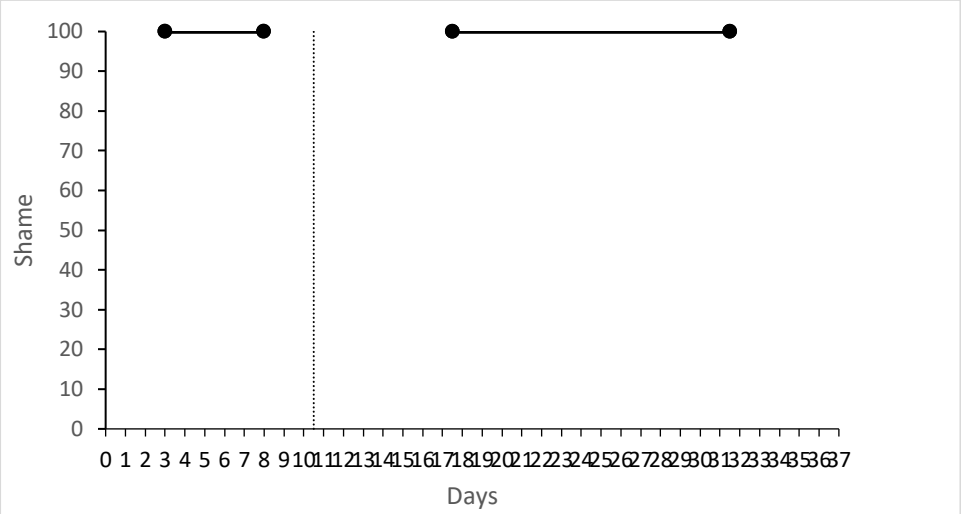


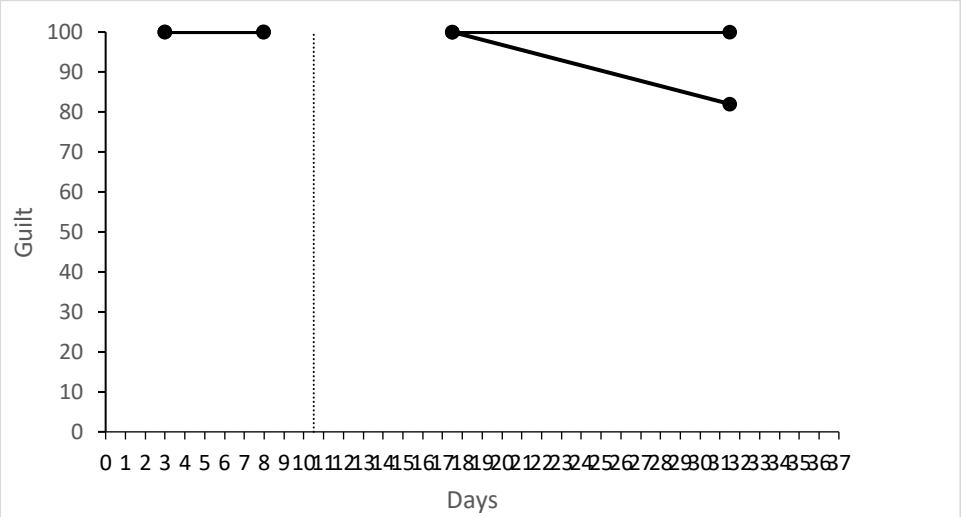

Compassion
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34
Days

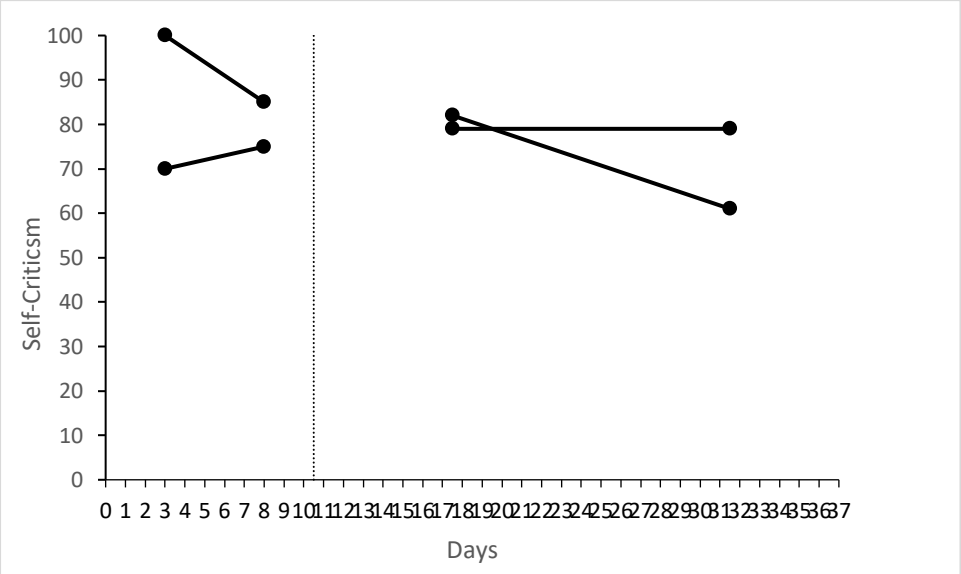

Normalising
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34
Days

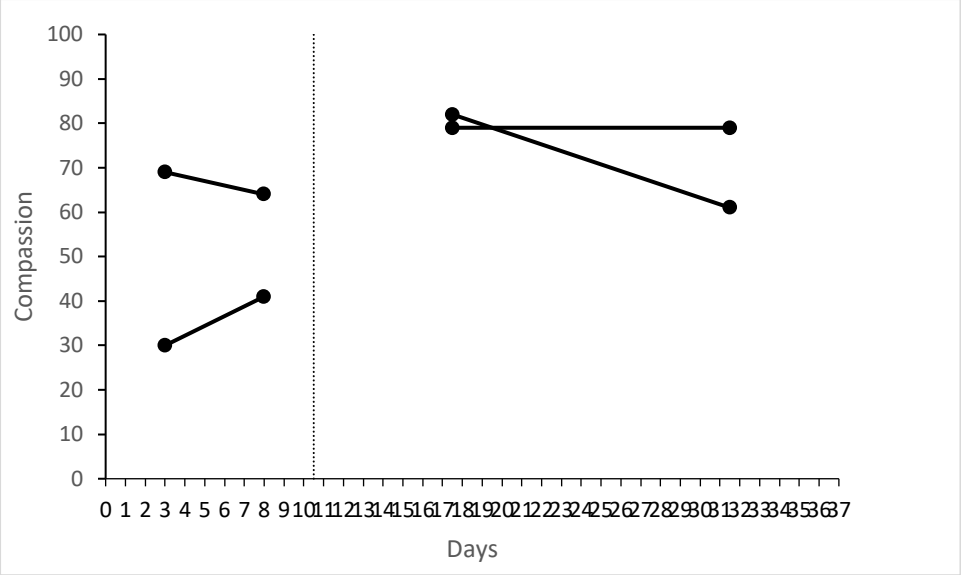

Motivation
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34
Days

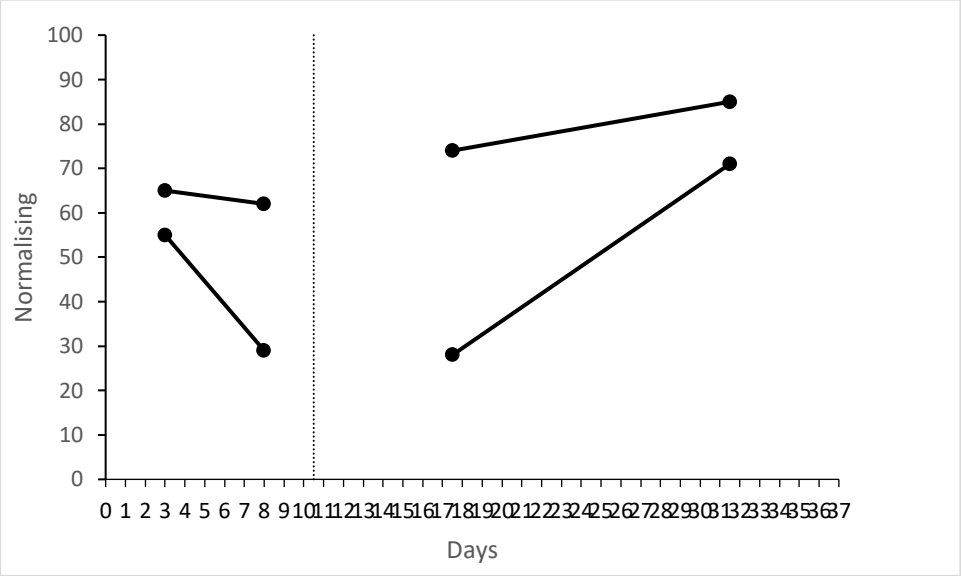
6. PF Variability Analysis by Trended Range

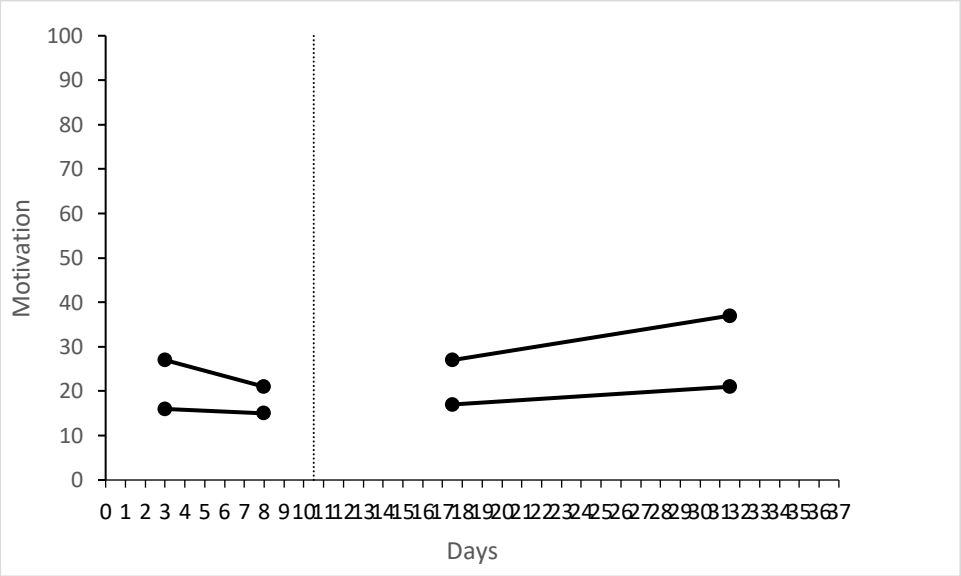




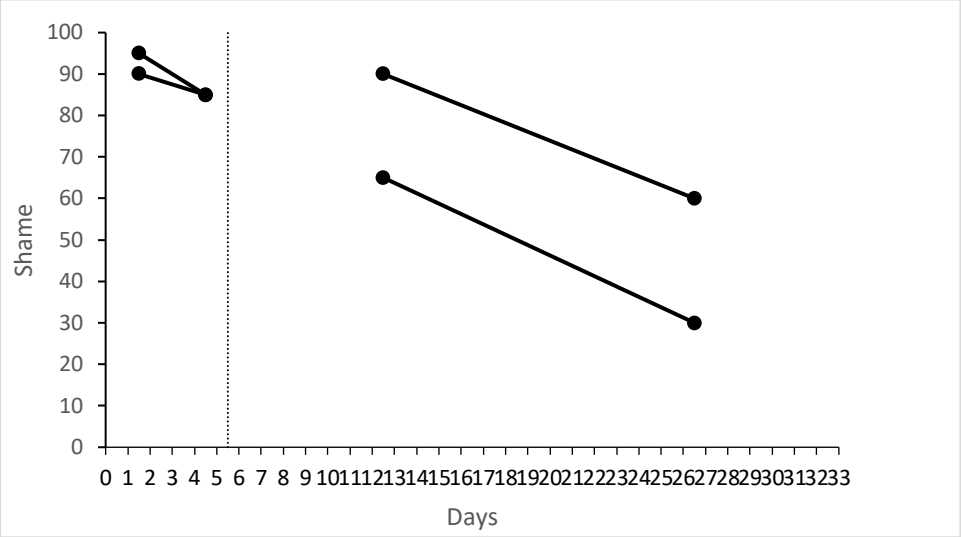


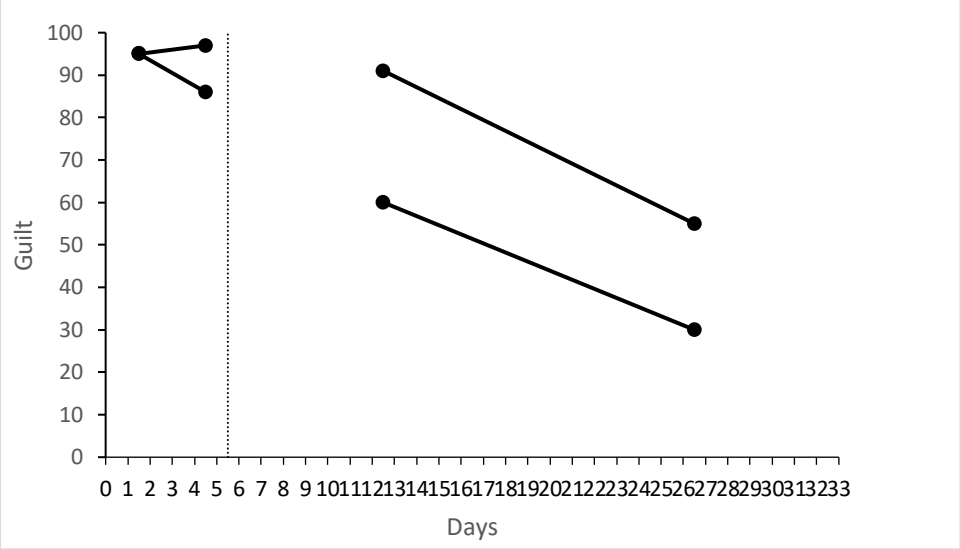

Compassion
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
Days

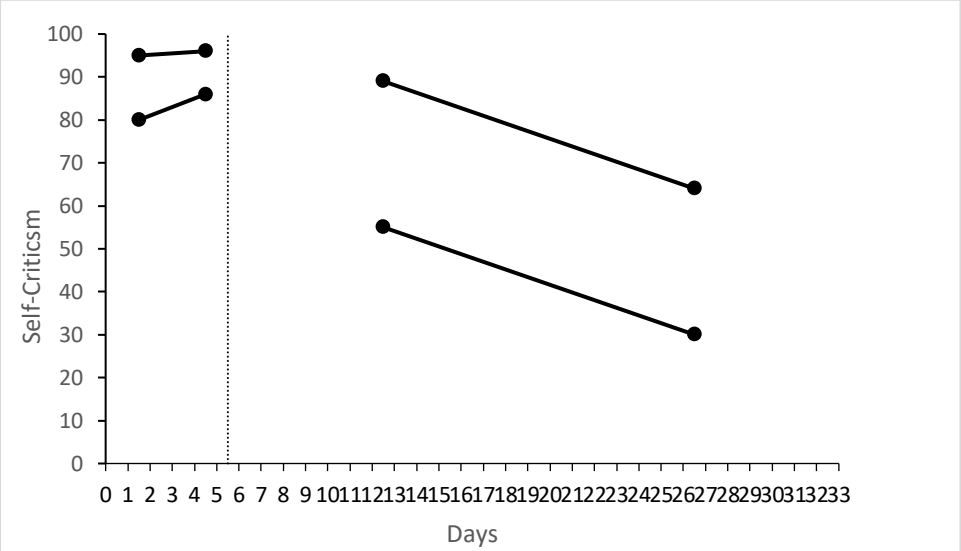

Normalising
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
Days

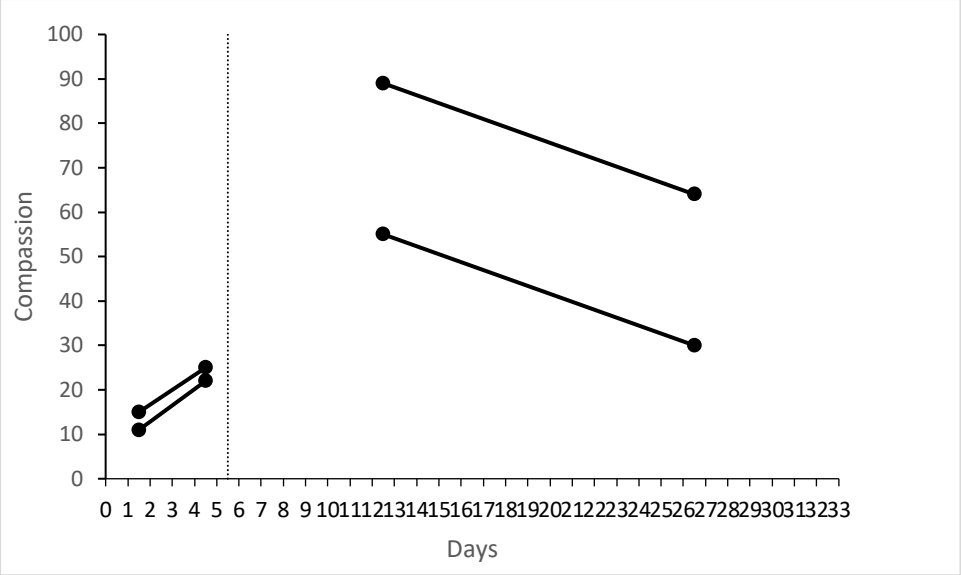

Motivation
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
Days

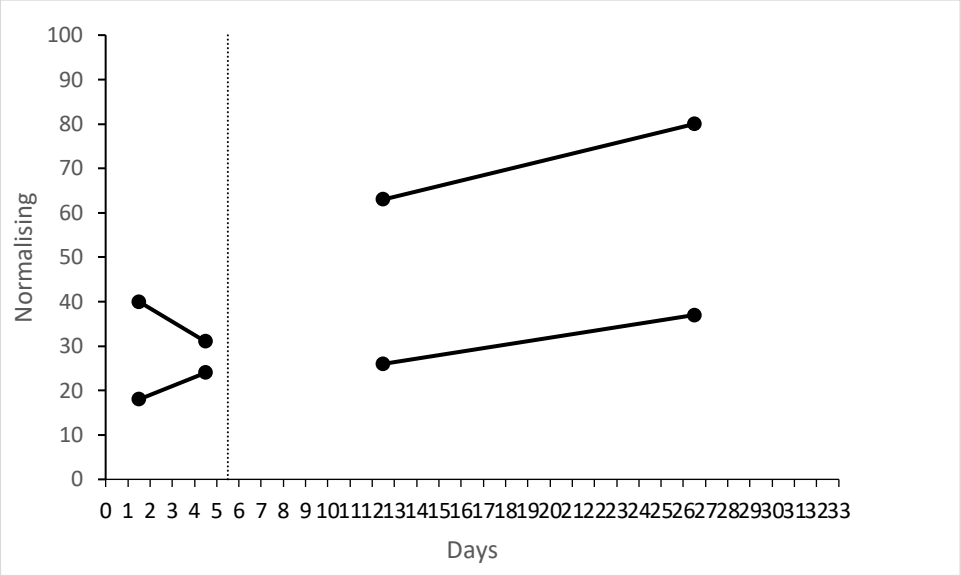
7. PG Variability Analysis by Trended Range

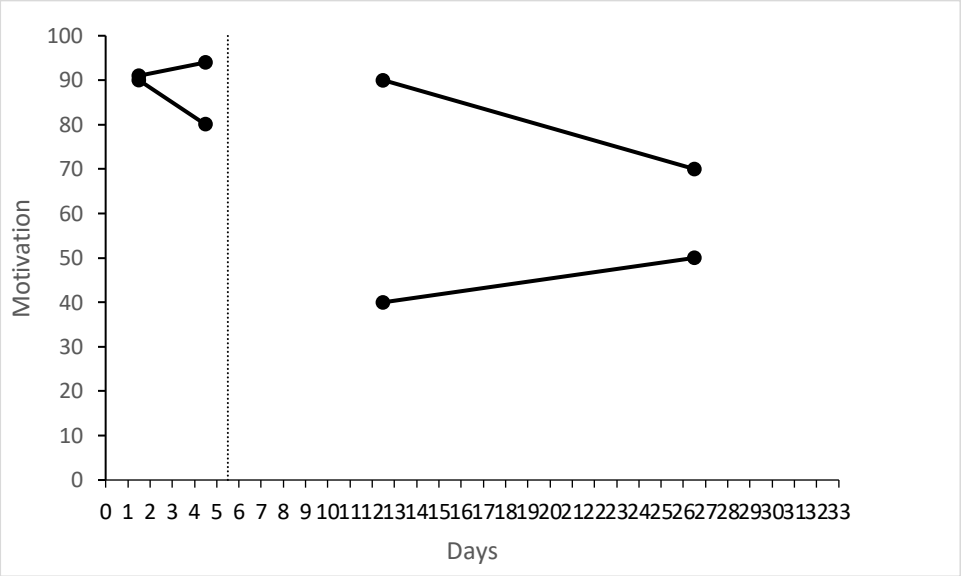




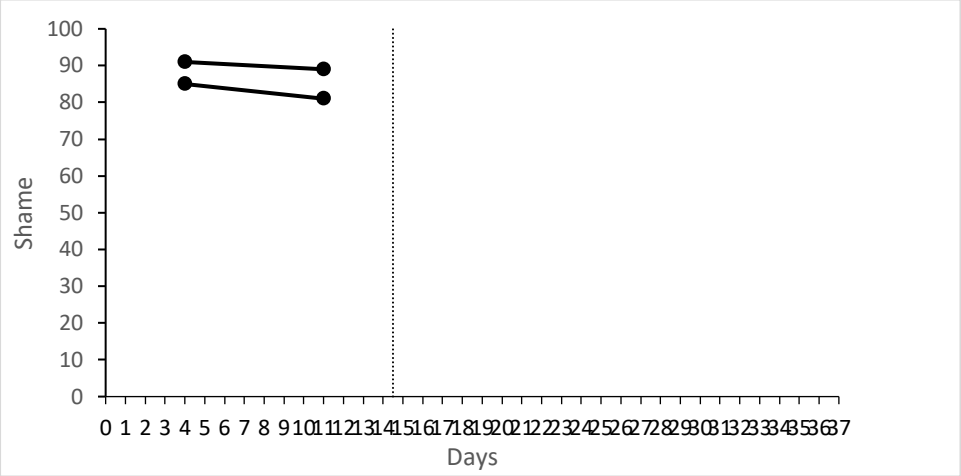


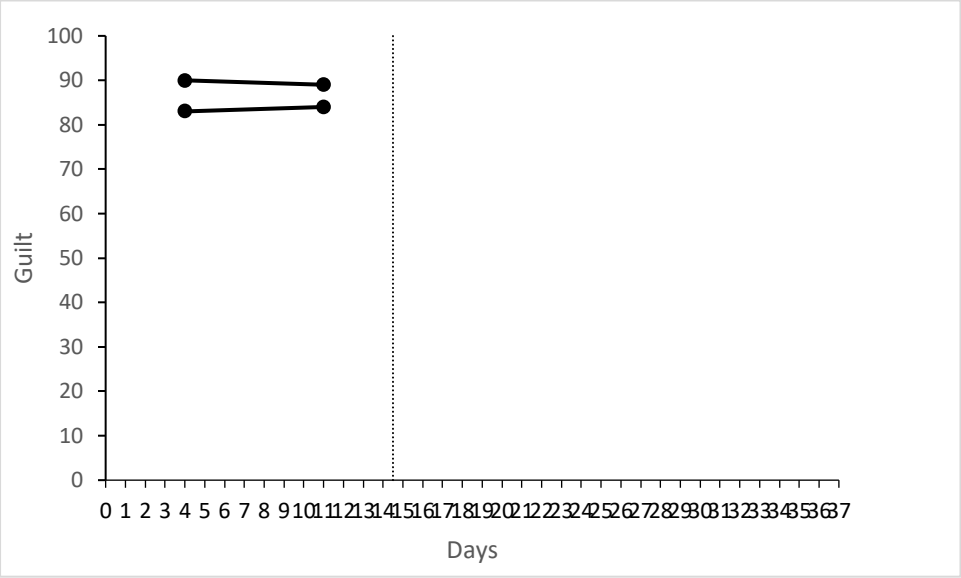

Compassion
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33
Days

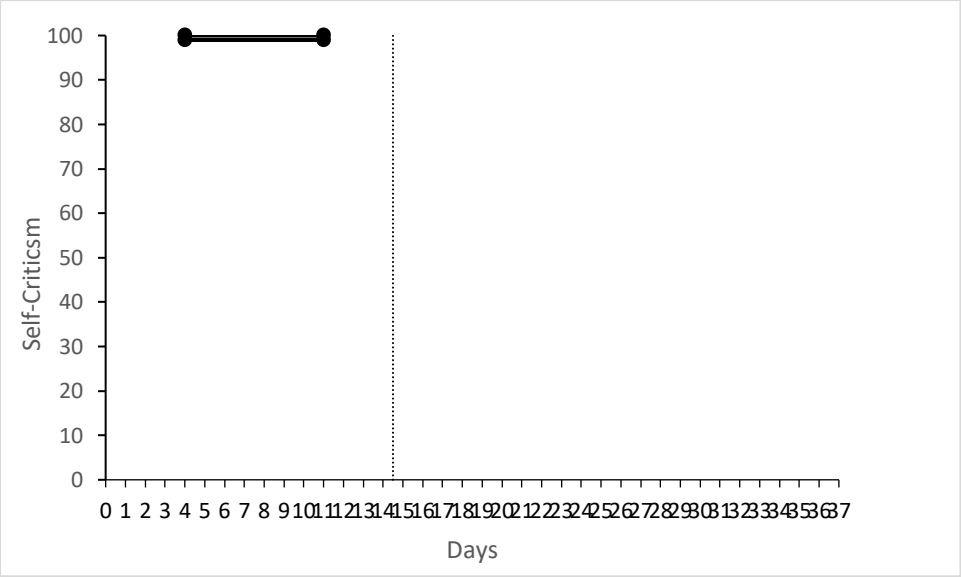

Normalising
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33
Days

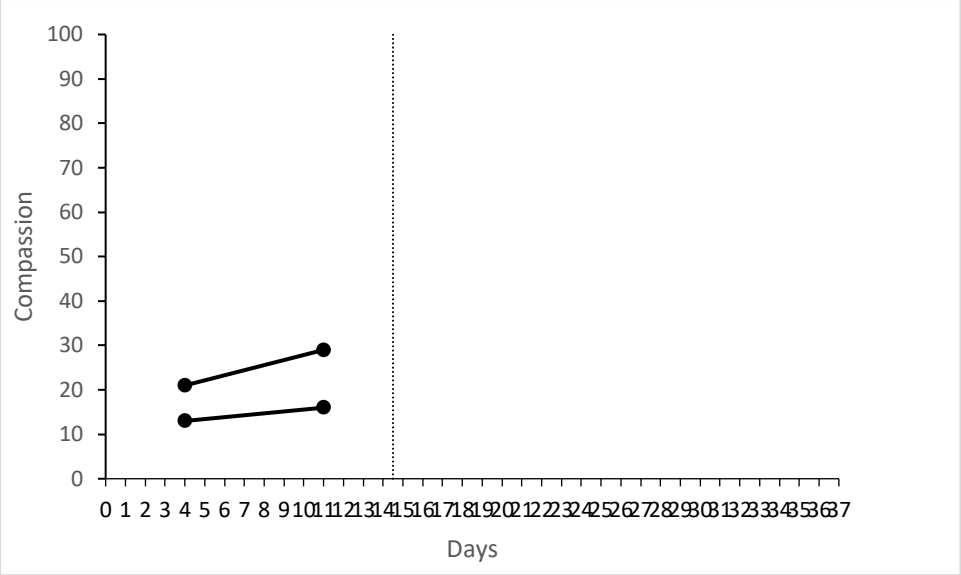

Motivation
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33
Days

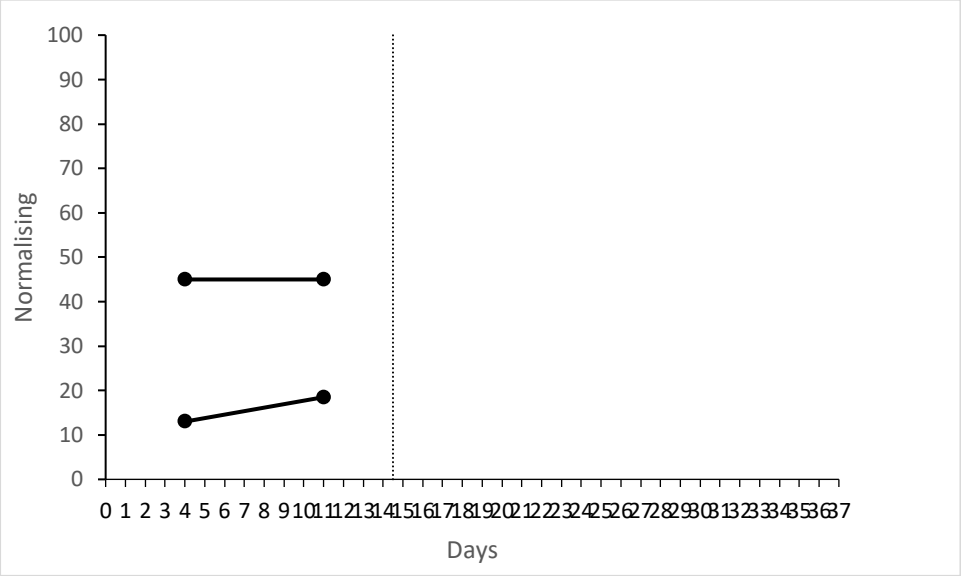
8. PH Variability Analysis by Trended Range

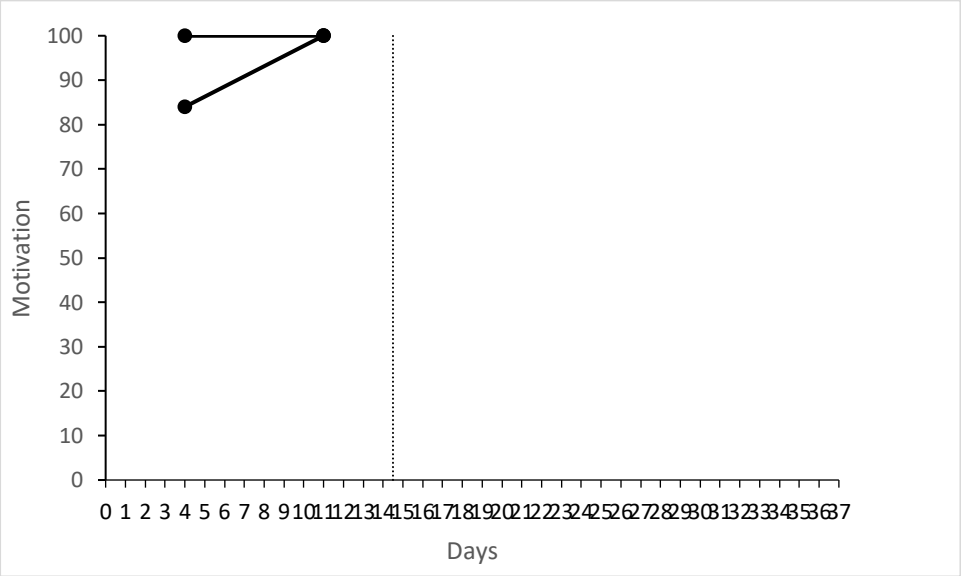




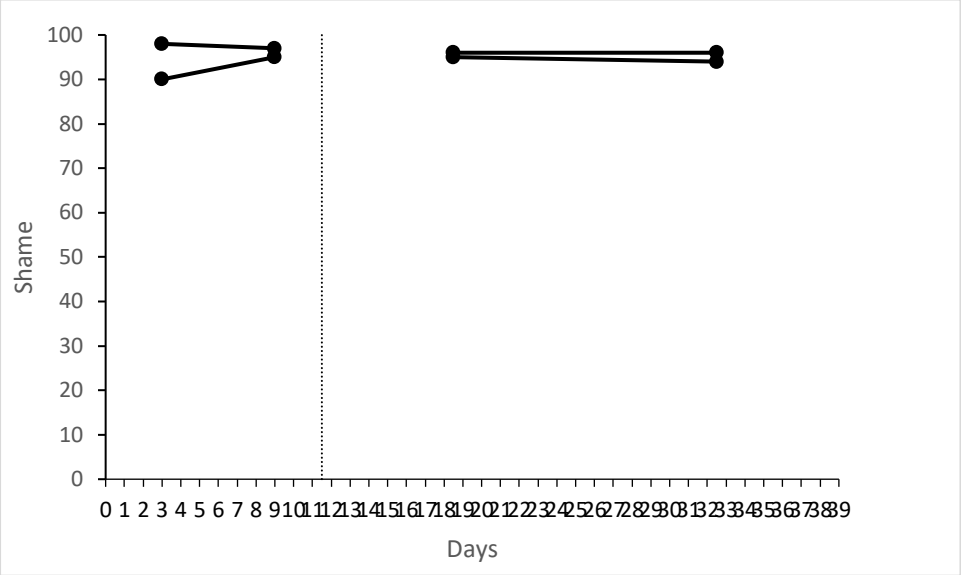


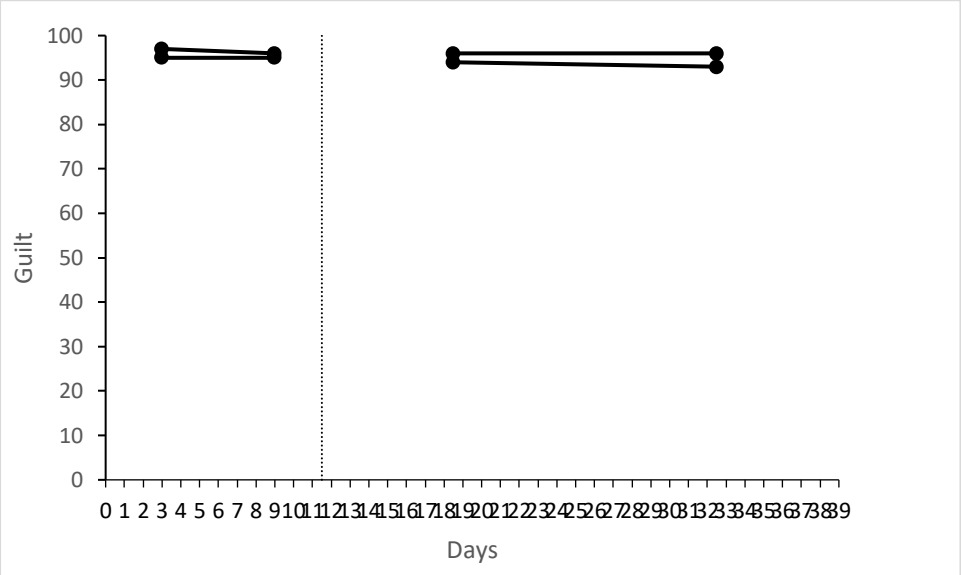

Compassion
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
Days

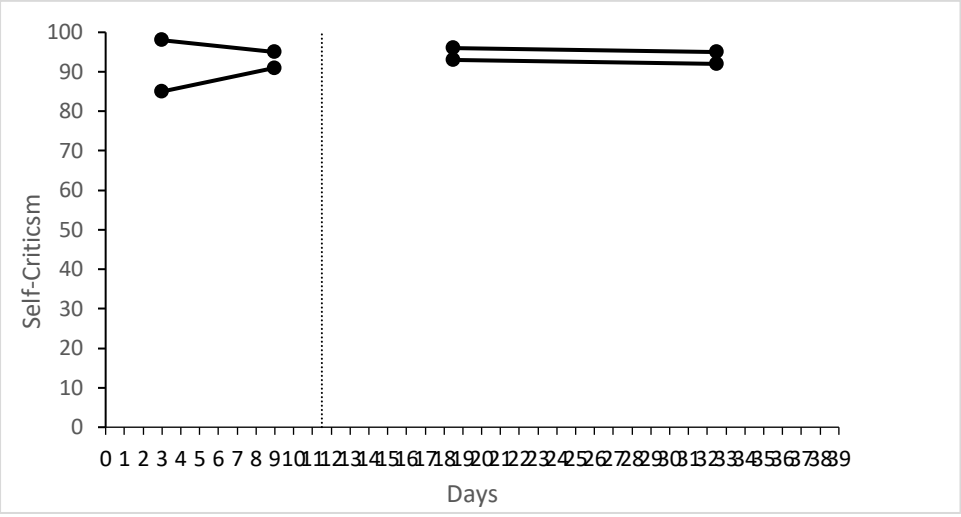

Normalising
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
Days

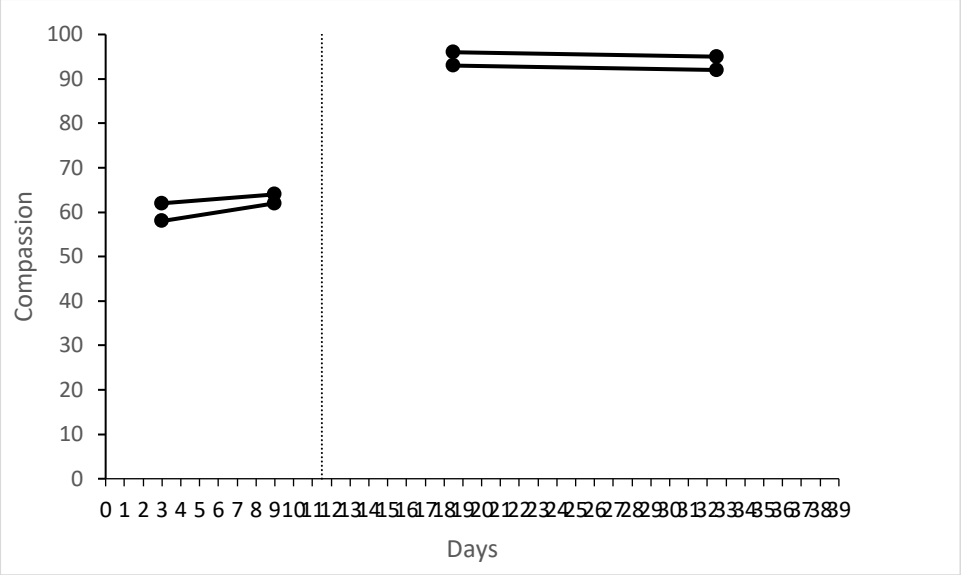

Motivation
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
Days

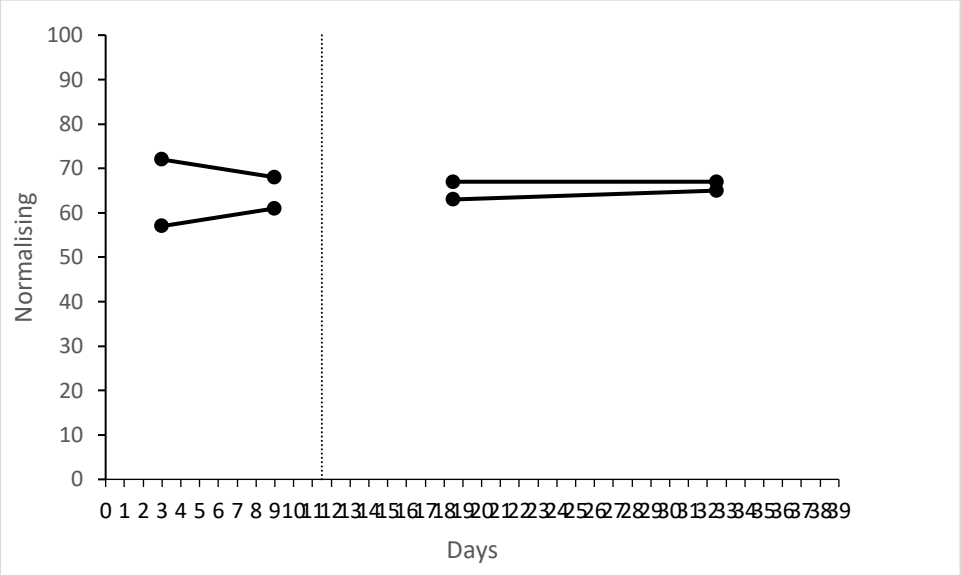
9. PI Variability Analysis by Trended Range

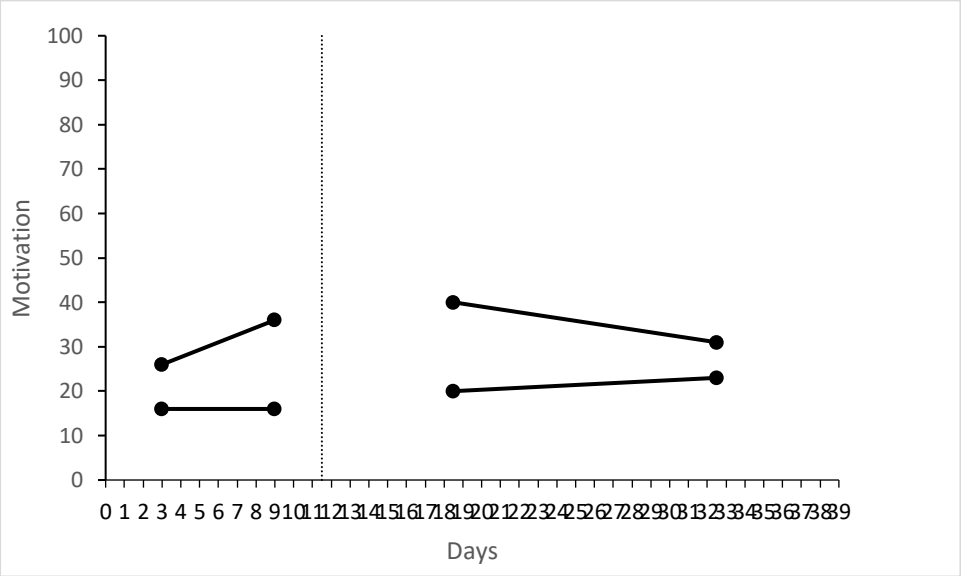




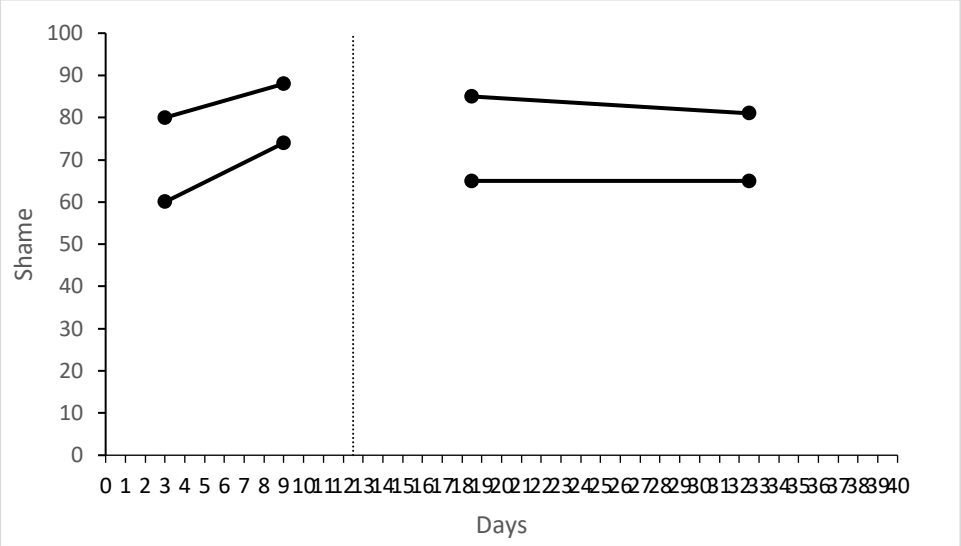


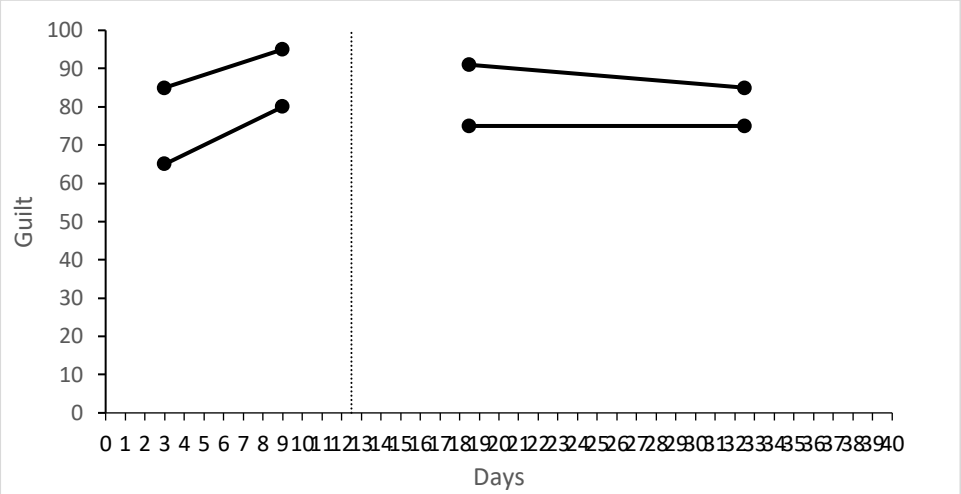

Compassion
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39
Days

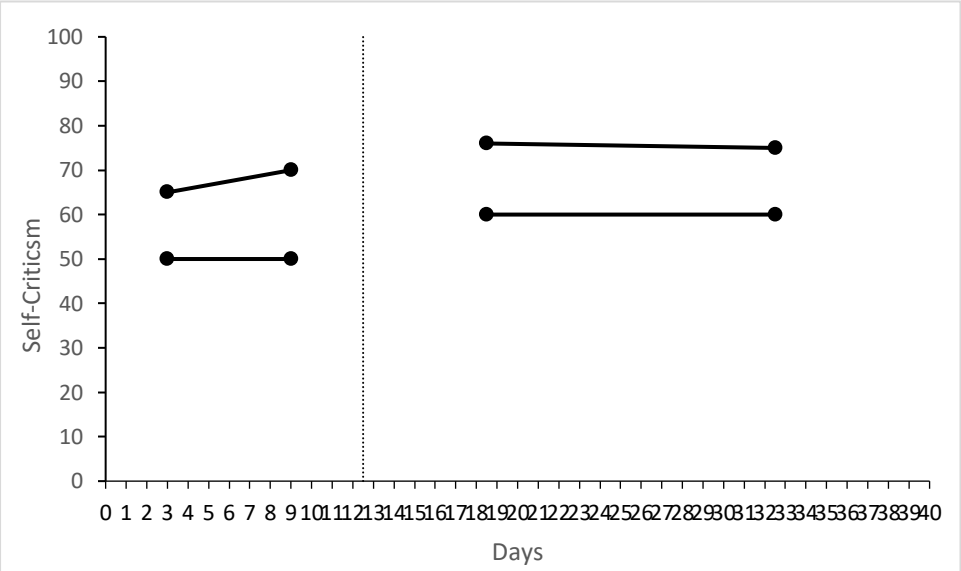

Normalising
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39
Days

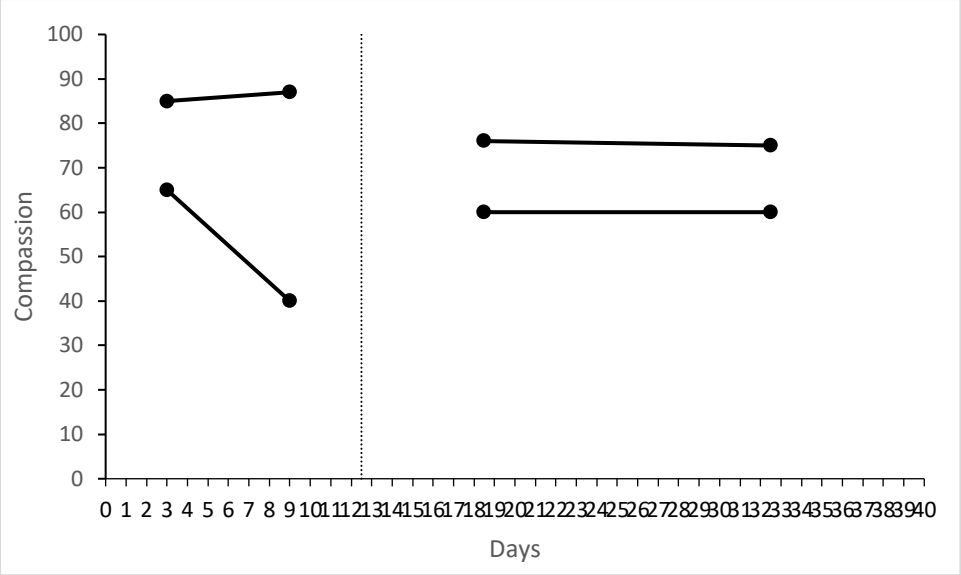

Motivation
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39
Days

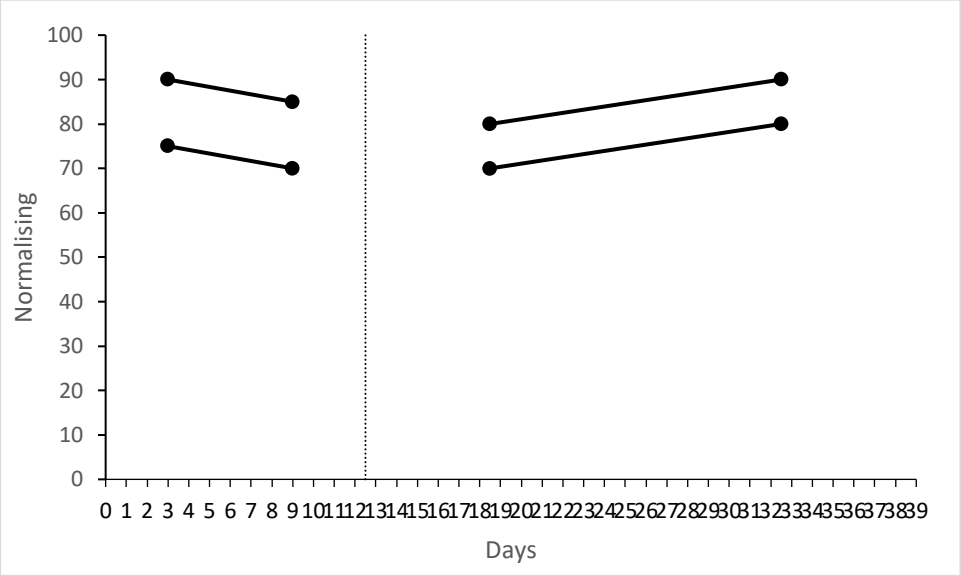
10. PJ Variability Analysis by Trended Range

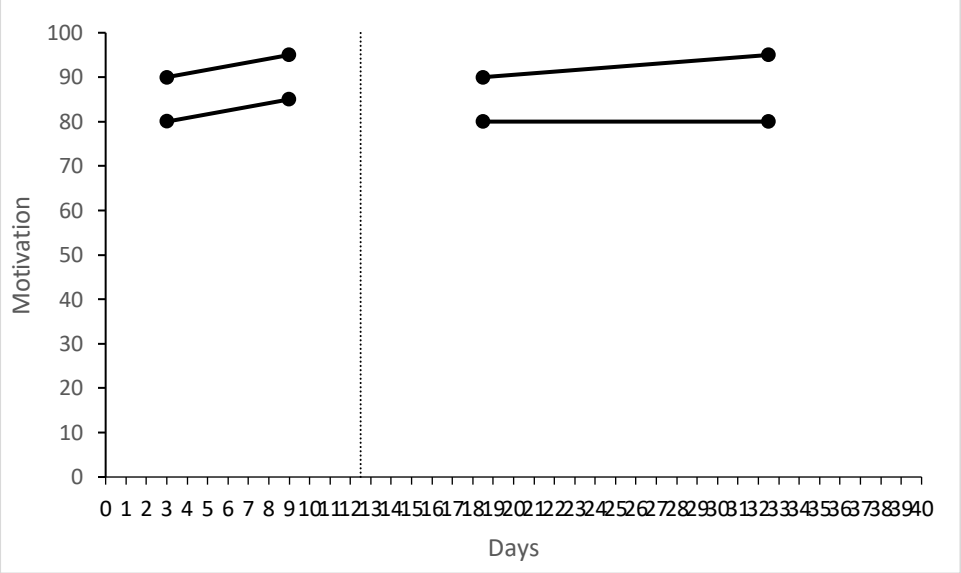




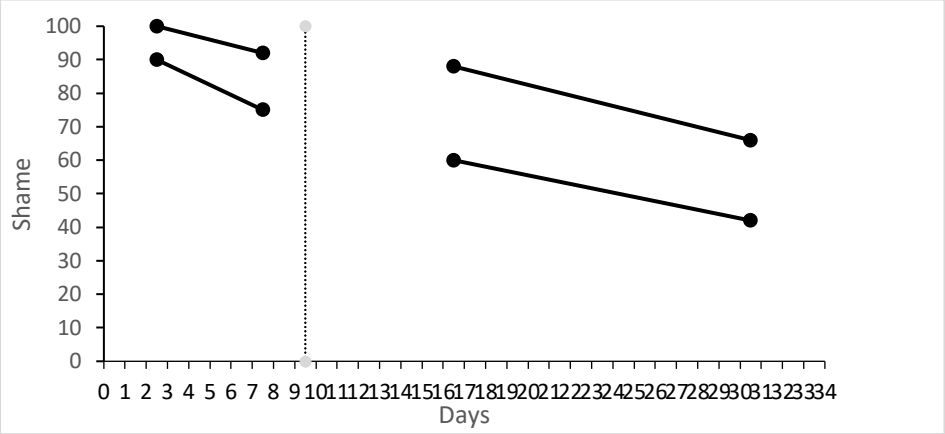


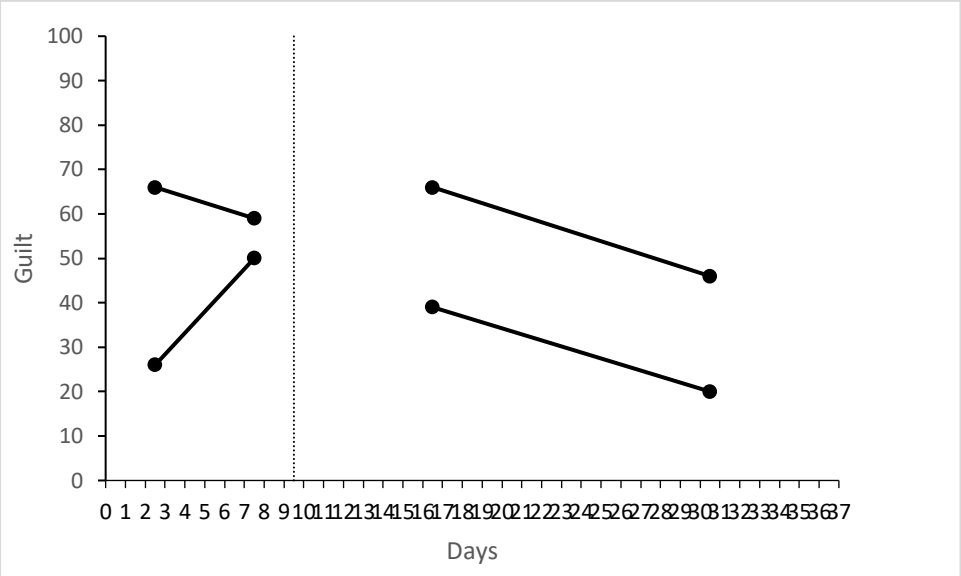

Compassion
Days

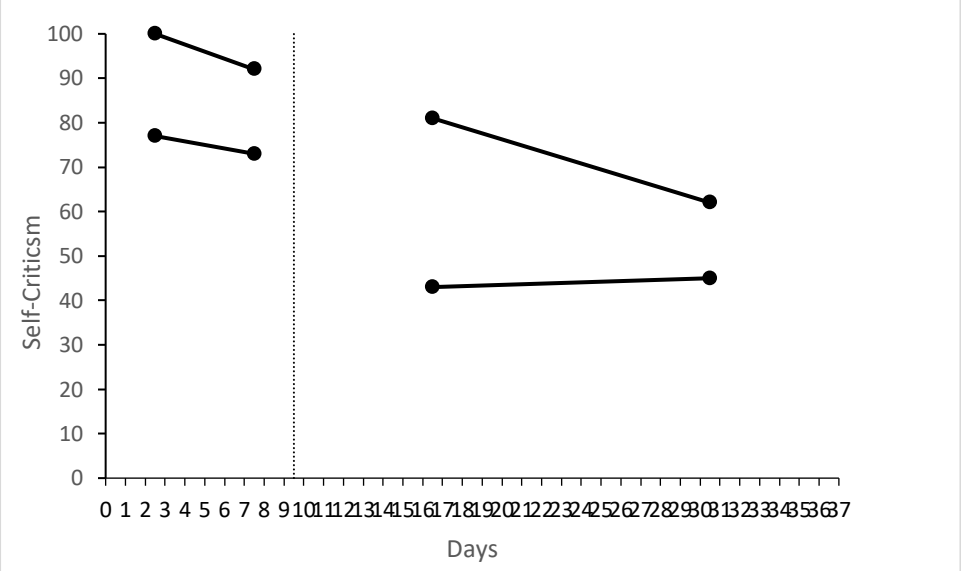

Normalising
Days

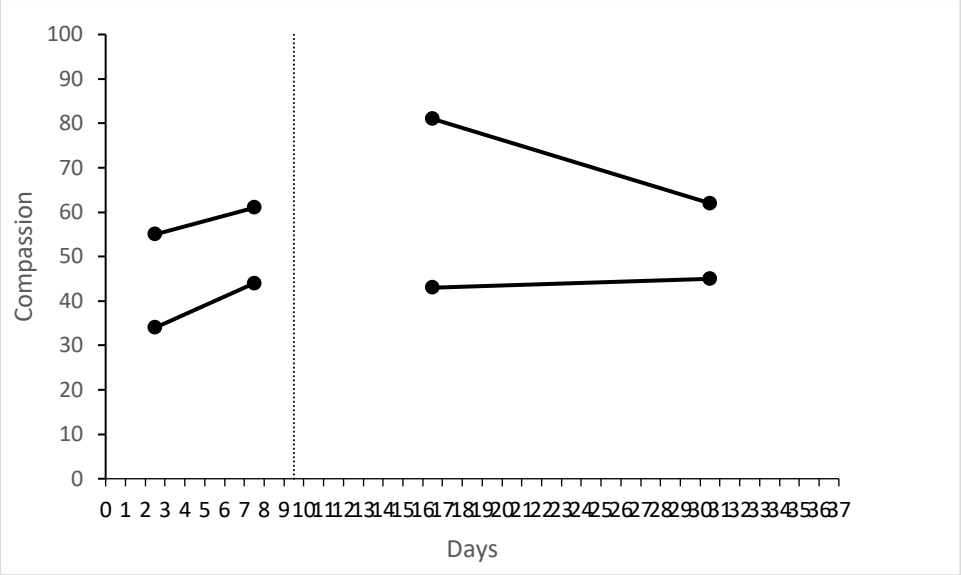

Motivation
Days

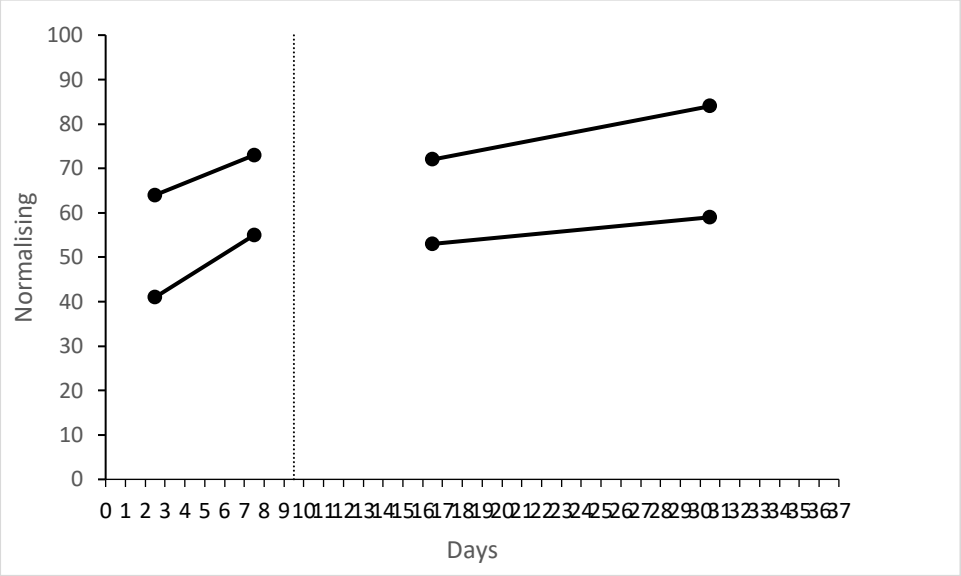
11. PK Variability Analysis by Trended Range

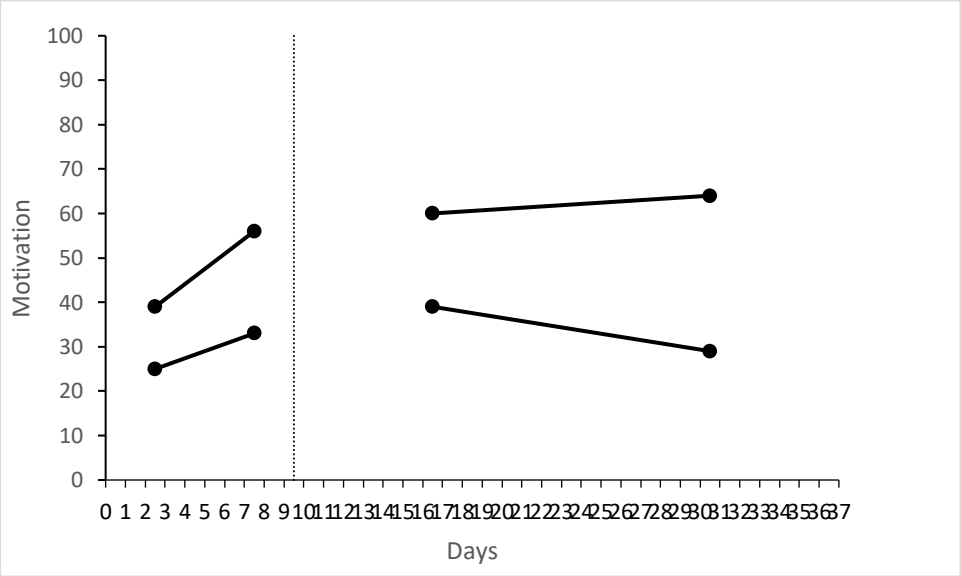




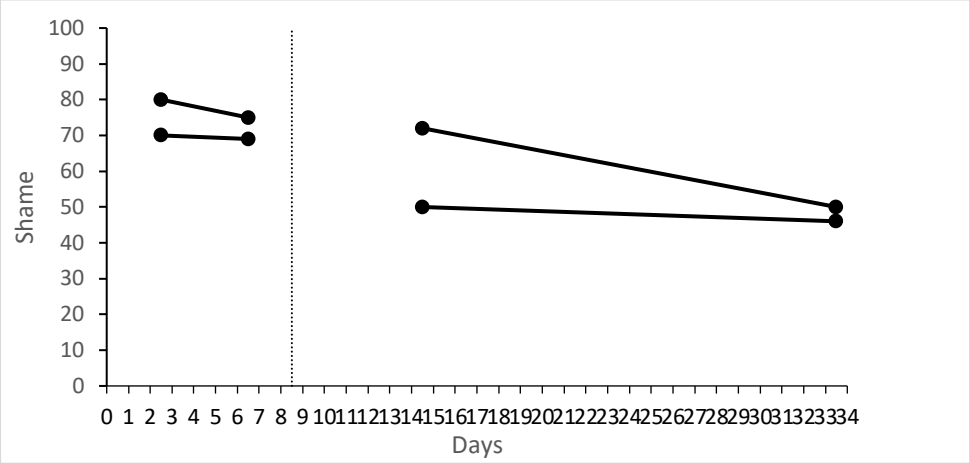


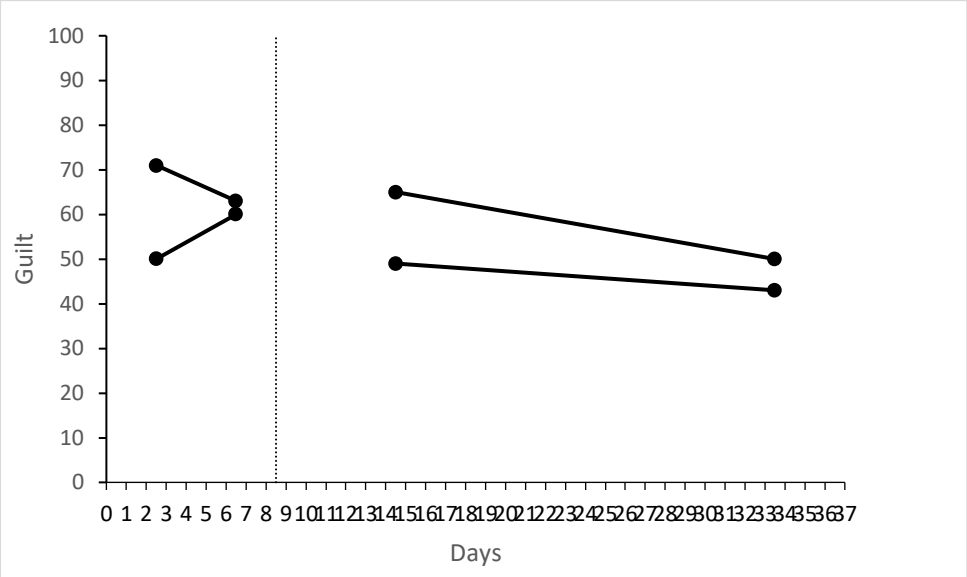

Compassion
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
Days

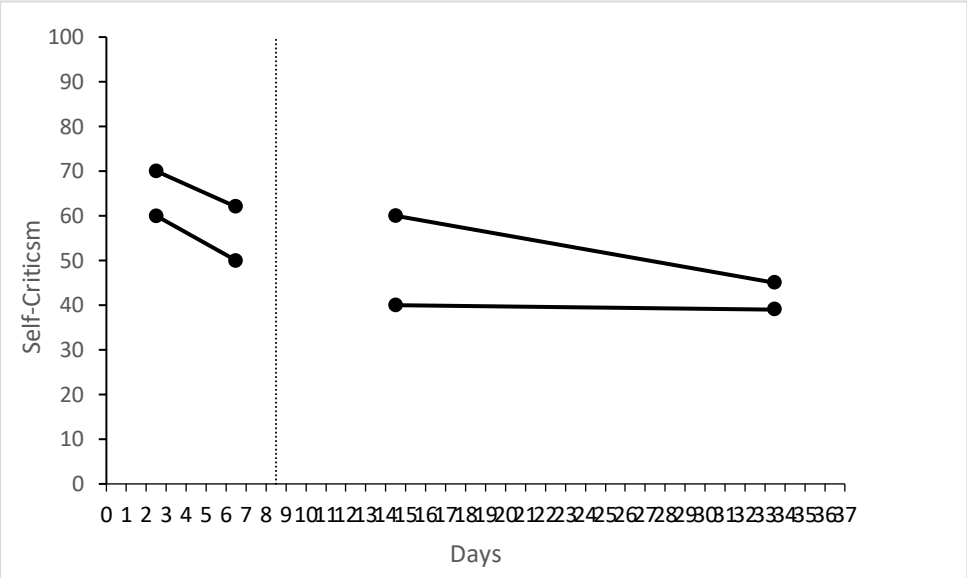

Normalising
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
Days

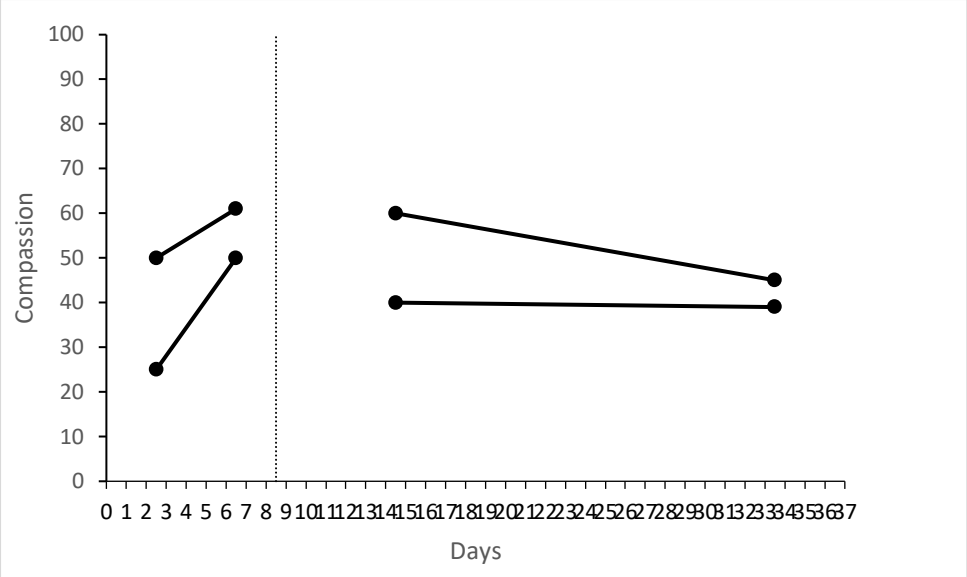

Motivation
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
Days

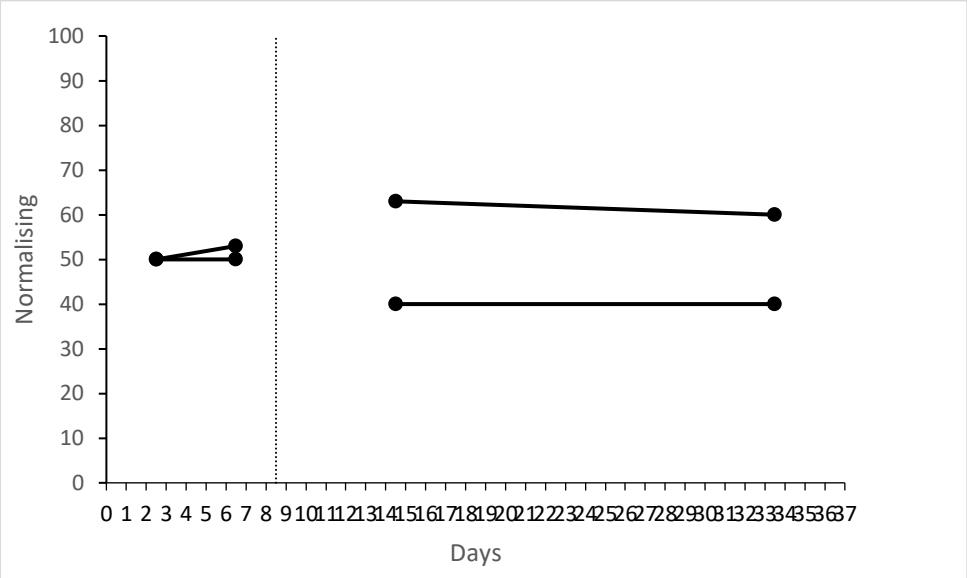
12. PL's Variability Analysis by Trended Range

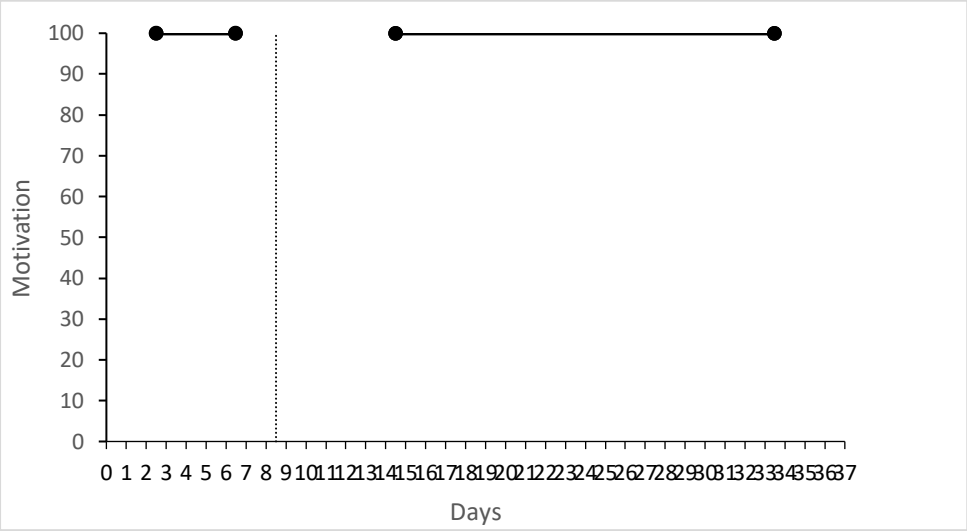




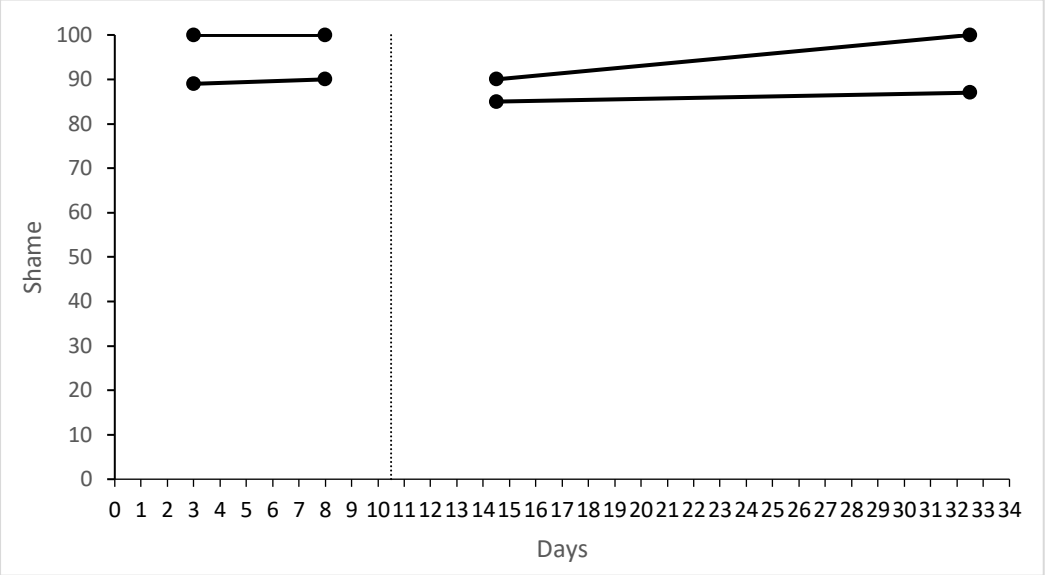


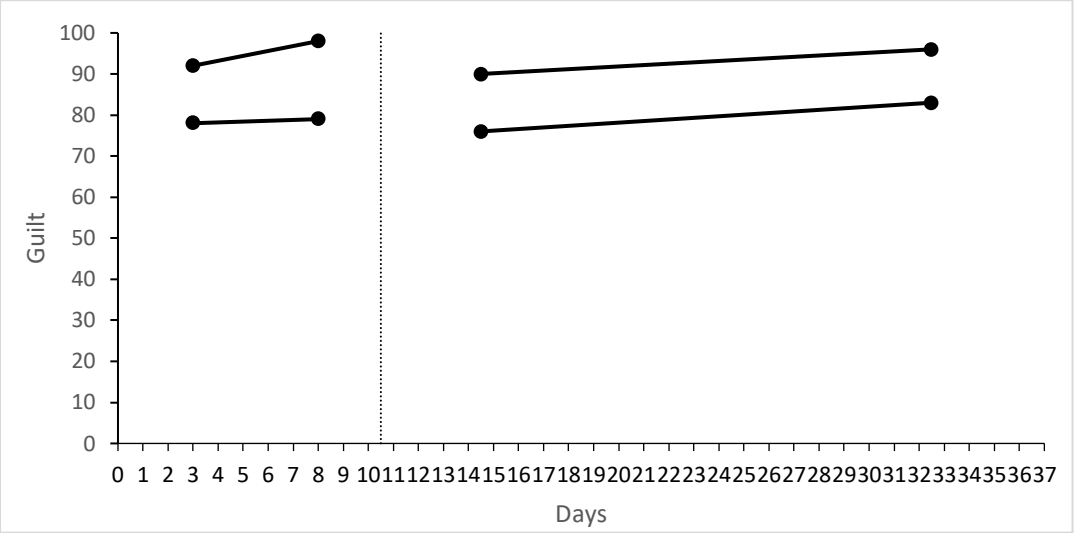

Compassion
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
Days

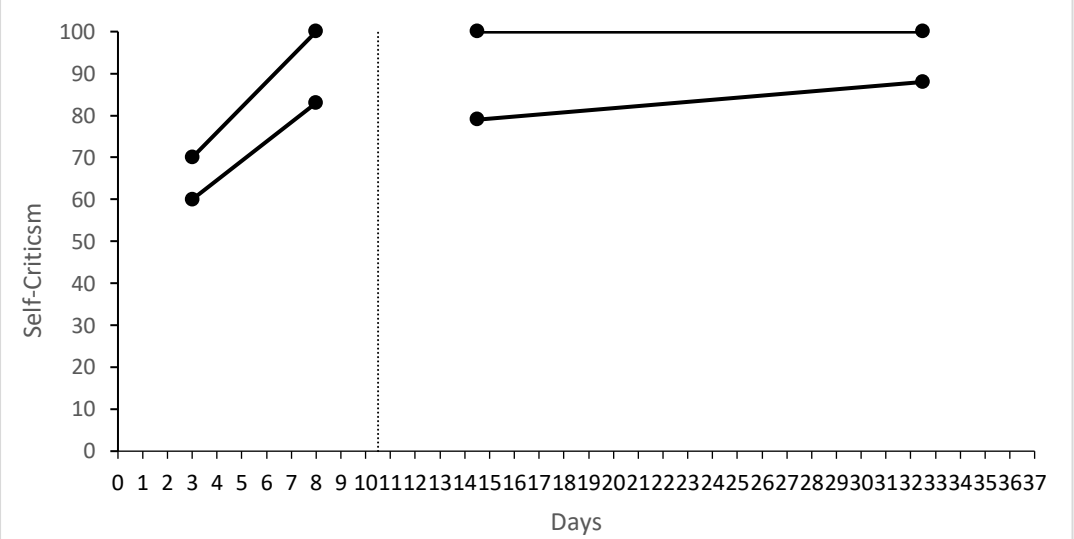

Normalising
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
Days

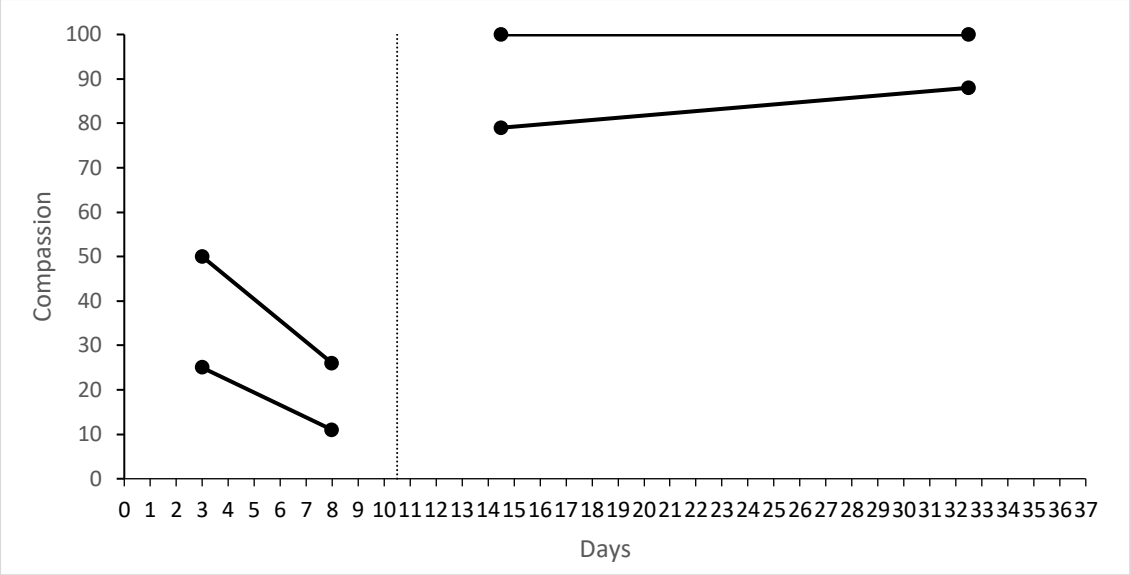

Motivation
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
Days

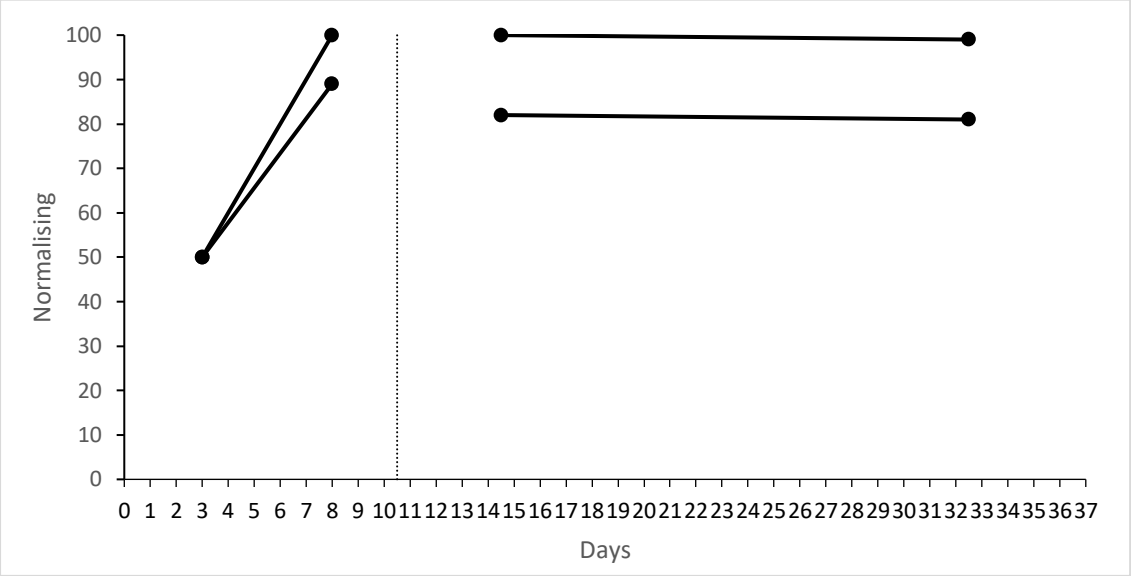
13. PM Variability Analysis by Trended Range

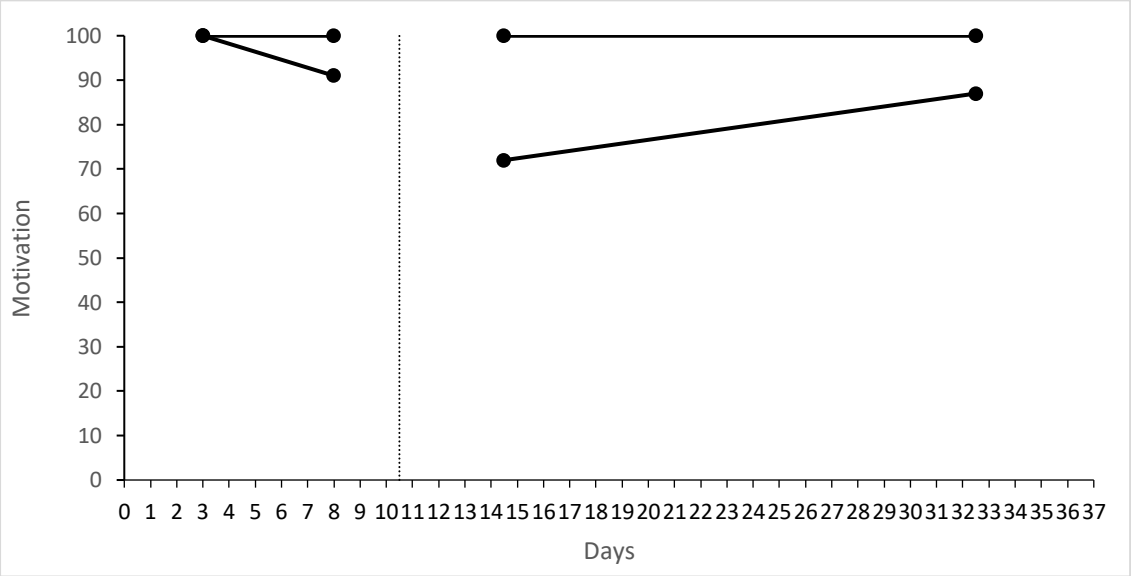




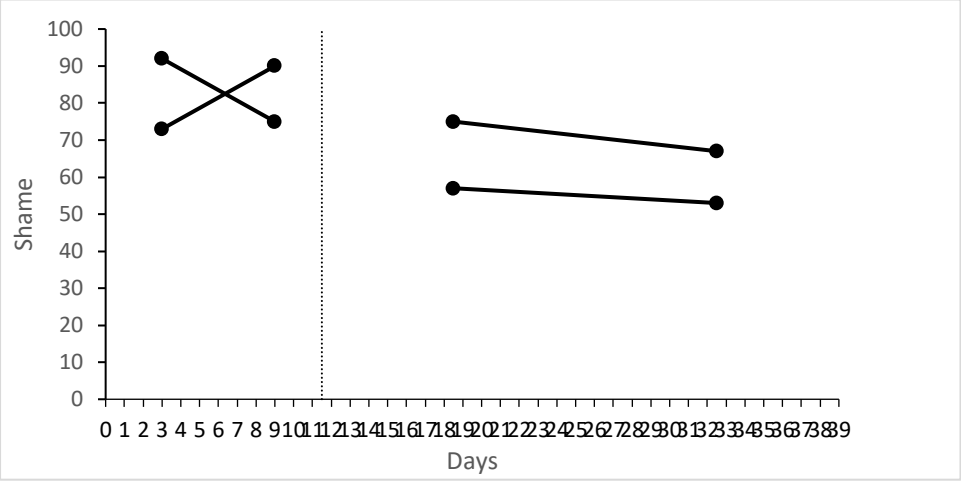


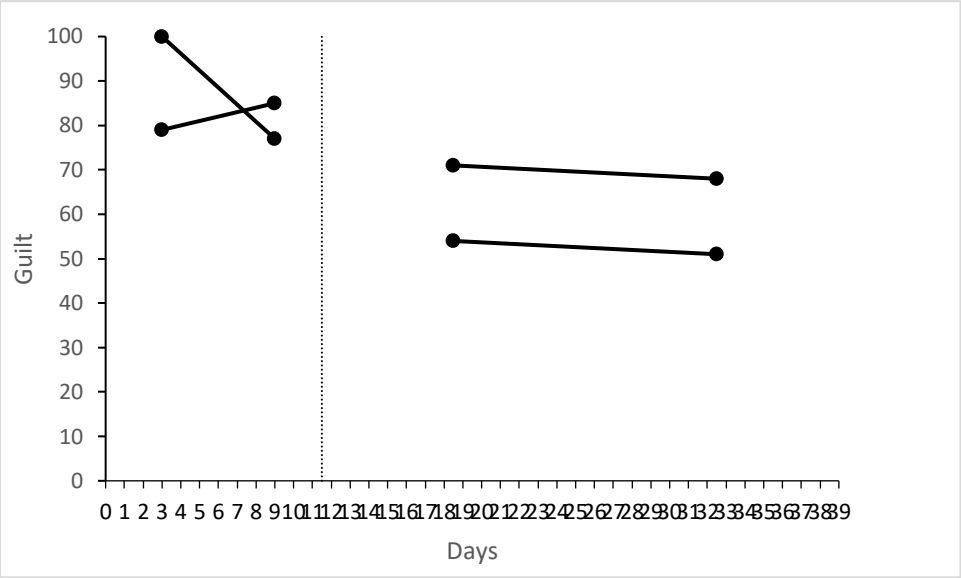

Compassion
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
Days

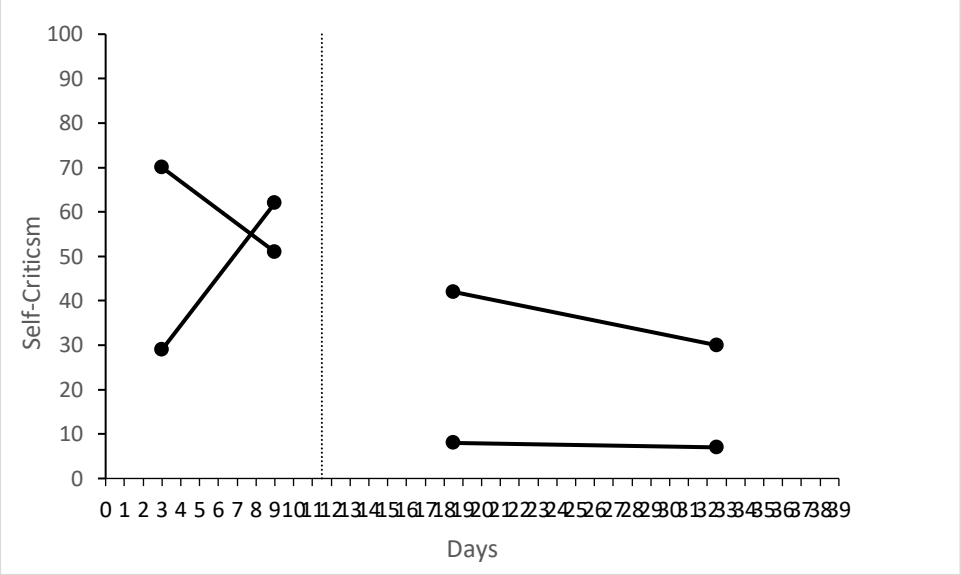

Normalising
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
Days

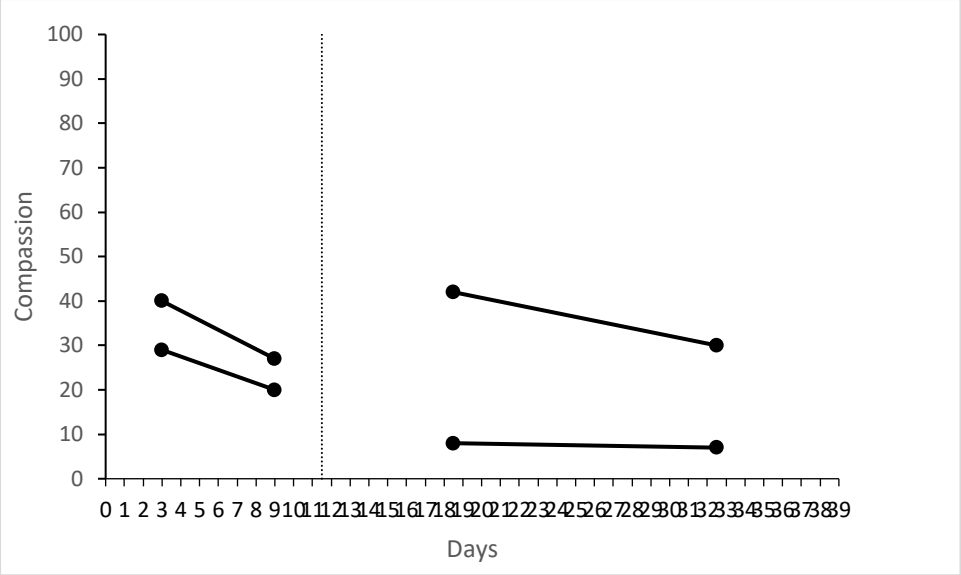

Motivation
100
90
80
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
Days

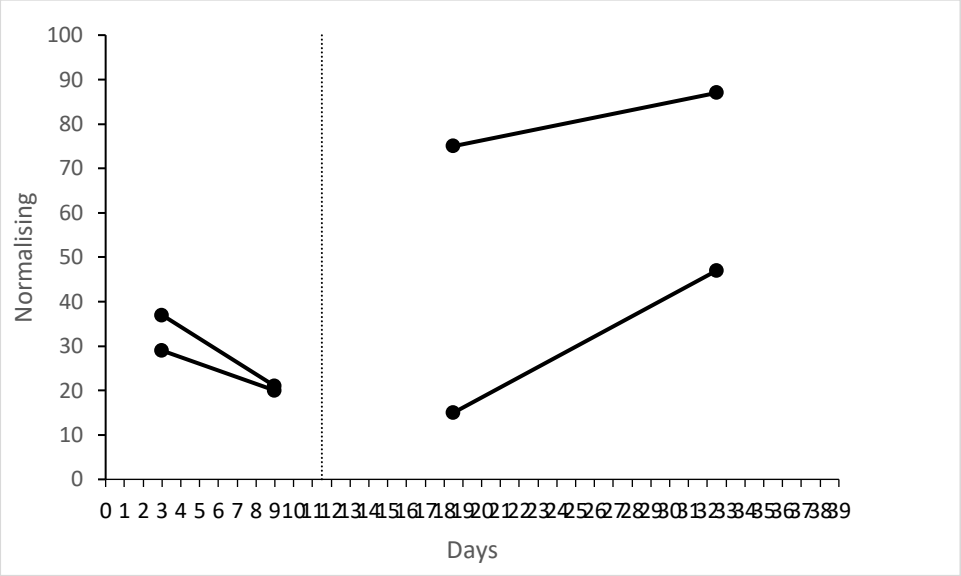
14. PN Variability Analysis by Trended Range

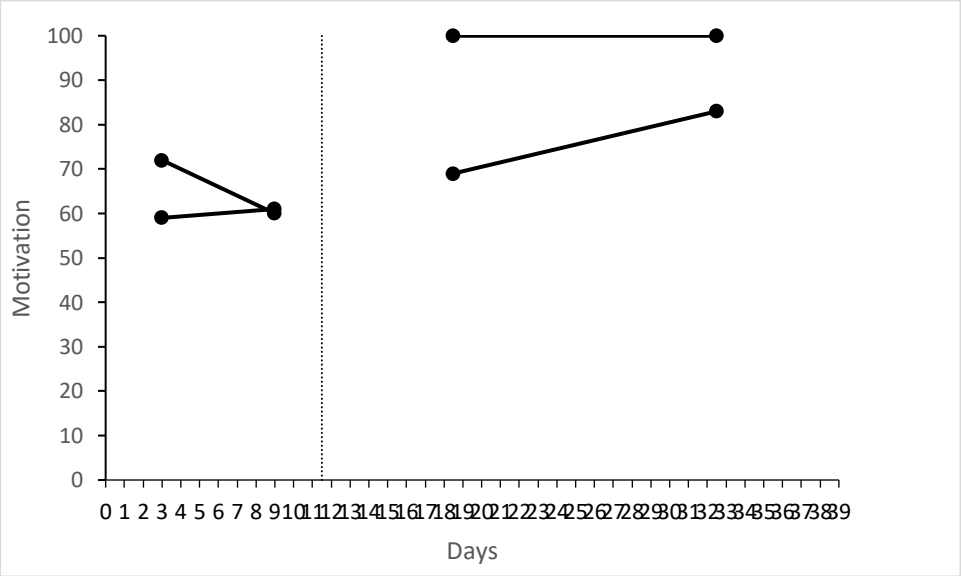




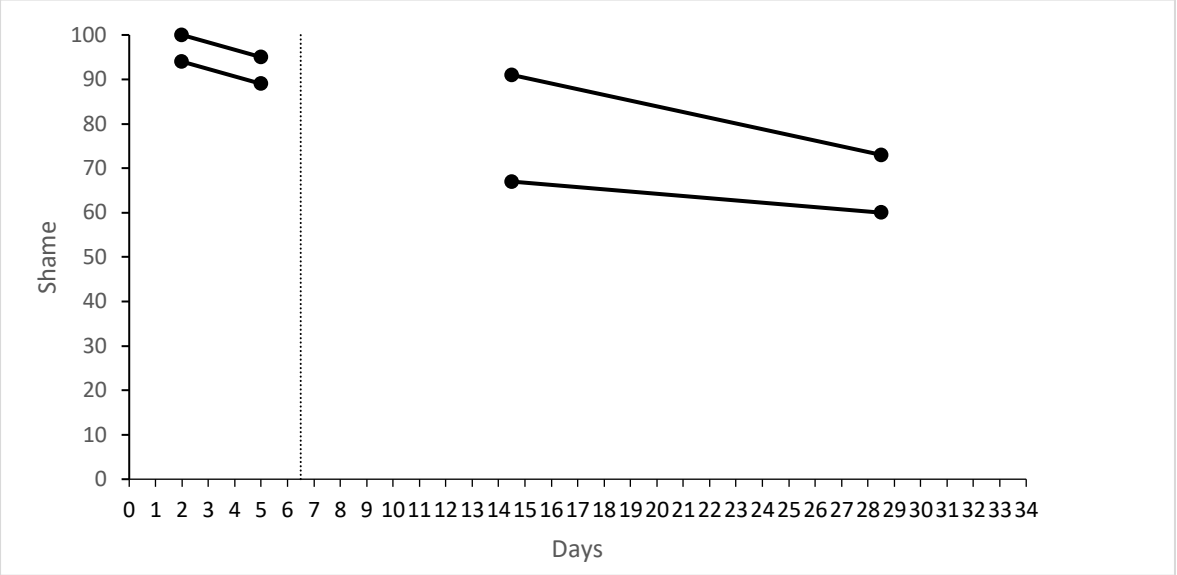


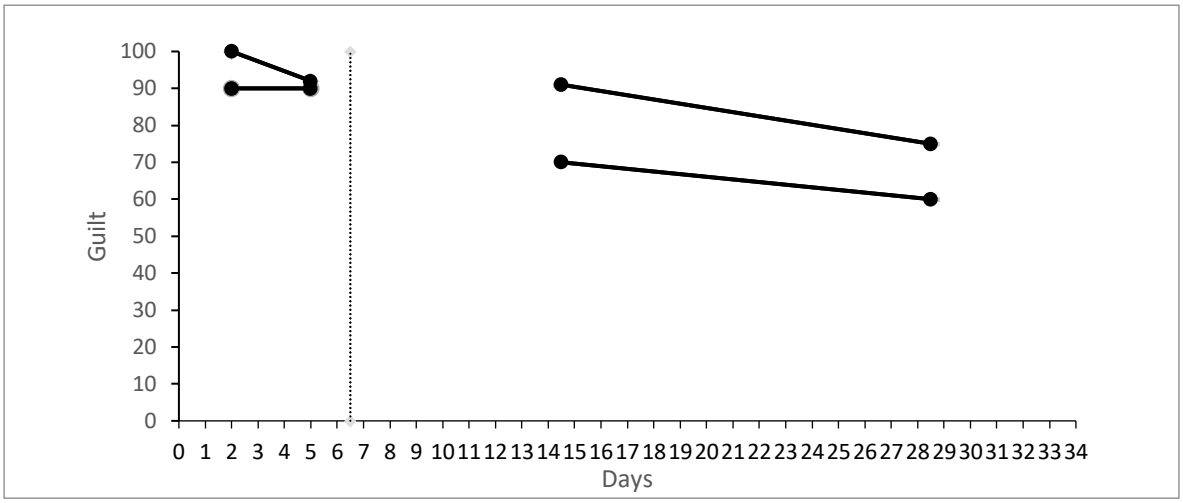

Compassion
Days

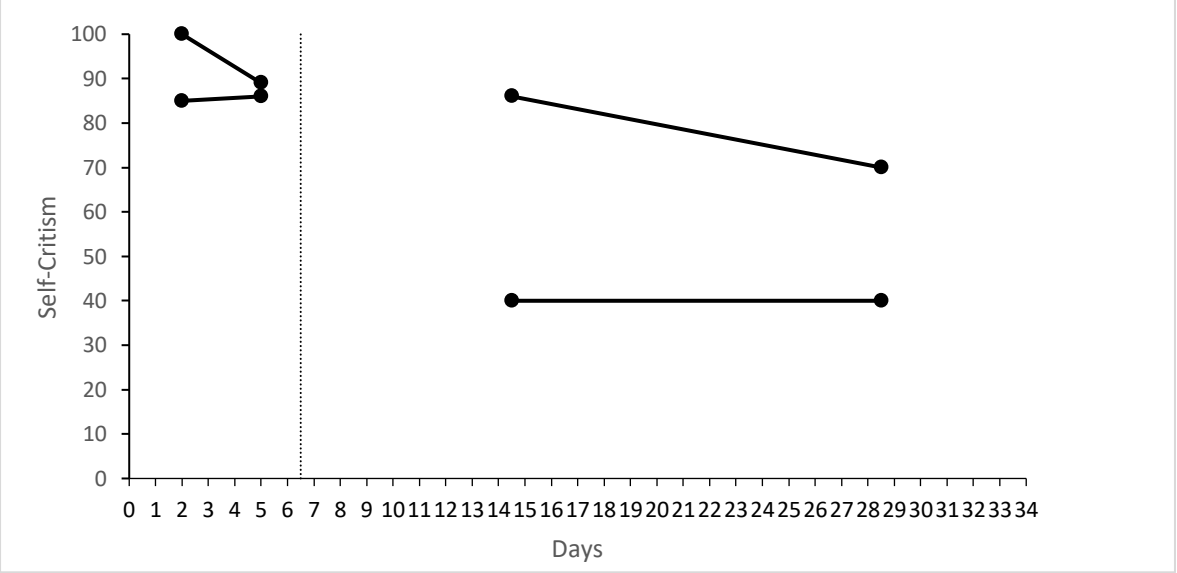

Normalising
Days

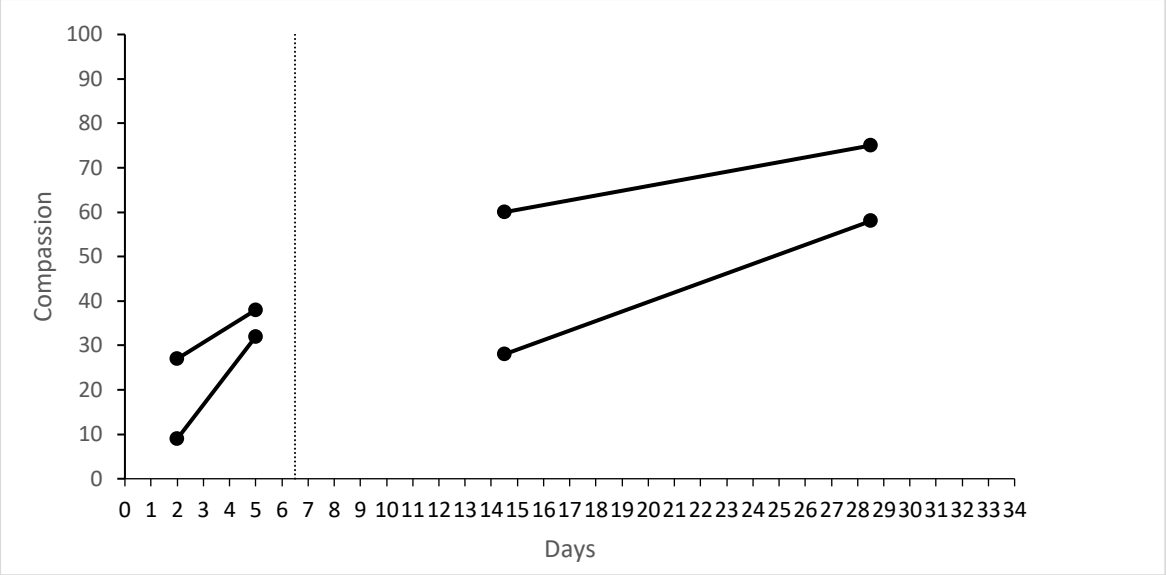

Motivation
Days

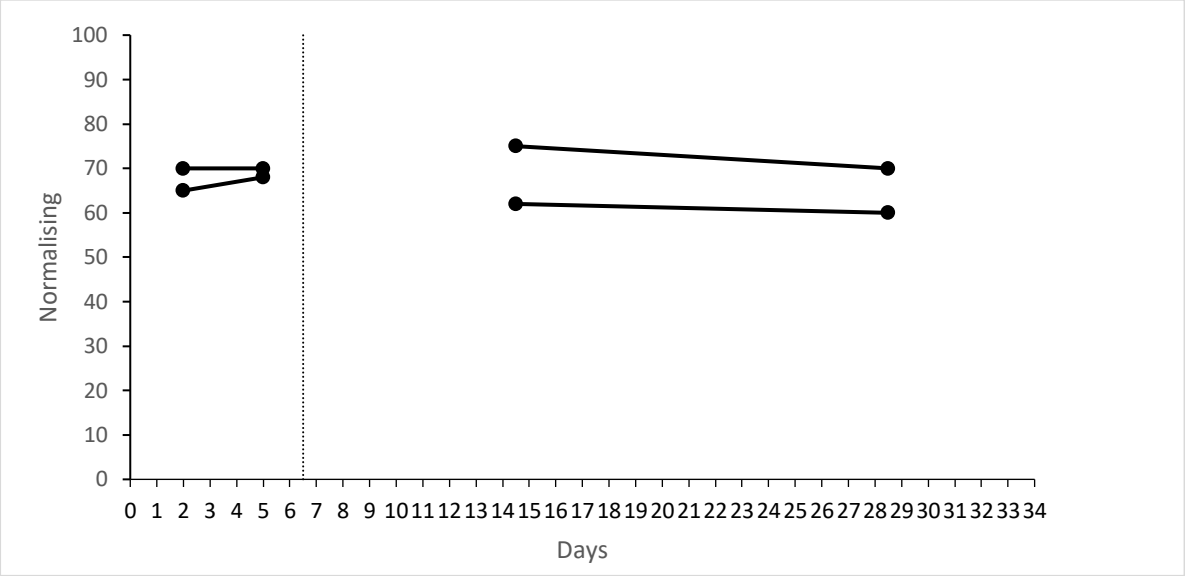
15. PO’s Variability Analysis by Trended Range

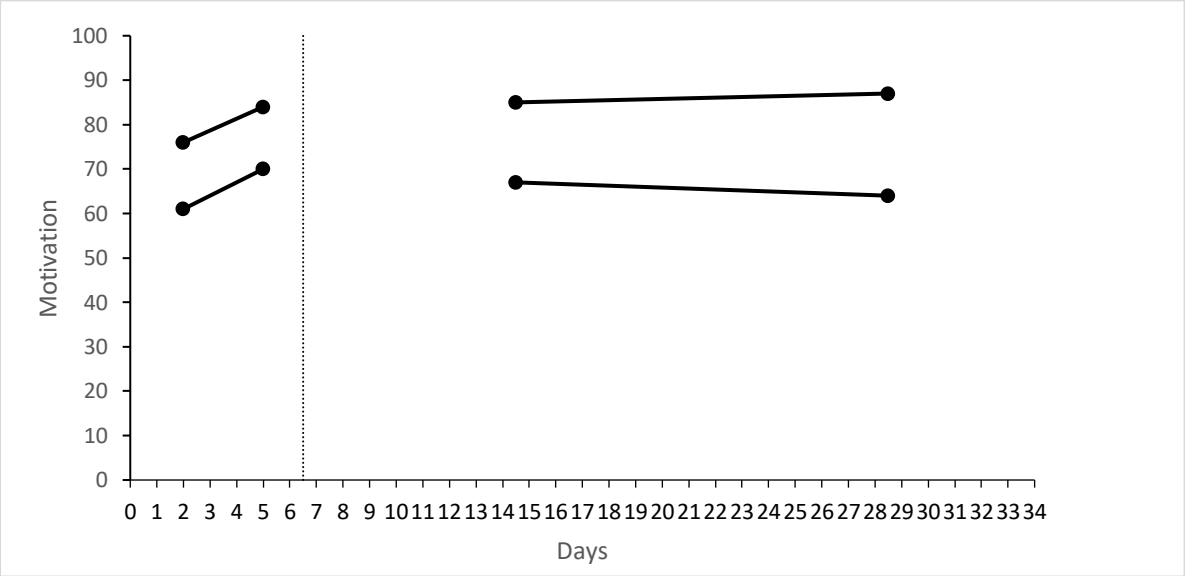







Compassion
Days


Normalising
Days


Motivation
Days