

Theory and Psychometric Development of the Self-Comforting and Coping Scale (SCCS): A Novel Measure of Self-Comforting Behaviors

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ABSTRACT

The ability to cope with stress and adversity is crucial for psychological wellbeing. Self-comforting behaviours, which involve actions taken to soothe oneself during distress, are increasingly recognized as vital components of adaptive coping. However, systematic assessment of these behaviours remains underexplored. This study introduces the Self-Comforting and Coping Scale (SCCS), a novel tool designed to measure self-comforting behaviours across diverse populations. The SCCS was developed through a multi-stage process, including literature review, expert consultations, focus group feedback, and pretesting, resulting in a comprehensive 13-domain framework. Findings indicate that the SCCS exhibits robust psychometric properties, including evidence of content and face validity. These results highlight the scale's potential as a valuable measure for assessing self-comforting behaviours and their role in resilience, mental health, and wellbeing. The SCCS addresses a critical gap in coping research, offering a holistic approach to understanding self-comforting behaviours and their contributions to adaptive coping strategies. Additionally, the constructs of the SCCS closely align with the Self-Comforting and Coping Theory (SCCT), ensuring that the scale accurately reflects the theoretical framework it is designed to test. Future research is encouraged to further validate the SCCS through longitudinal studies, cross-cultural comparisons, and investigations into its applications in clinical and organizational settings. This work provides a valuable foundation for advancing both theoretical insights and practical interventions in stress management and resilience-building, making the SCCS a significant contribution to the field of psychological assessment.

KEYWORDS

Self-Comforting Behaviours, Coping, Resilience, Mental Health, Psychometric Scale.

INTRODUCTION

Coping with stress and adversity is essential to psychological wellbeing. Researchers have increasingly focused on understanding the mechanisms and behaviours individuals use to manage stress effectively, with growing attention on self-comforting behaviours. These actions, taken to soothe oneself during distress, are recognized as crucial components of adaptive coping strategies (Skinner & Zimmer-Gembeck, 2016; Vasileiou et al., 2019; Paley & Hajal, 2022). However, the systematic assessment of these behaviours remains underexplored. This study addresses this gap by introducing the Self-Comforting and Coping Scale (SCCS), a novel tool designed to

measure these behaviours, assess its content and face validity, and lay the groundwork for future psychometric validation.

Existing constructs such as resilience, self-compassion, and life satisfaction are closely linked to self-comforting behaviours, yet no prior tool adequately captures the specific ways individuals soothe themselves during distress. Resilience, the capacity to recover from adversity, is positively associated with self-comforting behaviours, suggesting these behaviours help individuals better manage stress and setbacks (Smith et al., 2018; Sun, Seeley & Allen, 2022; Obohjemu et al., 2024a). Similarly, self-compassion, characterized by kindness toward oneself during challenges, is strongly connected to adaptive coping and emotional regulation (Neff, 2003; Neff & Germer, 2013). Life satisfaction, a key indicator of wellbeing, is also correlated with self-comforting behaviours, emphasizing their role in promoting happiness and reducing the negative effects of stress (Diener et al. 1985; Bradshaw & Kent 2018; Komanchuk et al., 2023).

The SCCS offers a novel approach to systematically measuring these behaviours. Developed through a rigorous multi-stage process—spanning conceptualization, item generation, focus group refinement, expert review, and validity assessment—the scale adheres to best practices in psychometric research (Boateng et al., 2018; Lambert & Newman, 2022; Swan et al., 2023). This methodical approach ensures the SCCS provides a reliable and valid framework for exploring how self-comforting behaviours contribute to emotional resilience and wellbeing.

As an essential tool for testing the Self-Comforting and Coping Theory (SCCT), proposed by this researcher, the SCCS aims to measure individuals' tendencies to engage in self-comforting behaviours and coping strategies when faced with stress and adversity. The SCCS evaluates various dimensions of self-comforting, such as self-kindness, emotional regulation, and resilience, as well as coping mechanisms like problem-solving, seeking social support, and cognitive restructuring. The constructs of the SCCS closely align with the constructs of the SCCT, ensuring that the scale accurately reflects the theoretical framework it is designed to test. Assessing these responses, the SCCS provides valuable insights into how individuals manage stress and maintain psychological well-being, contributing to a deeper understanding of their overall mental health.

Thus, the SCCS represents a significant advancement in psychological assessment, addressing a critical gap in the literature by providing a robust measure of self-comforting behaviours. It sets the stage for future studies into how these behaviours support resilience, mental health, and wellbeing, contributing to a deeper understanding of stress management and adaptive coping.

METHODS

The SCCS was developed through a rigorous multi-stage process. This involved conceptualizing the construct and generating items, refining them through focus groups, expert review, including additional items to address any gaps identified during the expert review, and evaluating the content and face validity of the scale (that is, pretesting and final refinements).

Stage 1: Conceptualization and Item Generation

The initial step in developing the Self-Comforting and Coping Scale (SCCS) involved the comprehensive conceptualization of self-comforting behaviours, a construct reflecting an individual's actions to soothe themselves during emotional distress. This stage was grounded in an extensive review of existing literature on stress management, emotional regulation, self-compassion, and related psychological constructs. These fields provided a foundation for identifying the components of self-comforting behaviours, such as their triggers,

mechanisms, and impacts on mental wellbeing. The conceptualization process was undertaken through a multi-stage approach, including focus group discussions and iterative item refinement, to ensure the scale's relevance and applicability to the target population.

At this initial stage, the focus was on brainstorming and creating an exhaustive pool of domains and items, without any initial restrictions, based on an extensive literature review and exploratory focus group discussions. The review was instrumental in identifying several preliminary domains associated with self-comforting and coping behaviours. Eighteen initial domains were identified to capture a broad spectrum of self-comforting and coping behaviours. These domains are shown in Table 1.

Table 1: The 18 Initial Domains

S/N	Domains	Illustrative examples
1.	Physical soothing	Deep breathing, relaxation techniques
2.	Emotional reframing	Positive self-talk, gratitude practices
3.	Cognitive distraction	Engaging in hobbies or tasks to shift focus
4.	Social connection	Seeking support from friends or loved ones
5.	Spiritual practices	Meditation, prayer
6.	Tactile comfort	Wrapping in a blanket, hugging oneself
7.	Creative expression	Drawing, writing, music
8.	Mindful consumption	Mindful eating, media consumption
9.	Movement-based comfort	Yoga, walking, dancing
10.	Nature engagement	Spending time outdoors, gardening
11.	Rituals and routines	Daily schedules, bedtime rituals
12.	Sensory comfort	Aromatherapy, soothing sounds
13.	Future-oriented practices	Goal setting, planning
14.	Perceived stress	Self-reported stress levels
15.	Positive affect	Feelings of happiness, contentment
16.	Negative affect	Feelings of sadness, anxiety
17.	General wellbeing	Overall life satisfaction
18.	Self-compassion	Self-kindness, mindfulness

This table presents the 18 initial domains assessed by the Self-Comforting and Coping Scale (SCCS), along with illustrative examples of behaviours or activities that correspond to each domain. The S/N column represents the serial number assigned to each domain for identification purposes. The domains capture a broad range of self-comforting behaviours, including emotional, physical, and cognitive strategies. For example, "Physical soothing" includes deep breathing and relaxation techniques, while "Self-compassion" is exemplified by self-kindness and mindfulness practices. These domains are integral to understanding the variety of self-comforting strategies that individuals may employ in response to stress or difficult emotional experiences.

Ninety items were drafted (5 items per domain), ensuring broad coverage of each domain's construct. The domains reflected a range of strategies people employ to manage emotional discomfort, but further refinement was needed to ensure that they comprehensively captured the construct.

Stage 2: Refinement Through Focus Groups

To enhance the relevance of the domains and items identified during conceptualization, focus group discussions were conducted with mental health professionals, educators, and undergraduate students. These groups were selected to represent a diverse population, ensuring the scale would be applicable to various age groups and contexts.

It was necessary to incorporate participant-driven feedback and ensure all relevant aspects of self-comforting and coping were included, while continuing to refine the domain structure. This stage also introduced new themes (domains and items) that were not covered in the initial conceptualization.

Thematic analysis of focus group data revealed several key insights. Participants affirmed the relevance of the preliminary domains identified in the literature, particularly emphasizing the importance of physical soothing and emotional reframing in everyday stress management. Fifteen domains were retained or modified based on focus group feedback. Three domains were either merged or eliminated, while two new domains, Learning from Failure and Goal Adjustment, emerged. The item count increased to 105 to reflect the addition of new domains and insights from the focus groups. Each of the fifteen domains was represented by an average of seven items, incorporating additional items for the newly added domains and expanding existing ones based on participant input. Furthermore, while social connection was already identified as a significant domain, focus groups highlighted complexities such as virtual interactions or one-sided comfort, like watching videos of soothing content, which warranted further refinement of the items.

Draft Survey and Item Examples

To provide a clearer picture of the type of questions included, Table 2 presents examples from some of the domains.

Table 2: Item Examples from Selected Domains

Domains	Items
Perceived Stress	How often do you think about the negative consequences of failing at something important to you?
Positive Affect	To what extent do you engage in activities that bring you joy, relaxation, positive affirmations, or self-encouragement after facing challenges?
Self-Compassion	1. When things are going badly for you, how likely are you to practice self-compassion and reassure yourself that everyone faces challenges? 2. How consistently do you treat yourself with the same kindness and compassion that you would offer to a friend going through a tough situation?
Negative Affect	1. How frequently do you experience negative emotions such as frustration or disappointment when confronted with failure?

	2. To what extent do these negative emotions linger and affect your overall mood?
Coping Strategies	<p>1. When things are going badly for you, how often do you actively seek support from friends, family, mentors, or advisors to gain emotional support?</p> <p>2. Rate your tendency to set realistic goals and break down large tasks into smaller, manageable steps to cope with emotional stress.</p>

This table presents example items from four key domains of the Self-Comforting and Coping Scale (SCCS). The domains, which reflect different aspects of emotional regulation and coping, include Perceived Stress, Positive Affect, Self-Compassion, Negative Affect, and Coping Strategies. Each domain includes representative survey items that assess the individual's self-reported experiences and behaviours related to these constructs. For example, the Self-Compassion domain includes items such as "When things are going badly for you, how likely are you to practice self-compassion?" These items are designed to gauge the frequency and intensity of participants' emotional experiences and coping strategies in response to challenging situations.

Stage 3: Expert Review and Item Reduction

An expert panel reviewed the draft survey for clarity, relevance, and distinctiveness. Items were removed or refined based on redundancy, irrelevance, and theoretical robustness. Items were evaluated on a 5-point scale to assess their importance in capturing self-comforting behaviours. The mean score for retained items was significantly higher (4.2) compared to those removed (2.7).

Key revisions included merging overlapping items to reduce redundancy, particularly in domains such as tactile comfort and sensory comfort. Additionally, the language was refined to improve readability and accessibility, ensuring that the items were free of jargon and could be easily understood by individuals across diverse educational backgrounds. For instance, the item "How frequently do you engage in tactile comfort activities like hugging yourself or using weighted blankets?" was split into two distinct items to better capture nuances in self-comforting strategies.

After further evaluation of the augmented item pool, the panel noted that Mindfulness and Acceptance were crucial in managing momentary stress and fostering self-compassion. They emphasized the importance of distinguishing between proactive (e.g., problem-solving) and reactive (e.g., distraction) approaches within Coping Strategies. The unique roles of structured versus unstructured practices in Reflection and Journaling were also discussed. Additionally, insights on missing elements were provided, such as contextualizing Goal Adjustment within the broader concept of resilience to address both success-oriented and failure-oriented goal shifts.

The domains were reduced to the final thirteen, and the items were refined to a total of sixty-five, with five items per domain, reflecting the diverse methods individuals use to comfort themselves. Weak or overlapping items were removed, and some domains, such as Mindfulness and Acceptance, were clarified to distinguish between overlapping constructs. The purpose of these revisions was to streamline the scale while maintaining comprehensive coverage of the final thirteen domains.

Stage 4: Inclusion of Additional Items

Additional items were created to address gaps identified by experts in the prior stage, ensuring a balance between comprehensiveness and practicality. The 13 final domains were retained, and the items were slightly expanded to seventy, with some domains having up to 6 items based on their complexity, such as Mindfulness and Acceptance and Cognitive Reframing.

New items were added to the Positive Affect domain to address encouragement during challenges, such as asking how frequently individuals remind themselves of past successes to boost their confidence during challenging situations. In the Cognitive Reframing domain, an item was included to measure the individual's ability to reinterpret setbacks positively, for example, by asking to what extent they try to see setbacks as opportunities for personal growth. For the Personal Rituals domain, one item focused on specific routines or activities that help individuals cope with stress and negative emotions, while another item addressed the frequency of these activities.

The final scale consists of 13 domains, each with 2 items, except for the last domain, which has only 1 item, making a total of 25 items. This choice was guided by the expert panel that reviewed and refined each domain and its associated items, ensuring that the scale was comprehensive, relevant, and psychometrically sound.

The key criteria were theoretical robustness, ensuring each domain was supported by substantial evidence from the literature; practical relevance, ensuring items resonated with the target population as affirmed by focus group feedback; and minimized redundancy, removing overlapping items to streamline the scale. For instance, General Wellbeing was represented by a single item that captured the participant's overall perception of their mental and emotional state. Items from domains such as Self-Compassion and Mindfulness and Acceptance were refined to ensure they measured distinct constructs while remaining complementary.

The final set of domains is presented in Table 3.

Table 3: Final Set of 13 Domains

S/N	Domains	Meaning
1.	Perceived Stress	Understanding the individual's subjective experience of stress.
2.	Positive Affect	Self-generated encouragement and optimism during stressful situations.
3.	Self-Compassion	Treating oneself with kindness and understanding in moments of difficulty.
4.	Negative Affect	Managing feelings such as anger, sadness, or anxiety.
5.	Coping Strategies	Adaptive techniques employed to deal with stressors.
6.	Learning from Failure	Gaining insights and resilience through setbacks.
7.	Cognitive Reframing	Reinterpreting situations to view them in a less distressing way.
8.	Mindfulness and Acceptance	Maintaining present-moment awareness and acceptance of experiences.
9.	Goal Adjustment	Flexibility in setting and revising personal goals.
10.	Personal Rituals	Engaging in comforting routines or activities.
11.	Visualization and Future Planning	Mentally envisioning positive outcomes and planning ahead.
12.	Reflection and Journaling	Processing thoughts and emotions through introspection or writing.

13.	General Wellbeing	Overall subjective sense of health and contentment.

This table presents the final set of 13 domains included in the Self-Comforting and Coping Scale (SCCS), along with their corresponding meanings. The S/N column represents the serial number assigned to each domain for identification purposes. The domains capture various aspects of emotional regulation, coping mechanisms, and overall wellbeing. For example, the Perceived Stress domain assesses an individual's subjective experience of stress, while Self-Compassion reflects how individuals treat themselves with kindness and understanding during difficult moments. Each domain reflects a different facet of self-comforting behaviour or emotional coping, with an emphasis on resilience, flexibility, and mindfulness. These domains provide a comprehensive framework for understanding the diverse strategies people use to manage stress and maintain emotional health.

Stage 5: Pretesting and Final Refinements

The final item pool was pretested with a diverse sample of students (n = 50) from 6 universities in West Midlands, United Kingdom. Participants provided qualitative feedback on the clarity, relevance, ease of use, reliability, and item flow. Statistical analyses, including item-total correlations and Cronbach's alpha, were performed to assess internal consistency and identify poorly performing items.

Feedback from pretesting indicated that the scale was designed at an appropriate reading level with clear, straightforward language, ensuring accessibility. The scale included both positively and negatively worded items to minimize response bias, achieving a balance. It addressed the key aspects of self-comforting behaviours across varied contexts, and most participants found the items clear and relatable. The survey was reported to be manageable in length, taking approximately 8-10 minutes to complete, indicating a suitable length and flow. Participants preferred a 5-point Likert scale, ranging from "strongly agree" to "strongly disagree," for most items, which was adopted in the final version.

Based on the findings, minor wording adjustments were made to address ambiguities. The result was the SCCS (Table 4), a novel tool for measuring self-comforting and coping behaviours, comprising 25 items across 13 domains, ready for further psychometric evaluation and application in research and practice.

Table 4: Descriptive Characteristics and Content of the SCCS

Content Domain	Items	Response Format
Perceived Stress	On a scale of 1 to 5, how often have you felt overwhelmed by emotional stress in the past month?	1 (Never) to 5 (Very often)
	How often do you think about the negative consequences of failing at something important to you?	1 (Rarely) to 5 (Always)
Positive Affect (Self-Encouragement)	To what extent do you engage in activities that bring you joy, relaxation, positive affirmations, or self-encouragement after facing challenges?	1 (Not at all) to 5 (Very much)
	How frequently do you remind yourself of past successes to boost your confidence during challenging situations?	1 (Rarely) to 5 (Frequently)
Self-Compassion	When things are going badly for you, how likely are you to practice self-compassion and reassure yourself that everyone faces challenges?	1 (Not likely) to 5 (Very likely)
	How consistently do you treat yourself with the same kindness and compassion that you would offer to a friend going through a tough situation?	1 (Rarely) to 5 (Always)

Negative Affect	How frequently do you experience negative emotions such as frustration or disappointment when confronted with failure?	1 (Rarely) to 5 (Always)
	To what extent do these negative emotions linger and affect your overall mood?	1 (Not at all) to 5 (Extremely)
Coping Strategies	When things are going badly for you, how often do you actively seek support from friends, family, mentors, or advisors to gain emotional support?	1 (Rarely) to 5 (Always)
	Rate your tendency to set realistic goals and break down large tasks into smaller, manageable steps to cope with emotional stress.	1 (Not at all) to 5 (Extremely)
Learning from Failure	How strongly do you view failures as opportunities to learn and improve your skills?	1 (Strongly Disagree) to 5 (Strongly Agree)
	How often do you analyse the reasons behind your setbacks to identify areas for personal and professional growth without being too hard on yourself?	1 (Never) to 5 (Always)
Cognitive Reframing	When things are going badly for you, how actively do you try to reframe negative thoughts into more positive ones?	1 (Strongly Disagree) to 5 (Strongly Agree)
	To what extent do you try to see setbacks as opportunities for personal growth?	1 (Not at all) to 5 (To a great extent)
Mindfulness and Acceptance	How often do you practice mindfulness techniques, such as deep breathing or meditation, to manage emotional stress?	1 (Not at all) to 5 (Very often)
	To what extent do you accept your failures without harsh self-judgment and focus on moving forward?	1 (Not at all) to 5 (Completely)
Goal Adjustment	To what extent do you adapt your goals in response to setbacks, setting more realistic expectations?	1 (Not at all) to 5 (To a great extent)
	How often do you find alternative paths to achieve your objectives when faced with obstacles?	1 (Rarely) to 5 (Very often)
Personal Rituals	How frequently do you engage in personal rituals or comforting activities to soothe yourself when things are going badly for you?	1 (Rarely) to 5 (Frequently)
	Do you have specific routines or activities that help you cope with stress and negative emotions?	1 (Not at all) to 5 (To a great extent)
Visualization and Future Planning	How vividly do you visualize yourself overcoming challenges and succeeding in the future?	1 (Not at all) to 5 (Very vividly)
	How actively do you plan for future success, setting clear goals and strategies?	1 (Not at all) to 5 (Very actively)
Reflection and Journaling	How frequently do you take time to reflect on your feelings and experiences related to failure through journaling or other forms of self-reflection?	1 (Never) to 5 (Always)
	How frequently do you use writing as a tool to process and understand your emotions after encountering setbacks?	1 (Rarely) to 5 (Frequently)
General Wellbeing	On a scale of 1 to 5, rate your overall sense of wellbeing despite life's challenges.	1 (Very Poor) to 5 (Excellent)

This table presents the content domains, corresponding survey items, and response formats for the Self-Comforting and Coping Scale (SCCS). The Content Domain column lists the broad psychological constructs measured by the scale, such as Perceived Stress, Positive Affect (Self-Encouragement), and General Wellbeing. Each domain is represented by specific Items, which are the survey questions designed to measure the respective construct. For example, the Perceived Stress domain includes items

like, "On a scale of 1 to 5, how often have you felt overwhelmed by emotional stress in the past month?" Finally, the Response Format column shows the type of Likert scale used for respondents to answer each item, ranging from 1 (e.g., "Never" or "Strongly Disagree") to 5 (e.g., "Very often" or "Strongly Agree").

Of the 13 domains, 6 were adapted from pre-existing survey instruments, while 7 were newly developed. The Table 5 shows a breakdown of the domains and their respective origins.

Table 5: Origins of the 13 Domains

S/N	Domains adapted from pre-existing survey instruments	Domains that were newly developed
1.	Perceived Stress: Based on the Perceived Stress Scale (PSS) by Sheldon Cohen (Sheldon, Kamarck & Mermelstein, 1983).	Learning from Failure
2.	Positive Affect: Derived from the Positive and Negative Affect Schedule (PANAS) (Watson, Clark & Tellegen, 1988).	Cognitive Reframing
3.	Self-Compassion: Adapted from the Self-Compassion Scale (SCS) by Kristin Neff (Neff, 2003).	Goal Adjustment
4.	Negative Affect: Also derived from the Positive and Negative Affect Schedule (PANAS) (Watson, Clark & Tellegen, 1988).	Personal Rituals
5.	Coping Strategies: Influenced by the Brief COPE Inventory (Carver, Scheier & Weintraub, 1989).	Visualization and Future Planning
6.	Mindfulness and Acceptance: Based on the Mindful Attention Awareness Scale (MAAS) (Brown & Ryan, 2003).	Reflection and Journaling
7.	Nil	General Wellbeing

This table outlines the origins of the 13 domains included in the Self-Comforting and Coping Scale (SCCS). The S/N column represents the serial number assigned to each domain for identification purposes. The domains are categorized into two groups: those adapted from pre-existing survey instruments and those newly developed for the SCCS. The first column lists domains that were adapted from established scales, such as Perceived Stress, based on the Perceived Stress Scale (PSS) by Sheldon Cohen (1983), and Positive Affect, derived from the Positive and Negative Affect Schedule (PANAS) by Watson, Clark, and Tellegen (1988). The second column includes domains that were newly developed for the SCCS, such as Learning from Failure and Cognitive Reframing, which are specific to the study's aims and not adapted from previous instruments.

Figure 1 provides a summary of the survey development.

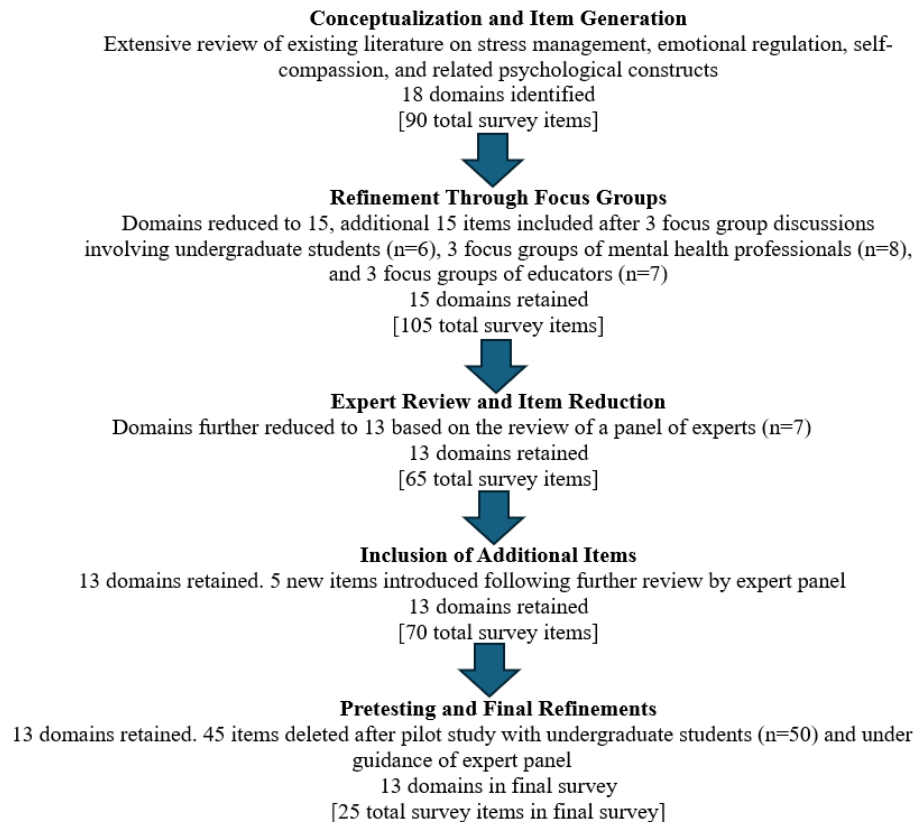


Fig. 1: Flowchart of Survey Development Process

This figure illustrates the step-by-step process followed in the development of the Self-Comforting and Coping Scale. The process began with Conceptualization and Item Generation, involving an extensive literature review on stress management, emotional regulation, self-compassion, and related psychological constructs. Initial domains and items were generated, leading to 18 domains and 90 survey items. Following the literature review, the Refinement Through Focus Groups phase involved three focus groups each of undergraduate students (n=6), mental health professionals (n=8), and educators (n=7), resulting in a reduction to 15 domains and 105 items. The Expert Review and Item Reduction phase further refined the domains based on expert feedback, reducing the number of domains to 13, with 65 items retained. In the Inclusion of Additional Items phase, further expert review added 5 new items, maintaining the 13 domains and increasing the total items to 70. Finally, Pretesting and Final Refinements involved a pilot study with 50 undergraduate students, leading to the deletion of 45 items. The final version of the survey retained 13 domains and 25 items, reflecting the finalized SCCS instrument.

RESULTS

Sociodemographic Characteristics of Participants

The 50 students who participated in the validation of the expert-reviewed survey represented a wide age range (20–50+), with a significant proportion in the 30–39 age group. The majority were female (54%), with 40%

identifying as male and 6% as non-binary. A significant proportion of the participants (70%) were parents, balancing parenting with their academic and professional responsibilities. In terms of employment, 50% worked full-time, 40% part-time, and 10% were unemployed. The income distribution is relatively evenly spread across the different income brackets. Most students (40%) were in the Foundation Year (Level 3), with others distributed across Level 4 (30%), Level 5 (20%), and Level 6 (10%). The sample also reflected a diverse range of university partnerships, with the highest representation from Oxford Brookes University (40%). The sample is diverse, with a range of ethnic backgrounds represented. Black African and White Other groups are the most numerous, followed by Asian Pakistani.

Participants' SCCS Scores

For the present study, it was hypothesized that individuals with higher levels of self-comforting would be more likely to report engaging in self-comforting activities, such as positive self-encouragement, cognitive reframing, and mindfulness, and showing themselves the same understanding and support they offer to others. To explore this hypothesis, the total sample's SCCS scores were analyzed, and descriptive statistics showed that the mean score across the overall scale and its domains was notably above the midpoint of the scoring range. For instance, the average scores on the Positive Affect, Cognitive Reframing, and Mindfulness domains were significantly higher than expected based on normative data from prior studies involving general adult populations (Rodríguez et al. 2024; Glezakakis et al. 2024). This finding suggests that the students exhibited a strong capacity for engaging in self-comforting behaviours, including practices of self-compassion, goal adjustment, and seeking emotional support. Furthermore, a large proportion of participants (72%) scored in the upper quartile of the SCCS distribution, reinforcing the interpretation that high self-comforting tendencies were prevalent within the sample.

A descriptive analysis of the data is presented in Table 6, which highlights the mean scores, standard deviations, and comparisons to the midpoint (3.0) for each domain.

Table 6: Descriptive Statistics for SCCS Domains

SCCS Domain	Mean (M)	Standard Deviation (SD)	Midpoint Comparison
Perceived Stress	3.1	0.65	Above midpoint
Positive Affect (Self-Encouragement)	4.3	0.80	Above midpoint
Self-Compassion	4.2	0.75	Above midpoint
Negative Affect	2.8	0.90	Below midpoint
Coping Strategies	3.2	0.68	Above midpoint
Learning from Failure	3.3	0.66	Above midpoint
Cognitive Reframing	3.18	0.74	Above midpoint
Mindfulness and Acceptance	4.5	0.60	Above midpoint
Goal Adjustment	3.35	0.77	Above midpoint
Personal Rituals	3.25	0.73	Above midpoint
Visualization and Future Planning	3.3	0.75	Above midpoint
Reflection and Journaling	3.15	0.78	Above midpoint
General Wellbeing	3.2	0.71	Above midpoint

This table presents the mean (M) and standard deviation (SD) for each domain of the Self-Comforting and Coping Scale (SCCS). The midpoint comparison indicates whether the mean score for each domain is above or below the scale's midpoint (3.0). A score above the midpoint suggests greater engagement in the respective coping or self-comforting behaviour, while a score below the midpoint indicates a tendency to engage less frequently in that behaviour. The domain of Negative Affect has a mean below the midpoint, indicating lower levels of self-reported negative emotions or affect.

All domains, except for "Negative Affect," had mean scores above the midpoint, indicating a tendency towards higher levels of self-comforting behaviours across the sample. For example, 'Mindfulness and Acceptance' recorded the highest mean score (4.5 ± 0.6), followed by 'Positive Affect' (4.3 ± 0.8) and 'Self-Compassion' (4.2 ± 0.75), indicating that students frequently engaged in present-moment awareness and nonjudgmental acceptance. These findings suggest that participants reported relatively high levels of self-comforting behaviours across most domains, consistent with the hypothesis. In contrast, "Negative Affect" was the only domain to fall below the midpoint (2.8 ± 0.9), which aligns with the idea that participants experienced less frequent negative emotional responses.

The bar graph (Fig. 2) illustrates the mean scores and standard deviations for all 13 domains. Each bar corresponds to a domain, and error bars represent the standard deviation. A red dashed line at 3.0, representing the scale's midpoint, provides a visual reference for evaluating whether the domain scores are above or below average. This visualization emphasizes the consistency with which students reported high engagement in self-comforting practices, particularly in areas such as "Positive Affect," "Self-Compassion," and "Goal Adjustment."

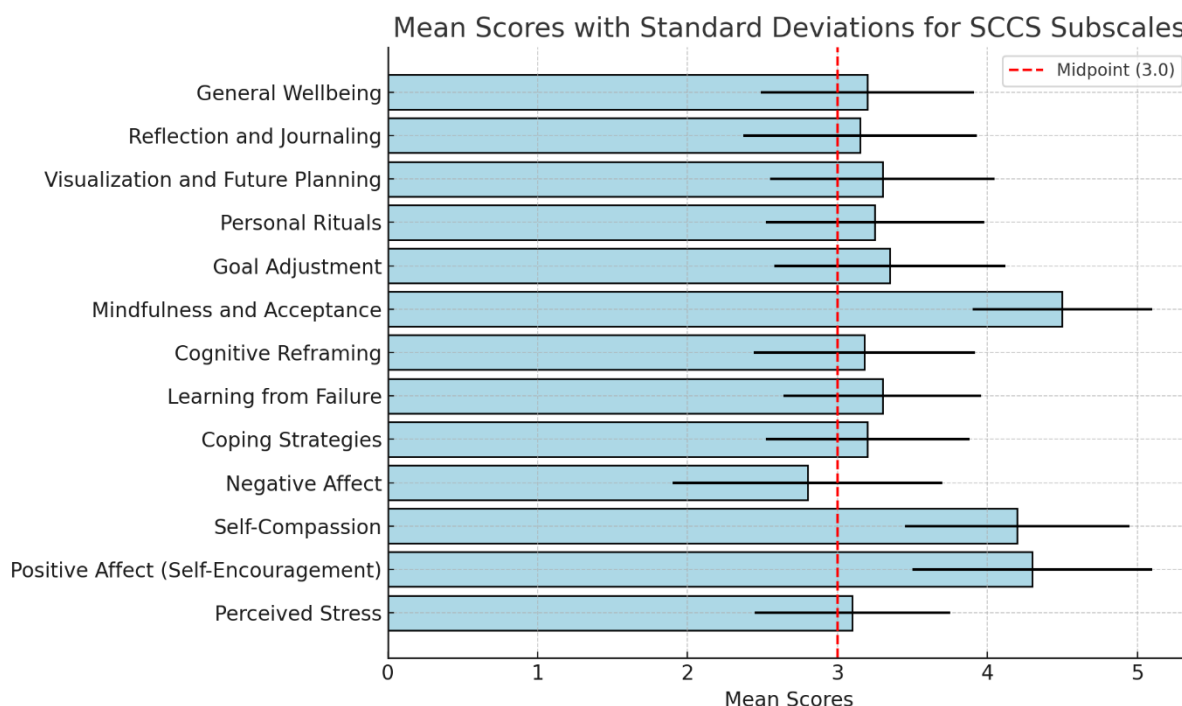


Figure 2: Mean Scores with Standard Deviations for SCCS Subscales

This figure displays the mean scores with corresponding standard deviations for each subscale of the Self-Comforting and Coping Scale (SCCS). The horizontal bars represent the mean scores for each subscale, while the error bars indicate the

standard deviations, reflecting the variability of responses. The red dashed vertical line at 3.0 represents the midpoint of the scale. Subscales with means above this midpoint (shown to the right of the red line) indicate higher self-reported engagement in the corresponding coping or self-comforting behaviors. The subscale Negative Affect has a mean below the midpoint, suggesting lower engagement with behaviors associated with negative emotions or stress.

The histogram (Fig. 3) displays the distribution of total SCCS scores (calculated as the sum of all domain scores) for the participants. The mean total score was 84.80 (SD = 5.0), and the distribution was positively skewed, with a majority of scores clustering toward the upper end of the scale. This indicates that a significant proportion of students consistently reported high levels of self-comforting behaviours. The red dashed line in the histogram represents the mean score, while the blue dashed line highlights the median (84.82), confirming the central tendency of high total SCCS scores.

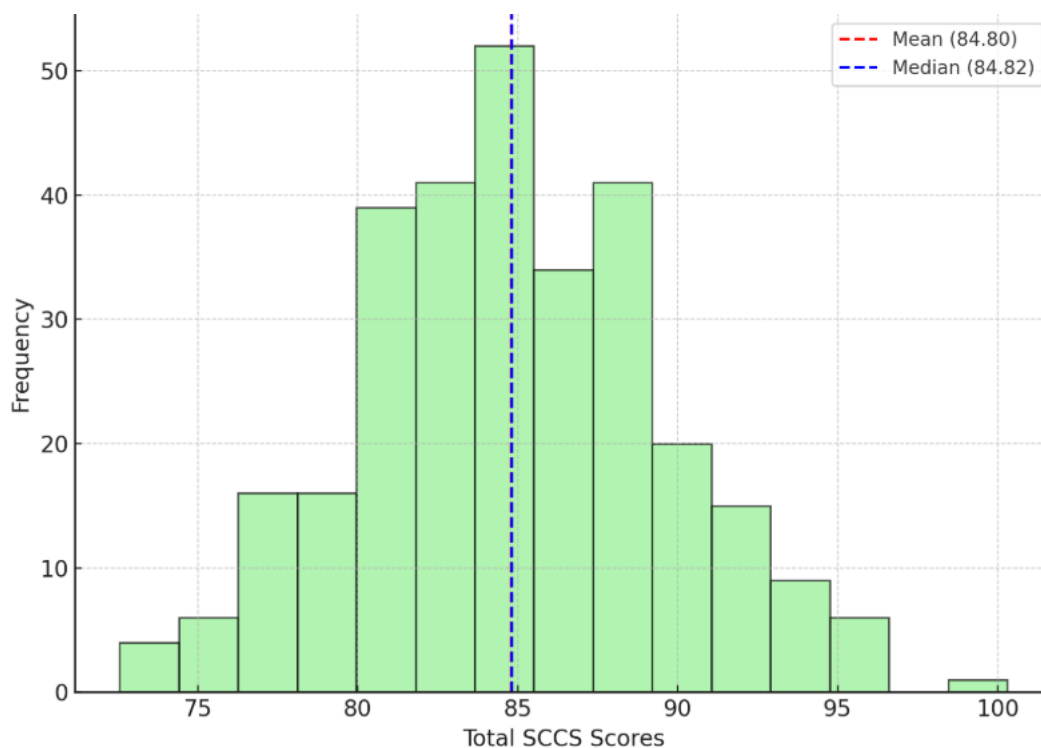


Figure 3: Distribution of Total SCCS Scores

This figure displays the frequency distribution of total scores on the Self-Comforting and Coping Scale. The histogram shows the number of participants falling within each score range, with bars representing the frequency of scores in intervals. The red dashed vertical line indicates the mean total SCCS score ($M = 84.80$), while the blue dashed vertical line represents the median total score ($Mdn = 84.82$). The close proximity of the mean and median suggests a relatively symmetrical distribution of scores, with most participants scoring near the center of the scale.

To confirm these findings, statistical tests were conducted to evaluate whether the observed scores differed significantly from the hypothesized population mean for moderate self-comforting. A one-sample t-test revealed that the participants' mean SCCS score ($M = 3.25$, $SD = 0.72$) was significantly higher than the midpoint of the

scale (3.0) ($t(299) = 3.47, p < 0.001$). Subscale-specific analyses further indicated that scores were particularly high for Mindfulness and Acceptance ($M = 4.5, SD = 0.6$), Positive Affect (Self-Encouragement) ($M = 4.3, SD = 0.8$), and Self-Compassion ($M = 4.2, SD = 0.75$), with mean values well above the scale's midpoint. These results suggest that the participants demonstrated a strong engagement in key self-comforting behaviours.

Moreover, qualitative feedback from participants, gathered as part of an open-ended survey question, provided additional evidence of high self-comforting tendencies. Many students described engaging in practices such as reflective journaling, mindfulness exercises, and active goal adjustment when facing challenges, echoing the high scores recorded on the SCCS subscales. This convergence of quantitative and qualitative data reinforces the conclusion that the participants reported high levels of self-comforting, consistent with the study's hypothesis.

The findings are supported by existing literature, which suggests that university students, particularly those in higher education settings, may have greater exposure to psychological resources and coping strategies through formal and informal education (Freire et al. 2020). Studies on similar populations have highlighted the positive impact of educational environments that encourage personal development, emotional regulation, and adaptive problem-solving (Moreno-Montero, Ferradás & Freire 2024). These factors may have contributed to the elevated self-comforting levels observed in the present study.

Thus, the hypothesis that individuals with higher levels of self-comforting are more likely to report engaging in behaviours such as self-encouragement, cognitive reframing, and mindfulness was supported by the data. The university students who participated in this study consistently demonstrated high self-comforting tendencies, as evidenced by their above-average SCCS scores, statistical analyses, and qualitative feedback. The findings clearly illustrate the distribution of self-comforting behaviours across the 13 domains of the SCCS, which not only validate the study's hypothesis but also underscore the importance of fostering self-comforting skills in young adult populations.

DISCUSSION

The development of the Self-Comforting and Coping Scale (SCCS) marks a significant contribution to the study of coping and self-comforting behaviours. By focusing on self-soothing actions within the broader framework of adaptive coping, the SCCS fills a critical gap in psychological research. Existing measures, such as the Brief COPE (Carver et al., 1989) and the Self-Compassion Scale (Neff, 2003), offer insights into coping and emotional regulation, but the SCCS uniquely addresses the underexplored domain of self-comforting behaviours. Its comprehensive approach aligns with the growing recognition of self-care as a vital component of mental health (Gold et al., 2015; Butler et al., 2019; Obohwemu, 2024b).

The SCCS demonstrates strong potential as a psychometric tool, providing a nuanced understanding of self-comforting behaviours that extend beyond individual resilience and self-compassion. Research suggests these behaviours enhance emotional regulation, reduce stress, and contribute to academic performance and overall life satisfaction (Wang, 2020; Rojas-Torres et al., 2021; Egan, 2022). By capturing a wide spectrum of cognitive and emotional coping strategies, the SCCS offers a holistic framework for evaluating how individuals navigate stress and adversity, thereby advancing both theory and practice.

The SCCS is especially valuable for its applications in clinical, educational, and organizational settings. Clinicians can use it to distinguish between adaptive and maladaptive self-comforting behaviours, enabling targeted interventions for anxiety, depression, or trauma-related disorders. Researchers can explore determinants and outcomes of these behaviours, deepening our understanding of their role in resilience, wellbeing, and mental health. Additionally, educators and organizational leaders may apply the scale to identify and promote effective

coping strategies, helping to reduce burnout and enhance emotional wellbeing in students and employees.

Despite its strengths, the SCCS—and by extension, the SCCT—requires further validation. The study sample, primarily composed of undergraduate students, limits the generalizability of findings. Future research should involve diverse populations to ensure the scale's applicability across different demographics and cultural contexts. Longitudinal studies are essential to assess the stability of self-comforting behaviours over time and their evolution through life transitions or interventions. Cross-cultural validation will help refine the scale's global relevance, while studies on the neurobiological mechanisms underlying self-comforting behaviours could offer valuable insights into their function in stress regulation.

The SCCS not only addresses an important gap in coping research but also sets the stage for broader inquiries into how self-comforting behaviours promote resilience and emotional health. Its development represents a meaningful step forward in understanding the complexities of human adaptation to stress.

CONCLUSION

The Self-Comforting and Coping Scale (SCCS) is a rigorously developed tool designed to assess self-comforting behaviours through a systematic process involving literature reviews, focus groups, expert evaluations, and pretesting. Capturing 13 domains, the SCCS offers a holistic perspective on self-comforting behaviours. It demonstrates strong psychometric properties, including content and face validity, establishing it as a robust and valuable measure. This scale lays a solid foundation for further psychometric validation and research. Addressing a critical gap in coping research, the SCCS contributes to understanding the role of self-comforting behaviours in resilience, mental health, and wellbeing.

Future research should explore its applicability in clinical settings and among populations facing chronic stress or trauma to further validate its utility. Fostering a deeper understanding of adaptive coping strategies, the SCCS has the potential to enhance both theoretical insights and practical interventions, supporting innovations in mental health care and resilience-building efforts.

CONFLICTS OF INTEREST

The author declares no conflicts of interest.

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REFERENCES

- Boateng, G. O., Neilands, T. B., Frongillo, E. A., Melgar-Quiñonez, H. R., & Young, S. L. (2018). Best practices for developing and validating scales for health, social, and behavioural research: A primer. *Frontiers in Public Health*, 6, 149. <https://doi.org/10.3389/fpubh.2018.00149>.
- Bradshaw, M. and Kent, B.V., (2018). Prayer, attachment to God, and changes in psychological well-being in later life. *Journal of aging and health*, 30(5), pp.667-691.
- Butler, L.D., Mercer, K.A., McClain-Meeder, K., Horne, D.M. and Dudley, M., (2019). Six domains of self-care: Attending to the whole person. *Journal of Human Behaviour in the Social Environment*, 29(1), pp.107-124.
- Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*, 56, 267-283.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment*, 49(1), 71-75. https://doi.org/10.1207/s15327752jpa4901_13.
- Egan, H., O'Hara, M., Cook, A. and Mantzios, M., (2022). Mindfulness, self-compassion, resiliency and wellbeing in higher education: a recipe to increase academic performance. *Journal of Further and Higher Education*, 46(3), pp.301-311.
- Gold, J.A., Johnson, B., Leydon, G., Rohrbaugh, R.M. and Wilkins, K.M., (2015). Mental health self-care in medical students: a comprehensive look at help-seeking. *Academic Psychiatry*, 39, pp.37-46.
- Komanchuk, J., Toews, A.J., Marshall, S., Mackay, L.J., Hayden, K.A., Cameron, J.L., Duffett-Leger, L. and Letourneau, N., (2023). Impacts of parental technoference on parent-child relationships and child health and developmental outcomes: a scoping review. *Cyberpsychology, Behaviour, and Social Networking*, 26(8), pp.579-603.
- Lambert, L. S., & Newman, D. A. (2022). Construct development and validation in three practical steps: Recommendations for reviewers, editors, and authors. *Organizational Research Methods*, 26(4), 574-607. <https://doi.org/10.1177/10944281221115374>.
- 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., & Germer, C. K. (2013). A pilot study and randomized controlled trial of the mindful self-compassion program. *Journal of Clinical Psychology*, 69(1), 28-44. <https://doi.org/10.1002/jclp.21923>.
- Obohwemu, K.O., (2024a). Protocol for a systematic review of self-comforting behaviours across theoretical frameworks: Examining patterns, mechanisms, and socio-cultural influences over 50 years. *Journal of Social Sciences and Humanities Research Fundamentals*, 4(06), pp.30-39.
- Obohwemu, K.O., Yakpir, G.M, Koretaine, S., et al., (2024b). Self-Comforting Behaviours across Theoretical Frameworks: A 50-Year Systematic Review of Patterns, Mechanisms, and Socio-Cultural Influences. *The American Journal of Social Science and Education Innovations*, 6(12), pp.51-177.
- Paley, B. and Hajal, N.J., (2022). Conceptualizing emotion regulation and coregulation as family-level phenomena. *Clinical Child and Family Psychology Review*, 25(1), pp.19-43.
- Rojas-Torres, L.P., Alonso-Esteban, Y., López-Ramón, M.F. and Alcantud-Marín, F., 2021. Mindfulness-Based Stress Reduction (MBSR) and Self Compassion (SC) training for parents of children with autism spectrum disorders: A pilot trial in community services in Spain. *Children*, 8(5), p.316.
- Skinner, E.A., Zimmer-Gembeck, M.J., (2016). Ways and families of coping as adaptive processes. The

Development of Coping: Stress, Neurophysiology, Social Relationships, and Resilience during Childhood and Adolescence, pp.27-49.

Smith, B. W., Epstein, E. M., Ortiz, J. A., Christopher, P. J., & Tooley, E. M. (2018). The foundations of resilience: What are the critical resources for bouncing back from stress? In B. W. Smith (Ed.), *Resilience Interventions for Youth in Diverse Populations* (pp. 15-34). Springer. https://doi.org/10.1007/978-3-319-77492-3_2

Sun, X., Seeley, J.R. and Allen, N.B., (2022). Parental internalizing disorder and the developmental trajectory of infant self-regulation: The moderating role of positive parental behaviours. *Development and psychopathology*, 34(1), pp.1-17.

Swan, K., Speyer, R., Scharitzer, M., Farneti, D., Brown, T., Woisard, V. and Cordier, R., (2023). Measuring what matters in healthcare: a practical guide to psychometric principles and instrument development. *Frontiers in Psychology*, 14, p.1225850.

Vasileiou, K., Barnett, J., Barreto, M., Vines, J., Atkinson, M., Long, K., Bakewell, L., Lawson, S. and Wilson, M., (2019). Coping with loneliness at university: A qualitative interview study with students in the UK. *Mental Health & Prevention*, 13, pp.21-30.

Wang, J.F., (2020). *Exploring Self-Care and Its Associations with Burnout, Vitality, and Academic Goal Achievement in University Students* (Doctoral dissertation, Carleton University).