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Development and Psychometric Properties of the SELFCARE Intervention Module: A New Approach for Dealing with Non-Suicidal Self-Injury (NSSI) Clients

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ABSTRACT:

Objectives: This study aims to evaluate the validity and reliability of the psychoeducational module titled Structured Emotional and Learning Framework for Cognitive Adjustment and Relieving Social Anxiety (SELFCARE).

Material and Methods: The module comprises eight sessions, each lasting 120 minutes. Data were collected using three distinct questionnaires to determine both content validity and reliability. The first questionnaire assessed the overall content validity of the module, while the second focused on the validity of individual sessions and activities. The third questionnaire was designed to measure the internal consistency reliability of the module. A panel of ten certified experts in counselling, module development, Cognitive Behavioral Theory (CBT), adolescent mental health, and psychology evaluated the module's validity. Additionally, a sample of 30 homogenous Form Two students from a secondary school in Kuala Muda, Kedah, selected through purposive sampling, participated in the reliability testing. Expert review data were analyzed using percentage agreement, while the data were analyzed using Cronbach's alpha coefficient.

Results: Findings from the expert evaluation revealed that the SELFCARE Module demonstrated excellent content validity, with 94% agreement well above the 70% benchmark for both overall content and the validity of individual sessions and activities. The reliability analysis showed a high Cronbach's alpha value of 0.97, far exceeding the minimum acceptable threshold of 0.60. In conclusion, the results indicate that the SELFCARE Module possesses strong validity and reliability, and is ready to be implemented by full-time school counsellors to reduce emotional dysregulation, social anxiety, and cognitive distortion among students engaging in self-injurious behaviours.

1. INTRODUCTION

Self harm behavioral among adolescents has emerged as an escalating mental health concern, not only at the global level but also within the Malaysian context. According to the World Health Organization (WHO, 2024), the prevalence of self harm behaviors among school going adolescents has shown a worrying upward trend, with profound psychosocial implications for their emotional development, interpersonal relationships, and academic achievement. Adolescent self-injury is frequently associated with difficulties in managing negative emotions, heightened social anxiety and a tendency toward cognitive distortions

that hinder realistic and balanced judgment—ultimately predisposing individuals to self-harming behaviors (Duncan-Plummer et al., 2023; Hetrick et al., 2020).

Although numerous psychological interventions have been developed to address this issue, the effectiveness of any intervention module depends largely on the extent to which it is grounded in a robust theoretical framework, culturally contextualized, and empirically validated for both validity and reliability prior to widespread implementation. Within this context, Cognitive Behavioral Therapy (CBT) has been identified as an evidence-based approach effective in addressing emotional and cognitive aspects of mental health, including self-injurious behaviors. CBT emphasizes identifying and restructuring maladaptive thought patterns and developing effective emotional regulation strategies to promote adaptive coping mechanisms.

Guided by these justifications, the researcher identified the need to develop a structured intervention module. The Structured Emotional and Learning Framework for Cognitive Adjustment and Relieving Social Anxiety (SELFCARE) to assist adolescents engaged in self harm behavior. The module is systematically designed to enhance emotional regulation, reduce social anxiety and rationalize cognitive distortions among adolescents displaying self-harming tendencies. However, before being implemented widely by school-based practitioners such as full-time Guidance and Counselling Teachers.

Accordingly, this study aims to evaluate the validity and reliability of the *SELFCARE* Module to ensure its content is appropriate, consistent, and effective for use in psychoeducational intervention settings within schools. The findings of this study are expected to contribute significantly to the growing body of knowledge in adolescent mental health intervention development, while providing a solid empirical foundation for future systematic evaluation of the module's effectiveness.

2. LITERATURE REVIEW

Previous literature has demonstrated a wide range of approaches in addressing adolescent mental health, particularly concerning self harm injurious behavior. However, persistent gaps remain in the form of limited long-term effectiveness and a notable scarcity of culturally contextualized intervention modules within local settings. Recent studies underscore the urgent need for the development of holistic, contextually relevant intervention frameworks that specifically target the underlying mechanisms contributing to self-harm among adolescents namely emotional dysregulation, debilitating social anxiety and cognitive distortions that foster maladaptive thought patterns and behaviors.

2.1 Emotional Regulation

Baetens et al. (2024) evaluated the effectiveness of a four-hour classroom-based intervention module aimed at enhancing emotional regulation, mental health, and targeted strategies to prevent Non-Suicidal Self-Injury (NSSI) among adolescents aged 11 to 14. Developed with direct reference to adolescents' psychosocial experiences and implemented within the school climate, the module was validated using standardized content assessment tools and analyzed through multivariate statistical methods. Results confirmed the module's content validity and its capacity to significantly reduce psychological symptoms and NSSI behavior. Furthermore, it positively influenced emotional regulation skills. The internal consistency of the module was high, as indicated by a Cronbach's alpha value exceeding 0.80. The success of this intervention was supported not only by quantitative outcomes but also by its practical effectiveness in real-world school environments.

2.2 Social Anxiety

A psychoeducational intervention module developed by Siti Roslina Mohammad Zain et al. (2023) was designed to reduce anxiety levels among Form Four students at a Maktab Rendah Sains Mara (MRSM) in Terengganu, involving a sample of 30 students. Three expert evaluators were engaged to determine the module's content validity. Although specific statistical values for validity and reliability were not explicitly reported, expert assessments confirmed that the module met the intended objectives and was age-appropriate for 14-year-olds. Internal consistency was reported as satisfactory, supporting the reliability and stability of the assessed items. The findings revealed a significant reduction in anxiety levels following the intervention. Effectiveness was further supported through a quasi-experimental design employing pre- and post-testing without a control group.

2.3 Cognitive Distortions

A study by Tan et al. (2025) aimed to develop and evaluate the effectiveness of a psychosocial intervention module grounded in the principles of Cognitive Behavioral Therapy (CBT) to address self-injurious behavior among adolescents. The primary

objective was to examine the impact of the module on cognitive distortions, psychological distress, and self-injurious tendencies. The module underwent expert evaluation by seven professionals in psychology, counselling, and education to assess its content validity. The validation process yielded a content validity index (CVI) exceeding 0.80, indicating strong expert consensus. Reliability testing, conducted through a pilot study, demonstrated high internal consistency with a Cronbach's alpha value above 0.85.

The intervention was implemented among 36 secondary school students identified as being at risk of self-harm. The findings confirmed the effectiveness of the module in significantly reducing both cognitive distortions and self-injurious behavior. This was supported by comprehensive inferential statistical analyses, affirming the intervention's practical and theoretical relevance in mitigating maladaptive cognitive patterns among adolescents.

2.4 Problem Statement

Self-injurious behavior is increasingly recognized as a critical adolescent mental health issue, both globally and within the Malaysian context. According to the World Health Organization (WHO, 2024), approximately 720,000 deaths by suicide were reported, with a significant proportion involving individuals aged between 16 and 29 years, many of whom had a history of self-harm prior to attempting suicide. In Malaysia, the 2023 National Health and Morbidity Survey (NHMS) by the Ministry of Health estimated that one million individuals equivalent to 4.6% of the adult population aged 16 and above exhibited symptoms of depression. Alarmingly, nearly half of this group reported having contemplated self-harm or suicide as a means of coping with psychological distress. These trends highlight the urgent need for early preventive measures within educational and mental health settings, particularly given the strong association between self-harm and increased suicide risk (Baetens et al., 2024; Calvo et al., 2024).

Self harm injurious behavior is often described using various terms that reflect its complex and multidimensional nature, including deliberate self-harm, non-suicidal self-injury (NSSI), self-mutilation, self-cutting, and parasuicide (Klonsky, 2007; Muehlenkamp & Cauley, 2016). According to the American Psychological Association (APA, 2018), self harm refers to the intentional infliction of harm or injury to one's body tissue without the intent to die by suicide. In this context, body modifications such as piercings or tattoos are not classified as self harm, as they are not inherently harmful and are often culturally or socially normative practices (Blay et al., 2023; Plener et al., 2018).

Several studies have identified adverse childhood experiences such as emotional, physical, or sexual abuse, and emotional neglect as primary antecedents to self harm behavior (Calvo et al., 2024). Among adolescents aged 11 to 14, emotional dysregulation, traumatic psychosocial experiences, and an inability to manage stress adaptively are key contributing factors (Baetens et al., 2024). Research by Kennedy and Brausch (2024), affirmed that poor tolerance of negative emotions and lack of access to emotional regulation strategies are strong predictors of self-harming tendencies. Therefore, a deeper understanding of the psychological mechanisms and socio-developmental backgrounds of affected adolescents is crucial in designing intervention modules that are not only statistically effective but also clinically and socially relevant.

Social anxiety, another critical psychological challenge among adolescents, is especially prevalent among students facing academic pressures and developmental transitions. It often manifests in early adolescence and is characterized by intense fear of negative evaluation in social interactions, leading to social withdrawal and self-isolation (Evans et al., 2021). Adolescents with social anxiety frequently engage in avoidant behaviors, limit communication, and internalize negative self-appraisals (Weismoore & Esposito, 2020). Moreover, the stigma surrounding social anxiety exacerbates feelings of shame and detachment, particularly among adolescents who self harm undermining social support and increasing psychological vulnerability if not addressed appropriately (Lynch et al., 2021).

In today's rapidly modernizing world, social anxiety has also been identified as a significant contributing factor to self harm behavior. Studies show that adolescents with high levels of social anxiety are at greater risk of engaging in self harm as a maladaptive coping mechanism to deal with negative emotions, social uncertainty, and unexpressed internal conflict (Yao et al., 2023). Psychopathological models suggest that social anxiety undermines emotional regulation capacities, thereby increasing emotional stress that often culminates in self harm attitude.. Psychosocially, adolescents with social anxiety exhibit intense fear and apprehension of social judgment, which significantly compromises their emotional and interpersonal functioning.

Furthermore, the inability to express emotions adaptively is another major risk factor associated with negative coping behaviors such as self harm. According to Lynch et al. (2021), factors such as overwhelming shame, difficulty establishing social connections, fear of negative social evaluation, avoidance of new or open social settings and feelings of worthlessness are key triggers for self harm tendencies among adolescents. These conditions often lead to social withdrawal, low self-esteem passivity, and disengagement from community settings (Leigh & Clark, 2018).

Cognitive distortions defined as biased and unrealistic patterns of thinking have also been identified as significant psychological precursors to self harm. Among adolescent students, cognitive distortions such as self-blame, catastrophizing and pervasive negative thinking are recognized as major triggers of self harm behavior (Mohamad et al., 2021; Han et al., 2024). Weismoore and Esposito-Smythers (2010), found that adolescents with trauma histories and high levels of cognitive distortion, particularly negative self-perceptions, demonstrated a greater likelihood of engaging in self harm. Such distortions not only weaken psychological resilience but also reinforce maladaptive cognitive schemas that normalize self harm as a means of coping.

More critically, cognitive distortions interfere with emotional regulation processes, particularly when individuals are unable to modulate their emotions adaptively. Han et al. (2024) concluded that negative cognitive distortions significantly predict the use of maladaptive cognitive emotion regulation strategies such as self-blame which further intensifies the risk of self harm. In essence, the relationship between cognitive distortions and self harm behavior among adolescents is both direct and mediated by dysfunctional emotional regulation strategies and extreme social anxiety. Thus, psychosocial interventions that focus on correcting distorted thinking patterns and enhancing adaptive emotional regulation are imperative in the prevention and reduction of self-harming behavior among adolescents.

3. METHODOLOGY

3.1 Research Design

This study employed a descriptive research design to evaluate the validity and reliability of the *SELFCARE* Module. The content validity of the module was assessed using percentage agreement, while its internal consistency reliability was determined through Cronbach's alpha coefficient.

3.1.1 SELFCARE Module Content

The development of the *SELFCARE* Module was guided by the Sidek Module Development Model, which consists of two primary phases: (1) the draft preparation phase, and (2) the trial and evaluation phase. The second phase involved a test to assess the reliability of the drafted module. According to Sidek Mohd Noah and Jamaludin Ahmad (2022), a well-constructed module should demonstrate high levels of both content validity and internal consistency reliability.

The theoretical foundation of the *SELFCARE* Module is based on the philosophy of Cognitive Behavioral Therapy (CBT), which serves as a therapeutic framework to address self harm behavior among adolescents. The module is systematically structured around three interrelated core psychological constructs: emotional regulation, social anxiety and cognitive distortions each of which has been empirically shown to play a significant role in self harm behavior. In alignment with CBT principles, which emphasize the interconnectedness of thoughts, emotions and behaviors, the module's activities are designed to help participants:

- Identify and challenge irrational thought patterns,
- Develop adaptive emotional regulation strategies, and
- Reduce symptoms of social anxiety.

The activities within the module not only target observable behavioral changes but also delve into the underlying cognitive dimensions that influence adolescents' overall psychological well-being. A summary of the *SELFCARE* Module is presented in Table 1.

Table 1: Summary of the *SELFCARE* Module

Session	Activity Title	Sub-Module	Duration
1	Let's Get Acquainted	Emotional Regulation	120 minutes
2	Exploring Emotions	Emotional Regulation	120 minutes
3	Interactive Emotion Game	Emotional Regulation	120 minutes
4	Positive Cognition	Cognitive Distortions	120 minutes
5	Certain Hopes	Cognitive Distortions	120 minutes
6	Shadows of Light	Cognitive Distortions	120 minutes
7	Climbing to the Peak	Social Anxiety	120 minutes
8	Soaring High	Social Anxiety	120 minutes

3.2 Participants

3.2.1 Expert Panel for Content Validation

The content validity of the *SELFCARE* Module was established through an expert consensus evaluation involving a panel of ten selected specialists. The selection of experts was guided by strict academic and professional criteria, ensuring the inclusion of individuals with substantive expertise and experience in the following four domains:

1. Development and formulation of intervention modules,
2. Application and implementation of Cognitive Behavioral Therapy (CBT),
3. Theoretical and clinical practice in psychology, and
4. Educational guidance and counselling school

This rigorous validation process was designed not only to verify the theoretical soundness and practical relevance of the module's content but also to ensure that it is scientifically grounded, contextually appropriate for the target population, and academically credible. The expert review further reinforced the module's applicability in real-world educational and counselling contexts.

3.3 Study Sample

A total of 30 Form Two students from a secondary school located in the district of Kuala Muda, Kedah were selected to participate in the study aimed at determining the reliability of the *SELFCARE* Module. The sample comprised 12 male students (40%) and 18 female students (60%). In terms of ethnicity, the participants included 17 Malays (56.7%), 7 Chinese (23.3%), and 6 Indian students (20%). All participants successfully completed all activities outlined in the module. A summary of the sample distribution is presented in Table 2.

Table 2 : A Summary of the Sample

Category	Frequency	Percentage (%)
Gender		
Male	12	40.0
Female	18	60.0
Ethnicity		

Malay	17	56.7
Chinese	7	23.3
Indian	6	20.0
Others	0	0.0

3.4 Content Validity Questionnaire

According to Fraenkel et al. (2019), validity refers to the degree of accuracy and appropriateness of an instrument, as determined by the data collected. Validity involves not only the extent to which an instrument measures a construct, but also whether the interpretations drawn from the data are sound and accurate. This study utilised three primary questionnaires: a content validity questionnaire for the overall module, a session-specific validity questionnaire, and a reliability questionnaire. The content validity instrument was adapted and modified from the original developed by Jamaludin Ahmad (2002), based on Russell's (1974) framework. This comprehensive evaluation ensures that each session and activity meets the objectives of the intervention, thereby enhancing the module's validity and reliability.

The content validity questionnaire consisted of five items: (i) the module content is appropriate for the target population (early adolescents aged 14), (ii) the module can be implemented effectively, (iii) the content aligns with the allocated time frame, (iv) the content can reduce emotional dysregulation, social anxiety, and cognitive distortions, and (v) the content can change adolescent behaviour. A 10 point Likert scale (1 = strongly disagree to 10 = strongly agree) was used, providing detailed gradation and enhancing precision in assessing content effectiveness (Nor Roselidyawaty Mohd Rokeman, 2024).

The session and activity-specific validity questionnaire was adapted from Mohamad Aziz Shah Mohamed Arip (2010), tailored to the eight-module sessions. Responses were also rated on a 10 point Likert scale. The score obtained (y) was divided by the expert's rated score (x) and then multiplied by 100. A score of 70% or above indicated high validity, confirming that the module content, structure, and implementation meet scientific standards (Sidek Mohd Noah & Jamaludin Ahmad, 2022).

3.5 Module Reliability

A highly reliable instrument yields consistent scores over time under similar conditions (Sidek Mohd Noah & Jamaludin Ahmad, 2022). Reliability, or measurement consistency, reflects an instrument's stability and its ability to produce results across different conditions (Fraenkel et al., 2019). This study's reliability questionnaire was constructed specifically to assess each activity within the module, ensuring direct alignment with intended outcomes. A 5 point Likert scale (1 = strongly disagree to 5 = strongly agree) was used, and reliability was measured using Cronbach's alpha coefficient.

3.6 Study Location

The *SELFCARE* Module study was conducted at a Malaysian Ministry of Education (MoE) secondary day school located in Sungai Petani, Kedah. This school was selected due to its demographic similarity to the study's target population and the strong cooperation from its administrators and full time school counsellors. The school also provided a conducive and comfortable environment for module implementation. Ethical approval and permission were obtained from the Educational Planning and Research Division (EPRD), Ministry of Education Malaysia, and the Kedah State Education Department.

3.7 Study Findings

Overall Content Validity of the *SELFCARE* Module. Table 3 shows the expert panel's evaluation of the *SELFCARE* module's content validity.

Table 3: Overall Content Validity of the *SELFCARE* Module

Module Content Statement	Percentage	Expert Consensus
Content targets early adolescents (age 14)	97%	Accepted
Content can be implemented effectively	95%	Accepted
Content fits the allocated time	90%	Accepted
Content reduces emotional dysregulation, social anxiety, and cognitive distortion	94%	Accepted
Content can change adolescent behaviour	95%	Accepted
Overall	94%	Accepted

These results confirm high overall validity, with the lowest rating (90%) for time suitability and the highest (97%) for population relevance. The overall average of 94% confirms the module's strong content validity (Sidek Mohd Noah & Jamaludin Ahmad, 2022).

3.8 Content Validity of Each Session and Activity

Expert ratings for each session and activity are shown in Table 4.

Table 4: Content Validity for Each Session and Activity

Session	Activity Title	Percentage	Expert Consensus
1	Let's Get Acquainted	93%	Accepted
2	Exploring Emotions	92%	Accepted
3	Interactive Emotion Game	94%	Accepted
4	Positive Cognition	93%	Accepted
5	Certain Hopes	93%	Accepted
6	Shadows of Light	95%	Accepted
7	Climbing to the Peak	95%	Accepted
8	Soaring High	94%	Accepted
Overall		94%	Accepted

The lowest percentage (92%) was recorded for Session 2 (*Exploring Emotions*), and the highest (95%) for Sessions 6 (*Shadows of Light*) and 7 (*Climbing to the Peak*). These findings affirm the high validity of each session and activity

Expert Panel Suggestions for Improvement

Table 5: Expert Feedback on Module Improvements

Expert	Suggestions
1	Clarify theoretical sources. Review time allocation for certain activities. Behavioural outcomes may vary by personality and background. Overall, very good.
3	Module aligns with research variables and objectives. Congratulations.
4	Revise wording in Statement 5. Suggest journal writing or drawing for reflective expression.
5	Well-suited for the target group. Stimulates cognitive, emotional, and creative engagement.
6	Concise and practical for school settings. Activities are creative. Recommend listing all references.
7	Activities are engaging. Adjust time for some sessions.
8	Emphasise conducive, therapeutic environments (space, size, temperature).
9	Recommend nationwide dissemination for use by school counsellors.
10	Activities are age-appropriate and suitable for national application. Well done.

The researcher has refined the module based on this feedback. The *SELFCARE* Module is now considered aligned with its objectives and ready for implementation with the target group.

Module Reliability

High reliability indicates strong internal consistency across items measuring the intended constructs (Creswell & Creswell, 2023).

According to Mohd Majid Konting (2004), a Cronbach's alpha value > 0.60 reflects acceptable reliability in social and educational research. Results from the pilot study are shown below. A reliability coefficient of 0.97 confirms the module's excellent internal consistency (Table 6) .

Table 6: Overall Reliability Coefficient of the *SELFCARE* Module

Module	Cronbach's Alpha (α)
SELFCARE Module	0.97

Table 7 showed the lowest reliability was found in Session 2 (*Exploring Emotions*, $\alpha = 0.81$), while the highest was in Session 7 (*Climbing to the Peak*, $\alpha = 0.91$). These findings confirm the *SELFCARE* Module as a reliable intervention tool for the intended population.

Table 7: Reliability Coefficients by Session and Construct

Construct	Session	Activity Title	α
Emotional Regulation	1	Let's Get Acquainted	0.86
	2	Exploring Emotions	0.81
	3	Interactive Emotion Game	0.82

Cognitive Distortion	4	Positive Cognition	0.87
	5	Certain Hopes	0.87
	6	Shadows of Light	0.88
Social Anxiety	7	Climbing to the Peak	0.91
	8	Soaring High	0.85
Overall			0.97

4 DISCUSSION

The findings affirm the *SELFCARE* Module's strong content validity, as evaluated by a panel of subject matter experts. The module not only meets its predefined objectives but is also appropriate in terms of duration and practical application. These outcomes align with Russell's (1974) framework, which stipulates that effective modules must: (i) be appropriate for the target population, (ii) utilise suitable delivery methods, (iii) adhere to appropriate time allocations, and (iv) improve targeted variables to produce behavioural change.

Additionally, the overall reliability score of $\alpha = 0.97$ indicates a high level of internal consistency, validating the stability of the module's items (Mohd Majid Konting, 2004). These findings collectively suggest that the *SELFCARE* Module is a highly usable and empirically supported intervention for adolescent mental health.

Moreover, the *SELFCARE* Module demonstrates strong potential as a structured intervention to reduce emotional dysregulation, social anxiety and cognitive distortions among adolescents who engage in self harm behavior. The module is especially relevant for early adolescents aged 13 to 15 and successfully integrates CBT approaches such as cognitive restructuring, self-disclosure, exposure and relaxation. The integration of these techniques within the module activities has shown promise in facilitating behavioral change and achieving the intervention's intended outcomes.

5 CONCLUSION

In summary, this study substantiates the validity and reliability of the *SELFCARE* Module as an effective psychoeducational intervention for addressing emotional regulation difficulties, social anxiety and cognitive distortions among adolescents exhibiting self harm behavior. The high content validity and strong reliability coefficients affirm the module's consistency and its alignment with intervention goals. Therefore, the *SELFCARE* Module holds strong potential for use in school-based counselling practices and systematic adolescent mental health interventions.

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