

Development of Mental Well-being Module for Adolescents with Self-Harm Tendencies in Malaysia: A Concept Paper

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Abstract

The promotion of mental well-being is critical for the psychosocial and emotional development of adolescents with self-harm tendencies, who are at risk for suicidal behaviour. The study aims to develop, validate and evaluate the efficiency of a Brief Cognitive Behaviour Therapy Module in enhancing the mental well-being with regards to adolescents with self-tendencies in Malaysia. Adolescents with self-harm tendencies are at risk for suicidal behaviours while mental well-being acts as a protective factor. Here, this research discusses the growing concerns regarding self-harm tendencies among adolescents in Malaysia, emphasising the need for validated school-based interventions focusing specifically on mental well-being. Due to the stigma associated with self-harm tendencies, promoting mental well-being utilising Brief Cognitive Behaviour Therapy evidence-based strategies is deemed to be more culturally appropriate and can lead to better acceptance. This study will

utilise the Design and Development Research (DDR) method with the ADDIE model of instructional design, which encompasses Analyse, Design, Develop, Implement and Evaluate phase. The study will apply multiple methods for data collection, incorporating both qualitative and quantitative approaches tailored to each phase of the study. To assess the effect of the developed module, a true experimental design will be implemented focusing on adolescents aged 13 to 14 years with self-harm tendencies in school settings. This research has the potential to positively contribute to an effective Brief Cognitive Behaviour Therapy Module in the school system for the mental well-being of adolescents exhibiting self-harm tendencies through guidance and counselling teachers.

Keywords: mental well-being, Brief Cognitive Behavior Therapy (CBT), adolescents, self-harm tendencies, module development

1. Introduction

1.1 Background

According to the World Health Organization (2022), mental health is described as a state of well-being where a person recognises their own abilities, can handle everyday stresses, works efficiently, and contributes to their community. Promoting mental health is also a key objective of the United Nations' Sustainable Development Goals (SDGs). Therefore, there is a growing need to address mental health issues beyond the healthcare sector. The SDGs Target 3.4 is to “reduce premature mortality by one third from noncommunicable diseases through prevention and treatment and promote mental health and well-being” (United Nations, 2022). This demonstrates the importance of promoting mental well-being.

Early adolescence is a critical phase, as it is also a time of emergence and development of mental health issues that potentially evolve into more severe mental disorders in adulthood, if not dealt with early on (Solmi et al., 2022). Conventionally, mental health interventions have concentrated on addressing the symptoms of mental disorders. The positive aspect of mental health is often overlooked despite its importance. This is due to the fact that mental well-being is not universally defined and can vary based on cultural, societal and individual factors (Wren-Lewis & Alexandrova, 2021). The medical approach primarily treats the symptoms of mental illness to minimise the impact. In recent years, studies related to mental well-being have been gaining more attention due to the growing acknowledgment of its significance. Previous studies have suggested that strong mental well-being protects and enhances recovery from mental illness and prevents self-harm tendencies (Russell et al., 2020). Building mental well-being has the potential to enrich adolescents' lives, regardless of the occurrence of mental disorders, and this should be the emphasise of research on adolescents.

The SDGs aim to lower suicide mortality by 2030, with a focus on low- and middle-income countries, which account for 77% of global cases (World Health Organization, 2022). Suicide is the leading cause of death among adolescents worldwide and ranks second among adolescents in Malaysia, surpassing the Asia Pacific regional average (UNICEF, 2022). Adolescence is a crucial time for intervention, as it is typically when self-harm tendencies

begin to emerge and heighten the suicide attempts risk (Brager-Larsen et al., 2022; Duarte et al., 2020). This behaviour often serves as a coping mechanism for underlying emotional distress as well as can greatly diminishes an individual's quality of life. Improving mental health can act as a protective factor by tackling the underlying causes of self-harm and encouraging more positive coping strategies.

Malaysia has achieved significant advancements in assessing and recognising the condition of mental health and self-harm tendencies among students in a school setting through healthy mind program (*program minda sihat*). Specific interventions can be strengthened to cater to students with self-harm tendencies by improving their mental well-being. Given the state of mental well-being and high risk of self-harming tendencies, school-based interventions need to be effective. There is a pressing need for interventions aimed at promoting the mental well-being of adolescents with self-harm tendencies in school settings. Cognitive Behaviour Therapy has the most documented effectiveness in treating mental disorders. However, the locally developed and validated Brief Cognitive Behaviour Therapy Module for the mental well-being of adolescents with self-harm tendencies in Malaysia is limited.

Therefore, this study aims to develop an evidence-based Brief Cognitive Behaviour Therapy Module that is deemed appropriate for the mental well-being of adolescents with self-harm tendencies. This research aims to offer psychological first aid as well as guidance to mental health practitioners, especially guidance and counselling teachers who are often the frontline responders in promoting mental well-being as well as discussing the likelihood of self-harm among adolescents in Malaysia.

1.2 Significance of the Study

Studies have shown that mental well-being serves as a safeguard against numerous mental health disorders and self-harm tendencies (Russell et al., 2020). By focusing on the positive side of mental health, this approach may reduce the stigma surrounding mental health and self-harm tendencies, which is a barrier for individuals to receive help especially in low as well as middle-income countries such as Malaysia (Javed et al., 2021). In Singapore, the treatment gap for mental disorders is 78.6%, with 40% expressing concern about the stigma associated with receiving treatment (Subramaniam et al., 2020). Similarly, in the Malaysia context, a study found that only 13.6% of adolescents living in the People's Housing Project (PPR) in Klang Valley sought follow-up treatment at a healthcare facility after receiving a referral letter to address their mental health (Institute for Health Behavioural Research, 2023). These findings highlight the importance of addressing the stigma surrounding mental health and improving access to health care. By promoting mental well-being and creating targeted intervention, this study can bridge the treatment gap by providing effective support for adolescents with self-harm tendencies in school settings.

Developing a module to address this issue will create a continuum of integrative care by embedding the Brief Cognitive Behaviour Therapy Module for the mental well-being of adolescents with self-harm tendencies in the school system through school counselors who are often the mental health frontliners. In addition, localising to fit the cultural and targeted population increases the effectiveness of the module. The study showed that participants

using the mother tongue in group and individual therapy were able to foster better emotional connections and cognitive work (Tannenbaum & Har, 2020). Therefore, developing a module in Malay language that is adjustable to the local context is important to enhance the effectiveness of the treatment. In addition, Cognitive Behaviour Therapy has been increasingly culturally adopted in Asia (Naeem et al., 2021). Developing a culturally appropriate Brief Cognitive Behaviour Therapy Module in Malay language can enhance the mental health support of adolescents with self-harm tendencies in Malaysia. This module can be integrated into the school system to provide ongoing support and improve the outcomes of adolescents with self-harm tendencies in Malaysia.

Adolescence is the pivotal in development of emotion regulation (Silvers, 2022). During this period, adolescents learn to effectively cope with overwhelming emotions. However, research indicates that adolescents with self-harm tendencies have a significantly higher deficit in emotion regulation strategies (Clapham & Brausch, 2022). This can make it more difficult for adolescents to constructively cope with emotions and to use self-harm tendencies as a maladaptive coping mechanism. Moreover, children with self-harm tendencies are not only more prone to emotion regulation deficits but are also over seven times more likely to show signs of depression and five times more likely to experience anxiety (Borschmann et al., 2020). These challenges can create a cycle that negatively affects other aspects of adolescents' life. Studies have shown that adolescents who engage in self-harm are more likely to have lower academic attainment and attitudes towards schooling than those who do not (Baetens et al., 2021). Thus, it is important to develop early interventions that focus on mental-well-being promotion and emotional regulation to mitigate self-harm tendencies among adolescents.

Providing effective intervention for the mental well-being of adolescents with self-harm tendencies in Malaysia holds significant implications for community and national well-being. Self-harm has been determined as a robust predictor with regards to upcoming suicide attempts (Duarte et al., 2020). Each suicide affects approximately 135 individuals (Cerel et al., 2019). In addition, each suicide results in an estimated projected economic loss of RM670 000 per youth suicide in Malaysia (Chua & Mogan, 2021). Given the magnitude of the impact, it is vital to address the issue at an early stage. There is a pressing need for interventions aimed at promoting the mental well-being of adolescents with self-harm tendencies. This will contribute to the development of the country by increasing the level of mental well-being as well as minimising the level of self-harm tendencies that can potentially prevent future social issues, reduce the cost of healthcare and increase the productivity of human capital.

1.3 Literature Review

To conceptualise the essence of mental well-being and mental disorders, Westerhof & Keyes (2010) introduced the dual continua model of mental health. This aims to give a broader perspective on mental health, emphasising that it encompasses both mental disorders and mental well-being. A scoping review of the dual continua model of mental health, which examined both non-clinical as well as clinical populations, revealed that mental well-being and mental disorders are two separate yet interconnected areas of mental health. Each domain

has its own unique predictors, as well as shared ones, and they influence one another through intricate relationships (Iasiello et al., 2020). The model highlights two primary objectives which are to protect and promote mental well-being and to enhance the treatment as well as prevention of mental disorders. Mental well-being can serve as a protector against mental health disorders, while mental disorders can pose a risk to mental well-being. Interventions aim at enhancing mental well-being could be valuable in preventing and reducing self-harm tendencies in this vulnerable population, particularly given the often "hidden" nature of self-harm within the community and its limited visibility in clinical settings.

Mental well-being consists of two main components: hedonic and eudaimonic. Hedonic well-being refers to affective aspects such as positive emotions and life satisfaction while eudaimonia well-being includes meaning in life and effective functioning as an individual within a community (Ryan & Deci, 2001). Mental health has been viewed mainly through the lens of hedonic well-being, which emphasises the reduction of mental disorders. However, this perspective contributes to the stigma surrounding mental health issues. In recent years, there has been a move toward a more holistic understanding of mental health, recognising that it encompasses more than just hedonic aspects. The WHO's (2021) definition of mental well-being emphasises the eudaimonia aspect where the productivity and coping skills of an individual are taken into account. Ryff (2018) described the eudaemonia model of well-being as the realisation of the fullest human potential. This model, known as psychological well-being, includes six dimensions: environmental mastery, autonomy, positive relationships with others, personal growth, a sense of purpose in life, as well as self-acceptance. These six fundamental aspects of psychological well-being are supported by lifespan developmental theories, which include psychosocial development (Erikson), theory of individuation (Jung) and humanistic theory of self (Rogers), maturity (Allport), mental health (Jahoda), meaning of life (Frankl), personality (Neugarten), and basic life tendencies (Buhler). A meta-analysis study demonstrated that the psychological well-being described by Ryff's can be improved through targeted intervention programs (van Dierendonck & Lam, 2023). By fostering mental well-being, interventions can help enhance general mental health findings as well as reduce the risk of self-harm tendencies.

Self-harm tendencies are becoming increasingly common among adolescents. A systematic review reported an overall average frequency of non-suicidal self-injury of 16%, but a higher prevalence of 19.5% was observed among Asian adolescent populations (Farkas et al., 2023). In Malaysia, suicidal behaviour among adolescents is on the rise. Compared to the National Health and Morbidity Survey from 2012 to 2022 (IPH, 2022), there was a steady increase among adolescents for suicide plan (6.8% to 10.0%), suicide ideation (7.9% to 13.1%), as well as suicide attempt (6.4% to 9.5%). Previous studies found that with or without suicide intents can co-occur and share associated risk factors (Griep & MacKinnon, 2022). This aligns with Gateway Theory where non-suicidal self-injury as well as suicidal attempts are on the same continuum (Duarte et al., 2020). In addition, Klonsky et al. (2014) emphasised the distinction between self-harm tendencies with as well as without suicidal intent are: the lethality, medical damage and frequency of the act. Thus, self-harm and suicidal behaviours are two different issues that are required to be discussed distinctly. In this research, self-harm

tendencies are defined as direct and intentional towards oneself without the intent to die (Gratz, 2001).

The Four-Function Model of self-harm was developed by Nock & Prinstein (2004) and refers to the most commonly used model to conceptualise self-harm tendencies functionalities. This model categorized self-harm tendencies into four main functions to identify underlying psychological needs. The category comprises both interpersonal (social) as well as intrapersonal (automatic) functions that can be positive or negative reinforcements. Intrapersonal function was consistently more prevalent than interpersonal function and associated with higher severity and persistence of self-harm tendencies (Gardner et al., 2021). The findings align with the Experiential Avoidance Model (EAM) in which the process of self-harm without suicidal intent is an affect regulation behaviour (Chapman et al., 2006). The model is founded on the assumption that self-harm behaviours serve as a negatively reinforced coping mechanism to escape intense, unwanted emotional arousal triggered by stimulus. The model is congruent with the study where it is found higher deficits in emotion regulation strategies are strongly linked to a higher occurrence of self-harm tendencies (Clapham & Brausch, 2022). The model provides valuable insights into understanding self-harm tendencies and highlights the role of emotional regulation in developing the module.

The basic principle of Cognitive Behaviour Therapy is that an individual's thoughts influence their feelings, which in turn affect their behaviour. Cognitive Behaviour Therapy has the most documented effectiveness in treating mental disorders (Fordham et al., 2021). Suicide Prevention using Cognitive Behaviour Therapy was shown to be 60% less likely to commit suicide attempts compared to participants in treatment as usual (Bryan & Rudd, 2018). Cognitive Behaviour Therapy is also proven to be an effective intervention for school-based group settings and in Asian culture (Naeem et al., 2021; Saw et al., 2020). However, a locally developed and validated Brief Cognitive Behaviour Therapy Module for the mental well-being of adolescents with self-harm tendencies in Malaysia is limited. Therefore, there is a need to develop and validate a Brief Cognitive Behaviour Therapy Module tailored for the mental well-being of adolescents with self-harm tendencies in Malaysia to ensure the targeted intervention is suitable for use in the school setting.

1.4 Research Objectives

The goal of the study is to develop, validate and test the effectiveness of Brief Cognitive Behaviour Therapy Module for the mental well-being of adolescents with self-harm tendencies in Malaysia. The specific research objectives for the study are:

- a) Develop a Brief Cognitive Behaviour Therapy Module for the mental well-being of adolescents with self-harm tendencies.
- b) Identify the effectiveness of the Brief Cognitive Behaviour Therapy Module on mental well-being (autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance)
- c) Identify the effectiveness of the Brief Cognitive Behaviour Therapy Module on self-harm

tendencies.

2. Method

2.1 Research Methodology

This research has two main objectives. The first objective is to develop a validated Brief Cognitive Behaviour Therapy Module to enhance the mental well-being of early adolescents with self-harm tendencies in a school setting. The second aim is to evaluate the effectiveness of the developed module. Hence, the research consists of two stages which are 1) module validation and 2) effectiveness of module. The study will apply multiple methods for collecting data as each phase has its own objective which requires different approach.

This study will utilised Design and Development Research (DDR) approach to accomplish these objectives. Richey & Klein (2007) described DDR as “the systematic study of design, development and evaluation processes with the aim of establishing an empirical basis for the creation of instructional products and tools, and new or enhanced models that govern their development.” Ellis & Levy (2010) further elaborated that DDR is an approach connecting the gap between theory as well as practice by approving a recognised problem, building on the current literature and contributing new insights to the body of knowledge in the form of model or module. This study will be applying the Ryff Psychological Well-being Model, Brief Cognitive Behaviour Theory and Experiential Avoidance Model of Self-Harm in the module development process to tailor for adolescents exhibiting self-harm tendencies in Malaysia. The research design adheres to the Type 1 approach in DDR that focuses on the process to design and develop module resulting in context-specific and product-oriented outcomes (Richey & Klein, 2007). The DDR approach in this study is guided by ADDIE model which comprises of Analyse, Design, Develop, Implement and Evaluate phase to develop the module in a systematic and empirical manner (Branch, 2010). The research will apply multiple methods of data collection incorporating both qualitative as well as quantitative methods to guarantee an extensive research process concerning every phase of the research.

In the initial stage of the study, the emphasis will be on validating the module developed, following the guidance provided in Analyse, Design and Development phase of ADDIE model. Within the first stage, there are three main steps to module validation which are, 1) need analysis assessment for the module 2) module design and development, and 3) module validation. For need assessment of the module, a quantitative survey will be conducted with guidance as well as counselling teachers in secondary schools to determine the requirement of designing the module for the mental well-being of adolescents with self-harm tendencies. As for the design and development of the module, qualitative inquiry will be employed utilising two focus group discussions consisting of a panel of experts in the related field and a group of late-adolescents with history of self-harm tendencies will be conducted. Lastly, the study will employ content validity index to identify the module’s validity.

The second stage of the study will focus on accessing the effectiveness of the module guided by the Implement and Evaluate phase of ADDIE model. In the Implement phase, true

experimental design will be employed to reduce selection bias and guarantee the study's internal validity. In the final phase, quantitative pre-test and post-test questionnaires, along with a feedback survey, will be evaluated to assess the effectiveness of the developed module.

The research design incorporates a systematic structure of the DDR approach using multiple methods to achieve the study's objective. By integrating the methods, this study aims to capture the different perspectives of the research problem for comprehensive data collection.

2.2 Participants

In the first stage of the study, the research will include guidance and counselling teachers for needs assessment, a panel of experts and adolescents aged 15 to 17 years will contribute to the module's design as well as development, and field experts will be engaged for content validation. The criteria for guidance and counselling teachers are certified counselor by the Counselor Board of Malaysia, having at least three working experiences with adolescents and working in school setting. As for focus group discussion, the panel of experts will be chosen based on the selection criteria that include mental health professionals with at least 10 years of working experience. Additionally, they must possess knowledge and experience dealing with adolescents who have self-harm tendencies. For the second focus group, the participants will consist of adolescents aged between 15 to 17 with a history of self-harm tendencies. Parental consent will be obtained prior to the study. Gaining insights from experts in the mental health field and adolescents who are close in age to the target population is vital to ensure the practicality as well as validity of the developed module.

As for the second stage of the study, the research specifically target adolescents aged 13 to 14 years old in Malaysia for implementation phase. This age range will be chosen strategically due to the developmental stage of early adolescents as it corresponds to the transition to secondary school and coincides with the onset age with regards to self-harm tendencies (Brager-Larsen et al., 2022). Participants will be selected based on the specific inclusion and exclusion criteria. The inclusion criteria consisted of (1) 13 -14 years old (2) engaged in self-harm behaviour over the past 12 months (2) acquired basic reading Bahasa Malaysia, as well as (3) obtaining written consent from a parent. Exclusion criteria will be those who were undergoing psychotherapy or psychiatric treatment will be excluded from the study.

2.3 Sampling Procedures

For the module validation process, criterion-purposive sampling will be utilised for respondent selection. The first step is to identify the need to develop a Brief Cognitive Behaviour Therapy module where guidance and counselling teachers in Malaysia are the primary users to execute the module. The number of respondents for this phase will be 30 to meet the minimum requirement of statistical analysis as recommended by Roscoe (1975). Utilising the snowballing method, guidance and counselling teachers will be the respondents of the need assessment survey. For the Focus Group Discussion, each group will consist of seven participants using criterion purposive sampling. The panel of experts consisting of experts on Cognitive Behaviour Therapy, mental well-being, module development and self-harm tendencies. For the second focus group, seven adolescents, aged 15 to 17, who have

a history of self-harm tendencies will be chosen through purposive criterion sampling and referrals from school guidance and counseling teachers. As for the validation of module, a panel of seven experts will be adequate to validate the content of the module as suggested by Polit & Beck (2006).

For the module evaluation phase, the study will utilise a true experimental design (Appendix A). A total of 80 participants will be selected to allocate 40 participants in experimental and control groups using stratified random sampling. Stratified random sampling will be employed in this study to ensure that the participants represent different subgroups represented in each group. In the context of the research, employing stratified random sampling relying on the age, gender as well as severity of self-harm tendencies ensures homogeneity of both experimental and control groups. After stratification, the random assignment method using the table of random numbers will be applied to assign participants to experimental and control groups. Random assignment enhances the likelihood of obtaining a representative sample, minimises selection bias and allows for a better generalisation of findings. This approach enhances the comparability of groups and allows for more accurate assessment of the module's effectiveness.

2.3.1 Sample Size

In Implementation phase, 450 adolescents will undergo the screening process and only 80 will be chosen as participants of the research. The research will utilise a sample size of 80 participants, divided into experimental and control groups using stratified random sampling to ensure every subgroup is represented in terms of age, gender and severity. Cohen et al. (2007) recommended a sample size of 30 participants per group in true experimental designs. A similar study in Malaysia suggested to an estimated at least 10% dropout rate for group therapy (Saw et al., 2019). Therefore, 80 participants will be sufficient for true experimental study.

2.3.2 Instrumentations

In the development and validation phase, each step will utilise different instruments to achieve the research goal. The need analysis survey comprises respondents' demographic profiles and items to evaluate the necessity of the module developed. The need analysis survey will utilise a Likert scale ranging from 1 (Strongly Disagree) to 4 (Strongly Agree). The survey items will be designed based on the goals of the analysis phase, which aims to assess the necessity of developing a Brief Cognitive Behaviour Therapy Module for the well-being of adolescents with self-harm tendencies in Malaysia. For focus group discussion, a semi-structured interview format will be implemented where the researcher prepares a predefined set of questions beforehand to serve as a discussion guide. Ultimately, the researcher will be the instrument to facilitate the discussion. A content validation questionnaire for expert validation will be adapted based on Sidek & Jamaludin (2005) to suit the needs of the module validation processes.

Three instruments will be applied in the evaluation phase. Firstly, Ryff's Psychological Well-being Scale is a self-report tool designed to assess the eudaimonic aspect of mental

well-being. It evaluates six key dimensions: environmental mastery, autonomy, personal growth, life purpose, positive interpersonal relationships, as well as self-acceptance. Each dimension includes 7 items, which are rated on a 6-point Likert scale from 1 (strongly disagree) to 6 (strongly agree). The reliability coefficients for these dimensions range from 0.85 to 0.91 (Ryff & Keyes, 1995). The instrument has been widely used in previous studies to measure mental well-being of adolescents in Asian culture (Kwok et al., 2020). Second, the Functional Assessment of Self-Mutilation (Lloyd-richardson et al., 2007) was developed to evaluate the behaviour, functions as well as characteristics of self-harm tendencies for the past 12 months. The assessment was divided into two sections. The first section consists of 11 items of self-harm behaviours and the classification. The second section consists of 22 items questions on the reasons for self-harm. This assessment has showcased good reliability as well as validity among adolescents (Reinhardt et al., 2021). Lastly, the post-intervention feedback form will be a self-developed questionnaire consisting of Likert-scale and open-ended questions.

2.3.3 Data Collection Method

The study will utilize both semi-structured interviews and questionnaires as data collection methods. Both qualitative as well as quantitative data collection methods are used at different phases of the research. The use of both methods is to ensure the objectivity of the study as well as the depth of the study. Considerable deliberation on the strength of each method and resource constraints has been devoted to determining the most suitable technique for data collection to optimally facilitate the development of the module.

In this study, questionnaires will be essential for both the development of the module and assessing its effectiveness. Firstly, a need assessment survey will be applied to analyse the necessity of developing the module. Secondly, a panel of experts will evaluate the module's content validity questionnaire to ensure content validity. As for the evaluation phase, the module's efficiency will be assessed utilising pre-test and post-test instruments to measure adolescents' mental well-being and self-harm tendencies. To gather feedback regarding the module, a feedback questionnaire consisting of Likert-scale questions as well as open-ended questions will be conducted to participants in the experimental group to gather their learning experiences on the module. This is to further explore participants' experiences and opinions regarding the module which will offer valuable qualitative data.

Focus group discussion employing a semi-structured interview protocol will be utilised to collect qualitative data in this study to determine the selection of content, strategies, logistics and media following the ADDIE approach of instructional design. Contents are specific components and objectives for each sub-module. Strategy refers to the concept of designing activities that align with the module objectives and needs of the targeted participants. The logistics involved determining the appropriate location and time frame for each sub-module. Media are vehicles to deliver the content to enrich learning experience and accommodate various learning styles. The study will involve two groups of focus group discussions, a panel of experts and late adolescents with history self-harm tendencies. The focus group discussion will be conducted by the researcher using interview protocol as a guide to facilitate the

discussion.

2.3.4 Data Analysis

Descriptive analysis will be employed for the majority of the data analysis in this study, with thematic analysis specially for focus group discussions. The need analysis questionnaire will be statistically analysed in the descriptive analysis of the percentage agreeable to the necessity for a tailored Brief Cognitive Behaviour Therapy Module designed for the mental well-being of adolescents with self-harm tendencies in Malaysia. Content validation questionnaire for expert validation will be adapted based on Sidek & Jamaludin (2005) to suit the requirements of the module validation processes. According to Tuckman & Waheed (1981), a module can be considered to have a high content validity if the validity result is above 70%. The evaluation phase aims to examine the significant differences before and after the treatment. An independent t-test will be utilised to contrast the post-test scores between the two groups, taking into account pre-test scores. The post-intervention feedback form will use t-test analysis and thematic analysis as it consists of Likert scale questions as well as open-ended questions will be administered to participants in the experimental group. As for focus group discussion, thematic analysis will be employed to analyse the data, focusing on identifying, examining, as well as reporting patterns or themes within the dataset.

2.3.5 Experimental Interventions and Manipulation

The Experimental group will undergo the newly developed Brief Cognitive Behaviour Therapy Module for mental well-being while control group will undergo a two-hour mental well-being talk due to ethical considerations regarding the vulnerability of the participants. The developed module is estimated to consist of eight sessions, each lasting 90 minutes. Each session will cover the components of Ryff Psychological Well-being together with Cognitive Behaviour Therapy techniques proposed by the panel of experts.

Experimental manipulations will be employed in this study to accurately measure the effects of the developed module. While randomization can enhance the internal validity, the research acknowledges the existence of potential threats to internal validity and will take measures to address them. Several control measures to mitigate the potential threats. To manage history threats, participants will not undergo other psychological support or counselling sessions during the research period unless specific requests have been made to the school guidance and counselling teacher. In addition, participants will be stratified randomized sampling according to age, gender and severity of self-harm tendencies to ensure homogeneity of each group and address the selection threat. For regression to mean threat, participant will be chosen based on standard deviation and extreme scores will be excluded from the study. Since the research will be conducted in a school setting, participants especially from the experimenter group will be reminded not to discuss the treatment details the study concludes to avoid cross-contamination. To ensure all participants will be treated fairly, control group will be given the option to undergo the module after the experiment has ended. By addressing potential threats, this study will ensure the effects of module developed are measured accurately thus enhancing the reliability of the finding.

The study will implement several precautionary measures to uphold ethical research practices and prioritise participants' welfare as per Declaration of Helsinki Ethical Principles (World Medical Association Declaration of Helsinki, 2013). Parental informed consent together with assent from the participant will be obtained to ensure that they understand the possible risks involved. Adolescents undergoing psychotherapy and psychiatric treatment will be excluded from the research to protect vulnerable individuals. In addition, the questionnaire will begin with a screening question: "have you intentionally caused physical harm to yourself?". Respondents who answer with a negative reply will be directed to proceed to the next section. To further safeguard the welfare of the participants, a guidance and counselling teacher will be assigned to provide immediate counselling support. In addition, a flyer containing contacts of local healthcare facilities and counselling helpline referrals will be distributed to all respondents. These measures reflect the researcher's strong commitment to upholding ethical research practice.

3. Discussion and Conclusion

The study is expected to develop a validated Brief Cognitive Behaviour Therapy Module for mental well-being of adolescents with self-harm tendencies suited to be used in a school setting. The module will consist of Ryff Psychological Well-being elements and Cognitive Behaviour Therapy strategies targeted for adolescents exhibiting self-harm tendencies to promote healthier coping strategies as prior studies have shown promising results (Duarte et al., 2020). The implementation of the newly developed module will anticipate to yield significant improvement on the mental well-being of adolescents with self-harm tendencies. The evidence of the effectiveness of the developed module will be the participants in the experimental group will exhibit a higher post-test score on Ryff Psychological Mental Well-being as contrasted to the pre-test scores. Moreover, the experimental group is expected to demonstrate higher mental well-being scores compared to control group which only receives two hours of intervention. This will be the indication the effectiveness of the Cognitive Behaviour Therapy can effectively enhance various dimensions of psychological well-being aligning with previous studies (van Dierendonck & Lam, 2023).

Research associated with self-harm tendencies in Malaysia remains limited, due to societal stigma and concerns over potential iatrogenic effects on participants (Fernandez et al., 2022). Previous research addressing iatrogenic effects on self-harm tendencies intervention and suicide risk assessment indicated the concerns are unsupported (Coppersmith et al., 2022). Baetens et al. (2020) conducted a school-based prevention targeting self-harm tendencies among adolescents reported therapeutic effects for the participants as they felt heard and seen. Despite the positive outcome, this study will implement precautionary measures upholding ethical research practice.

This research will be valuable in addressing pressing concerns regarding mental well-being among adolescents with self-harm tendencies in Malaysia. However, it is important to take into account specific limitations when analysing the results. These limitations encompass both the scope of the study and specific participant criteria. The study will be conducted at one public national secondary school in an urban area in Malaysia. This geographical and

institutional restriction may limit the generalisability of the developed Brief Cognitive Behaviour Therapy Module to other types of educational institutions, regions, or cultural contexts. The study acknowledges the relatively small sample size of participants, which may affect the statistical findings. The limited number of participants may not fully capture the diversity and variability of the adolescent population. Consequently, the generalisability of the results to the broader population of Malaysian adolescents may be limited. For the research purpose, adolescents are described as individuals aged 13 to 14 years. While this age range is chosen for specific research considerations, it might not include the entire adolescent population, which could restrict the applicability of findings to older or younger age groups. While the exclusion criteria are essential for ethical reasons and participant safety, it restricts the study's applicability to adolescents with pre-existing mental health conditions, potentially excluding a subgroup with specific needs.

In conclusion, the development of a Brief Cognitive Behaviour Therapy Module for the mental well-being of adolescents in Malaysia is a crucial step in addressing the issue. Mental health encompasses more than just the nonexistence of mental disorders. By improving mental well-being as a protective factor against mental disorders and moderating self-harm tendencies among adolescents, this module has the potential to not only promote overall mental well-being but also de-stigmatise self-harm tendencies and encourage more adolescents to seek help. The implementation of the module developed can contribute to a more supportive school environment for adolescents, potentially improving mental health outcomes and reducing self-harm behaviours.

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Appendix A

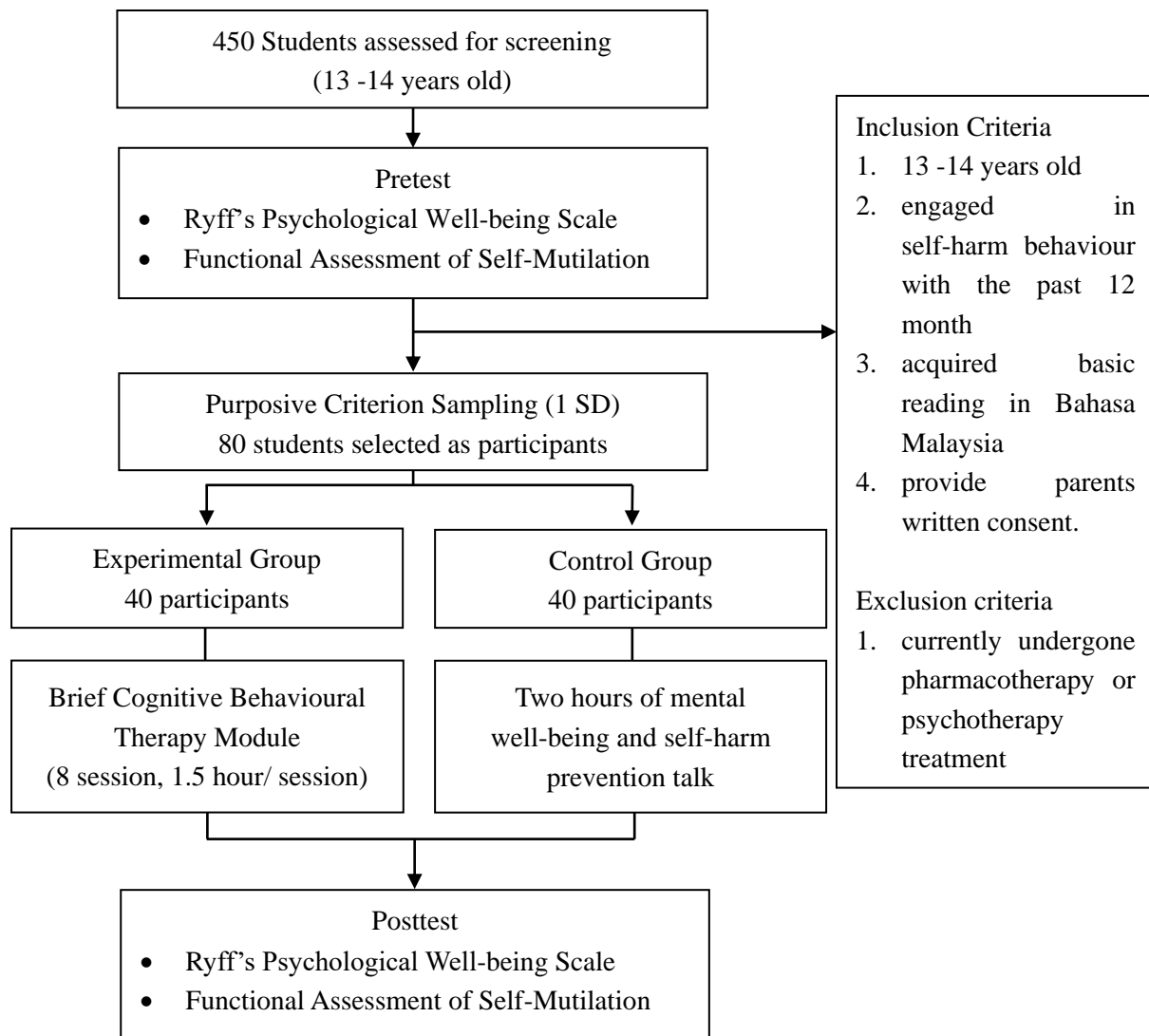


Figure A. Sampling Procedure in Implement Phase

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