

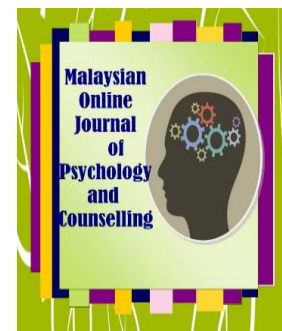
THE DEVELOPMENT OF COMPASSIONATE AID FAMILY INTERVENTION (CAFyIn) MODULE TO FAMILY MEMBERS OF PEOPLE WHO INJECT DRUGS (PWID)

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ABSTRACT

Family members of people who inject drugs (PWID) face heightened risks of encountering health, social, and economic challenges that can severely impact their quality of life. While there is a growing number of interventions available for PWID, such as the Needles Syringe Exchange Program (NSEP) and Methadone Maintenance Treatment (MMT), intervention specifically tailored for the well-being of family members of PWID remain limited, particularly in Malaysia. This article presents the development of a “Compassionate Aid Family Intervention’ (CAFyIn) Module utilizing the Sidek Module Development Model (SMDM), with the aim of improving the quality of life among family members of PWID. SMDM emphasizes a systematic process with a detailed procedure. The article outlines the application of the SMDM, the key findings, and the potential benefits of the CAFyIn. The study's results demonstrate that the CAFyIn exhibits a strong content validity, achieving an average score of 88%. This indicates that the module has been well-designed and holds promise in supporting the needs of family members facing the challenges associated with having PWID relatives.

Keywords: Family member, Quality of Life, PWID, CAFyIn, Sidek's Module Development Model



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INTRODUCTION

Malaysia has been focusing on implementing harm reduction towards the HIV risks population aligned with the goal of “Ending AIDS by 2030” (Palchadhuri et al., 2016; Assefa & Gilks, 2020). HIV or human immunodeficiency virus is one of the viruses that can attack the human immune system which if left untreated can result in AIDS (acquired immunodeficiency syndrome) (Patel et al., 2021; Uwishema et al., 2022). HIV has been taken seriously in the healthcare field because it is still a major infectious disease around the world, with an estimated 39.0 million HIV-positive individuals globally at the end of 2022, 630 000 HIV-related deaths, and 1.3 million new HIV infections (World Health Organization, 2023). In this modern era, injection drugs remain a significant contributor to HIV and HCV (Hser et al., 2016). Although heroin remains a popular drug in Southeast Asia, the types of drugs used for injection have expanded beyond heroin (Hser et al., 2016; Singh et al., 2013).

HIV infection is relatively common among people who inject drugs (PWID), and HIV-positive individuals are predisposed to depression (Levintow et al., 2018). This is related to the physical and psychological consequences of HIV and addiction that exacerbate depressive symptoms (Levintow et al., 2018). The relationship between HIV and depression in PWID is more causal than correlational (Levintow et al., 2021). HIV infection leads to depression, and depression leads to HIV infection among PWID (Adams et al., 2020; Levintow et al., 2018). In the same vein, injecting risk behaviour have been linked to mental health issues and PWID who are experiencing severe depression are more likely to share needles (Armstrong et al., 2013). Previous research has shown that depression is a significant driver of continued HIV transmission among PWID, as the risk of sharing needles and unprotected sex increases when someone is depressed (Armstrong et al., 2013).

Health constitutes a crucial aspect of overall quality of life, yet other facets such as social connections and financial stability also play significant roles in shaping one's quality of life (Leuteritz et al, 2021). The quality of life among PWID are relatively poorer (Vasylyev et al., 2019; Armstrong et al., 2013). According to Armstrong et al. (2013), PWID are vulnerable to poverty, poor mental and physical health, disconnect from family, and imprisonment, all of which equal to low quality of life, especially when they have lower education and are homeless. PWID are a vulnerable population with a high rate of overdose, mental illness, and HIV/HCV infection (Muncan et al., 2020). Furthermore, the degree of financial status plays a significant role in each route of drug administration (Estevez-Lamorte et al., 2021). People who use drug with a stable financial situation prefer to use drugs by nasal or smoking (Estevez-Lamorte et al., 2021), whereas injecting is more common among low-income or poor people (Buthenthal et al., 2014). PWID are also more likely to have lower educational qualifications, as lower qualifications are associated with more dangerous methods of administration, particularly injection (Estevez-Lamorte et al., 2021; Novak & Kral, 2011).

In Malaysia, methadone maintenance therapy (MMT) and needle syringe exchange programs (NSEP) are currently the two most important initiatives for reducing the risk of injecting drugs while also lowering HIV and HCV transmission (Chandrasekaran et al., 2017). The effectiveness of NSEP is well established (Reddon et al., 2019). MMT is also one of the best harm reductions that are effective in reducing HIV (Chandrasekaran et al., 2017). Malaysia have conducted MMT for ten years and discovered that MMT assists patients in enhancing their quality of life in three areas: employment, health, and social functioning (Aziz et al., 2016). It has also been discovered that MMT helps to reduce the transmission of HIV, HCV, and criminality in Malaysia after 10 years (Aziz et al., 2016). NSEP helps control the HIV epidemics but not addiction, whereas MMT can help reduce the number of heroin addicts (Lin et al., 2016). Even though NSEP not focusing on reducing addiction, but it is an important source for entering the MMT program as it created a channel for people who inject drugs (PWID) to

be referred for rehabilitation, health screening, and further treatment (Rao et al., 2020). To effectively combat HIV outbreaks, it is suggested that HIV prevention strategies to be combined, as standing alone is not recommended (Reddon et al., 2019). Multiple evidence-based interventions are likely to have aided in the reduction of HIV outbreaks, as a single intervention cannot solve all the problems (Lin et al., 2016).

However, even though drug use is an individual behaviour, the impact of addiction is stressful enough to cause pain and suffering for the entire family (Li et al., 2013; Orford et al., 2013). HIV can be transmitted through the exchange of biological fluids such as blood, breast milk, sperm, and vaginal secretions (World Health Organization, 2023). Due to risky injection drug use and risky sexual behavior, PWID is disproportionately at risk for transmitting HIV and HCV globally (Kim et al., 2015). According to an Iranian study, married PWID engage in unsafe injection and sex five times more frequently (Esmaeili et al., 2019). This behavior increased the risk of HIV transmission among PWID to family members, as this study discovered that only 1 in 5 HIV-positive PWID practiced safe injection and sex, while the remaining HIV-positive PWID did not (Esmaeili et al., 2019). In Malaysia, men outnumber women in terms of drug injection, but women are more likely to be infected by unprotected sexual contact (Abdul Manaf et al., 2019). Furthermore, aside from being transmitted by HIV, one of the most serious problems caused by drug addiction is during pregnancy, as substance use among pregnant women is a risk to public health because it can jeopardise child development (Ross et al., 2015).

PWID not only contributes to HIV transmission through sexual contact but also has potentially destroying families' mental health (Escudero et al., 2017). According to Shamsaei et al., (2019) substance users affect family in countless ways. Somatization, interpersonal sensitivity, depression, anxiety, and phobia were found to be more prevalent in families with a substance abuser than in families without a substance abuser (Shamsaei et al., 2019). Stigma is also one of the difficulties that family members of drug users, particularly those who inject drugs, often experience (Lee et al., 2015). The challenges were classified into two categories: internal and external. Internal problems were defined as behavior inside the family, such as how they communicate, their emotions, and drug addict behavior, whereas external hurdles were defined as community involvement and stigma. While these two problems were significant, this study discovered that most participants were overwhelmed by internal challenges because they had lost faith that their family member who was an addict would not relapse after treatment (Syazrah et al., 2018). Interpersonal sensitivity encompasses feelings of perplexity or difficulty in interpersonal connections, which can interfere with an individual's social performance. Furthermore, family life, career, and interpersonal relationships may be impacted by the distribution of social performance (Shamsaei et al., 2019).

People who inject drugs (PWID) not only harm their own lives but also impacted their entire families. As harm reduction interventions primarily target PWID, family members may silently endure the consequences. Considering the detrimental effects of PWID on the well-being of family members and the lack of comprehensive research on this population in Malaysia, there is a need to create an intervention specifically designed for them. This paper aims to establish a highly validate intervention module to improve the quality of life for family members of PWID. The development of the Compassionate Aid Family Intervention (CAFYIn) module will be thoroughly explored in this article.

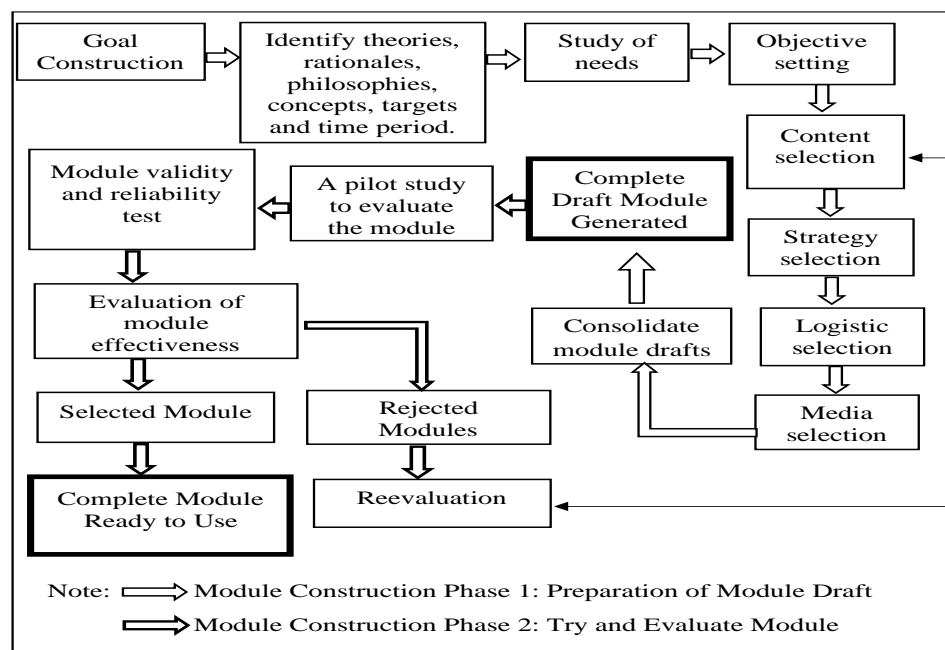
STUDY OBJECTIVES

The objective of this research is to create a valid module, with the goal of improving the quality of life for family members of People Who Inject Drugs (PWID). The development of the module followed Sidek's Module Development Model (SMDM) throughout the entire process.

The Development of Cafyin Module

Compassionate Aid Family Intervention (CAFyIn) is a module that aims in enhancing the quality of life among family members of people who inject drugs (PWID). In developing CAFyIn module, a comprehensive framework has been constructed that addresses four key domains: physical health, psychological health, social relationship, and environmental. In creating the module, Sidek's Module Development Model (SMDM) will be utilized as a framework. SMDM has been chosen as several key factors have been taken into consideration, including the logical order, conforming to norms or standard, being strong in terms of validity and reliability, and being widely used in various contexts of module development.

Sidek's Module Development Model (SMDM) consists of two phases. The first phase focuses on preparing the module draft, encompassing ten sequential processes. These processes include constructing goals, identifying theories, rationales, philosophies, concepts, targets, and time periods, studying needs, setting objectives, selecting content, strategies, logistics, and media. Lastly the module drafts are consolidated to generate the final draft. The second phase involves the trial and evaluation of the module, comprising five key processes. These processes begin with the pilot study to assess the module, followed by tests to establish its validity and reliability. The effectiveness of the selected module is then evaluated, and if necessary, the researcher reevaluates the content selection. Upon successful evaluation, the module is considered complete and ready to use. The module development flows created by Sidek Mohd Noah and Jamaludin Ahmad (2005) are shown in the figure below:



Note. Reprinted from "Development of the PiNTAS Module: Academic Intervention Programme for Low-Performing University Students", by Rahman, Abdullah & Khalid, 2021. Retrieved from *PalArch's Journal of Archaeology of Egypt/Egyptology*, 18 (2), 183-194.

Figure 1.0. Sidek's module development model

Process 1: Setting a goal.

The goal of developing Compassionate Aid Family Intervention Module (CAFyIn) module is to enhance the quality of life among family members of PWID. Thus, the focus on developing CAFyIn module is to help family members of PWID to improve their overall quality of life encompassing 4 domains: physical health, psychological, social relationships, and environmental.

Process 2: Identify theories, rationales, philosophies, concepts, targets, and time period.

- Theories

Family Systems Theory: This theory emphasized the interconnectedness of family members and their influence on each other. By addressing the family as a whole rather than individual, the module can promote effective coping strategies, communication, and support among family members.

Maslow's Hierarchy of Needs Theory: this theory proposes a hierarchy of human needs, ranging from basics physiological needs to higher-level psychological and self-fulfillment needs. By focusing on meeting their basic needs, the module aims to enhance the overall quality of life and well-being of family members.

- Rationale: The rationale for CAFyIn module is to recognize the impact of drug use on family members and provide a comprehensive approach to enhance their quality of life.
- Philosophy: Strength-Based Approach, as it aims to empower family members to overcome challenges, build effective coping strategies, and improve their overall quality of life.
- Concept:

Family Education: promote understanding, reduce stigma, and enhance knowledge of available resources and support systems.

Self-Care: Encouraging family members to prioritize their own well-being through self-care activities, stress management techniques, and accessing appropriate support services.

- Target: Family members of people who inject drugs who aged 18 years and above.
- Time period: Several weeks or months.

Process 3: Study of needs

- Literature Review: conducted a literature review on existing literature, research studies, and relevant resources on the experiences and needs of family members affected by drug injection behavior.
- Survey: Provided a survey with 12 experts in drugs issue and counsellor with 5 years of experience, designed using Fuzzy Delphi method, to gather experts' insights and expertise on the necessary requirements for the module. From the result, all experts agreed that this module need to be developed.

Process 4: Objective setting

In developing CAFyIn module, the general objective is to enhance the quality of life among family members of PWID and as a focused objective, researchers wanted to increase knowledge and understanding of addiction and its impact on family dynamics. The focused objective aims to provide family members with necessary knowledge and understanding of addiction, helping them comprehend the complexities of the issue and how it affects their family relationships.

Process 5: Content Selection

Knowledge about addiction, family dynamics, coping skills, communication strategies, building supportive environments, accessing resources, and empowerment and self-efficacy.

Process 6: Strategy Selection

- Psychoeducation sessions: Conduct informative sessions that provide essential education about addiction, its effects on individuals and families, and available support resources.
- Support group: Facilitate support groups specifically tailored for family members, where they can connect with others facing similar challenges. These groups provide a safe space for sharing experiences, expressing emotions, and receiving mutual support and guidance.
- Family Therapy Sessions: Organize family therapy sessions led by registered counsellors to address specific family dynamics impacted by drug use. These sessions facilitate open dialog, promote understanding, and provide guidance on resolving conflicts and rebuilding trust within the family system.

Process 7: Logistic Selection

- Venue Selection: The intervention will take place at Hotel Crystal Crown, located in Klang, Selangor. The selection of this venue is not only by its proximity to Klinik Kesihatan Pandamaran, where PWID receive drug-related treatment and their daily methadone dose, but also by the convenience it offers to their family members.
- Scheduling: In determining the optimal schedule, the availability and convenience of participants need to be considered. Considering that many family members are employed, conducting the sessions on the weekend would be more convenient.

Process 8: Media Selection

Interactive Materials: Incorporate interactive activities, such as group exercises, role-playing, or a case study to actively engage participants and encourage application of knowledge and skills in real-life scenarios.

Process 9: Consolidate module draft.

Lastly, after all the process of developing a module has been completed, the researcher will combine all the process into one draft called a module draft. The module draft will include the objective (general and focused objective), the content, activities in each session, the selected media, and the strategies of module implementation.

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Process 10: Complete draft module generated.

Table 1.0 Summary of CAFyIn Module

Session	Activity	Focus
Session 1	Introduction	Rapport and building relationship
Session 2	Family Dynamic & Relationship (Genogram)	Social relationship <ul style="list-style-type: none"> - Social Relationship - Social Support - Sexual Activity
Session 3	Self-Care (Holistic Health)	Physical Health <ul style="list-style-type: none"> - Pain & discomfort - Medical treatment - Energy - Discomfort - Sleep - Ability to perform daily life - Capacity to work
Session 4	Positive Affirmation	Psychological <ul style="list-style-type: none"> - Positive feelings - Self-esteem - Thinking, learning, memory - Self satisfaction - Negative feelings
Session 5	Goal Settings (SMART goal)	Environmental Health <ul style="list-style-type: none"> - Freedom, physical health - Financial resources - Opportunities - Home environment - Transport - Opportunities for leisure things - Health & social care
Session 6	Reflection	Gratitude Journal <ul style="list-style-type: none"> - Reflect all the sessions - The benefits of the program and why it needs to continue

METHODOLOGY

Procedures of the Study

Sidek's Module Development Model (SMDM) was utilized in developing Compassionate Aid Family Intervention (CAFyIn) Module. There are two phases required to complete the module. The first phase started with process 1 (setting a goal) ended with process 10 (complete draft module generated) and for second phase is a phase where the module will go through the pilot test which is also useful to identify module's validity and reliability. Through the pilot test, possible errors or weakness can be identified before exposing the actual study (Mahfar et al., 2019).

Participants

A pilot test was carried out in order to assess the reliability and validity of the CAFyIn module. To evaluate the validity of CAFyIn module, a group of three highly qualified and experienced lecturers in educational psychology and counseling with PhD qualifications, were chosen as a panel of independent assessors.

Measures

In this study, a questionnaire was employed to gauge the content validity of the developed CAFyIn module. The questionnaires were tailored to specifically evaluate and ascertain the content validity of the CAFyIn module, ensuring comprehensive and accurate measurement of these essential aspects.

Content Validity Measuring Process

The content validation of the CAFyIn module was assessed by a group of three highly qualified and experienced lecturers in educational psychology and counseling with PhD qualification. The experts were given a draft of CAFyIn module and content validity questionnaire. The content validity questionnaire consists of 5 items using 5-point of Likert-scale ranging from 1 (strongly disagree) to 5 (strongly agree). It is a modified version from the original questionnaire by Rusell (1974) who suggested that validity of content can be answered based on:

- (a) Module content meets the target population.
- (b) The content of module is straightforward and can be implemented correctly.
- (c) The content of module is following the allotted time.
- (d) Module content can enhance student behavior change.
- (e) Module content can change students' attitudes towards excellence.

For the modified version only (d) and (e) have been modified to: (d) module content can enhance the quality of life, and (e) module content can change family members of PWID attitudes towards better quality of life.

From the questionnaire, the module is valid if the percentage above 70% (Noah & Ahmad, 2005).

The formula:

$$Total\ Score = \frac{Total\ Expert\ Score\ (x)}{Maximum\ Score\ (y)} \times 100\%$$

Once the module has been assessed and scored by experts, the researcher will proceed to assess its validity using the aforementioned formula. If the percentage exceeds 70%, the module is deemed

valid; however, if it falls below 70%, adjustments are required, and the experts will reevaluate the module.

RESULTS

Table 2.0 Content Validity

Content Validity	Percentage (%)
The content of CAFyIn module for family members of PWID meets the target population.	86.7
The content of CAFyIn module for family members of PWID can be implemented successfully.	93.3
The content of CAFyIn module for family members of PWID is compatible with the time allocated.	86.7
The content of CAFyIn module for family members of PWID can assist them to better understand the impact of drugs to family members	93.3
The content of CAFyIn module for family members of PWID can assist them to enhance the quality of life	80

According to the results in Table 2, each item obtained a score above 70%, indicating a positive outcome. The overall average of the module has been calculated to be 88%, confirming its validity and suitability for utilization in the actual study. These findings provide substantial evidence that the module is well-founded and can confidently be incorporated into the research endeavor.

Study Design

In the next stage of this research, researchers will conduct a quasi-experimental study utilizing a pre-posttest approach. The study will involve comparing an intervention group with a control group to evaluate the effectiveness of the Compassionate Aids Family Intervention (CAFyIn) Module. The main focus with CAFyIn module will be on enhancing the quality of life among family members of people who inject drugs (PWID).

Setting and Sample

The study will be conducted in Klang, Selangor with the sample size among 60 family members of PWID, which corresponds to 30 participants for each group (intervention & control group). The minimal number of participants for causal-comparative and true experimental studies is 30 for intervention group and control group respectively. According to Nikoloupoulo (2022), the purposive sampling method is when the researcher selects participant for the study that have the same characteristics. It is also called as judgemental sampling because the researcher selects based on his or her judgement respondents that will be provide the best information to achieve the study objective.

Inclusion criteria for participants were as follows: (1) aged 18 years old and above; (2) parents, spouse/partners, or son/daughter of PWID; (3) family who stay in the same household with PWID; (4) permanent residents in Klang, Selangor; (5) consent to participate in this study.

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Exclusion criteria for participants were as follows: (1) aged below 18 years old; (2) not parents, spouse/partners, or son/daughter of PWID; (3) family who does not stay in the same household with PWID; (4) not permanent residents in Klang, Selangor; (5) not consent to be participate in this study.

Ethical Consideration

This study received approval from University Malaya Research Ethics Committee (UMREC) (UM.TNC2/UMREC_2065). The informed consent will be given to all participants before the study starts. Data will be captured using Research Electronic Data Capture (REDCap). When capturing data, personal identity will stay anonymous in order to protect participant identity.

Research Instrument

Instruments used to obtain data in this study are demographic questionnaire, Abbreviated World Health Organization Quality of Life (WHOQOL-BREF), and Compassionate Aids Family Intervention (CAFyIN) Module. Demographic questionnaire for family member of PWID consisted of age, ethnicity, religion, gender, relationship status, level of education, employment, and family income.

WHOQOL-BREF is a short version of WHOQOL-100. WHOQOL-BREF is a recommended questionnaire as it is reliable instrument to measure the quality of life (Gholami et al., 2013). It consists of 26-items of 4 domains. 2 items for general health and quality of life. 7 items for physical health, 6 items for psychosocial health, 3 items for social relationship and 8 items for environment (Gholami et al., 2013).

CAFyIn module is a family-based intervention module. CAFyIn module is a six-session module developed from literature, based on Family System Theory, Maslow's Hierarchy of Need. CAFyIn module aims to improve quality of life among family members of PWID.

Expected Results

The upcoming research aims to explore the potential positive impact of the Compassionate Aids Family Intervention (CAFyIn) Module on the quality of life among family members of people who inject drugs (PWID). The CAFyIn module is anticipated to offer valuable support and educational resources, equipping family members with effective coping strategies to manage the adverse effects associated with drug addiction, particularly concerning PWID.

By investigating the intervention's effects, the hypothesis posits that the intervention group will display more significant improvements in their quality of life compared to the control group. The data obtained from this study will be instrumental in contributing to the development and enhancement of interventions specifically designed to elevate the quality of life for family members who have PWID among their loved ones.

This research endeavor aims to shed light on the importance of comprehensive family-focused interventions in fostering resilience and well-being amidst challenging circumstances. Ultimately, the outcomes of this study will potentially pave the way for more tailored and effective strategies to support and uplift the lives of family members impacted by PWID.

CONCLUSION

This investigation will make a valuable contribution to the development of interventions designed to uplift the quality of life among family members of PWID. The study's results will furnish compelling

evidence showcasing the efficacy of the CAFyIn module in enhancing the well-being of these family members. Furthermore, this research holds the potential to offer insights that can shape policies and practices concerning the provision of services to families affected by drug addiction.

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