DEVELOPMENT OF A COGNITIVE THERAPY MODULE TO ENHANCE SELF-ESTEEM FOR YOUTH WITH PHYSICAL DISABILITIES IN MALAYSIA

Aga Mohd Jaladin R[1], Fernandez JA[1], Muhamad AS[1], Mohammad Roose AR[2], and Sipon S[3].
[1]Department of Educational Psychology and Counselling, Faculty of Education Universiti Malaya, 50603 Kuala Lumpur, Malaysia
[2]Faculty of Cognitive Sciences and Human Development, Universiti Malaysia Sarawak, 94300 Kota Samarahan, Sarawak, Malaysia
[3]Faculty of Leadership and Management, Universiti Sains Islam Malaysia, 71800 Nilai, Negeri Sembilan, Malaysia

Correspondence:
Rafidah Aga Mohd Jaladin,
Department of Educational Psychology and Counselling,
Faculty of Education,
Universiti Malaya, 50603 Kuala Lumpur, Malaysia
Email: rafidah_aga@um.edu.my

Abstract

Youth with physical disabilities may have concerns about their bodily functions and appearance, which do not typically conform to sociocultural norms. A mounting body of research confirmed that physical disability has an adverse impact on self-esteem development. This study was aimed at developing a cognitive therapy module for professional counsellors to help Malaysian youth with physical disabilities enhance their self-esteem. The methodology comprised three stages: (i) self-esteem baseline assessment; (ii) module design and development; and (iii) module evaluation. First, the Rosenberg Self-Esteem Scale was used to collect data from 110 youth with physical disabilities. The results revealed that participants had moderate levels of self-esteem (mean, $\bar{x}$ = 30.16). This finding highlighted the need to increase the level of self-esteem among youth with physical disabilities. The second stage involved the development of the cognitive therapy module for self-esteem enhancement using Sidek's model of module development. The third stage involved evaluating the module's content validity and reliability using Sidek's model of module development. Findings showed that the therapy module has high content validity and reliability. The overall findings demonstrate that the newly developed module can be applied by professional counsellors to enhance self-esteem among youth with physical disabilities.

Keywords: Cognitive Therapy, Physical Disabilities, Professional Counsellors, Self-Esteem, Malaysian Youth

Introduction

There are over 593,000 registered persons with disabilities (PWD) in Malaysia which represents around 1.5% of its population (1). Since registration is voluntary, this data may not be entirely accurate. Additionally, the World Health Organization asserts that 15% of the global population has some form of disability (2). This shows that many individuals have not come forth and registered themselves as PWD. Undeniably, little research has been undertaken regarding PWD in Malaysia. Consequently, PWD are too often hidden, discriminated, and omitted from society. The paucity of knowledge and misperceptions about PWD have caused a deep-rooted stigma against PWD and thus, limiting the access to their rights to be part of our society. In reality, PWD should be proud to identify themselves as members of a minority community, whose rights have been legally acknowledged and need to be protected.

In particular, persons with physical disabilities have been negatively stereotyped as being dependent and incompetent (3). Besides that, physical disability encroaches on one's development, especially during one's youth. During puberty, youth with physical disabilities may be apprehensive about their functional impairments and body image which do not typically conform to the sociocultural norms. This may create a deep-seated frustration within themselves. These adverse feelings, paired with the negative reaction and social exclusion by society towards PWD, negatively affect their self-esteem of being in a minority group (4, 5).

Prior work had demonstrated that PWD consistently reported lower self-esteem than the general population (6, 7). Persons with physical disabilities (PWPD), especially in their youth, are more susceptible to low self-esteem as they struggle to adapt to their social world. They constantly

compare themselves to their able-bodied peers which leads them to feel down or unworthy. Negative beliefs about oneself are associated with the degree to which individuals are different (e.g., are aware of stigma) (8). To make matters worse, PWPD are especially vulnerable to mental disorders due to factors like isolation, abuse and stressors related to poverty or unemployment (9). Further, PWPD often suffer from how others react to them, and this contributes to diminished self-esteem and the tendency to take little care of themselves, which may subsequently hinder social inclusion (10). Taken together, the findings from the aforementioned studies revealed that both individual and environmental factors can influence the self-esteem of PWPD. Fortunately, one's self-esteem is not set in stone, thus if PWPD suffer from low self-esteem, they can participate in activities that boost their self-esteem. Hence, the aim of this study is to create a therapy module to heighten PWPD's self-esteem, leaving them feeling empowered and assimilated into society.

Some studies have reported that the age and degree of disability influence self-esteem (11, 12). Both studies acknowledge that youth are most likely to suffer from poor self-esteem. Additionally, a plethora of studies have demonstrated that females have lower self-esteem levels than males (13). Female youth with physical disabilities are more at risk of low self-esteem compared to their male counterparts (14). However, local studies have yet to examine if there is a difference between self-esteem and sex in PWPD. Disability itself is a stigmatizing phenomenon, its adverse impacts can be profound when combined with the social pressure women face in our society today. For example, Malaysian women today actively contribute in almost all male-dominated fields, yet factors such as gender gaps and unequal pay still exist (15). Abuse and sexual harassment have also been a contributing factor to low self-esteem, with one in every five women being subjected to sexual and/or physical abuse globally (16). PWPD are often discriminated against and deprived of basic human rights (10). Consequently, females with physical disabilities may face double discrimination. For instance, women with physical disabilities were found to be more vulnerable to sexual and physical abuse, due to a lack of information around gender-based violence and lack of awareness about protective measures and resources (17).

Though PWPD often suffer from poor self-esteem, emerging research demonstrated that being a member in such a group may serve as a protective factor for self-esteem due to the ability of members to belong in a tight-knit group (18). Also known as disability pride, PWD feel proud to belong to a unique group. They accept and honour each individual's uniqueness and treat it as a beautiful aspect of human diversity. Commendably, the Malaysian government provided more resources for youth with physical disabilities (in line with her 11th and 12th Malaysia plans) to perform daily life activities such as vocational training and rehabilitation programs within the community. Nonetheless, mental health has yet to be addressed, which is of utmost significance.

Positive self-esteem is often viewed as the primary facet of mental health, and it is also a protective factor that promotes positive behaviour and better mental health (18). Past studies have revealed that high self-esteem is associated with fewer symptoms of depression, anxiety, suicidal tendencies, eating disorders and substance abuse (19, 20). Self-esteem refers to how we view ourselves in terms of worth and value (21). Hence, if a person has low self-esteem, he/she can do things to boost his/her self-esteem. Healthy or positive self-esteem leads one to accept him/herself and acknowledge their strengths as well as weaknesses.

Fennell's cognitive model of low self-esteem will be used as a foundation for the Cognitive Therapy for Self-Esteem Enhancement (CTSEE) module (22). This model postulates that throughout one's life, one develops negative beliefs about oneself which Fennell refers to as 'bottom line'. One's bottom line is often a simple description of oneself (e.g., *"I'm useless"*). This bottom line is ever-present but dormant, it is activated in certain situations. Once it is activated, one is more likely to use adverse safety strategies such as criticizing oneself, setting inflexible rules, making anxious predictions about the future and avoiding threats. Even so, these strategies can only make one feel better in the short-term as the bottom line never changes and one's self-esteem never improves. These negative core experiences and beliefs will result in dysfunctional assumptions in which the individual believes that he/she will only be happy or satisfied with life if he/she is perfect, loved or in control.

It is important to note that physical disability is only one facet of a person. Hence, for PWPD, it is essential to allow oneself to view his/her disability as one component of his/her life, not the only component. In addition, PWPD may be dealing with stereotypes and discrimination from society. Our society focuses on looks, speed, and being the same as everyone else so PWPD may experience additional pressure from trying to meet society's impossible standards. These factors are considered when developing the therapy module to enhance self-esteem among PWPD.

It is, therefore, necessary to transform the dysfunctional beliefs into functional beliefs, in order for them to build positive relationships with others and feel confident in their abilities. In spite of this, many local school and college counsellors do not have sufficient materials to refer to as guidelines. Most therapies focusing on PWD and self-esteem were developed in the West and may not be suitable in the Malaysian context (23). As such, the present research aims to develop a CTSEE module that includes a structured and organized group counselling procedure and activities to increase the self-esteem of youth with physical disabilities, leaving them feeling empowered in the long run.

Among the advantages of group counselling with PWPD are that groups can assist them to strive towards the resolution of a common problem (i.e., self-esteem), provide them with the opportunity to learn from one another, develop

a social support network and ease their transition to the able-bodied community (24). Prior work has shown that youth respond better in a group of peers than in individual counselling, especially if the participants are within the same age bracket (25, 26). Also, adverse effects can be diminished when individuals in the PWD group prefer to identify with each other instead of the mainstream culture (18). Apart from that, groups provide a sense of belonging and build the PWPD's confidence as they too can present their perspectives and offer solutions to others. Subsequently, they learn social skills and build healthy relationships with each other that tend to last and extend outside of therapy.

Currently, there are over 8,000 registered counsellors in Malaysia, but the ratio is one counsellor for every 4,030 individuals (27). This ratio is too high to handle the population's mental health issues which are on the rise. Furthermore, there is a shortage of counsellors that specialize in rehabilitation counselling in Malaysia. When working with PWD, counsellors often lack the skills, knowledge, and attitudes to help them, thus there is an intense need for training programs and educational materials for counsellors in order for them to effectively identify their roles and function when working with this unique minority group. Consequently, this research aims to develop a CTSEE module for counsellors to be used in a rehabilitation group counselling programme to help youth with physical disabilities suffering from low self-esteem. To achieve this research aim, the following research objectives were formulated:

i) To examine the baseline level of self-esteem among youth with physical disabilities;

ii) To design and develop a CTSEE module for youth with physical disabilities; and

iii) To evaluate the validity and reliability of the cognitive therapy module.

Upon completion of this research, new findings in the form of a valid and reliable cognitive therapy module to enhance self-esteem would be developed to benefit both the counsellors as well as PWPDs. As the newly developed module uses a group therapy approach, it offers opportunities for counsellors to maximize results and reach a wider audience in a brief span of time.

Materials and Methods

Research design

First, a survey method was used to examine the self-esteem levels of youth with physical disabilities. Then, a module development framework by Sidek Mohd Noah was adopted to develop the CTSEE module and examine its reliability and validity (28). The CTSEE module content was theoretically based on Fennell's cognitive model of low self-esteem (22). This research was conducted based on three stages of implementation.

Stage 1: Assessing the baseline level of self-esteem

This stage focused on the assessment of self-esteem levels among youth with physical disabilities to establish the need for module development. It has two research questions of interest:

i) What is the level of self-esteem among youth with physical disabilities?

ii) Is there a significant difference in the score of self-esteem of youth with physical disabilities with respect to sex?

Instrument

The instrument utilized in this stage was the Rosenberg Self-Esteem Scale (RSES) which comprises 10 questions using a five-point Likert scale. This instrument measures an individual's self-worth by gauging both negative and positive feelings of oneself and can be administered to individuals aged 12 years old and older (21). Numerous studies worldwide have vouched for this scale's reliability and validity (including Malaysia), all establishing that this scale is able to effectively evaluate the self-esteem level of individuals across ethnicities (29). The Malay version of the RSES was used in this research. The translated version is considered a valid tool to evaluate self-esteem among Malaysians (29).

Sample

The participants were 110 randomly selected youths with physical disabilities from various states in Malaysia who were students at an industrial and rehabilitation training centre in the state of Selangor. According to Yamane's sample size table, the minimum sample size for a population of more than 100,000 at ±10% precision levels where the confidence level is 95% is 100. Hence, the sample size of 110 in this research is sufficient. Majority of the participants were males (57.3%), of Malay race (90%), and in between the ages of 18 and 20 years old (36.4%) (30). All the participants have some form of physical disability such as spinal cord disability, mobility and/or physical impairment (i.e., upper limb or lower limb disability). Table 1 presents the demographic characteristics of the participants.

Research procedure

This research was performed according to established ethical guiding principles and with necessary approvals from the education centre's authorities (Ref. No: UM.TNC2/UMREC_1156). At the outset, the participants were briefed on the nature and purpose of the present research. Participants were also made to understand that their participation is voluntary and there was no reward or penalty if they chose to participate or not to participate in the research. Thereafter, they signed informed consent forms if they agreed to participate in this research. Then, a paper-based survey was distributed by hand to the participants. Upon completion of the survey, the

Table 1: Demographic background of participants

Demographic Details	Frequency N= 110	Percentage (%)
Sex		
Male	63	57.27
Female	47	42.73
Race		
Malay	99	90.00
Indian	8	7.27
Others	3	2.73
Region		
Rural	59	53.64
Urban	51	46.36
Age Group		
18 to 20 years old	40	36.36
21 to 23 years old	37	33.64
24 to 26 years old	17	15.45
27 to 30 years old	16	14.55

researchers transferred all the responses collected into Statictical Package for the Social Science (SPSS) for further analysis.

Results

The results of this stage revealed that youth with physical disabilities have a moderate level of self-esteem (mean = 30.16). The Cronbach's alpha reliability coefficient for the RSES is 0.86. This value indicates a satisfactory level of reliability (31). Further, the Kolmogorov-Smirnov test examines if variables are normally distributed, ideal for a sample size of more than 50 (31). Here, the data are normally distributed as the test is insignificant ($p > 0.05$). The RSES scores are summarized in Table 2.

Table 2: RSES analysis

Statistics	Score
Mean	30.16
Standard deviation	8.09
Level	Moderate
Cronbach's alpha	0.862
Kolmogorov-Smirnov	0.063

As individuals with high self-esteem are driven to take care of themselves (both mentally and physically) and to persistently strive towards the fulfilment of personal aspirations, it is pertinent to increase the levels of self-esteem among youth with physical disabilities. Therefore, the findings of the present research allude to the need to enhance the levels of self-esteem among youth with physical disabilities. Additionally, self-esteem will empower youth to engender confidence, which their peers will want to emulate.

Moreover, the t-test results for comparing self-esteem ($t = -0.697$, $df = 108$, $p > .05$) scores with sex were insignificant. Hence, there is no significant difference in the self-esteem score between males and females. Table 3 displays the t-test results for the youth with physical disabilities and Table 4 presents the means scores according to sex. Although there is a slight difference between the mean scores of males and females, the differences were not significant.

Stage 2: Designing and developing the cognitive therapy module

The second stage of the present research aims to design and develop a cognitive therapy module to enhance self-esteem for youth with physical disabilities. In order to develop an effective and systematic therapy module, the researchers utilized Sidek's Module Development Model (SMDM) (28). The SMDM is a comprehensive framework and has been proven to be effective in developing modules related to psychology and counselling within the Malaysian population (32-34). Further, the SMDM has specific and systematic steps for developing a module and testing its validity and reliability.

The step-by-step process of the CTSEE module development is summarized in Figure 1. The first step is developing the aim of the module which is to enhance self-esteem among youth with physical disabilities. The second step involves theory identification, rationale, philosophy, concepts, targets, and time frame. Here, the Fennell's cognitive model of low self-esteem was used as a foundation in the development of the CTSEE module (22). The researchers intend to develop a module for group therapy that can be administered over six counselling sessions. The third step is the need of assessment in which the researchers assessed the baseline level of self-esteem among youth with physical disabilities. Thereafter, the researchers select the content, implementation strategy, logistics, and media for the CTSEE module. After the draft module is completed, the researchers evaluate the CTSEE module by testing its validity and reliability. During the pilot test, the researchers may identify any possible errors or weaknesses in the content activities as well as the appropriateness of the activities.

The CTSEE module was developed to increase the level of self-esteem among youth with physical disabilities.

Table 3: Independent samples t-test

		Levene's Test for Equality of Variances		T-Test for Equality of Means						
				t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
		F	Sig.						Lower	Upper
Total Self-Esteem Score (Male vs. female)	Equal variances assumed	1.664	.200	-.697	108	.488	-1.089	1.563	-4.187	2.009
	Equal variances not assumed			-.712	105.765	.478	-1.089	1.529	-4.120	1.942

Table 4: Mean and standard deviations across sex

Sex	Mean	Standard Deviation
Male	29.698	8.600
Female	30.787	7.395

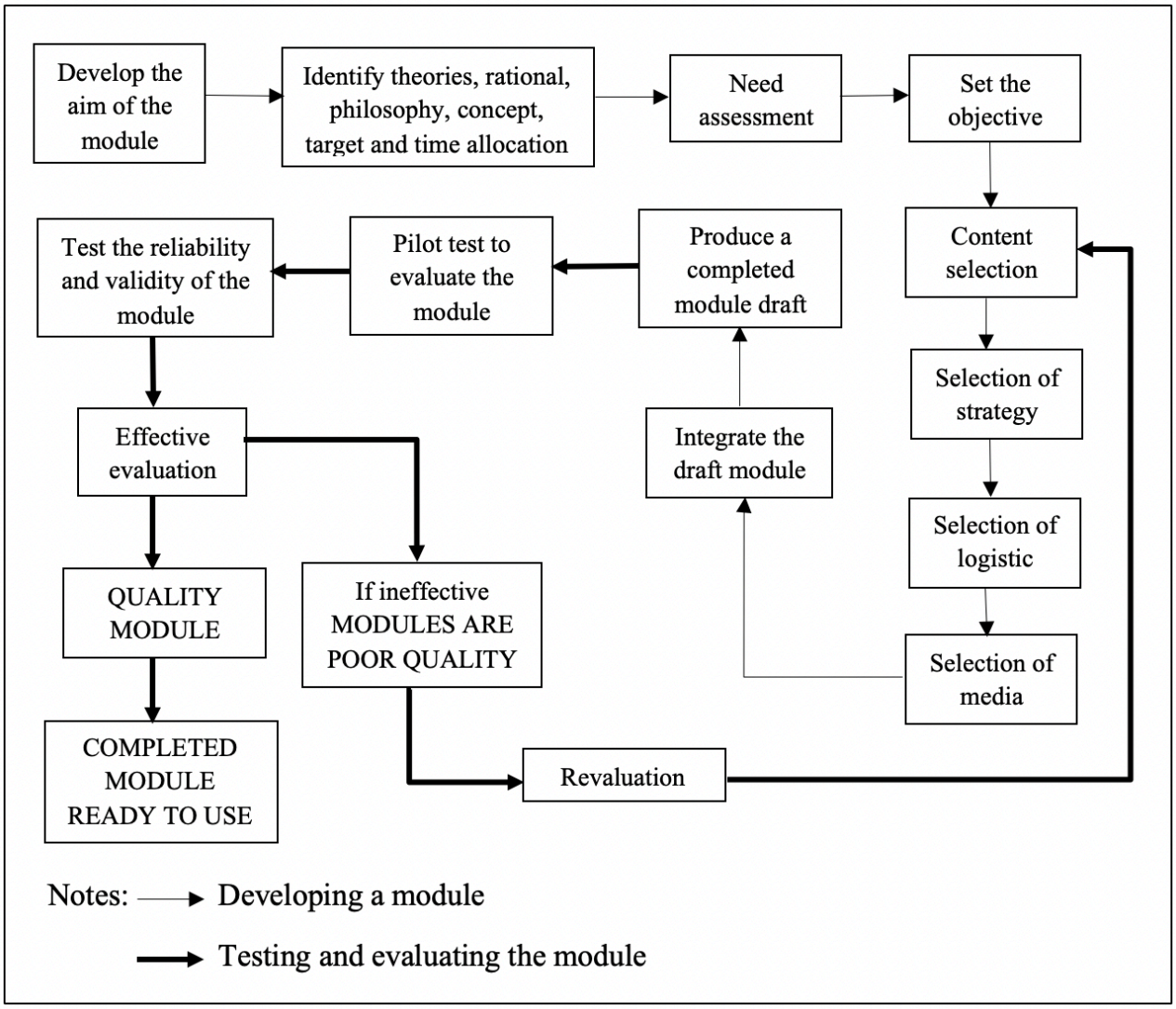

Figure 1: Sidek's Module Development Model (35)

It includes six units and eight activities which can be administered over six counselling sessions. It is a collection of therapeutic exercises adapted to the needs of youth with physical disabilities. It can be used by professional counsellors to help facilitate group counselling sessions. An ideal group counselling session includes one group leader (professional counsellor), one facilitator/assistant and six to ten group members. The total duration of time required to execute all the activities in this module is nine hours. The CTSEE module can be administered in a classroom environment, and it is tailored for youth with physical disabilities between the ages of 15 and 30 years old. Group interactions and individual participation are incorporated into the learning process.

A well-informed and efficient module must be based on a reputable theory or model. Therefore, the researchers used Fennell's cognitive model of low self-esteem as a foundation in the development of the CTSEE module (22). This model endorses the use of cognitive therapy to improve self-esteem. The researchers used a number of aspects theorized by this model involving the association between early experience and subsequent low self-esteem; responsiveness of self-esteem to a variety of situations (positive and negative life events); a reciprocal relationship between self-criticism, hopelessness, and depressed mood; and biases in processing that retain obstructive outlooks (22). Here, cognitive therapy helps individuals break out of the vicious cycle that upholds their challenges. In summary, the researchers formed the submodules of the CTSEE module according to the dimensions of cognitive therapy for self-esteem which are (a) understand the concept of self-esteem; (b) resolve current challenges; and (c) reduce the vulnerability to future challenges. Table 5 presents the framework of the newly developed CTSEE module.

Table 5: Content of the CTSEE module

	CTSEE Submodule	Activities	Content Objective
1.	Getting to Know Group	Introduction to Group Counselling	An introductory activity to explain the nature and purpose of the group; discuss the group rules and guidelines with group members.
		Me, myself, and I (Ice Breaking)	An ice breaking activity to get to know each other better and build trust among group members and the group leader (and facilitators).
2.	Understanding Self-Esteem	What is self-esteem?	An activity to help members comprehend the concept of self-esteem, specifically to help members understand the differences between high and low self-esteem, and the positive effects of high self-esteem.
3.	Exploring Early Experiences	Let's discuss our history	An activity that encourages participants to open up about their early experiences. It gives them a sense of awareness of when and why their low self-esteem developed. It also provides them with a sense of autonomy, as most of the questions urge them to come up with their own steps to feel empowered or more optimistic.
4.	Combating Negative Core Beliefs	Say NO to self-criticism	This activity teaches group members how to identify their self-critical thoughts that hinder their self-esteem. It also teaches them how to combat their self-criticisms and replace them with helpful alternative thoughts. These helpful thoughts will ultimately increase their self-esteem.
5.	Overcoming Low Self-Esteem	Self-acceptance	This activity teaches group members to focus on their strengths and positive characteristics. It makes them feel confident and empowered to achieve their goals, which ultimately increases their self-esteem.
6.	Planning for the Future	Let's plan our future	This activity helps group members come up with specific future goals with their newfound high self-esteem. The members are also able to see things more clearly after writing down specific steps on how to achieve their goals.
		Therapeutic goodbye cards	An activity to highlight the group members' strengths and positive characteristics. Members also have the opportunity to express their thoughts about termination.

Stage 3: Measuring the content validity and reliability of the CTSEE module

This stage of the research required the researchers to employ a quantitative approach by means of questionnaire distribution to selected participants. The questionnaire was the primary instrument utilized to measure the content validity of the CTSEE module which is based upon Sidek's Module Development Model process. The expert panel consisted of one professor, one associate professor and four senior lecturers who were recruited to assess the contents of the CTSEE module. These experts were approached to validate the module because all of them had a Doctor of Philosophy (PhD) degree in either counselling or psychology and had more than five years' experience in the fields of rehabilitation counselling, module development, self-esteem, and educational psychology.

A set of the completed CTSEE module (consisting of an introduction to the research, the module's manual, appendices, and a content validity questionnaire) was given to each participant to analyse the content validity. Table 6 depicts the content validity questionnaire that is in accordance with Russell's suggestions on the mandatory requirements of content validity for a module (36). This questionnaire used a Likert type scale ranging from 1 (strongly disagree) to 10 (strongly agree). A blank space was provided at the end of the questionnaire for participants to provide any feedback or recommendations for improvements.

Table 6: Content validity of the CTSEE module

No.	Questions	Content Validity (%)	Experts' Judgment
1.	The CTSEE module meets the required components of self-esteem.	83.33	Agreed
2.	The CTSEE module is suitable for its target population.	86.67	Agreed
3.	The CTSEE module content could be effectively implemented.	83.33	Agreed
4.	The CTSEE module content is compatible with the time allotted.	85.00	Agreed
5.	The CTSEE module content is capable of increasing self-esteem levels of participants.	86.67	Agreed
6.	The CTSEE module content is capable of teaching participants more helpful ways of thinking.	86.67	Agreed
	Overall content.	85.28	Accepted

In addition, Noah and Ahmad established a formula to evaluate the overall content validity score which is presented in Figure 2 (35). The calculated value will reveal the level of content validity of a module and if the value is more than 70%, the content validity is deemed high (35). Table 6 shows the percentage value of the overall content validity score which is 85.28%. This value is deemed high as it exceeds the suggested threshold value of 70%. Also, the content validity scores based on each aspect of validity range from 83.33% to 86.67%. As such, the individual content validity scores of the CTSEE module were strongly validated and the overall content validity of the module is high. Therefore, this module can be administered to the target population i.e., Malaysian youth with physical disabilities.

$$\frac{\text{Total Score from Expert}}{\text{Maximum Score}} \times 100\% = \text{Content Validity}$$

Figure 2: Content validity formula (35)

Reliability

For the purpose of assessing the reliability of the CTSEE module, the researchers followed Russell's suggestion of focusing on the extent to which participants could effectively follow the steps of each activity in the CTSEE module (36). Russell proposed that module developers must ensure that participants are able to follow all the steps of the activities effectively in order to evaluate the reliability of a module. If successful, the activities in the module are effective (36).

During this stage, the researcher recruited 11 youths with physical disabilities from an industrial training and rehabilitation centre in Selangor. These 11 participants reported low self-esteem on the Rosenberg Self-Esteem Scale. The 11 participants were split into two groups with one group consisting of five participants and the other consisting of six participants. They took part in a pilot test that consisted of eight group counselling sessions, delivered over the course of four weeks. Each group counselling program was delivered by one professional counsellor and one trainee counsellor. Before the start of the group counselling, all the participants were given written and oral explanations of the group counselling program and were asked individually if they were willing to join the program. Thereafter, signed informed consent forms were collected, and they were briefed on the nature and purpose of the study.

Then, the researchers developed a reliability questionnaire specifically for this research to measure the reliability of the CTSEE module based on each activity's objectives. According to Ahmad and Noah's recommendation, the questionnaire was developed based on the CTSEE module's activities (37). It comprises 25 items with a Likert scale ranging from 1 (strongly disagree) to 10 (strongly agree).

Further, a blank space was given for participants to provide any feedback or suggestions for improvement. The researchers did not need to make any changes to the module as the participants only stated positive comments on the questionnaire.

The reliability questionnaire was developed based on the dimensions of cognitive therapy for self-esteem which are understanding the concept of self-esteem, resolving current challenges, and reducing the vulnerability to future challenges. Some examples of the questions include 'I understand the differences between high and low self-esteem after what is self-esteem activity', 'I am able to replace my critical thoughts with positive alternative thoughts after the say No to self-criticism activity', and 'I am excited about the future based on the let's plan our future activity'.

All the participants were required to answer the reliability questionnaire after completing each group counselling session. The responses were analysed via the SPSS software. The computed alpha Cronbach coefficient value of the instrument was 0.80 for the 25 items. As the minimum acceptable reliability value is 0.7 and the rule of thumb for alpha strength of association between 0.71 to 0.80 is considered good, it can be concluded that the CTSEE module has a good internal consistency (31). The researchers also further improved the reliability of the CTSEE module by ensuring that (i) the facilitators received sufficient training and had mastered the module before the implementation of the pilot study; (ii) facilitators fully adhered to the instructions in the CTSEE module and (iii) a summary of each activity of the CTSEE module was presented to the participants in the pilot test before progressing to the next submodule (33).

Discussion

The first stage of the research revealed that youth with physical disabilities have a moderate level of self-esteem. Supporting studies have also reported similar findings whereby having disabilities did not significantly affect the self-esteem of PWD (8, 38) and PWPD reported moderate self-esteem (39). Some studies even suggested that youth with physical disabilities had good self-esteem (40, 41). Oftentimes, people think disability is a medical diagnosis that hinders the development of PWD. Nevertheless, disability is more than just a physical or mental effect on the body. Many individuals view their disability as an integral part of who they are, rather than a flaw or something that should be separated from their identity. Hence, PWD view disability as part of their identity and this is where disability pride comes into play. Disability pride considers disability as an enriching and positive experience that serves as a protective factor (18). Additionally, PWD often come together as a group and support each other which leads to positive feelings about oneself. Apart from that, most of the participants were Muslims (90%). In Islam, disability is viewed as a challenge set by God. Muslims usually believe that God will only give people what they can handle and even provide supplications for them. Hence, PWPD may view themselves as special and closer to God.

Unexpectedly, the present research also demonstrated that there was no significant difference in the level of self-esteem between males and females. Past studies conducted among able-bodied youth had revealed significant sex gaps with males constantly reporting higher self-esteem than females (13). Several other studies also demonstrated that there is a significant difference in self-esteem between male and female PWD, with females reporting lower self-esteem than males (7, 40). The evidence on sex similarities in self-esteem revealed by this research is fundamental in disseminating factual information about self-esteem among PWD. When developing programs or intervention strategies, professional counsellors and other mental health professionals may focus on self-esteem in both sexes. This is pivotal as young men are often overlooked because of the widespread belief that males have higher self-esteem than females. It is astonishing that gender stereotypes do not apply in the Malaysian context with PWPD. Perhaps, it is because Malaysian parents tend to socially isolate and be overprotective of their children with physical disabilities (42). Hence, both male and female PWPD seem to assess their self-worth, abilities, and self-respect similarly.

Moreover, the findings of this research provided evidence that the newly developed CTSEE module is valid and reliable to be used with youth with physical disabilities. From a theoretical and practical perspective, the findings of this research will impact the body of knowledge involving rehabilitation and multicultural counselling. Further, Sidek's Module Development Model (SMDM) is a comprehensive and robust model that has specific steps to develop a module and assess its validity and reliability. Several other local studies have also applied Sidek's model when developing a mental health module and all their studies showed promising results (32, 33, 43). However, the CTSEE module must be administered by a registered professional counsellor in order to safeguard the clients' wellbeing and maximize its effectiveness. As the CTSEE module has attained a high content validity and reliability value, it is envisioned that this module will help the target population (youth with physical disabilities) attain heightened levels of self-esteem.

The CTSEE module is adapted from Fennell's cognitive model of low self-esteem (22). This model posited that low self-esteem stems from one's negative core beliefs, which derive from an interaction between inborn temperamental factors and subsequent experience. For instance, neglect, abuse, trauma, absence of sufficient affection, warmth, and praise. PWD tend to have lower self-esteem and greater social isolation, more overprotection during childhood, and poorer quality intimate relationships as adults (42, 44). This module aims to weaken dysfunctional beliefs and establish more helpful beliefs through cognitive restructuring which empowers PWPD to reach for their goals. Apart from increasing PWPD's self-esteem, this

module also increases their independence and decreases their dependency on others.

Limitations

There are a few limitations in this research due to the constraints in the research methodology. The first stage used a self-report instrument (i.e., Rosenberg Self-Esteem Scale) which may bring about social desirability bias. As individuals naturally want others to view them favourably with respect to socially accepted beliefs and values, their responses to the scale may be lopsided. Perhaps, future studies can reduce social desirability bias by using an online platform, indirect questioning, and randomization response techniques.

Furthermore, the sample size of this research is small and was limited to one industrial training and rehabilitation centre in Selangor. Hence, the findings of this study cannot be generalized across populations. Future studies may include a larger sample size from various states in Malaysia to improve the external validity of the findings. Self-esteem may also differ among urban and rural PWPD. Perhaps, rural youth are exposed to fewer social stressors than urban youth. Subsequent studies may want to examine these issues. As an added measure, future studies can consider adding a control group at the third stage of the research to eliminate the possible impact of all other variables.

It is also worth noting that most of the participants in the first stage were Malays (90%) and there was no representation of the Chinese ethnicity. Malaysia is a multi-ethnic nation with Malays forming the major ethnic group. Malaysia also has other ethnic groups such as the Eurasians, natives of East and West Malaysia. The lack of representation from other ethnic groups brings about sampling limitations on the generalizability of research. Despite the fact that the CTSEE module exhibited good internal consistency in the present research, future studies may look into examining other types of reliability (e.g., test-retest reliability).

Recommendations and implications for counselling practice

The findings of this research demonstrated that the CTSEE module had high content validity and reliability, which makes it ideal to be administered to the target population. Nevertheless, it is important to emphasize that this module can only be used by professional counsellors as it is customized for the counselling profession. For example, there are many counselling skills that need to be administered during group counselling such as probing, blocking, linking, active listening, etc.

Moreover, researchers can also examine the efficacy of the CTSEE module for persons with different types of disabilities such as persons with hearing, speaking, visual, learning, mental and multiple disabilities. Besides that, future studies can assess the efficacy of this module in different settings such as schools, higher education institutions, hospitals, welfare centres, etc. If proven successful, the same module can be used by professional counsellors across settings and populations. At the present time, counselling programs in Malaysia do not offer specialized courses on rehabilitation counselling, thus, this therapy module can be used to further develop existing educational counselling programs at higher education institutions. As the CTSEE module was developed based on the specific needs of PWD, it can be incorporated into the local counselling education curriculum to ensure that trainee counsellors are multiculturally competent upon graduation.

Apart from that, there is a need for more continuous development programs in the field of professional counselling in the Malaysian context (43). Therefore, this module can be promoted among practising counsellors through training programs that will ensure that clients are provided with high-quality counselling services. Specifically, the Malaysian Board of Counsellors and the International Counselling Association of Malaysia may consider using this module in their training workshops, especially when discussing multicultural and rehabilitation counselling. As disability research is continually evolving, more studies on rehabilitation counselling are necessary to improve our understanding and provide better care for PWD as well as to broaden society's understanding about PWD. It is hoped that this research inspires professional counsellors and trainee counsellors to conduct more rehabilitation counselling research and/or partake in a similar methodology when forming an assorted range of therapy modules that include unique minority groups.

Conclusion

In conclusion, this research shows how the CTSEE module was developed and rigorously examined to ascertain its validity and reliability using Sidek's Module Development Model. The module can help youth with physical disabilities build their self-esteem. This newly developed module can be used by rehabilitation and school counsellors to promote the mental wellbeing of youth with physical disabilities.

Acknowledgement

The authors would like to thank the Ministry of Higher Education, Malaysia, UMCares, University of Malaya (Knowledge Transfer Program project number: MRUN2019-1D) and the Social Advancement & Happiness Research Cluster, University of Malaya (project number IIRG004A-19SAH) for funding this research.

Competing interests

The authors declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

References

1. Malaysian Department of Social Welfare. Twelfth Malaysia plan. 2021. Available at: https://rmke12.epu.gov.my/en. Accessed 9 October 2021.
2. World Health Organization. Disability and health. 2020. Available at: https://www.who.int/news-room/fact-sheets/detail/disability-and-health. Accessed 10 September 2021. Accessed 9 October 2021.
3. Dunn DS. The Social Psychology of Disability. New York, United States of America: Oxford University Press. 2015.
4. Nosek MA, Robinson-Whelen S, Hughes RB, Nosek TM. An internet-based virtual reality intervention for enhancing self-esteem in women with disabilities: Results of a feasibility study. Rehabil Psychol. 2016;61(4):358–70.
5. Molero F, Recio P, García-Ael C, Pérez-Garín D. Consequences of perceived personal and group discrimination against people with physical disabilities. Rehabil Psychol. 2019;64(2):212–20.
6. Holzer LA, Sevelda F, Fraberger G, Bluder O, Kickinger W, Holzer G. Body image and self-esteem in lower-limb amputees. PloS One. 2014;9(3):e92943.
7. Narimani M, Mousazadeh T. Comparing self-esteem and self-concept of handicapped and normal students. Procedia-Soc Behav Sci. 2010;2(2):1554–7.
8. Miyahara M, Piek J. Self-esteem of children and adolescents with physical disabilities: Quantitative evidence from meta-analysis. J Dev Phys Disabil. 2006;18(3):219–34.
9. Ji Y, Rana C, Shi C, Zhong Y. Self-esteem mediates the relationships between social support, subjective well-being, and perceived discrimination in Chinese people with physical disability. Front Psychol. 2019;10:2230.
10. Islam MR. Rights of the people with disabilities and social exclusion in Malaysia. Int J Soc Sci Humanit. 2015;5(3):171–7.
11. Kloomok S, Cosden M. Self-concept in children with learning disabilities: the relationship between global self-concept, academic "discounting," nonacademic self-concept, and perceived social support. Learn Disabil Quarterly, 1994;17(2):140–53.
12. Von Soest T, Wagner J, Hansen T, Gerstorf D. Self-esteem across the second half of life: The role of socioeconomic status, physical health, social relationships, and personality factors. J Pers Soc Psychol. 2018;114(6):945–58.
13. Bleidorn W, Arslan RC, Denissen JJ, Rentfrow PJ, Gebauer JE, Potter J, *et al.* Age and gender differences in self-esteem—A cross-cultural window. J Pers Soc Psychol. 2016;111(3):396–410.
14. Miyahara M, Piek J. Physical disabilities and self-esteem. In: Levesque RJR, ed. Encyclopedia of Adolescence. New York, United States of America: Springer. 2011:2079–2083. https://doi.org/10.1007/978-1-4419-1695-2_104
15. Lim BFY. Women left behind? Closing the gender gap in Malaysia. Japan Lab Iss. 2019;3(17):22–9.
16. World Health Organization. Violence against women. 2021. Available at: https://www.who.int/news-room/fact-sheets/detail/violence-against-women. Accessed 11 October 2021.
17. Islamic Relief Fund. Double discrimination against women with disabilities must stop. 2021. Available at: https://islamic-relief.org.my/double-discrimination-against-women-with-disabilities-must-stop/. Accessed 11 October 2021.
18. Bogart KR, Lund EM, Rottenstein A. Disability pride protects self-esteem through the rejection-identification model. Rehabil Psychol. 2018;63(1):155–9.
19. Henriksen IO, Ranøyen I, Indredavik MS, Stenseng F. The role of self-esteem in the development of psychiatric problems: a three-year prospective study in a clinical sample of adolescents. Child Adolesc Psychiatry Ment Health, 2017;11(1):1–9.
20. Chin WC, Wu SL. The predicting effects of depression and self-esteem on suicidal ideation among adolescents in Kuala Lumpur, Malaysia. J Health Translational Med. 2020;23(1):60-6.
21. Rosenberg M. Society and the Adolescent Self-Image. New Jersey, United States: Princeton University Press. 1965.
22. Fennell MJV. Low self-esteem. In: Freeman A, Felgoise SH, Nezu CM, Nezu AM, Reinecke MA, eds. Encyclopedia of Cognitive Behavior Therapy. Massachusetts, United States of America: Springer. 2005:236–40.
23. Palisano RJ, Chiarello LA, King GA, Novak I, Stoner T, Fiss A. Participation-based therapy for children with physical disabilities. Disabil Rehabil. 2012;34(12):1041–52.
24. Livneh H, Wilson LM, Pullo RE. Group counseling for people with physical disabilities. Focus Except Chil. 2004;36(6):1–20.
25. Pingitore F, Ferszt GG. The "voice" and perspectives of adolescents participating in a short-term psychotherapy group. Int J Group Psychother. 2017;67(3):360–82.
26. Shechtman Z. Group Counseling and Psychotherapy with Children and Adolescents: Theory, Research, and Practice. New York, United States of America: Routledge. 2007.
27. Kannan HK, Noor MHM. Govt sets target of 11,000 of counsellors by 2020: DPM. 2018. Available at: https://www.nst.com.my/news/nation/2018/10/416730/govt-sets-target-11000-counsellors-2020-dpm. Accessed 9 September 2021.
28. Noah, SM. Perkembangan Kerjaya: Teori dan Praktis (Career Development: Theory and Practice). Selangor, Malaysia: Universiti Putra Malaysia Press. 2001.
29. Lim HL, Ling MY, Teh CH, Heng PP, Kee CC, Ghazali SM, *et al*. Construct validity and reliability of Rosenberg Self-Esteem Scale-Malay (RSES-M) among upper secondary school students in Malaysia. Malaysian J Med Health Sci. 2019;15(2):32–8.

30. Yamane T. Statistics: An Introductory Analysis. 2nd Ed. New York, United States: Harper and Row. 1967.
31. Chua YP. Mastering Research Statistics. 2nd Ed. Kuala Lumpur, Malaysia: McGraw-Hill Education. 2020.
32. Madihie A, Noah SM. An application of the Sidek module development in REBT counseling intervention module design for orphans. Procedia-Soc Behav Sci. 2013;84:1481–91.
33. Mahfar M, Noah SM, Senin AA. Development of rational emotive education module for stress intervention of Malaysian boarding school students. SAGE Open. 2019;9(2):1–16.
34. Said SNM, Baharom NN, Hamilin SP, Madihie A, Yusoff SM. Development of mindfulness module for promoting healthy lifestyle among female students in higher education institution. Int J Bus Soc. 2017;18:854–61.
35. Noah SM, Ahmad J. Pembinaan Modul, Bagaimana Membina Modul Latihan dan Modul Akademik (Module Development: How to Develop Training Modules and Academic Modules). Selangor, Malaysia: Universiti Putra Malaysia Press. 2005.
36. Russell JD. Modular Instruction: A Guide to the Design, Selection, Utilization, and Evaluation of Modular Materials. Minnesota, United States: Burgess Publishing Company. 1974.
37. Ahmad J, Noah SM. Pendekatan alternatif menentukan kesahan dan kebolehpercayaan modul program maju diri (Alternative approaches to determine the validity and reliability of self-developed program modules). J PERKAMA. 2001;9:97–118.
38. Johnson P. The prevalence of low self-esteem in an intellectually disabled forensic population. J Intellect Disabil Res. 2012;56(3):317–25.
39. Nemček D. Self-esteem in people with physical disabilities: Differences between active and inactive individuals. Acta Facultatis Educationis Physicae Universitatis Comenianae. 2017;57(1):34–47.
40. Apichai S, Sirisatayawong P, Chupradit S, Khamchai S. A study of self-esteem and academic achievement of undergraduate students with physical or locomotion disability in Chiang Mai University. J Ass Med Sci. 2019;52(2):112–8.
41. Stevens SE, Steele CA, Jutai JW, Kalnins IV, Bortolussi JA, Biggar WD. Adolescents with physical disabilities: Some psychosocial aspects of health. J Adolesc Health. 1996;19(2):157–64
42. Marshall J, Doone E, Price M. Cultural models of child disability: Perspectives of parents in Malaysia. Disabil Rehabil. 2019;41(22):2653–62.
43. Aga Mohd Jaladin R, Amit N, Anuar AA, Fernandez JA, Salleh S, Rais H, *et al.* Development of a continuous professional development training module based on multicultural counseling competency for professional counselors in Malaysia. J Adult Contin Educ. 2020;26(2):242–61.
44. Retznik L, Wienholz S, Seidel A, Pantenburg B, Conrad I, Michel M, *et al.* Relationship status: Single? Young adults with visual, hearing, or physical disability and their experiences with partnership and sexuality. Sex Disabil. 2017;35(4):415–32.