Brief Communication

Acceptability of a web-based character strengths module for early adolescent school children

Miyuru Chandradasa[1], Shehan Williams[1], Sivunadipathige Sumanasiri[1], Sindujaa Selliah[1], Pradeep Gunarathne[1], Angela Paric[2], Nisha Ravindran[2], K.A.L.A Kuruppuarachchi[1], Arun Ravindran[2]

[1]University of Kelaniya, Sri Lanka, [2]University of Toronto, Canada

Abstract

Background

Frequent socio-political conflicts in the past decades have adversely affected the well-being of youth in Sri Lanka. There is a need to support youth development, mitigate past trauma, and promote social harmony. School-based interventions to improve character development, emotional regulation and tolerance have good evidence and may benefit adolescents in Sri Lanka. Our objective was to develop a novel character strength program in Sinhala to promote Leadership, Empathy, Altruism, Personal Growth, and Social Responsibility (LEAPS). This program consists of ten web-based modules and is facilitated by teachers. This initial evaluation focuses on the first module and its acceptability among students and teachers.

Method

Program modules were developed by a child and adolescent psychiatrist with the support of mental health and educational experts. The content was improved using the Delphi process through an expert panel. The first module was pre-tested among grade 8 students (12-14 years) and teachers of two schools in the Gampaha District. It was designed to be interactive and contains various cultural activities and questions. On completion, participants gave feedback online via Likert scales. Ethics approval for the study was obtained from the Faculty of Medicine, University of Kelaniya.

Results

A total of 115 students and 66 teachers participated. Overall, more than 95% of students and teachers found the module appropriate and suitable. The students had more favourable ratings for the module compared to the teachers on aspects of understanding the content (p<0.001), ability to complete by self (p<0.001), suitability to age (p<0.001), shorter time for completion (p<0.001) and suitability of the design (p<0.001). Both groups suggested that the pictures and activities be increased.

Conclusions

Teaching character strengths using a web-based intervention was well accepted by adolescent students and teachers in Sri Lanka.

Introduction

Sri Lanka is a South Asian island nation and has the highest Human Development Index in the region [1]. The population of twenty-two million is multi-ethnic and multi-religious, comprising followers of Buddhism, Hinduism, Islam and Christianity. After gaining independence from the British colonial powers in 1948, the country has seen centuries-old ethnic tensions aggravated, leading to a major armed conflict lasting nearly three decades. The armed conflict ended in 2009 followed by relative peace and stability which was disrupted by the Easter Sunday bombings in 2019. Further, there were two youth uprisings in the 1970s and 1980s that significantly affected the emotional well-being of the nation, with thousands of deaths resulting from attacks on military and civilian targets. At present, Sri Lanka is facing the worst economic crisis in its history and has experienced record inflation levels, depletion of foreign currency reserves and shortages of essential medications. There is significant collective trauma in the society and the country needs well-planned initiatives to improve the mental well-being of the population [2].

Efforts to improve the emotional well-being of the population have been slow for several reasons including a lack of mental health resources and a scarcity of evidence-based, systematic approaches in service development. Therefore, introducing cost-effective, pragmatic programmes to enhance psychological well-being should be a priority. Targeting adolescents at the peak of their emotional, physical, and social development would be one option. In this regard, schools would be an optimal place for novel programming. School-based interventions are cost-effective as they utilise existing resources and therefore have a high likelihood of sustainability. They are also a safe and trusted environment to engage with students [3]. There are more than 10,000 schools in Sri Lanka, with four million students and a student-teacher ratio of 18:1. Sri Lanka retains more than 80% of adolescents in the secondary school system [4].

It has been proposed that an individual's response to adverse circumstances and ability to cope with stress are partly shaped by their character strengths [5]. Character is defined as individuals' unique moral and mental qualities that shape their thoughts, feelings, and actions [6]. It includes character strengths, which are traits that can be trained to positively enhance personal development [7,8]. This is in line with tenets of positive psychology that focus on the optimistic aspects of human life and strengths rather than deficits [9]. The Values in Action Institute on Character (VIA) have classified six virtues and 24-character strengths [10,11]]. Character strengths such as perseverance, self-regulation, prudence and social intelligence are associated with positive teacher-rated classroom conduct and later academic achievements [12]. Character strengths of hope, humour, zest and kindness are also correlated with well-being in adults 13]. At the same time, strengths such as judgement, kindness and creativity can also be protective against symptoms of depression and suicidality [14].

In a school setting, comprehensive programmes that work to enhance student character strengths have been associated with improved academic achievement, classroom attendance and reduced need for disciplinary interventions [15]. Strengths of temperance, vitality, and transcendence were independently associated with well-being

and happiness in adolescents [16]. In this regard, culturally adapted character interventions in the school setting that enable long-lasting social-emotional transformation may benefit adolescents.

The LEAPS intervention comprises ten web-based modules on the 24-character strengths and was assessed using an adapted version of the VIA Youth Survey [17]. The VIA Youth Survey was adapted using a Delphi consensus process. It is planned to evaluate the effectiveness of the character intervention through a cluster randomised clinical trial. This paper presents the results of a pre-test that evaluated the acceptability, comprehension, usability, appropriateness and suitability of the first LEAPS module among students and teachers.

Methods

Two schools in the District of Gampaha in Sri Lanka were selected for the project. Early adolescents between 12-14 years in grade eight were recruited as participants. One class from a girls' school and two from a boys' school participated. All grade eight teachers were also invited to participate.

A child and adolescent psychiatrist created modules based on the 24 VIA character strengths with the support of general adult psychiatrists, psychologists, occupational therapists, social workers, teachers and students [10]. The VIA character strength concepts were then adapted for the Sri Lankan socio-cultural context and the first internet-based module was based on the VIA virtue of humanity and character strengths of love, kindness and social intelligence [10]. This module contained activities such as single best answer questions, checklists, image choice questions, selecting emoticons and ranking questions in a colourful design. A Delphi panel of 15 experts consisting of child and adolescent psychiatrists, general adult psychiatrists, psychologists, medical officers, social workers, occupational therapists, principals and teachers reviewed the content.

Students and teachers took approximately 40 minutes to complete the module in Sinhalese at the school computer centre. Each student was allocated a specific time in the school timetable for the task. Informed written consent was obtained from the students, their parents and teachers. Feedback on the module was obtained using self-administered Likert scales (strongly agree, agree, no idea, disagree, strongly disagree) on comprehension, ease of completion, appropriateness for age and culture, suitability of time allocation, colour schemes and suggestions for improvement. The students were also questioned on their perspectives on the module and the teachers on their perception of the acceptability of the module for the students. The data were analysed using SPSS software version 22. The response rates were calculated and the significance of the difference in ratings between students and teachers was determined using chi-square/Fisher's exact tests. The purpose was to understand the difference in perception of the two groups and to modify the modules to make them more acceptable to all.

Results

Of a total of 130 students (all students of sampled classes) and 70 teachers invited to participate, 115 students (N=39 females; N=76 males) and 66 teachers (N=58 females;

N=8 males) completed the questionnaire. The students had significantly more favourable ratings (average 97.3%) for the module compared to the teachers (average 95.3%) on aspects of understanding the content (p<0.001), ability to complete by self (p<0.001), suitability to age (p<0.001), shorter time for completion (p<0.001) and suitability of the design (p<0.001). A comparison between students' responses in grade eight and teachers is shown in Table 1. 'Strongly agree' and 'agree' responses in the Likert scale were taken as favourable responses.

Table 1: A comparison of ratings of students and teachers for the character development module

| Quality | Group | Participant response | | | | | Favourable responses | Chi-square/ Fisher's Exact | P-value |
	Students n = 115 Teachers n = 66	Strongly agree	Agree	No idea	Disagree	Strongly disagree	(Strongly agree + agree)		Significant at p<0.05*
Understand the content	Students	102	11	02	00	00	98.2%	19.280	<0.001*
	Teachers	43	21	00	02	00	96.9%		
Able to complete by self	Students	100	13	00	01	01	98.2%	18.401	<0.001*
	Teachers	40	24	00	02	00	96.9%		
Suitable for age	Students	110	03	02	00	00	98.2%	38.546	<0.001*
	Teachers	42	20	00	04	00	93.3%		
Appropriate to Sri Lanka	Students	105	09	01	00	00	99.1%	0.957	0.620
	Teachers	59	07	00	00	00	100%		
Has preferable colours	Students	89	18	05	01	02	93.0%	6.169	0.187
	Teachers	42	17	06	01	00	89.3%		
Has a suitable design	Students	107	05	02	00	01	97.3%	31.338	<0.001*
	Teachers	43	20	00	02	01	95.4%		
How long did (students), will it (teachers) take	Time	90 mins	60 mins	40 mins	30 mins	20 mins	≤40 mins	20.717	<0.001*
	Students	00	01	36	78	00	99.1%		
	Teachers	01	11	23	31	00	81.8%		

Table 2 shows suggestions by students and teachers to improve the character development module. Thirty-two students (27.8%) and 26 teachers (39.3%) suggested increasing the number of pictures in the module. Twenty-four students (20.8%) wanted to increase the number of activities, while only two teachers (3.0%) requested the same (χ 10.776/ p 0.001).

Table 2: Suggestions by students and teachers to improve the character development module

Suggestion	Students (n = 115)	Teachers (n = 66)	Significance (χ/p) Significant at p<0.05*
Apply darker colours	11 (9.5%)	14 (21.2%)	4.809/0.20
Apply lighter colours	10 (8.6%)	02 (3.0%)	2.134/0.14
Increase activities	24 (20.8%)	02 (3.0%)	10.776/0.00*
Increase pictures	32 (27.8%)	26 (39.3%)	2.535/0.11
Increase words	02 (1.7%)	00 (0.0%)	1.128/0.28
Make activities difficult	03 (2.6%)	01 (1.5%)	0.235/0.62
Reduce activities	00 (0.0%)	01 (1.5%)	1.725/0.18
Reduce pictures	02 (1.7%)	01 (1.5%)	0.010/0.91
Reduce words	15 (13.0%)	05 (7.5%)	1.289/0.25
Simplify activities	00 (0.0%)	01 (1.5%)	1.725/0.18
Simplify wording	13 (11.3%)	12 (18.1%)	1.623/0.20

Discussion

The findings from our pre-test of a web-based and interactive character development module developed for early adolescent school children in Sri Lanka show high acceptability among students and teachers. Students were significantly more positive about the intervention than teachers on understanding the content, ability to complete by self, suitability for age, shorter time for completion and suitability of the design. The findings strengthen our resolve to continue and inform the development of ten modules covering six virtues and 24-character strengths.

We observed that the teachers' perspectives on understanding the content and ability to complete the task by the students themselves was less than that of the pupils. Further, they felt the students needed more time. This may be due to the teachers' underestimation of early adolescents who are growing up in a world with modern, easily accessible technologies. This may also be the reason that some teachers suggested fewer activities in the module. It is found that pupils determined to be more capable by teachers are more likely to receive higher-quality learning opportunities than others who are judged as less able [18]. Therefore, a teacher's estimation has implications for future placement decisions, grade promotion and academic pathways [19].

It was heartening to note that more pictures and activities were welcomed. Visuals are powerful tools to get information through to young people, and character intervention modules can benefit from including more pictures to keep participants' interest and attention [20]. The students' request for more activities in the module than already given suggests their desire and motivation to engage in the activity.

Another factor to consider is that screen use among young adolescents may pose a challenge to the LEAPS program and similar interventions. Excessive screen use may lead to conflicts between Sri Lankan adults and their tech-savvy children [21]. In a study in the USA, less than half of the parents could correctly identify their child's technological proficiency [22]. Parents, teachers and students will need help to overcome the threats posed by internet addiction and other vices while using it appropriately for learning activities. It is noteworthy that recent studies show that internet addiction is confined to a small group of school children in Sri Lanka, with the majority of those having mild addiction [23].

In the context of more demand for online education and the current economic crises, web-based character interventions have to be considered. The preliminary findings among students and teachers for the LEAPS program will further strengthen this initiative.

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