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The impact of a specialized training programme on teacher mental health literacy in Central Sri Lanka.

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Abstract

Objectives: Globally 10-20% of children and adolescents are suffering from mental health disorders. Improving mental health literacy (MHL) of teachers supports early detection and referral of children with mental health problems. In a background of no organized programs to improve teachers' MHL training, "Sisu Sitha Noridawa (SSN)" (not hurting students' feelings) was developed and conducted in central Sri Lanka to explore the effects of the intervention on teacher MHL.

Method: There were 251 teachers participated in the study. To begin, Psychiatrist authors facilitated small group discussions on ten case vignettes of common child psychiatry problems and then large group discussions using mini lectures and a handbook. Pre and post-tests were conducted to assess knowledge and attitudes on mental health problems of school children. The scores were analyzed using, Paired T-test in SPSS 17.

Results: A majority (73.7%) of teachers claimed to have encountered students with mental health issues. The mean score differences of pre and posttest in both knowledge and attitude components showed statistically significant differences with p values <0.001 and Cohen's d values >0.2 in each, indicating the training had a significant positive impact on improving both the knowledge and attitude about mental health.

Conclusions: The training program had a significant positive impact on improving the MHL of participants on common child and adolescent mental health problems. The sustainability of achieved effects and their application in the classroom need exploration in a long-term study. SSN is a feasible and effective training program to be included in the existing teacher-training curriculum with in-service booster SSN programs, in a middle-income country like Sri Lanka.

Keywords: *mental health literacy, knowledge, attitudes, children, teacher-training*



INTRODUCTION

World Health Organization (WHO) claims about 20% of children and adolescents will contract an emotional and/or behavioral disorder during their lifetime [1, 2]. They can have a drastic impact on the academics and social life of these children, depriving them from achieving their full potential [3]. Teachers play an important role in the life of children and adolescents as a group who has the unique opportunity to spend a considerable amount of time with them observing their behaviour, academic performance and social interactions during the most wakeful hours of the day. Especially in rural settings of developing countries, teachers play a significant role in the community as they usually have a fair awareness of the students' family backgrounds and are capable of advising the family in various issues including health related problems [4]. Therefore, it is of paramount importance that the teachers have high mental health literacy (MHL). MHL is defined as knowledge and beliefs about mental disorders that aid their recognition, management and prevention [5]. Lack of knowledge in MHL of the public can hinder the evidence based mental health care [6]. Research conducted worldwide have revealed that there are inadequacies in MHL of teachers [4, 7, 8]. In a Brazilian study on public school teachers' perceptions about mental health, 80.6% have shown great interest in acquiring knowledge; yet the lack of reliable sources of education created lack of confidence in managing everyday situations involving mental health problems. The same study revealed that the television was the source that provides information in the case of 61.3% of the teachers [9]. The clinician authors of current study come across many children who face adversities in the hands of the teachers due to poor MHL of those teachers.

Studies have shown that the improvement of MHL of the teachers is helpful in early detection of students suffering from mental disorders and aids early referral to professional care [10, 11]. School based programs such as Canadian mental health and high school curriculum guide (The Guide) and the African version of the Guide significantly improved knowledge, decreased stigma and enhanced help-seeking efficacy among teachers [12, 13, 14, 15]. In a Tanzanian study more than 200

students with potential mental health issues were identified and referred for professional care following a training program to improve MHL [12]. Sri Lankan data shows the prevalence of child and adolescent mental health problems is a considerable health issue in the country. In a national survey, 18.9% of the adolescents aged 13-18 years showed some abnormality in emotional and behavioral parameters [16]. Out of them 15.5% and 12.4% were severely affected in educational functioning and peer relationships respectively. In central Sri Lanka, 13.8% of school children aged 7-11 years have shown emotional and behavioral problems [17].

The concept of MHL is not very familiar in Sri Lankan context. The stigma in relation to mental health is high in the country [18]. This probably contributes to poor conceptualization of MHL in general. There are a few published studies on MHL of various stakeholders in mental health [19, 20]. However, there are no published studies in Sri Lanka on evaluation of MHL of teachers. This study is the first of its kind. Teachers learn some child psychology principles briefly at the teacher training schools. There are diploma level courses in early childhood and primary education which include social and personality psychology as sub-courses at the only government run Open University [21]. A few non-governmental organizations (NGOs) and individual mental health professionals conduct haphazard training programs for teachers on request of individual schools. There are no regular island wide hands on skills training programs for teachers on emotional and behavioural disorders among children and adolescents.

The clinician authors come across school children and adolescents with mental health problems whose teachers have either failed to detect the problem or managed it adversely, over decades, on a regular basis. That further deteriorates the condition leading to unfortunate circumstances like poor school performance and worsening of the emotional /behavioural problems such as school refusal, withdrawal and irritability. In order to change this ongoing adversity, a teacher-training program to improve MHL on emotional and behavioural disorders of childhood and adolescents was developed and delivered. The

training was named, Sisu Sitha Noridawa (SSN) meaning, “not hurting the feelings of the student” in Sinhala, the main language in Sri Lanka. The phrase was coined based on the famous Sinhala poem, “Guru Sitha Noridawa” which means, “Not hurting the feelings of the teachers” in order to catch the attention of a wider audience of teachers for the training. The effectiveness of the intervention (the training) was evaluated statistically.

SUBJECTS AND METHODS

The necessity of a program to improve MHL of teachers in order to facilitate early detection, appropriate classroom management and if necessary, referral of children and adolescents with mental health problems was suggested to the local educational authorities and due approval was obtained from them for the study. The participant teachers were selected by the principals of the schools upon the recommendation and request of the director, Health services, Central province. The training was conducted at the auditorium of the Teaching Hospital, Kandy, Sri Lanka in collaboration with local ministries of education and health. A convenient sample of 251 primary teachers from 3 educational zones (namely Kandy, Dewinuwara and Katugasthota) out of the 6 educational zones in Kandy district government schools in Central Province, Sri Lanka was selected for the study. Three one - day workshops on 3 different days were conducted for each group from each zone. The participants completed a bio data sheet of basic information, namely, participant number, age, sex, civil status, nationality, religion, area of living, level of education, name of the current school, total service duration, number of schools served, records of behavioral and emotional problems of own children and those of children in their classrooms.

A days' group was divided into 10 small groups and 10 case vignettes of common childhood behavioral, emotional and neurodevelopmental problems, namely, oppositional defiant disorder, conduct disorder, attention deficit hyperactivity disorder, autism, dyslexia, mental retardation, depression, separation anxiety disorder, anxiety around sexuality and anxiety around bullying (both

by students and teachers advertently or inadvertently) were distributed one vignette per one small group. A comprehensive handbook that was prepared for the training was given to each participant. The handbook contained key identifying features of the conditions discussed in the vignettes and guidelines for classroom management of each case with referral process if necessary. First, the teachers were requested to detect the problems and come up with suggested classroom management plan in small groups without consulting the handbook. Then the 3 psychiatrists in the author panel facilitated an interactive comprehensive discussion in the large group setting on each case vignette with references to the handbook and relevant mini lectures on power point. A certificate of participation was awarded for each participant as an immediate incentive.

The effect of the training program on the MHL was assessed by a pre and post-test through self-administered written questionnaires on knowledge and attitude in mental health problems in children and adolescents. The questionnaires were prepared based on the clinical experience of the clinician authors and the cultural context. They were in Sinhalese language. The questionnaire of the knowledge component comprised of 35 questions of true/ false type while that on attitude comprised of 14 questions with a 5-point Likert scale (Tables 1 and 2 respectively). The pre and post-test results were recorded and analyzed using SPSS 17.0. The paired T test was used to assess whether there was a significant improvement in attitude and knowledge in mental health following the workshop.

RESULTS

Out of the 251 teachers that participated for the study 205 (81.7%) were females and 98.0% were Buddhists while 1.6% and 0.04% were Muslims and other religions respectively. The sample consisted of 41.4% of teachers from Kandy zone whereas 30.3% and 28.3% were from Denuwara and Katugastota zones respectively. The participants came from all the different school categories; 1AB with science, arts and commerce

streams for Advanced level (A/L) course (28.7%), 1C with no Science for A/L (12.8%), Type 2 with classes from Grade 1 up to Grade 11 (21.9%) and Type 3 (primary) schools with classes from grade 1 to 8 or Grade 1 to 5 comprising the largest individual group from one category (36.7%).

The participant teachers were of a wide variety of educational backgrounds. Most, 48.2% of the sample was A/L educated. Out of the teachers 33.9%, 8.8%, 6.4% and 2.8% owned a basic degree, diploma, PhD and MA respectively. 185 (73.7%) teachers revealed that they have encountered children with emotional and behavioral problems and 12.4% of the participants had their own children suffering from some mental health issue.

The knowledge questionnaire comprised of 35 questions and 1 mark was awarded per each correct answer. In the pre-test of the knowledge component (n=251), the mean score was 17.9. This significantly improved after the workshop with a post-test mean score of 19.6. (Figure 1) The percentage of accurate responses to most of the components in the knowledge questionnaire was increased following the program. (Table 1) The change of the outcomes is statistically significant with a p value of <0.001 (95% CI [2.18, 1.10]). The Cohen's d, (d=0.38), exceeded the Cohen's condition for a small effect (d=0.2) indicating that there is a significant difference between the two means.

Table 1. Knowledge questionnaire and the percentage of accurate responses of the pre and post tests

Knowledge Questionnaire	Yes/No	Pre Test	Post test
1. Only adults have mental health disorders.	No	245 97.6%	247 98.4%
2. Children and adolescent brains are not developed enough to have mental health problems.	No	220 87.6%	236 94%
3. Medication is the only answer in most of the emotional and behavioral disorders in children.	No	243 96.8%	242 96.4%
4. Mental health problems do not affect behavior of the students.	No	231 92 %	231 92%
5. Mental health problems do not affect performance of the students	No	222 88.4%	227 90.4%
6. Children with anxiety disorders may panic in situation that they fear	Yes	193 76.9%	208 82.9%
7. Children with phobias can be helped by making them relaxed and feel supported.	Yes	241 96%	239 95.2%
8. A child who does not speak at school all the time, but speak well at home may be doing so due to defiance.	No	209 83.3%	201 80.1%
9. Depression is sadness	No	135 53.8%	111 44.2%
10. Only weak-minded children develop depression.	No	210 83.7%	206 82.1%
11. Common symptoms of childhood depression are getting angry and disobedient	Yes	168 66.9%	198 78.9%
12. Childhood depression may cause poor school performance and school refusal	Yes	224 89.2%	237 94.4%
13. Children with Attention Deficit Hyperactivity Disorder (ADHD) can concentrate on their work at least for 20 minutes	No	147 58.6%	141 56.2%
14. Children with ADHD are more impulsive, disorganized and forgetful.	Yes	181	192

		72.1%	76.5%
15. A reasonable punishment can cure ADHD.	No	182 72.5%	161 64.1%
16. Difficulty in reading, writing and doing mathematics are not mental health problems.	No	102 40.6%	119 47.4%
17. Students with specific learning disorders may have normal or superior intelligence.	Yes	223 88.8%	219 87.3%
18. If a child shows less intelligence there is nothing a mental health professional can do about that child.	No	228 90.8%	231 92%
19. Children with Mental Retardation (MR) appear to forget what is taught.	Yes	200 79.7%	195 77.7%
20. Children with MR are poor in all performances at school.	No	217 86.5%	218 86.9%
21. Children with Autism have poor social interactions.	Yes	134 53.4%	167 66.5%
22. Children with Autism could be highly intelligent or have low Intelligence.	Yes	176 70.1%	203 80.9%
23. Children with autism develop psychosis later.	No	175 69.7%	209 83.3%
24. Children with Oppositional Defiant Disorder (ODD) have a less severe condition than children with Conduct Disorder (CD).	Yes	131 52.2%	170 67.7%
25. Children with ODD and CD often bully, threaten or intimidate others.	Yes	175 69.7%	203 80.9%
26. Children with ODD and CD deliberately annoy others.	Yes	165 65.7%	215 85.7%
27. Children with ODD and CD may not be angry and resentful.	No	39 15.5%	30 12%
28. Unknown people sexually abuse children, mainly.	No	153 61%	148 59%
29. Sexually abused children often feel guilty thinking they were abused because they were at fault.	Yes	151 60.2%	173 68.9%
30. Alcohol and other substances of abuse have less addictive effect in developing brain.	No	111 44.2%	114 45.4%
31. Having a balanced diet and adequate sleep improve mental health well-being of students.	Yes	228 90.8%	221 88%
32. Giving praise improve mental health well-being of students.	Yes	241 96%	240 95.6%
33. Talking over problems with students helps to build better mental health	Yes	234 93.2%	243 96.8%
34. Physical exercise helps to improve the mental health well - being of students.	Yes	232 92.4%	236 94%
35. Having a positive relationship with students and doing something students enjoy improve mental health well- being of both teachers and students	Yes	242 96.4%	242 96.4%

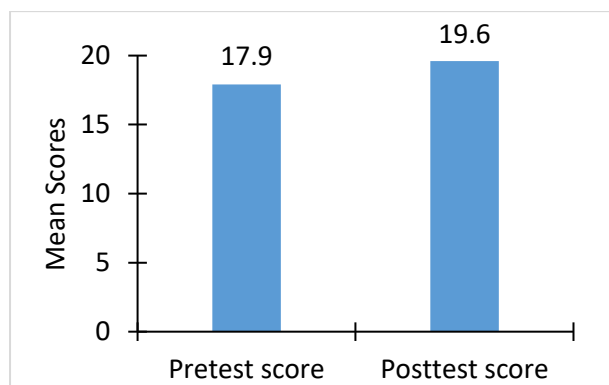


Figure 1. Mean scores of pre and post knowledge tests

Out of 251 participants only 236 participants had correctly filled the attitude questionnaire and hence considered for the study. The pre-test in attitude component of the participants (n=236) had a mean score of 55.9. This improved to a mean score of 59.1 in the post-test (figure 2). The percentage of the most favorable response for each sentence was increased following the program (Table 2). According to the paired T-test, the change of outcome is statistically significant, the p value being <0.001 (95% CI [1.96, 4.29]). and the Cohen’s d value is 0.4 (d > 0.2). The results indicate that the training program had a significant positive impact on improving both the knowledge and attitude components of teachers on child and adolescent mental health issues.

Table 2. Attitude questionnaire and percentages of favorable responses of the pre and posttests

Attitude Component	Likert scale statement	Pre-test	Post -test
1. Having high mental health literacy makes life easy as a teacher	Totally Agree	176 70.1%	210 83.7%
2. Having a mental illness ruins one’s life	Totally Disagree	45 17.9%	97 38.6%
3. People with mental illnesses are never getting better	Totally Disagree	162 64.5%	193 76.3%
4. Seeking help for mental illness is a sign of weakness	Totally Disagree	195 77.7%	208 82.9%
5. Seeking help for mental illness is not good for the record of a child’s future	Totally Disagree	159 63.3%	182 72.5%
6. Mental illnesses are caused by a personal weakness or character flaw	Totally Disagree	99 39.4%	111 44.2%
7. Role of the special education teacher is less important than that of a science /math teacher in a school.	Totally Disagree	202 39.4%	216 86.1%
8. Role of the Counseling teacher is less important than that of a science /math teacher in a school	Totally Disagree	197 80.5%	224 89.2%
9. Children with mental illness should not be sent to school	Totally Disagree	218 86.9%	224 89.2%
10. Children with mental illness are dangerous	Totally Disagree	149 59.4%	159 63.3%
11. Media gives a reasonable idea about mental health problems	Totally Disagree	82 32.7%	106 42.2%
12. Homosexual orientation is a mental health disorder	Totally Disagree	96 38.2%	133 53%
13. A female child behaving and thinking like a male child is a disgrace to a girls school	Totally Disagree	162 64.5%	186 74%
14. It is ok to criticize children to correct them as opposed to criticizing adults as adults get hurt and fall out with us	Totally Disagree	161 64.1%	194 77.3%

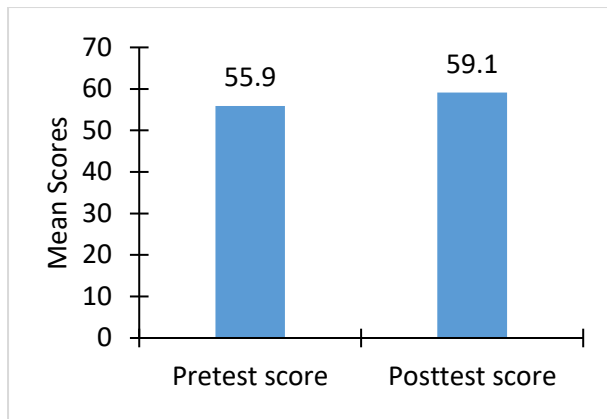


Figure 2. Mean scores of pre and posttest attitude tests

DISCUSSION

There is a growing global interest in bringing MHL into the school setting [22, 23]. There are many school friendly interventions that have been carried out to achieve improved school MHL [24 - 26]. In the South Asian middle income setting in Sri Lanka, the concept of MHL is little heard of and only a few published research on MHL was found [19]. The SSN program was also a venue to introduce the term MHL and highlight the importance of having a high MHL amongst teachers. This type of an interactive approach helps to alleviate many self-identified yet unanswered questions that teachers have on day-to-day child mental health problems and supports their willingness in enhancing knowledge and ability to manage them better [27]. The SSN training clearly resulted in a significant improvement of both the knowledge and attitudes of teachers on child and adolescent mental health. This improvement can be stated as a direct effect of the intervention due to the design of the study where the pre and post-tests are done immediately prior and following the program that makes the non-training factors unlikely. To the best of the knowledge of the authors this study is pioneering in Sri Lanka in exploring the effect

of interactive workshop based training on MHL of teachers.

The SSN training program was well received by the participant teachers who actively participated with enthusiasm and lively interactive discussion despite the fact that stigma on mental health is a barrier in achieving mental health promotion in the country [18]. Authors believe the SSN program contributed towards reducing stigma too as knowledge improves understanding and acceptance of mental health issues [28]. Enhancing teachers' knowledge and decreasing stigma could also have a long term and a persistent positive impact on students [11, 29]. It will facilitate to improve the MHL of the students as the teachers will impart their new knowledge and attitudes to the students in day-to-day classroom settings. This will in turn lead to self-identification and help seeking behaviour by students consequently reducing child and adolescent mental health morbidity and mortality [11, 30, 31].

There is no organized and regular national teacher-training program to improve MHL in Sri Lanka. For an intervention to be successful it should be effective, realistic, feasible and contextually specific [32]. The SSN training program fulfils these requirements and therefore it is a favorable and economically bearable resource that can be implemented in a middle-income, developing country.

The evaluation of results is important in providing information to the clinicians on how to improve the training program. It guides in identifying the areas that the teachers have performed inadequately in knowledge/attitude, post-test and this would be helpful in modifying the training program to address the paucity of knowledge.

Though this study shows outstanding results, it was conducted in only 3 educational zones in the Central Province (out of 9 provinces of Sri Lanka) and it limits our ability to generalize the effects to

the whole country. To overcome this the training could be extended to the other 8 provinces with slightly different geographical, social and cultural settings and evaluated for the effectiveness. The SSN training program can be endorsed as suitable to be embedded in the national teacher training curriculum if the central province results are replicated across the country. The worldwide emphasis is to incorporate training in MHL into the existing school curriculum structure [12, 30]. It has been shown that including mental health literacy into regular curriculum legitimizes the educational value of the material [25]. Moreover, such embedding of the program in the teacher training curriculum rather than conducting it as a separate course or a training program will prevent sensationalizing mental health problems and in turn stigma around mental health [25]. Booster training programs of SSN at regular intervals within the teacher training curriculum of training colleges and at in-service trainings will be effective in consolidating the new knowledge and attitudes.

The study measures the immediate results of the intervention and does not guarantee a long-term positive impact or an ability to apply achieved effects into real life classroom problems. A few low income countries have conducted studies in collaboration with resource rich countries like Canada where the teachers are trained in application of mental health literacy resource into their classrooms; the outcomes have been promising [22]. The SSN can be upgraded, as the next step to a didactically familiar classroom based training program to improve both the teachers' and students' MHL [12].

CONCLUSION

This study was conducted to evaluate the success of the interactive workshop based SSN training program on improving the MHL of teachers. Improving the mental health literacy of teachers will pave the way towards early diagnosis, proper classroom management and referral of the child and adolescent with mental health problems, which is the ultimate goal of this effort. There was a statistically significant improvement in both knowledge and attitude component following the training. "Sisu Sitha Noridawa" (Not hurting the students' feelings) is a favorable training program,

which is effective and financially realistic to improve MHL of teachers in the study population. It can be embedded in the teacher training curriculum of Sri Lanka provided the results are replicated in a more representative sample across the country. This study can be improved by adding an arm for evaluation of the sustainability and applicability of the short-term effects achieved from the training. Finally this could be a stepping-stone to an internationally collaborated interventional study to improve teacher MHL that could be used as a model for middle-income country teacher training on MHL.

The changes in the knowledge and attitude related to mental health were tested immediately following the intervention. This study does not look at the actual change of practice of teachers in the classroom or the same in the long run, which is a limitation of this study.

Presentation information

This study was presented as an abstract at the Sri Lanka College of Psychiatrists 14th annual academic sessions, Colombo, Sri Lanka, 27-30th April 2017.

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Author declaration

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Author Contributions

1. The conception of the work Ginige P.
2. Design and delivery of the work Ginige P, Perera I.B.R.U and Arambepola S.C.A
3. The acquisition of data and analysis Ginige P, Kuruwita K.A.P.R, Gunawardena E.R.N.D.
4. Interpretation of data and Drafting the work Ginige P, Kuruwita K.A.P.R, Gunawardena E.R.N.D, Arambepola S.C.A revising it critically for important intellectual content
5. Final approval of the version to be published Ginige P and all other

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Ministry of Health, Provincial Council, Central Province, Kandy, Sri Lanka has covered the teacher training workshop expenses and they did not have any involvement with the data collection, analysis and interpretation of data, writing of the report and the decision to submit the paper for publication.

Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on request.

Ethics approval and consent to participate

The study was based on a training program we developed and delivered for teachers. We got the approval to conduct the training from the due educational authorities of the Provincial Ministry of Education, Central Province, SL. The teachers participated willingly in response to the recommendation from the ministry. We got their explicit informed consent to compare and contrast the pre and post training knowledge and attitude on mental health by willing participation. The letter of approval from the health of Ministry is attached as a supplementary file.

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