Impact of Awareness Program on Knowledge of Primary School Teachers Regarding Mental Disorders among School Children

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Abstract:
Background: Mental disorders in children have been increasing worldwide and constitute a public health concern. The aim of this study was to assess the knowledge of primary school teachers about mental disorders in school children and evaluate the impact of an awareness program on their knowledge.
Subjects and Methods:A total of 200 teachers from 4 public primary schools in Beni-Suef City participated in this awareness program in the period between September and November 2017.
The knowledge of the teachers about mental illness in school children was assessed by the investigators using interview questionnaire. The assessment included knowledge of teachers about 4 aspects; causes and risk factors of mental illness, types, manifestations, and treatment.
After the program, all teachers were assessed again over their knowledge about the 4 aspects using the same questionnaire and the scoring system was similar to that of the baseline assessment.
Results: The age of the participating teachers ranged between 25 and 59 (36.4±9.9) years, and 39% of them were males and 61% were females. Of the 200 teachers who were interviewed at schools, 99 (49.5%) were found to have good knowledge about mental disorders in school children.
After the awareness program, the rates of optimal knowledge about causes, types, manifestations and treatment possibilities for mental illness among school children improved significantly from 15.5%, 62.5%, 62.5% and 21% to a high of 50%, 90%, 76% and 42% respectively (p<0.001).
Conclusion: The awareness program had a positive impact on improving the knowledge of primary school teachers regarding mental disorders in school children. Further studies should focus on possible roles for primary school teachers in screening for mental illnesses.
Key Words: Knowledge Mental illnesses School childre

I. Introduction

The burden of childhood mentaldisorders will stagger by more than 50% by the year 2020. This will put childhood mental disorders as one of the most common causes of morbidity and disability among children, making it a public health concern.[1]

Early identificationand treating of children with mental illnesses would reduce the burden of these disorders and mightoffer early chances for treatment in addition to protecting the children from apossibility of worsening academic and social functioning.[2,3]

However, mental illnesses are not easily picked unless the symptoms are extremely distressing and they are often neglected by the children's relatives as well as their teachers. The associating stigma may prevent the children from referral to psychiatric specialists. All these together might result in late diagnosis, worse prognosis, and serious adverse outcomes.[4]

Previous literatures showed that mental illnesses usually start at early life, and most of teens who suffer from mental disorders are school students who spend their daytime under observation of their school teachers.[5]

In contrast to parents who are biased observers, teachers are neutral observers and can detect the behavioral changes of their school children whenthey are well-trained to do so. Meanwhile, teachers can serve in early identification of mental illnesses, referral to specialists, reducing stigma, and enhancing the awareness of their students about mental illnesses.[6]

II. Significance

Although the topic of mental disorders amongst school children is of great importance, little is known about knowledge of school teachers in Egypt about the mentalillnesses in this age category. We believe that primary school teachers, who are well-trained to deal with mental illnesses among their school children, could help in future screening programs.

Aim

The aim of this study is to evaluate the knowledge of primary school teachers regarding the mental illnesses that may affect school children; causes and risk factors, types, symptomatology, and treatment, in addition to implementingawareness program to improve this knowledge.

Hypothesis

We hypothesized that primary school teachers might have suboptimal knowledgeabout mental illnesses amongst school children and the awareness program we designed might beof a positive effect on their knowledge.

Setting and Time Frame

A total of 200 teachers from 4 public primary schools in Beni-Suef City participated in this awareness program. The study locale, Beni-Suef city, is the capital of Beni-Suef governorate and situated 110 km south to Cairo. The baseline and final assessment in addition to the sessions of the program have been given at the 4 schools between September and November 2017.

Study Design

An interventional non-controlled design was adopted.

Sampling

The sample size was calculated using Epi-Info version 7 Stat Calc, [Center for Disease Control (CDC), WHO], based on the following criteria; improvement rate of 50%, confidence level of 95%, margin of error of 5% and non-response rate of 25%.

The 4 primary schools where the programs have been conducted were used randomly by card withdrawal after stratifying the schools to urban and rural schools. The 200primary school teachers who participated in our program have been selected using total enumeration sampling from the 4 primary upon the following eligibility criteria; primary school teachers; not workers or administrators, and gave a verbal consent to participate.

Fieldwork and Data Collection

Before starting the program, all the participating teachers were asked to fill in a one page questionnaire showing the name and site of their schools, age, sex, parity, religion, family history of mental illness, and if they thought that mental illness is a stigma.

Then, the knowledge of the teachers about mental illness in school children was assessed by the investigators using interview questionnaire. The assessment included knowledge of teachers about 4 aspects; causes and risk factors of mental illness, types, manifestations, and treatment. The questionnaire included 16 phrases with a Likert scale from 1 to 5 according to the agreement of the teacher with the statement and every question was given scores from 1 for strongly disagree to 5 in strongly agree, while inverse questions were given scores 5 to strongly disagreeand 1 to strongly agree. The total score of each aspect was 20 and the total score of the whole questionnaire was 80.Scores $\geq$ 60% of the total score were considered of optimal knowledge.

The causes and risk factors aspect included statements about the familial, nutritional, and social risk factors, while the types aspect explored teachers' knowledge about different types of psychiatric disorders, and whether if the teachers were aware that diseases like depression and anxiety could also affect the children. The symptomatology aspect aimed at evaluating the ability of the teacher to suspect children with mental disorders, while the treatment aspect examined the knowledge of teachers about psychotherapy, behavioral, chemical and nutritional treatments.

Before admitting the questionnaire fordata collection, a pilot study on 20 teacherswas conducted to test the validity andreliability of questionnaire. The Cronbach's alphafor reliability was 0.78 while content validity was assessedby a professor of public health and a professor of psychiatry. Since there were no modifications on the questionnaire after the pilot study and the results were merely close to the final findings, they were included in the final sample.

The awareness program, designed by the investigators, included 4 sessions; 30 minutes each. Each session focused on raising the awareness of the teachers over only one of the 4 aspects. Arabic-language brochures and leaflets, supported by illustrated figures and graphs, have been distributed as take-home notes.

Later, all teachers were assessed again over their knowledge about the 4 aspects using the same questionnaire and the scoring system was similar to that of the baseline assessment.

Data Analysis

Data entry, verification, and validation were carried out using standard computer software. A double-entry method was used to ensure that the data were transferred accurately from the case report forms to the database. Data were analyzed using the software, Statistical Package for Social Science (SPSS Inc. Released 2009, PASW Statistics for Windows, version 18.0: SPSS Inc., Chicago, Illinois, USA), then processed and tabulated. Frequency distribution with its percentage and descriptive statistics with mean and standard deviation were calculated. Chi-square, t-test, correlations were done whenever needed. P values of less than 0.05 were considered significant.

Ethical Considerations

The study was conducted in full accordance with the guidelines for Good Clinical Practice and the Declaration of Helsinki, and data for each patient were collected onlyafter obtaining that patient's signed written data release forms.

III. Results

Of the 200 primary school teachers who participated in this program, 84 (42%) were working in schools located in urban areas and 116 (58%) were working in schools located in rural areas. The age of the participating teachers ranged between 25 and 59 (36.4±9.9) years, and 39% of them were males and 61% were females.Most of the participants (92%) were Muslims and 16 (8%) were Christians. Almost more than half (53%) of the teachers had 2 or less children. A third of the teachers stated having a history of mental illness in the family, and 42.5% believe that mental illness is a stigma (Table 1).

Of the 200 teachers who were interviewed at schools, 99 (49.5%) were found to have good knowledge about mental disorders in school children (Figure 1).

Baseline assessment of participating teachers' knowledge of mental disorders among school children showed that only 31 (15.5%) had optimal knowledge about the causes and risk factors of mental illnesses in this age, 125 (62.5%)had optimal knowledge about types of mental illnesses that may affect children, and the same percentage for their knowledge about the manifestations of mental illnesses in schoolchildren. Only 42 (21%) showed optimal knowledge about the possibilities of treatment (Table 1, Figure 2).

The results also showed that there were no statistically significant differences between teachers with optimal knowledge and those with suboptimal knowledge regarding the site of the school, age of teachers, their sex, religion, parity, family history, or even their belief that mental illness is a stigma (p>0.05) (Table 1).

After the awareness program, the rates of optimal knowledge about causes, types, manifestations and treatment possibilities for mental illness among school children improved significantly from 15.5%, 62.5%, 62.5% and 21% to a high of 50%, 90%, 76% and 42% respectively (p<0.001)(Table 2, Figure 2).
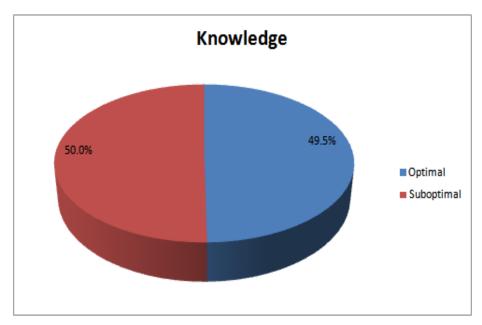
Figure 1: Knowledge of primary school teachers about mental disorders in school children, Beni-Suef, 2017

Table 1: Association between socio-demographic characteristics of primary school teachers and theirknowledge about mental disorders in school children, Beni-Suef, 2017

Socio-demographiccharacteristics		Suboptimal n=101 (%)	Optimal n=99 (%)	Total n=200 (%)	P value
School site	Urban	41 (40.6)	43 (43.4)	84 (42.0)	0.396
	Rural	60 (59.4)	56 (56.6)	116 (58.0)	
Age (Mean±Sd) years		36.8±10.5	35.9±9.3	36.4±9.9	0.498
Sex	Male	40 (39.6)	38 (38.4)	78 (39.0)	0.487
	Female	61 (60.4)	61 (61.6)	122 (61.0)	
Religion	Muslim	92 (91.1)	92 (92.9)	184 (92.0)	0.414
	Christian	9 (8.9)	7 (7.1)	16 (8.0)	
Parity	≤ 2	49 (48.5)	57 (57.6)	106 (53.0)	0.127
	> 2	52 (51.5)	42 (42.4)	94 (47.0)	
Family history of mental illness	Yes	33 (32.7)	28 (28.3)	61 (30.5)	0.301
	No	68 (67.3)	71 (71.7)	139 (69.5)	
Mental illness is a stigma	Yes	39 (38.6)	46 (46.5)	85 (42.5)	0.164
	No	62 (61.4)	53 (53.5)	115 (57.5)	

Table 2: Improvement of the participating teachers' knowledgeabout mental disorders in school children after the awareness program,Beni-Suef, 2017

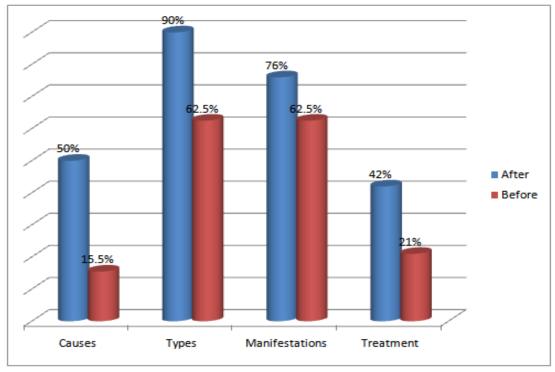| Items	Scoring	Before	After	P value
Causes of mental illness	Optimal	31 (15.5)	100 (50.0)	<0.001*
	Suboptimal	169 (84.5)	100 (50.0)	
Types of mental illness	Optimal	125 (62.5)	180 (90.0)	<0.001*
	Suboptimal	75 (37.5)	20 (10.0)	
Manifestations of mental illness	Optimal	125 (62.5)	152 (76.0)	<0.001*
	Suboptimal	75 (37.5)	48 (24.0)	
Treatment of mental illness	Optimal	42 (21.0)	84 (42.0)	<0.001*
	Suboptimal	158 (79.0)	116 (58.0)	

*p value is considered significant

Figure 2: Assessment of participating teachers' knowledge about mental disorders in school childrenbefore and after the awareness program,Beni-Suef, 2017

IV. Discussion

Having good knowledge about childhood mental illnesses among primary school teachers can help in making early identification of symptoms which could eventually help in reducing the burden of mental illnesses. The current studyshows that almost half of the primary school teachers in Beni-Suef City lacked the required knowledge regarding mental disorders in children.

In consistence, 520 teachers from English medium schools in India were assessed for their knowledge about mental illnesses in children using a score of 15 (from 15 questions), and a high of 76% of the participating teachers got less than half of the total score.[6]Another study from India on 35 primary school teachers revealed very limited knowledge amongst teachers about the mental health of children.[7]In a study on 260 teachers in Turkey, 40% had below average knowledge about mental diseases.[8]A descriptive study of attitudes toward mental illnessesamong school children showed that the teachers lacked knowledge of handling such situations.[9]A community-based study, conducted in Nigeria, revealeda significant lack of knowledge regarding mental illnesses.[10]Other studies showed suboptimal knowledge about certain psychiatric disorders that affect children.[11,12]

In the current study, age and sex of teachers in addition to their site of work did not show any statistically significant correlations with the level of knowledge among teachers. Previous literatures showed that gender, age of teachers and whether they were working in rural or urban schools might have impact on their knowledge.[6-8]

The awareness program that has been implemented throughout this study achieveda positive impact in improving the rates of optimal knowledge about causes, types, manifestations and treatment possibilities for mental illness among school children from 15.5%, 62.5%, 62.5% and 21% to a high of 50%, 90%, 76% and 42% respectively. This improvement could be compared to an educational module designed for primary school teachers in India and achieved similar successes.[7]

The efficacy of our awareness program could be attributed to many reasons. First, the awareness sessions have been given at the schools where teachers have been working. Every sessiondiscussed only 1 aspect related to mental disorders in children. Teachers were offered chance to introduce their personal experiences which offeredmore effective integrative communication. Further, the program was designed to be suitable for primary school teachers who are in contact with children most of the day.

V. Conclusion and Recommendations

In conclusion, the findings of the current study show primary school teachers lack knowledge about mental illnesses among children. Also,the awareness programshowed a positive impact on improving the knowledge of the teachers. The study highlighted a possibility of using teachers in screening program for mental diseases after getting the required training.

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