

Training on Local Cultural Wisdom Game to Reduce Emotional and Behavioral Disorders Among Junior High School Students Sleman Regency

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Abstract

Emotional and behavioral disorders among students after the eruption of Mount Merapi are important health problem. Treatment delays could worsen the student's psychological status, decreasing their school achievement and even their future. Mental health training and education, through the local cultural wisdom games for students, may potentially reduce this problem. The research aims to analyze the effectiveness of using local cultural wisdom games to reduce emotional and behavioral disorders among Junior High School students in Cangkringan, Sleman Regency. The research method is quasi experimental research with one group using pre-test and post-test design. Subjects were 90 seventh grade students from Public Junior High School Two of Cangkringan, Sleman Regency, Yogyakarta Province. Notes and tools of local cultural wisdom games, and an SDQ (Strength and Difficulties Questionnaire) were used as instruments. Analysis was done using paired t-test, linear regression and F-test with $\alpha = 5\%$. After training on local cultural wisdom games, there was significant decrease of emotional and behavioral disorders among the students. The proportion of students who had severe emotional and behavioral disorder (abnormal) decreased from 43.3% to 23.3%. The average SDQ score of 18.8 before the intervention, decreased to 14.1 after the intervention ($t_{stat} = 12.495$; $p = 0.000$). In conclusion, local cultural

wisdom games are effective methods to decrease emotional and behavioral disorders of Junior High School students in Cangkringan, Sleman Regency.

Keywords : Local cultural wisdom games, emotional and behavioral disorder, junior high school students.

Introduction

Teenagers in Cangkringan, Sleman Regency, Yogyakarta Province, experienced a very traumatic event caused by a great continuous eruption of Mount Merapi from 25th - 30th October 2010. Hundreds of people and thousands of cattle died, hundreds of houses collapsed or were ruined, and thousands of hectares of agricultural land were destroyed.

A traumatic event can cause the release of stress hormones which decrease immunity and symptoms emerge relating to cognitive and affective behavior. Stress affects the neurotransmitters, serotonin and dopamine which have roles in behavioral problems of teenagers (Dogan, 2011). Emotional problems and behavior of teenagers have a high risk of evolving into psychopathology when they grow up (McGue and Iacono, 2005). Negative effects of a disaster had a long term effect on 40% to 68% of victims and the effect could last for 30 years (Fullerton and Ursano, 2004). Exploration study was done in April 2014 (before

the intervention) on 97 seventh grade students from Public Junior High School of Cangkringan Two. This study discovered that 42 students (43.3%) had emotional and behavioral disorder (abnormal) with an SDQ average score of 25.6; 28 students (28.9%) didn't experience any emotional and behavioral disorder (normal) with SDQ average score of 10.3; lastly 27 students (27.8%) were on the borderline between normal and abnormal state with average SDQ score of 17.1. Emotional and behavioral disorders of teenagers, mainly those which emerge after disaster, are very important health problem. Late detection of these problems may result in delayed treatment, which worsen the condition, decreases school achievement, and disrupts social interaction with their community. Those problems need effective and continuous treatment, because psychological problems at an early age could affect their development. Local cultural wisdom games were proven to decreased depression and anxiety tendency, elevate social and autonomous abilities, and increase an eagerness to learn on kindergarten students as well (Sumarni, Dona, Fera, Arifin, Warsini, 2013). Giving local cultural games to elderly, could decrease depression, improving social interaction, quality of sleep, physical healthiness and creating more productivity as well (Sumarni, et.al, 2012).

Training in junior high school students with local cultural wisdom games may potentially reduce mental and behavioral disorders. The moves used in these games consist of sublime life philosophy; that may amend the cognitive and affective aspects of individuals who perform these games.

Objectives

To analyze the effectiveness of local cultural wisdom games in reducing emotional and behavioral disorders in junior high school students.

Defining research problems

With this background, some research problems could be identified as follows;

a) Numerous junior high school students in Cangkringan, Sleman Regency, experienced emotional and behavioral disorders, after the eruption of Mount Merapi, and are in immediate need of continuous treatment.

b) Treating emotional and behavioral disorders among junior high school students after the eruption of Mount Merapi, through the use of local cultural wisdom games.

Methods

The method of this research was quasi experimental research with one group using pre-test and post-test design. The subjects were 90 seventh grade students from Public Junior High School Two of Cangkringan, Sleman Regency, Yogyakarta Province. Research instruments were notes and tools of local cultural wisdom games, and SDQ (Strength and Difficulties Questionnaire). Data was statistically analyzed using paired t-test, linear regression and F-test with $\alpha = 5\%$. In a Training of Trainers Program called "Improving Mental Health Capacity of Children and Teenagers in Disaster Areas", which was a collaboration of Temasek Foundation Singapore, Institute of Mental Health, and Cipto Mangunkusumo Hospital in 2013, the SDQ questionnaire had been agreed upon to be used as the instrument for early detection of emotional and behavioral disorders in children and teenagers after disasters in Indonesia. Here are the SDQ scores in 3 categories:

a) abnormal (SDQ score 20 – 40); severe emotional and behavioral disorder;

b) borderline (SDQ score 14 – 19); mild emotional and behavioral disorder;

c) normal (SDQ score 0 – 13), no emotional and behavioral disorder.

The research activities included, as follows:

a. Arranged training of local cultural wisdom games with the students of Public Junior High School Two in Cangkringan, Sleman Regency, for 8 sessions during 2 months. Local cultural wisdom games and songs taught to students were:

- (1) Traditional games: Jamuran, Engklek, Cublak-cublak Suweng, Kucing-kucingan, Jaranan, Endhog-endhogan, Dhingklik Oglak-aglik.
- (2) Traditional songs: Padhang Bulan, Suwe Ora Jamu, Gambang Suling, Sluku-sluku Bathok, Lir Ilir, Gundhul-gundhul Pacul, Kidang Talun.

b. The trainers were 2 psychiatrists, 2 GPs, 1 sociologist, and 4 nursing students who had been trained to assist with game activities, traditional games and traditional dances of Sleman Regency.

c. The level of emotional and behavioral disorder for respondents was measured twice, namely, before and after training on local cultural wisdom games. Before the training, measurement was done of all 97 seventh grade students at Public Junior High School Two of Cangkringan, Sleman Regency. To reduce the influence of other factors, apart from training respondents on local cultural

wisdom games, the research took a practical step. Before the post training measurement, respondents were asked to fill out a filter questionnaire to know, whether or not, respondents participated in other activities such as training/seminars/discourse/events, that could affect their emotions and behavior during the two measurements. If there was one "yes" answer on the filter questionnaire, the respondent was not included, and the data was not analyzed.

Results

From the 97 students who were measured before training, there were 7 students who could not be included, due to the filter questionnaire. Those 7 students were student number 22, 31, 37, 45, 55, 60, and 77. Therefore there were 90 students who received further analysis.

Respondent Characteristics

There were more female respondents than male, as 49 students (54.4%) were females. The average age were 12.2 years old. There were 64 students (71.1%) whose age were 12 years old and 20 students (22.2%) whose age were 13 years old.

Table 1: Respondent Characteristics (n = 90)

Characteristics		f	%
Sex/Gender	a. Male	41	45.6
	b. Female	49	54.4
Age	a. 11 years old	4	4.5
	b. 12 years old	64	71.1
	c. 13 years old	20	22.2
	d. 14 years old	2	2.2

Source: Primary data, 2014.

Relationship between Emotional and Behavioral Disorder (SDQ Score) and Gender and Age

The results of statistical analysis by linear regression and F-test showed:

(1) No significant differences of SDQ scores between male and female respondents ($F = 1.141$; $p = 0.3348$).

(2) No significant relation between SDQ score (Y) with respondent age groups (X) whereas $Y = 19.26 - 0.0524 X$; $F = 0.001$; $p = 0.9686$.

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After trainings, the number of students who had severe emotional and behavioral disorders (abnormal) decreased from 37 students (41.1%) to 21 students (23.3%). On the contrary, the number of students with no emotional and behavioral disorders (normal) increased from 26 students (28.9%) to 45 students (50.0%). The average SDQ score also decreased significantly from 18.8 before the training, to 14.1 after the training ($t_{\text{stat}} = 12.495$; $p = 0.000$).

Table 2: Frequency Distribution and SDQ Score of Cangkringan Junior High School Students, Before and After Training

Emotional and Behavioral Disorders	Before Training			After Training		
	f	%	Average	f	%	Average
			SDQ Score			SDQ Score
Abnormal (SDQ Score 20 – 40)	37	41.1	25.6	21	23.3	24.0
Borderline (SDQ Score 14 – 19)	27	30.0	17.1	24	26.7	16.1
Normal (SDQ Score 0 – 13)	26	28.9	10.3	45	50.0	8.4
Total	90	100.0	18.8	90	100.0	14.1

Source: Primary data, 2014.

Discussion

Games of local cultural wisdom, along with singing, dancing and holding hands, provide physical advantages, such as increasing muscle coordination and strength. They help to express emotions that are difficult to express verbally, such as sense of loss, anger and frustration, and also help the teenager to feel happier. Socially, they can decrease the feeling of isolation and increase social skills. They also help to increase cognitive skills, memory, motivation, stress reduction, and anxiety. Traditional games and songs corresponding to local cultural wisdom and spirituality with sublime values and very strong Javanese philosophy, will increase spirituality, reduce stress, increasing happiness, decrease depression and increase immunity (Hartoto, 1995; Sumarni, et.al., 2012). One local cultural wisdom game song performed was “*padhang rembulan*” (Bright Moon), which has philosophical values, such as a spirit of solidarity shown in the lyrics “*yo prakanca dolanan neng njaba, padhang bulan padhang koyo rahina*” (come on friends, let’s play outside, the moon is shining bright). These lyrics which show solidarity or togetherness, playing happily, and thankful for what God has given, increase courage to perform, increase teamwork and reduce aggressive symptoms (Kartini, n.d.). Theoretically, group physical activities with local cultural wisdom games will improve confidence, stimulate others and increase social interaction. Togetherness in games will increase happiness and

endorphin levels (*endorphin surge*) which emerge as happiness and immunity, as well as decreasing depression (Deze cache and Dunbar, 2012). Meanwhile, fun games cause physiological changes in some body systems, such as musculoskeletal, cardiovascular, endocrine, immunity and nervous systems (Fry and William, 1994). They also cause changes of the catecholamine function and cortisol level (Hubert and Meyer, 1991; Mc Daniel, 2011). At the beginning, and end, of the games, participants always prays and do breathing exercises in the form of warming up and cooling down, which could increase relaxation and decrease depression (Chung, Tsai, Liu, Chou, Lin, Shyu, Wang, 2010)

Conclusion

Training of local cultural wisdom games is an effective method to reduce emotional and behavioral disorders of Junior High School students from Cangkringan, Sleman Regency.

Suggestions

Local cultural wisdom games should be included in overall student activities because they are proven to give positive effects to teenagers’ mental health. In this case, types of games and songs are adjusted with their own local culture. Further comprehensive studies are needed, especially those related to teenagers’ problems emerging after disasters, considering that the treatment needs priority in study areas and teaching schedules in schools.

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