The influence of Guided Imagery and Music (GIM) relaxation on primary school teachers' stress

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Abstrak

Latar belakang: *Stres dapat menimpa berbagai profesi dan pekerjaan. Guru sekolah dasar merupakan salah satu profesi yang rentan terhadap stres. Stres ini dapat berpengaruh terhadap kinerja guru, oleh karena itu stress harus diatasi. Salah satu cara untuk menurunkan stres adalah relaksasi dengan terapi musik. Bagian dari terapi musik adalah Guided Imagery and Music (GIM). Penelitian ini untuk mengetahui pengaruh relaksasi GIM terhadap stres guru sekolah dasar negeri di kabupaten Sekadau, Kalimantan barat.*

Metode: *40 orang responden guru diikut sertakan dalam penelitian ini melalui cluster random sampling. Desain penelitian menggunakan metode quasi eksperiment pre-post dengan grup kontrol. Data yang dikumpulkan meliputi karakteristik individu dan masa kerja, stressor kerja (menggunakan kuesioner SDS) dan stres guru (menggunakan kuesioner SCL-90). Relaksasi GIM diberikan sebanyak 5 sesi dalam waktu ±20 menit setiap sesi selama 1 minggu.*

Hasil: *77.5% responden memiliki tingkat stress sedang pada stressor beban pekerjaan kualitatif berlebih. Penilaian awal stress didapatkan 77.5% responden mengalami gejala psikopatologi dengan gejala terbanyak adalah obsesi-kompulsif (27.5%). Terdapat penurunan rerata stres yang bermakna pada guru SD yang mendapat relaksasi GIM dengan perbedaan mean 3.00±6.29 (p=0.046) dan peningkatan rerata stress pada kelompok kontrol -1.45±7.72 (p=0.412).*

Kesimpulan: *Intervensi GIM berpengaruh terhadap penurunan tingkat stress pada guru SD yang menjalani relaksasi GIM.* ***(Health Science Journal of Indonesia 2018;9(1):45-50)***

Kata kunci: *Relaksasi GIM, Stres guru, Guru sekolah dasar*

Abstract

Background: Stress is a common hazard in a lot of professions and occupation. Primary school teachers are one of the most vulnerable profession to have stress. Stress may impact on teachers' performance and therefore must be treated. One of the ways to alleviate stress is relaxation by musical theraphy. A part of musical theraphy is Guided Imagery and Music (GIM) relaxation. The purpose of the research is to know the influence of GIM relaxation method on stress' level of primary school teachers in district Sekadau, West Kalimantan.

Methods: 40 teachers participated in this research and were chosen by cluster random sampling method. The study design was pre-post quasi experiment with control group. The collected data included respondents' individual characteristics and length-of-employment, work stressors (using SDS questionnaire) and teachers' stress (using SCL-90 questionnaire). GIM relaxation method was provided in 5 sessions where conducted for 20 minutes during the period of one week.

Results: 77.5% of respondents have medium stress levels, which were excessive qualitative workloads stressors. In early stress assessment, 77.5% respondent showed psychopatology symptoms, where the most frequent symptom was obsessive-compulsive (27.5%). There was a significant decrease in stress level in primary school teachers who received the GIM relaxation with a mean difference of 3.00±6.29 (p=0.046) and an increase of stress' level in control group with a mean difference of -1.45±7.72 (p=0.412).

Conclusion: GIM intervention has an effect on reducing stress level in primary school teachers who have undergone GIM relaxation. ***(Health Science Journal of Indonesia 2018;9(1):45-50)***

Keywords: GIM relaxation, Teachers' stress, primary school teachers

Stress is a common hazard in a lot of professions and occupation. According to World Health Organization (WHO), 8% of illnesses caused by working activity in many countries is depression.[1] International Labour Organization (ILO) estimates the costs of stress in communities are about 1-3.5% of Gross Domestic Product (GDP) of the country.[2] Teachers are on of professions that could evoke stress. This happens since teachers have a responsibility to educate and unlock the potency of learners. At the same time, they must fullfill various demands, standards and targets from the parents or the custodians, the institution they work for, even the government.

The Scottish Council for Research in Education found that 23% of the 1800 teachers were found having a significant relationship with incidental illness.[3] Bauer et al found that in developing countries, a teachers is a professions which causes high levels of burnout.[3] One group of teachers who has possibility to experience stress is primary school teacher. Arismunandar, in his research, stated that the predisposition of the average score of primary school teachers' stress level is proven to be higher than junior high school teachers.[4] Sugijanto's research showed that among of 326 respondents of primary school teachers, 168 (51.5%) of the teachers were found underwent stress. A research by Prasetyo R on 80 respondents of primary school teachers in Wonosobo regency found that 62,5% of the teachers experienced mild stress level with perceptions of task loads in high category (80%).[3,4] In West Kalimantan itself, the main problems of the education system being faced right now are lack of teachers, unequal procurement distribution for educational activity, and poor quality of teachers. These problems causes the workload of each teacher is increasing.

Sekadau district, West Kalimantan is one of the district with a high prevalence of pathological stress symptoms in school teachers. A preliminary survey conducted by researchers among 20 teachers at a primary school in Sekadau, found that most of the teachers (14 people) have complained about the same things, which are the burden and the demands for more effort on teaching. A preliminary survey which was also conducted by researcher toward 17 teachers in another primary school by giving questionnaire of SCL-90 has identified 12 people who have score results of more than 61 (70,6%) which means that they have been experiencing pathology stress symptom and obtaining light and medium job stressors on the completion of the SDS questionnaire.

Many methods are used for stress management, such as relaxation methods. One of relaxation techniques is with music therapy. One part of music therapy is Guided Imagery and Music (GIM). GIM is an application that combines several relaxation techniques, such as breath relaxation, visual relaxation (imagination) and music therapy.[7] Music therapy for stress management, especially among workers is still rare in Indonesia. At the same time, research that implements GIM as a workplace's stress management in Indonesia has never been done especially among the teachers. This study aims to determine the effect of Guided Imagery and Music (GIM) relaxation to reduce stress in primary school teachers in district Sekadau, West Kalimantan.

METHODS

The type of this research is intervention with pre and post quasi experiment towards the control group. Stress variable measurements were performed twice (pre and post) in both groups. The data were collected by self-questionnaires during October 16 to November 3, 2017 at two public primary school in district Sekadau, West Kalimantan, in accordance with the result of a pre-eliminary survey conducted by researchers. Stress teachers were assessed using a questionnaire of Symptom Check List-90 (SCL-90) that is calculated on a numerical scale from 0-360 with cut off score of 61. Each symptom is calculated by converting the value into T-score table. Work stressors assessed with a Stress Diagnostic Survey (SDS) questionnaire, with each stressors categorized as low stress (1-10), medium stress (11-23) and high stress (24-35).

The minimum samples were obtained using the formula:

$$n1 = n2 = 2\left[\frac{(Z \propto + Z\beta)S}{(x1-x2)}\right]^2$$

with a degree of significance level 5% and power test 80%, from previous studied obtained S=7.68, x1-x2=78. To avoid the existence of drop out the samples, a correction was made of 20%. Based on this formula, the sample calculation result is 20 people for each group, so the total samples are 40 people from both group. This sample divided into two groups, namely intervention group (n = 20) and control group (n = 20).

The samples were obtained by cluster sampling technique by taking samples from 236 public primary schools with an average number of teachers are 20 people. The researchers chose in 2 public primary school with 20 teachers for sampling, with the criteria of inclusion having low and medium stress, willing to be respondents and given GIM intervention. Exclusion

criteria include hearing-impaired samples or using hearing aids, receiving psychopharmaceutical therapy, planning off-duty while the study was going, the SCL-90 score equal to 0 and having a high level of stress. The sample's criteria who dropped out from this study had resigned during the study was conducted and did not follow any or all of the intervention sessions of the intervention group.

GIM Intervention was given in the intervention group as much as 5 sessions for 1 week through MP3 player and earphone using instrumental relaxation music and guided by a guide. GIM intervention was held after school hours and conducted in the teacher's room with the respondent sitting in the chair. Each session lasted for ± 20 minutes.

Individual characteristic data and work stressor distribution in both groups were tested for univariate analysis and homogeneity with Chi-square test or Fisher's exact test. The mean stress values in both groups were tested using T test with α <0.05.

The research protocol was approved by Research Ethical Commission of Faculty of Medicine Universitas Indonesia with No : 964/UN2.F1/ETIK/2017.

RESULTS

The sample size in this study was 40 teachers from 2 public primary school in district Sekadau, West Kalimantan, who have met the inclusion criteria.

Data of individual characteristic and working periods of the respondents consist of teacher groups that were devided into intervention and control can be seen in Table 1. The result of the analysis of individual characteristics by age group is that the highest age reaches over 30 years (82.5%). The sexes in both groups consisted of female respondents that reach 67.5%. At the same time, the married population is higher (87.5%) than single population. Lastly, the respondents' educational background from the undergraduate university program became the highest population (77.5%) and most of them already have a working period for six years (80%).

According to on Table 2. most of the respondents' work stress level was in the medium category, especially for them who have experienced a qualitative excess workload (77.5%). The highest percentage of the intervention group is 80%, followed by excessive quantitative workload for 65%.

The result of the distribution of respondents' stress level based on psychopathology symptom (Tabel 3.) assessed through SCL-90 pre-intervention scores between two groups was 77,5%. The highest symptoms of psychopathology are obsessive-compulsive (27.5%) and the lowest is anxiety (2.5%). The proportion of psychophatological symptoms are more likely to be undergone by the intervention rather than the control group.

Table 1. Individual characteristics and length-of-employment

Variables	Intervention		Control		Total		p-value
	n (20)	%	n (20)	%	n (40)	%	
Age							
• ≤30 years old	2	10	5	25	7	17.5	
• >30 years old	18	90	15	75	33	82.5	0.047
Gender							
• Male	5	25	8	40	13	32.5	
• Female	15	75	12	60	27	67.5	0.311
Marital Status							
• Married	18	90	17	85	35	87.5	
• Single	2	10	3	15	5	12.5	1
Education							
• Diploma degree grade II	1	5	7	35	8	20	
• Diploma degree grade III	-	-	1	5	1	2.5	
• Undergraduate university	19	95	12	60	31	77.5	0.020
Length of Work							
• ≤6 years	3	15	5	25	8	20	
• >6 years	17	85	15	75	32	80	0.695

Table 2. Work stressor respondents distribution

Variables	Intervention		Control		Total		p-value
	n (=20)	%	n (=20)	%	n (=40)	%	
Role ambiguity							
• Low degree	7	35	10	50	17	42	
• Medium degree	13	65	10	50	23	57	0.337
Role conflict							
• Low degree	7	35	14	70	21	52	
• Medium degree	13	65	6	30	19	47	0.027
Quantitative workload							
• Low degree	7	35	7	35	14	35	
• Medium degree	13	65	13	65	26	65	1
Qualitative workload							
• Low degree	4	20	5	25	9	22	
• Medium degree	17	80	15	75	31	77	1
Career Development							
• Low degree	7	35	10	50	17	42	
• Medium degree	13	65	10	50	23	57	0.337
Responsibility to other people							
• Low degree	7	35	11	52	17	42	
• Medium degree	13	65	10	47	23	57	0.204

Table 3. Stress based on psychopathology symptom distribution

Variables	Intervention		Control		Total	
	n (=20)	%	n (=20)	%	n (=20)	%
Psychopathology symptom						
• <61	4	20	5	25	9	22.5
• ≥61	16	80	15	75	31	77.5
Depression	0	-	0	-	0	-
Anxiety	1	5	0	-	1	2.5
Obsessive-compulsive	6	30	5	25	11	27.5
Phobic anxiety	7	35	3	15	10	25
Somatization	0	-	0	-	0	-
Interpersonal sensitivity	2	10	0	-	2	5
Hostility	2	10	1	5	3	7.5
Paranoid	2	10	0	-	2	5
Psychoticism	2	10	0	-	2	5
Additional items	1	5	3	15	4	10

Table 4. Mean difference of teachers' stress before and after GIM relaxation in intervention and control group

Groups	Mean±SD		Mean Difference±SD	p-value
	Pre-intervention	Post-intervention		
Intervention	70.7±9.08	67.7±5.37	3.00±6.29	0.046
Control	67.1±7.41	68.5±5.92	-1.45±7.72	0.412

Based on Table 4. there was a significant difference in mean pre and post stress values in the intervention group's, with mean ± SD pre- and post- values were 70.7 ± 9.08 and 67.7 ± 5.37 (p = 0.046). It can be noticed that statistically, GIM interventions had an effect on the stress assessment conducted in this group. However, different things were seen in the control group, where there was no significant difference in the mean pre-and post stress level with p= 0.412.

In this study it was also found that 2 respondents from the intervention group and 7 respondents from the control group have experienced an increase in SCL

scores of post-intervention, while 3 respondents from the intervention group with SCL post-intervention scores have not decreased.

DISCUSSION

Results showed that the majority, 82.5% of respondents were 30 years old. According to sex, female respondents (67.5%) was higher than male respondents. Moreover, amongst all primary school teachers who participated in this study, mostly were married and had undergraduate university program with more than 6 years of work period.

Most respondents had medium stress level, and the most frequent work stressors were overwork qualitative workload (77.5%) and excessive quantitative workload (65%). The results of this study are in accordance with the research conducted by Prasetyo R, Flook et al and Sulastri L, that the most frequent factor which affects the work stress of the teacher is the excessive workload (80%) while they have not enought time to complete their job.[5,7,8] However, the results of those studies were considered small in terms of workload if they are compared to a research that was conducted by supervisors and managers at pharmaceutical companies in Jakarta. These supervisors and managers received a stressor of overwork qualitative workload in the medium-high category of 90.4%.[9]

Furthermore, the study found that most of the respondents had psychopathology symptoms (77.5%). This finding reinforce preeliminary results of surveys held by researchers who found 70.6% of the teachers had experienced psychopathological symptoms. Psychopathology symptoms were more likely to be found in supervisors and managers of pharmaceutical companies in Jakarta, where 71.4% of the employees experienced psychopathological symptoms.[9] From that result, the most frequent symptom of psychopathology that appeared is obsessive-compulsive (27.5%).[9] This has proven to be in accordance with a research conducted on supervisors and managers of pharmaceutical companies X, where it was found that the most frequent symptoms were obsessive-compulsive (45.2%).[9]

In this study, there was a significant decrease in teachers' stress from before to after the result of stress assessment where GIM intervention was given to the intervention group. The decrease in SCL scores on the intervention group was 3.00, while the control group gained an increase of 1.45. These results are in line with the results of research conducted by Garcia

who got a significant reduction of CARD (Classroom Appraisal of Resources and Demand, Elementary Version) outcomes from 80 teachers who have given guided imagery intervention (1 guided imagination) for 3 weeks (p <0.01).[10] This result is also consistent with the results of a study conducted by Beck et al, who stated that there was a significant decrease in PSS-10 (Perceived Stress Scale-10) results in 20 workers experienced chronic work related stress who received GIM intervention after 3 sessions follow up per week and continued for 9 weeks (p <0.01).[6,10] The decreased of stress rates should be higher if the interventions are conducted within longer hours and sessions, with comfortable conditions and situations, and performed by trained and certified guides.

Statistically, GIM relaxation caused effects on teacher'stress before and after intervention towards the intervention group (p=0.046). However, there was no significant difference compared with the control group. This may be regarding the condition of the participants in both schools that at the time of the study took place, they have been doing a lot of activities, the intervention was too short, and the sessions given were too few. At the same time, the condition of the room was not comfortable enough and the intervention was not undergone by a professional in the field, as it has also become the weaknesses of this study.

This happened becaused at the time the study taken place, respondents from both schools had finished midterm examination and some other activities that followed. These condition could affect the stress assessment towards respondents.

According to this study, several respondents in the intervention group (2 people) and control (7 people) experienced an increase of SCL scores post-intervention. From the interviews toward several respondents in both groups, the respondents complained about the number of school activities that must be done in addition to other school activities that should be on schedule and complained about the questionnaire that is too lenghty. In addition, this study also found that three respondents in the group of interviewees claimed that their feelings were the same between the pre-intervention and post-intervention SCL-90 quessionare.

In conclusion, the Guided Imagery and Music (GIM) interventions significantly reduce stress in the intervention group. However, the opposite result was found on the control group. The control group experienced an increase in their stress assessment.

GIM intervention is mean to reduce stress among teachers and it is recommended to be used as a way to reduce stress on teachers.

Thus, it recommends furthers study carries out in a longer sessions and time, in a comfortable room and condition, and with a certified guide.

Acknowledgments

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