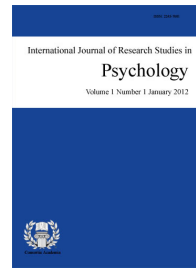


Efficacy of indigenous imagery breathing-relaxation training through Javanese Gamelan music to reduce job stress responses among teachers at special-needs school

Safaria, Triantoro ✉

Ahmad Dahlan University, Indonesia (safaria_diy@yahoo.com)



ISSN: 2243-7681
Online ISSN: 2243-769X

Received: 19 September 2014

Revised: 20 October 2014

Accepted: 21 October 2014

OPEN ACCESS

Available Online: 29 October 2014

DOI: 10.5861/ijrsp.2014.904

Abstract

This study aim is aiming at testing the efficacy of breathing-relaxation training through Javanese Gamelan music to reduce job stress response among teachers at special needs school. This research used *randomized pre-post control group design*. 49 teachers at special needs school was involved and randomized to experiment group and control group. 25 teachers were included in experimental group, while 24 teachers were included in control group. The experiment group followed ten indigenous imagery breathing-relaxation training sessions. The data were analyzed by using independent t-test. The results of this study showed there is a significant differences between experiment and control group on systolic blood pressure $t(47) = 4.2, p = .000$, diastolic blood pressure $t(47) = 3.1, p = .003$, heart rate $t(26.4) = 5.5, p = .000$, and response stress $t(36.4) = 4.7, p = .000$. The explanation of result would be discussed further.

Keywords: job stress; imagery breathing-relaxation; Javanese Gamelan music; teacher of special needs school

Efficacy of indigenous imagery breathing-relaxation training through Javanese Gamelan music to reduce job stress responses among teachers at special-needs school

1. Introduction

Job stress is still a big problem for many organisations in the world (Crampton, Hodge, & Mishra, 1995; Safaria, Othman, & Nubli, 2010). Job stress can be experienced by employees regardless of their job type. In a business organisation, as well as in educational institution, job stress such as overload task, students' behavior problem, teaching in overload class, and low organizational support still becomes a threat to many employees (Jing, 2008; Jones, Kinman, & Payne, 2006; Kim, Sorhaindo, & Garman, 2006; Robbins, 2003). However, the optimal stress situation will also create a challenging motivation to achieve better performance (Safaria, Othman, & Nubli, 2011). For example the challenging task fits with individual capacity. It means that the best performance will be achieved when people experience a moderate level of pressure. If they experience too much or too little pressure, their performance will decline, sometimes become severely stressed.

Current study described that financial loss caused by job stress in American companies ranges from 100 to 300 million US per year (Wang et al., 2002). These costs did not include financial loss caused by absenteeism, job accident and low productivity. As an example, it can be calculated that 75% to 90% employees sought medical treatment caused by job stress (Crampton et al., 1995), and it made anxiety and depression (Stoner & Perrewe, 2006; Gellis & Kim, 2004), apathy, alienation, and absenteeism (Kim et al., 2006). One study reported that in 16 days for every year, many employees experienced stress, fatigue, emotional depletion and serious depression. It was calculated that between 60% to 80% employees experiencing job accident were related to job stress (Glendon et al., 2006).

The purpose of this study is to examine the efficacy of breathing relaxation training through listening to Javanese Gamelan music to reduce job stress response among teachers special needs school. So far I search on the literature, currently there is no study conducted by using breathing relaxation while listening to Javanese Gamelan music for reducing job stress response among teachers at special needs school in Indonesia. The present study is the first study which used and combined breathing relaxation and listening to Javanese Gamelan music for decreasing and stabilizing job stress responses among teachers in Indonesia. It is expected this study will contribute a new understanding and insight on how breathing relaxation which is combined with listening to Javanese Gamelan music can reduce and stabilize the response of job stress among teachers. Utility of Javanese Gamelan music in this study is aimed to facilitate and create a stronger and easier relaxation state while practicing breathing relaxation training.

1.1 The impact of job stress

The causes of job stress are not only just experienced by a professional job like a pilot, or the medical profession, but also at teaching profession. Several studies have identified the causes of job stress among teachers. A study in Sweden, Wahlund and Nerell (2004) found the most important causal factors that always afflict job stress were a big classroom size, long working hours, destructive student behavior, overload demand, and rapid school reformation. In the United Kingdom, Cox et al., (2000) identified five factors related to job satisfaction and job stress namely poor school management, overload job demand, lack of teaching resources, poor working conditions, lack of career and training, and negative student's behavior. Kyriacou (2001) summarizes a number of international studies. He then concluded that there are ten main stressors for teachers. These include teaching students who lack motivation; maintaining discipline, facing time pressures and workload, coping with changes, being evaluated by others, conflict with colleagues, self-esteem and status issues, having problems with administration/management, role conflict and ambiguity and poor working conditions. Safaria, Othman, and Nubli (2010) found in their study that job insecurity significantly increases job stress

experiences among Javanese academic staff.

Related to job stress among teachers at special needs school, Williams and Gersch (2004) found no significant differences in the total level of stress between mainstream school teachers and teachers at special need school. However, Trendall (1989) found that teachers at special schools are reported being less stressed in their working environment than their mainstream school colleagues. Regarding to the sources of stress, Williams and Gersch found different type stressors experienced between mainstream school teachers and teachers at special needs school. Mainstream teachers tend to experience high levels of stress caused by disruptive pupils, pupils' poor attitudes to schoolwork, lack of available time to spend with individual pupils and OFSTED inspections with the special school teachers being stressed by lack of resources when facilitating their leaning disabled students. Meanwhile, Antoniou, Polychroni, & Kotroni (2009) found five most important stressors among teachers at special needs school, namely lack of resources and equipment, feelings of increased responsibility for their pupils' wellbeing and education, lack of support from the government regarding their occupational status, pressure of time at school, and discrimination. Previous studies found that the sources of stress among special teachers at special needs school relate to the individual learning and emotional needs of the children who are mentally, and physically impaired (Leone & Wiltz, 2006; Nelson, 2001). These limitations make teachers at special needs school more difficulty to facilitate their students to achieve teaching goal as planned in curriculum.

Why are job stress among teachers have to be stopped and managed properly? It is because teachers have a central function for student academic achievement. If a teacher cannot achieve his/her optimal performance in the learning process. it is difficult for him/her to facilitate students to achieve higher academic performance too (Steyn & Kamper, 2006). If a teacher experiences many stresses in their work, and he/she cannot manage it effectively, finally stress condition will cause low productivity, and directly impact to student later in teaching-learning process (Dorman, 2003; Rice, 2005; Phillips, Dil Sen, & McNamee, 2007).

1.2 The psychological effects of breathing-relaxation and music listening

One of the treatments that are empirically quite effective to reduce stress response at work is breathing-relaxation while listening to music. According to Davis, Eshelman, and McKay (1995) all types of relaxation can be used to reduce job stress response. Breathing-relaxation training is used in present study because previous studies showed that relaxation training is effective to reduce stress reactions (Prawitasari, 1988; Carlson & Hoyle, 1993; Meuret, Wilhelm, Ritz, & Roth, 2003). Besides that, breathing-relaxation training is easier to be trained to every person. So teaching and training how to breathe effectively to get a relaxed condition is not complicated. In spite of that, the training that uses effective breathing relaxation for reducing distress needs a systematic approach and an appropriate application (Rickard, 2000).

Present study uses music as a tool for achieving better relaxation condition. Participants of this study will listen to Javanese Gamelan music while conducting and practicing breathing relaxation training. When a person listens to music, he/she can create a calm condition, slow brain wave, decrease blood pressure, and slow heart rate, along with practicing breathing relaxation. The final goal is by listening to music, the relaxation state will be easier to be achieved by participant, and finally the power of breathing relaxation will be stronger to create calm, loose, and relaxed state. Tsiris (2008) argued that the aesthetic of music can also contribute to the transformation of the self. By listening to music, an individual will feel the aesthetic experience which appears and echoes in the music itself. The aesthetic of music is not only influence the brainwave, but also thrill and touch the hearts of those who listen to music. These experiences have impact on the transformation process of the self for developing a fully functioning person in daily activity. DeNora (2000) states that music has many functions and impacts in everyday life of people, not just as entertainment purpose, but also as a resource of meaning in individual life such as in wedding ceremonies, religious activities, or romantic relationship through love song.

1.3 *The physiological effects of breathing-relaxation and music listening*

Several previous studies concluded that breathing-relaxation, listening to and enjoying music can enhance relaxation state. Music can influence the person's body and mind because it can modify brain wave, blood pressure, heart rate and improve better heart rate variability (Trappe, 2012). When a person is listening to music, his brain wave is slower and this condition will increase relaxation state, and it will reduce distress reaction (Hodges, 1999; Trappe, 2012). Several studies have suggested that listening to music has different effects in a person's body and mind such as increasing concentration, reducing distress, creating the condition of relaxation, reducing cortisol and testosterone, facilitating neurogenesis, regeneration and repairing of neurons (Fukui, Arai, & Toyoshima, 2012; Fukui, 2001; Fukui & Yamashita, 2003; Fukui, & Toyoshima, 2008; Khalfa, Dalla Bella, Roy, Peretz, & Lupien, 2003). Besides, music has function to entertain and bring positive emotion (Ashwani & Milind, 2011). Patients of Alzheimer's disease that received music therapy had an increasing 17β -estradiol and testosterone which was supposed to have preventive effects on the increase and deposition of β -amyloid, prevent nerve cell damage, improve cognitive function and delay the onset of dementia (Fukui, Arai, & Toyoshima, 2012).

Another study found a positive effect on the decrease of body mass index, fasting blood sugar, systolic blood pressure, diastolic blood pressure, mean serum cholesterol, low density lipoprotein (LDL), very low density lipoprotein LDL, and increase in high-density lipoprotein (HDL) among patients with metabolic syndrome who underwent music therapy. HDL cholesterol may act to reduce the risk for heart disease, one function of HDL is scavenges and removes LDL ("bad cholesterol") (Sharma, Rajnee, & Mathur, 2011). When a person is listening to music, his mood may change. As an example, when a person has sad feeling, then he/she listens to music, it may lead to change his/her emotion, and his/her feeling becomes more comfortable and relaxed as one possible effect. Another study by Vianna, Barbosa, Carvalhaes, and Cunha (2012) demonstrated that music therapy had a significant effect in increasing breastfeeding rates among mothers of premature newborns at the first follow-up visit, and also a positive influence (although not significant) that lasted up to 60 days after infant discharge. Their study confirmed that music therapy may be useful for increasing breastfeeding rates among mothers of premature newborns.

Research by Campbell (2000) suggested that music has tremendous effect either, for healing, increasing concentration or achieving relaxation. Bartlett (2005) found that music has a different function in every culture, but the prominent fact is the capability of music to influence mood and emotion of the listeners. Another study concluded that classical music significantly changes mood positively, and further enhances the ability to memory recognition (Baddour, 2008). Music can also increase productivity too (Schnall, 1998).

1.4 *The Effect of Javanese Gamelan music*

Music type that may be believed to have positive effects for the body and mind and also have a healing power in Javanese culture is Javanese gamelan music. Javanese Gamelan music is traditional music that has evolved since Mataram king period (1570s). The javanese believe that Gamelan music has a mystical power and relates to sacred myth (Suryanto, 2006). They believe that by listening to a gamelan music, they will get a blessing from sacred power (Natalia, 2006; Wulandari, 2006). Besides, Gamelan rhythm may create a calm situation. The repetitive melody of Gamelan music may create a relax and loose psychological state. Repetitive melody may produce a hypnosis psychological state like. Several studies have examined the application of Javanese Gamelan music. Study conducted by Suryanto (2006) studied about the influence of *macapat*¹ song (Javanese traditional song) to develop child emotional sensitivity. Suryanto (2006) suggested there was a change of child emotional sensitivity when children listen to a *macapat* song from their parents. Another study conducted by Natalia (2006) found that Javanese Gamelan music has an effect for baby's emotion. Baby who is

¹ *Macapat* is a Javanese traditional song or poem. Each *macapat*' stanza has lines called *gatra*, and each *gatra* has a number of specified syllables (*guru wilangan*), and ends at the end rhyme sound called *guru lagu* (*guru song*).

listening to Gamelan music has more positive mood, more emotionally calm, better body weight gain, and a better sleeping pattern. Another study conducted by Wulandari (2006) found that imagery-relaxation through Javanese Gamelan music has an effect for pregnant mothers. The pregnant mothers that participated in pregnant gym with imagery-relaxation through Javanese Gamelan music are significantly more relaxed, calm, and more enthusiastic during pregnancy time. And so, they are more emotionally positive, happier, and in general, having healthier psychophysiological condition.

Based on several studies above, relaxation, breathing, and listening to music are chosen for a method to reduce job stress response. Besides, the study using breathing-relaxation training through Javanese gamelan music for teachers at special needs school is rarely studied and still need comprehensive and systematic research. Javanese gamelan music is chosen because this type of music is part of Javanese culture. Gamelan music is inherent and ingrained in the lives of Javanese community. For example, macapat song is often sung by parents to make their children calm, or also used as an educational process, especially for instilling the values of noble character contained in Javanese culture. Gamelan music has also a very important meaning in every ritual in Javanese culture. For example with the absence of gamelan music in a certain event such as *ruwatan*² make it unworkable. Javanese philosophy is expressed in gamelan music. It contains a harmony of physical and spiritual life, harmony in talking and acting in noble manner, in spite of aggressively expressing the emotion, and cultivating a tolerance attitude towards other people (Suryanto, 2006). This study uses breathing-relaxation training through listening to Javanese Gamelan music for reducing job stress response. The result of this study would give new information and insight about how breathing relaxation training has more efficacy when is combined with traditional music, especially belong to participants' culture (Javanese Gamelan music).

2. Method

2.1 Design

A pre-post randomized control group design was used in this study. The subject was randomly assigned to the experiment and control group. A total of 49 teachers at special-needs school were involved. 25 teachers entered as the experimental group, and 24 teachers included in the control group. Four variables were employed to measure the level of stress response among the subject, namely stress response data that measured by self-report scale, the blood pressure (systolic and diastolic) and heart rate pulse measured by Microlife™ a digital blood pressure measuring instrument.

2.2 Measurement

The quantitative data in this study were collected by using a job stress response scale. The scales will measure current participant job stress response level. Before the scale was used, reliability and validity of the scale were tested. Job stress response scale has four indicator responses to measure the level of job stress responses experienced by participants. Following are the indicators and a sample item for each: (a) Behavioral responses—"I have little motivation to achieve higher performance of my job" (b), Emotional responses—"I feel fatigue to handle my job now" (c), Cognitive responses—"My thought easily distracted when I am working" (d), Physiological responses—"I get severe or chronic headaches." A 4-point Likert-type scale is used to measure each participant's perceived job stress level. These response choices on this continuous scale include: 1 (*never*), 2 (*seldom*), 3 (*sometimes*), and 4 (*frequently*).

On a scale of job stress some items were disqualified, namely item 17, item 23 and 24 because it have the item-total correlations less than .30. Test results using confirmatory factor analysis showed satisfactory results. All items correlated with appropriate factors as expected. Final measurement model showed adequate goodness

² *Ruwatan* is a self-liberation effort from a disaster, misfortune, feel unlucky, and unpleasant things through traditional ceremonies and rituals with a prayer and special activities.

of fit statistics with an acceptable loading factor.

Table 1

The result of the Job stress questionnaire Analyses

Items	Standardized Factor Loadings.	t-Values	Skewness	Kurtosis
Item2 (behave)	.677	1.00*	.410	-.268
Item3 (behave)	.744	1.084*	.122	-.586
Item4 (behave)	.796	1.145*	.254	-.430
Item5 (behave)	.767	1.116*	.239	-.633
Item7 (emotional)	.748	1.000*	.130	-.471
Item8 (emotional)	.874	1.179*	.145	-.552
Item9 (emotional)	.835	1.102*	.178	-.418
Item10 (emotional)	.763	.953*	-.125	-.685
Item12 (cognitive)	.806	1.00*	-.049	-.877
Item13 (cognitive)	.836	.979*	.030	-.662
Item14 (cognitive)	.791	1.056*	.193	-.684
Item15 (cognitive)	.745	.895*	.085	-.744
Item16 (physiologic)	.812	1.097*	.459	-.540
Item18 (physiologic)	.802	.975*	.424	-.490
Item19 (physiologic)	.837	.964*	.193	-.901
Item20 (physiologic)	.862	1.00*	.322	-.580
Item21 (physiologic)	.829	.985*	.435	-.534
Item22 (physiologic)	.837	1.058*	.468	-.526
Fit measurement	Chi-square = 223.191, df=127 CMIN=1.757, $p < .001$	RMSEA = .056 TLI = .959	NFI = .925 GFI = .905	CFI = .966 * $p < .001$
Construct reliability	Behavior = .834 Cognitive = .873 Emotional = .882 Physiologic = .931			
Average Variance Extracted (AVE)	Behavior = .558 Cognitive = .632 Emotional = .651 Physiologic = .689			

Table 1 above described the loading factor items, t-values for the path coefficient, and model fit. It also described the Skewness and kurtosis values for multivariable normality. Results showed significant t-values at the .05 level, and the Skewness and kurtosis values did not exceed the value of its recommendations 2.0 and 6.0. It means that the scale has a normal distribution of values. Chi-square value has a quite good fit ($\chi^2 = 223.191$, (127), $p < .01$, CMIN = 1,757), RMSEA = .056, TLI = .959, GFI = .905, NFI = .925, CFI = .966, and the score of each items t-values were significant ($p < .01$). Based on the result of CFA analysis it can be concluded that job stress scale has good measurement model.

2.3 Treatment

The present study used an indigenous imagery breathing-relaxation technique combined with listening to Javanese Gamelan music to reduce job stress response. During breathing relaxation training session, participants were instructed to follow therapist instruction. In this session therapist guided participant to visualize and imagine several scenes that induced relaxation and calm situation, like visualizing a garden with many flowers and fresh open air. In inner smile-breathing relaxation session, participant was guided by the therapist to smile smoothly and deeply, and then asked to feel the calm energy induced by it. After each session, participants were asked to practice the techniques at home and in the office. Besides, they were asked to write down their experiences during a stressful situation, and how breathing relaxation technique contributed to decrease the job stress response. During experiment session, participant listened to Javanese Gamelan music by tape cassette while they trained and exercised a breathing-relaxation technique.

2.4 Data analysis

The data were analyzed by using paired and independent sample t-test. T-test is a statistical method uses to examine the change of mean score between two groups. T-test is a parametric statistic method, with need for normal distribution data.

3. Result And Discussion

3.1 Result

Based on the analysis of Kolmogorov-smirnof method, it found that all of the data showed normally distributed. The data showed skewness values less than 1.0 , then it could be said to be normally distributed data. Table 2 below gives an overview of descriptive data in the experimental group. The pretest mean of stress response variables is 36.9 (SD= 8.6), while the posttest mean of stress response is 29.6 (SD=7.4). The pretest mean of systolic blood pressure is 131.2 (SD=23.6). Whereas the posttest mean of systolic is 120.5 (SD=19.9). The pretest mean of diastolic blood pressure is 86.1 (SD=20.9). While the posttest mean of diastolic is 76.3 (SD=14.4). Finally, the pretest mean of heart pulse is 84.7 (SD= 9.8). While the posttest mean of heart pulse is 78.9 (SD=11.5).

Table 2

Experiment group's descriptive Data

Variable	N	SD Pre-test	SD Post-test	Mean Pre-test	Mean Post-test	Kolmogorov-Smirnoff
Stress response	25	8.6	7.4	36.9	29.6	Normal
Systolic blood pressure	25	23.6	19.9	131.2	120.5	Normal
Diastolic blood pressure	25	20.9	14.4	86.1	76.3	Normal
Heart pulse	25	9.8	11.5	84.7	78.9	Normal

The paired sample t-test analysis showed that there is a significant differences between pretest-posttest mean score of the systolic blood pressure in the experiment group ($t = 4.4$, $p < .001$). Further analysis with a diastolic blood pressure variables used paired sample t-test showed that there is a significant differences between pretest-posttest mean scores in the experiment group ($t= 3.3$, $p < .05$). Then the results of the analysis used paired sample t-test for heart pulse variable showed that there is a significant differences between pretest-posttest mean score in the experimental group ($t= 5.4$, $p < .001$). Last, the result of paired sample t-test on job stress response variables showed there is a significant differences between pretest - posttest mean scores in the experiment group ($t= 4.8$, $p < .000$). The completed analysis of paired sample t-test can be seen in Table 3 below.

Table 3

The paired sample t-test of experiment group

Variable	N	SD	t	df	p
Stress Response	24	7.6	4.8	24	.000
Systolic Blood pressure	24	12.1	4.4	24	.000
Diastolic blood pressure	24	14.9	3.3	24	.003
Heart pulse	24	5.4	5.4	24	.000

Similar analysis was performed on the control group data. The control group data showed normal distributed according to Kolmogorov-Smirnov analysis. On the pretest mean score of stress response variables is 34.1

(SD=8.2), while the posttest mean score is 34.5 (SD=9). The pretest mean score of systolic blood pressure variables is 129 (SD=20.6), whereas the posttest mean score is 128.6 (SD=20.6). The pretest mean score of diastolic pressure is 82.7 (SD=16.7), while the posttest mean is 81.3 (SD=17.8). The pretest mean score of heart pulse is 83.7 (SD=10.8), while the posttest mean score is 83.8 (SD= 10.9). The completed analysis of the all mean score of variables can be seen in Table 4 below.

Table 4*The control group descriptive data*

Variables	N	SD Pre-test	SD Post-test	Mean Pre-test	Mean Post-test	Kolmogorov-Smirnoff
Stress response	24	8.7	8.9	37.1	37.9	Normal
Systolic pressure	24	18	17.9	128.9	132.6	Normal
Diastolic pressure	24	19.1	19.1	84.4	85.2	Normal
Heart pulse	24	12.5	12.8	82	82.3	Normal

Analysis conducted by testing differences on the pretest and posttest mean scores in the control group subject by paired samples t-test. The physiological variables that are analyzed included systolic blood pressure, diastolic blood pressure, and heart rate pulse. The stress response was also analyzed using similar analyses. The result showed that there is no significant differences between the pretest-posttest mean scores on systolic blood pressure ($t = 14.04, p > .05$), on diastolic blood pressure variables ($t = .471, p > .05$), also on heart rate pulse ($t = 1.2, p > .05$). Last analysis on stress response variables also showed there is no significant differences between the mean score of the pretest- posttest ($t = .978, p > .05$). The result of analysis can be seen in Table 5 below.

Table 5*The result of paired sample t-test of control group*

Variables	N	SD	t	df	p
Stress response	24	3.9	-.978	23	.338
Systolic blood	24	11.1	-1.4	23	.174
Diastolic blood	24	7.8	-.471	23	.642
Heart pulse	24	1.1	-1.2	23	.245

Final analysis was then undertaken to see if there are differences in physiological changes and stress responses between experimental groups with the control group. Independent sample t-test score gains through used to test differences in relaxation breathing imagery indigenous donation to changes in physiological and stress responses in the experimental and control groups. The analysis showed that significant differences between the experimental group with a control group of systolic blood pressure seen with $t (47) = 4.2, p = .000$, diastolic blood pressure $t (47) = 3.1, p = .003$, with a heart rate $t (26.4) = 5.5, p = .000$, and the stress response with $t (36.4) = 4.7, p = .000$. Full results can be seen in Table 5 below. Analysis of the effect size then performed, and obtained the degree of influence of relaxation breathing imagery indigenous module to the decrease in systolic blood pressure of = 0.271. While the magnitude of the diastolic blood pressure of = 0.168, then the effect on the reduction of heart rate = 0.386, and a decrease in the stress response at = 0.318. The results according to Cohen (1988) show the extent of the practical significance of the research. This is indicated by a score of d greater than or equal to the width of $> .20$. It can be concluded that the indigenous imagery relaxation breathing through Javanese gamelan music can reduce stress and physiological effects caused by psychological stress response special teacher. The full results of the analysis of independent sample t-test can be seen in Table 5 below.

Table 6*The result of independent sample t-test*

Variables	<i>N</i>	<i>t</i>	<i>df</i>	<i>p</i>
Stress response	49	4.7	47	.000
Systolic blood	49	4.1	47	.000
Diastolic blood	49	3.1	47	.003
Heart rate pulse	49	5.5	47	.000

3.2 Discussion

How the explanation for the contribution of indigenous imagery relaxation breathing to changes in physiological stress among teachers at special needs school? Relaxation is a technique or method in the behavioral therapy that can be used to relax the muscles tense when individuals experience anxiety. By learning to identify and relaxes tense muscles in the body, then the anxiety can be controlled. Individuals who do relaxation exercises regularly can acquire the skills to suppress anxiety (Ritz, 2001; Erskine-Milliss, & Schonell, 1981; Lichstein et al., 1999; Muhana, 2002). Several studies have shown that the relaxation was effective in reducing tension, and also effective for reducing public speaking anxiety (Muhana, 2002).

Relaxation training gives the body and mind a chance to do its own healing. Body and mind can heal itself if given a relaxed condition. Relaxation training can help restore harmony and help create the optimal conditions for life. Relaxation is also able to eliminate the physical and mental strain (Davis, Eshelman, & McKay, 1995). Some people require assistance and training to understand how to release physical and mental tension ease, as well as children in desperate need of relaxation exercises. Relaxation training is also effective for reducing the symptoms of muscle tension, unobtrusive and gentle and can help treat arthritis, asthma, anxiety, depression, and high blood pressure, mental and physical stress caused by stress and tension (Benson, & Proctor, 2000).

Relaxation can also be achieved through music. Music is an expressive training which is also known as one of the five creative arts training (others include arts training, dance, writing workshops, and psychodrama). Music can be used alone or can be combined with other creative arts training. Musical training to use technology tone of relaxation, promotes healing, and improves mental function (releasing anxiety, stress, and depression), thus achieved the overall sense of psychological well-being (Baddour, 2008).

Physiologically, music can affect blood pressure, heart rate, and respiration. Music also can decrease the hormone cortisol which is a stress hormone. Studies show that music can lower the amount of cortisol, adrenaline and noradrenalin in the body. In addition, music is also able to facilitate endorphins into the bloodstream. These endorphins can create positive emotions and physical health (Baddour, 2008). So it can be concluded relaxation breathing through gamelan music to create a relaxed state of the body's state of relaxation that will reduce physical and emotional tension. The end result is to reduce the level of stress in children. This is obtained from this study, namely breathing relaxation training through Javanese gamelan music can lower stress levels in grade acceleration.

Davis, Eshelman, and McKay (1995) assert that all types of relaxation can be used to reduce stress reactions, including stress due to work pressure. One type of relaxation breathing relaxation is based on previous research suggests may reduce response to stress both physiologically and psychologically (Prawitasari, 1988; Carlson & Hoyle, 1993; Meuret, Wilhelm, Ritz, & Roth, 2003). In this study Javanese gamelan music used for the achievement facilitate a state of relaxation, which is expected to improve the effectiveness of relaxation breathing imagery indigenous modules are used. Tsiris (2008) argues that the power and beauty of music can lead to self-transformation. The power of music can also create a more positive mood, the memories of the good

old days, so this can be a positive force for positive change source psychologically and physiologically the individual self.

Previous research also confirms that breathing for relaxation, listening and enjoying music can enhance the state of relaxation. Music can affect the body and mind of the individual, because the music can modify brain waves, blood pressure, heart rhythm, and increased heart rate variability (Trappe, 2012). When people listen to music, the brain waves become slower; this condition will improve the state of relaxation, and will reduce the stress response (Hodges, 1999; Trappe, 2012). Previous investigations also confirmed that listening to music has an influence on the body and psychic individuals such as improving concentration, reducing stress response, creating a state of relaxation, reduce cortisol and testosterone, facilitate neurogenesis, as well as repair and regenerate neurons (Fukui, Arai, & Toyoshima, 2012; Fukui, 2001; Fukui & Yamashita, 2003; Fukui, & Toyoshima, 2008; Khalfa, Dalla Bella, Roy, Peretz, & Lupien, 2003). In addition it also serves as entertainment music and creating more positive emotions (Ashwani & Milind, 2011).

Relaxation training combined with listening to music gave body and mind an opportunity to fulfil the self-healing process. Relaxation condition would make the body and mind in stable condition. Relaxation training restores harmony, besides it would help the body and mind creating an optimal condition for life to growth positively (Trappe, 2012). Relaxation could get rid of physical and mental strain, and change it to calm and loose condition. Several persons need assistance and training to understand how to release and calm down physical and mental strains. Including teacher's profession, they need training to create and establish relaxation conditions during stressful days.

This study confirms previous studies that found significant effects of music on reducing stress, anxiety, and improving metabolic and health condition (Fukui, Arai, & Toyoshima, 2012; Ashwani & Milind, 2011; Khalfa et al., 2003; Warnock, 2012). For an example, study by Chang, Chung, Chung, and Lee (2004) found a significant decrease on depression score, blood pressure, and heart rate after undergoing one month music therapy. This study found that breathing-relaxation through listening to Javanese Gamelan music was able to create a relaxed body condition, and this relaxed condition then decreased physical and emotional strains. Nevertheless, the result should be accepted with caution, because the present study does not examine the effect of breathing relaxation, and listening to music separately. The present study mixed breathing-relaxation by listen to Javanese gamelan music together as one technique to reduce job stress responses, and it would be difficult to take conclusion which factor contributed to reduce job stress responses in subject.

4. Conclusion

Breathing is an essential part of human life. Through breathing person inhales the oxygen that has an important role in maintaining the metabolism system of the human body. The appropriate breathing technique will create a specific positive condition like relaxation, calmness and looseness. If a person wants to get more energy, then he/she must make inhalation longer than exhalation. If relaxation condition is needed, then a person must make exhalation longer than inhalation. Based on the result of this study, indigenous imagery breathing relaxation technique by listening to Javanese Gamelan music significantly made teachers as experiment subject able to manage their stressful conditions in the work setting and they were able to restore their body and mind to become a stable state. The limitation of present study is the effect of music, imagery, and breathing relaxation do not exclusively separated in analysis. This condition make a precise conclusion about the effect of three interventions above quit difficult to confirm. The future work needs to explore this effect by using factorial design that separated all three types of interventions above.

Acknowledgement: The present study was granted by Directorate General Higher Education of Ministry of Education and Culture of Indonesia Government with grant number 1141.5/K.5/KL/2013.

5. References

- Antoniou, A-S., Polychroni, F., & Kotroni, C. (2009). Working with students with special educational needs in Greece: Teachers' stressors and coping strategies *International Journal of Special Education*, 24(1), 100-111.
- Ashwani, A., & Milind, P. (2011). Harmonizing effect of music on the patients suffering from anxiety. *International Journal of Research in Ayurveda and Pharmacy*, 2(2), 484-490.
- Baddour, E. (2008). *Alternative relaxation therapy*. Retrieved from <http://www.permanente.net/homepage/kaiser/pdf/40590.pdf>. 1
- Bartlett, D. L. (2005). Physiological response to music and sound stimuli. In D. A. Hodges (Ed.), *Handbook of music psychology* (2nd ed., pp. 123-145). USA: The University of Texas at San Antonio.
- Campbell, M. (2000). *Effectivity of music for therapy*. Boston: McGraw-Hill Irwin.
- Carlson, C. R. & Hoyle, R. H. (1993). Efficacy of abbreviated progressive muscle relaxation training: A quantitative review of behavioral medicine research. *Journal of Consulting and Clinical Psychology*, 6, 1059-1067. <http://dx.doi.org/10.1037/0022-006X.61.6.1059>
- Cox, T., Mackay, C. J., Cox, S., Watts, C., & Brockley, T. (2000). *Stress and wellbeing in school teachers. Psychological response to occupational stress*. Conference conducted at the meeting of the Ergonomics Society, University of Nottingham.
- Crampton, S. M., Hodge, J. W., & Mishra, J. M. (1995). Stress and stress management. *Journal of Advance Management*, 60(3), 10-24.
- Davis, M., Eshelman, E. R., & McKay, M. (2005). *The guide of relaxation and stress reduction*. Jakarta: EGC publication.
- DeNora, T. (2004). *Music in everyday life*. UK: Cambridge University Press.
- Dorman, J. (2003). Testing a model for teacher burnout. *Australian Journal of Educational & Developmental Psychology*, 3, 35-47
- Edwards, S. E. (2008). Breath psychology: Fundamentals and applications. *Psychology Developing Societies*, 20(2), 131-164. <http://dx.doi.org/10.1177/097133360802000201>
- Fisher, A. B. (1992, November 30). *Welcome to the age of overwork*. Fortune, pp. 64-67.
- Fukui, H., & Toyoshima, K. (2008). Music facilitates the neurogenesis, regeneration and repair of neurons. *Medical Hypothesis*, 71(5), 765-769. <http://dx.doi.org/10.1016/j.mehy.2008.06.019>
- Fukui, H., & Yamashita, M. (2003). The effect of music, and visual stress on testosterone and cortisol in men and women. *Neuroendocrinology Letters*, 24, (3-4), 173-180.
- Fukui, H., (2001), Music and testosterone: A new hypothesis for the origin and function of music. *Annals of the New York Academy of Sciences*, 930, 448-451. <http://dx.doi.org/10.1111/j.1749-6632.2001.tb05767.x>
- Fukui, H., Arai, A., & Toyoshima, K. (2012). Efficacy of music therapy in treatment for the patients with Alzheimer's disease. *International Journal of Alzheimer's disease*, 7, 1-6. <http://dx.doi.org/10.1155/2012/531646>
- Hodges, D. A. (1999). Neuromusical research: A review of the literature. In D. A. Hodges (Ed), *Handbook of music psychology* (2nd ed., pp. 197-284) USA: The University of Texas at San Antonio.
- Jing, L. (2008). Faculty's job stress and performance in the undergraduate education assessment in China: A mixed-methods study. *Educational Research and Review*, 3(9), 294-300.
- Jones, F., Kinman, G., & Payne, C. (2006). Work stress and health behaviors: A work-life balance issue. In F. Jones., R. J. Burke., & M. Westman (Eds). *Work-life balance: A psychological perspective*. (pp 145-171). New York: Sage Publication.
- Khalfa, S., Dalla Bella, S., Roy, M., Peretz, I., & Lupien, S. J. (2003). Effects of relaxing music on salivary cortisol level after psychological stress. *Annals of the New York Academy of Sciences*, 999, 374-376. <http://dx.doi.org/10.1196/annals.1284.045>
- Kim, J., Sorhaindo, B., & Garman, T. (2006). Relationship between financial stress and workplace absenteeism of credit counseling clients. *Journal Family Economic Issue*, 27, 458-478. <http://dx.doi.org/10.1007/s10834-006-9024-9>

- Kyriacou, C. (2001). Teacher stress: Directions for future research. *Educational Review*, 53(1), 27–35. <http://dx.doi.org/10.1080/00131910120033628>
- Loehr, J. E., & Migden, J. A. (1999). *Breathe in, breathe out*. Alexandria, Virginia: True Life Books.
- Mc Kinney, S. (2000). *Music therapy*. Retrieved from <http://www.geocities.com/sergiy.mtherapy>
- Meuret, A. E., Wilhelm, F. H., Ritz, T., & Roth, W. T. (2003). Breathing training for treating panic disorder: Useful intervention or impediment. *Behavior Modification*, 27(5), 731-742. <http://dx.doi.org/10.1177/0145445503256324>
- Natalia, J. (2006). *Influences of gamelan music toward positive emotional newborn*. Paper presented at The National Conference IPPI V: Implementation of local wisdom value for family problem intervention. Malang, Indonesia.
- Nelson, J. R., Maculan, A., Roberts, M. L. & Ohlund, B. (2001). Sources of occupational stress for teachers of students with emotional and behavioral disorders. *Journal of Emotional and Behavioral Disorders*, 9, 123-131. <http://dx.doi.org/10.1177/106342660100900207>
- Phillips, S., Dil Sen, & McNamee, R. (2007). Prevalence and causes of self-reported work-related stress in head teachers. *Occupational Medicine*, 57, 367–376. <http://dx.doi.org/10.1093/occmed/kqm055>
- Pratt, J. W. (2003) Perceived stress among teachers: An examination of some individual and environmental factors and their relationship to reported stress. *Unpublished Masteral thesis*, University of Sheffield.
- Prawitasari, J. E. (1988). Effectivity of relaxation for physical strain: An experimental study. *Research Report*. Yogyakarta: Gadjah Mada University, Indonesia.
- Rice, L. P. (2005). *Stress and health*. California: Brooks/Cole Publishing.
- Rickard, J. (2000) *Relaxation for children*. New York: Wiley and sons.
- Ritz, T. (2001). Relaxation therapy in adult asthma: Is there new evidence for its effectiveness? *Behavior Modification*, 25(4), 640-666. <http://dx.doi.org/10.1177/0145445501254009>
- Robbins, S. P. (2003). *Organizational Behavior* (10th ed.). New Jersey: Prentice-Hall, Inc.
- Safaria, T., Othman, A., & Nubli, M. (2010). Religious coping, job insecurity, and job stress among Javanese academic staff: A moderated regression analysis. *International Journal of Psychological Studies*, 2(2), 159-169. <http://dx.doi.org/10.5539/ijps.v2n2p159>
- Safaria, T., Othman, A., & Nubli, M. (2011). The role of leadership practices on job stress among Malay academic staff: A structural equation modeling analysis. *International Education Studies*, 4(1), 90-100. <http://dx.doi.org/10.5539/ies.v4n1p90>
- Schnall, M. (1998). A brief introduction to music therapy. *Annual Review of Public Health*, 15, 381-411. <http://dx.doi.org/10.1146/annurev.pu.15.050194.002121>
- Sharma, M., Rajnee, & Mathur, K. C. (2011). Effects of music therapy on clinical and biochemical parameters of metabolic syndrome. *Journal Bangladesh Social Physiology*, 6(2), 108-115.
- Spangenberg, J. J., & Theron, J. C. (2007) Stress and coping strategies in spouses of depressed patients. *The Journal of Psychology: Interdisciplinary and Applied*, 133(3), 253-262. <http://dx.doi.org/10.1080/00223989909599738>
- Steyn, G. M., & Kamper, G. D. (2006) Understanding occupational stress among educators: an overview. *Africa Education Review*, 3(1), 113-133. <http://dx.doi.org/10.1080/18146620608540446>
- Suryanto. (2006). *Macapat Song (Javanese Song) as a stimulator for developing child emotional sensitivity*. Paper presented at The National Conference IPPI V: Implementation of local wisdom value for family problem intervention. Malang, Indonesia.
- Trappe, H. J. (2012). Music and medicine: The effect of music on the human being. *Applied Cardiopulmonary Pathophysiology*, 16, 133-142.
- Trendall, C. (1989) Stress in teaching and teacher effectiveness: A study of teachers across mainstream and special education. *Educational Research*, 31(1), 52–58. <http://dx.doi.org/10.1080/0013188890310106>
- Tsirir, G. (2008). Aesthetic experience and transformation in music therapy. *Voices: A World Forum for Music Therapy*, 8(3), 57-71.
- Vianna, M. N. S., Barbosa, A. P., Carvalhaes, A. S., & Cunha, A. J. L. A. (2012). Music therapy may increase breastfeeding rates among mothers of premature newborns: a randomized controlled trial. *Voices: A*
-

- World Forum for Music Therapy*, 12(3), 34-54.
- Wahlund, I., & Nerell, G. (2004). *Work environment of white collar workers: work, health, well-being*. Stockholm: Central Organization of Salaried Employees in Sweden (TCO).
- Wang, P., Springen, K., Schmitz, T., & Bruno, M. (2002) A cure for stress? *Newsweek*, October 12, pp. 64-65.
- Warnock, T. (2012). Vocal connections: How voice work in music therapy helped a young girl with severe learning disabilities and autism to engage in her learning. *Approaches: Music therapy & Special Music Education*, 4(2), 85-92.
- Williams, M. & Gersch, I. (2004). Teaching in mainstream and special schools: are the stresses similar or different? *British Journal of Special Education*, 31(3), 157-162.
<http://dx.doi.org/10.1111/j.0952-3383.2004.00347.x>
- Wulandari, P. Y. (2006). *Exploration of Indonesia traditional music in relaxation sesión for pregnancy exercise*. Paper presented at The National Conference IPPI V Implementation of local wisdom value for family problem intervention. Malang, Indonesia.

