Spirotif Relaxation Improve Anxiety and Sleep Quality in Elderly

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Abstract: Elderly is the age group with the highest anxiety level. Anxiety will interfere with sleep patterns so that sleep quality decreases. Spirotif Relaxation is an activity that combines physical and spiritual aspect by modifying the Progressive Muscle Relaxation and Spiritual Relaxation (Dhikr) that can cause tranquility and physical fitness. This study was to explain the effect of Spirotif Relaxation on the anxiety level and sleep quality in elderly with Kocaba Comfort Theory approach. The study was using a quasi-experimental design with two group pre-post test design. The population was elderly with anxiety and decreased sleep quality following the elderly Posyandu in Pucangro Village with a total sample of 44 elderly, consisted of 22 elderly for intervention group and 22 elderly for the control group. The independent variable was Spirotif Relaxation. The dependent variable were the anxiety level and sleep quality. Instruments were GAI (Geriatric Anxiety Inventory) and PSQI (Pitsburgh Sleep Quality Index). Results showed that there were significant differences in anxiety level (p = 0.001) and sleep quality (p = 0.043). Spirotif Relaxation can increase comfort. As a result the value of anxiety decreases and sleep quality increases. Future study may use manual tasbih for dhikr increasing elderly comfort.

1 BACKGROUND

Elderly is the age group with the highest anxiety rate. Situations that may cause anxiety in the elderly include retirement, physical impairment, death of a loved one and loss of economic security (Perry & Potter, 2005). Anxiety experienced by the elderly who can not be overcome will disrupt the elderly sleep patterns that leads to decreased quality of elderly sleep (Rianjani et al., 2011).

The incidence of elderly anxiety in Indonesia is about 39 million people out of 238 million people (WHO, 2012). Sleep disturbance in elderly in Indonesia about 49% or 9,3 million elderly (DinKes Jatim, 2008). In Rianjani et al. (2011) mentions that there are 50% of elderly of 115 elderly who suffer from sleep disorders are caused by anxiety factors. Gistningsih study (2011) mentioned that from 43 elderly who had moderate anxiety with insomnia as many as 5 elderly (12%) and mild anxiety with insomnia as many as 17 elderly (39%). In the study Rosmawati (2011) of 36 elderly as many as 26 (78.8%) elderly have anxious with the incidence of insomnia. Based on preliminary study results using questionnaires with 10 elderly people in Elderly Posyandu Dusun Berjel Pucangro Village, which is the work area of Blimbing Gudo Public Health Center on December 5, 2017, showed that from 10 elderly people 60% (6 people) experienced anxiety and decreased sleep quality.

Management of anxiety and sleep quality problems can be divided into pharmacologically and non-pharmacologically. One of the non-pharmacological management in improving anxiety and quality of elderly sleep is by performing progressive muscle relaxation techniques and dhikr. Spirotif Relaxation is the activity of combining and modifying the progressive muscle relaxation and spiritual relaxation (dhikr) interventions. How to do this relaxation by saying dhikr then followed by relaxing tense muscles, with the aim of obtaining His mercy in the form of peace, tranquility, and happiness, as well as physical health and fitness.

Progressive muscle relaxation exercises significantly reduce insomnia and improve sleep quality in the elderly (Jayarathe & Zoysa, 2016). Relaxation is also effective for reducing anxiety in men or women, young people or the elderly (Ranjita & Sarada, 2014). In the study of Lorent et al. (2016) explains that progressive muscle relaxation
significantly reduces tension, anxiety, and anger, but does not improve mood.

Spiritual Relaxation (Dhikr) is a deed in the form of Asma Allah containing requests to Allah Almighty by always remembering His name accompanied by resignation (Yusuf et al., 2008). Medically it is also known that people who are accustomed to dhikr remember Allah automatically the brain will respond to the expenditure of endorphine that can cause a feeling of happiness and comfortable (Patimah et al., 2015). In the study of Joseph et al., (2008) found a change of psychological well-being in treatment group before and after religious relaxation intervention; dhikr.

Relaxation Spirotif can stimulate the Pituitary gland to increase Production of β-Endorphin, Enkefalin and Serotonin which ultimately can increase comfort on the client. This comfortable and relaxed feeling can cause anxiety to decline. The presence of endorphins and enkefalin also helps in influencing the atmosphere to relax so it is easy to start sleeping and the increasing amount of enkefalin and serotonin that can cause sleep and relaxation (Smeltzer & Bare, 2010). This will lead to improved sleep quality.

2 METHODS

This research was used quasi-experiment pre and post test with control group design. Total of samples in this study were 44 people with the inclusion criteria 1) Aged 60-80 years old, 2) Minimum level of primary school education, 3) Did not experience cognitive impairment (MMSE value >23) while an exclusion criteria in this study was: 1) Elderly with limited range of motion, 2) Elderly undergoing treatment bed rest. This study was used nonprobability sampling technique type of purposive sampling. The independent variables in this study was Spirotif Relaxation while the dependent variable in this study were the anxiety level and sleep quality.

This study took place at the Pucangro Village on 25th January - 21th February 2018. The instrument used are GAI (Geriatric Anxiety Inventory) and PSQI (Pittsburgh Sleep Quality Index) to measure anxiety level and sleep quality which were given at pre and post test in both groups. Data were analyzed using Wilcoxon signed ranks test and Mann-Whitney test. The first analysis was Wilcoxon signed ranks test if p value ≤ 0.05 then H1 accepted, which means that Spirotif Relaxation affecting anxiety level and sleep quality. The second test was Mann-Whitney test to analyze the differences in the value of anxiety level and sleep quality post intervention in both groups. This study has passed the ethical test in Nursing Faculty of Airlangga University.

3 RESULTS

Effect of Spirotif Relaxation in anxiety level and sleep quality value can be seen in the results of Wilcoxon signed ranks test between pre and post intervention measurements that is 0.000 and 0.000. P value <0.05 means that H1 accepted, which means there was significant difference between Spirotif Relaxation in anxiety level and sleep quality value. In anxiety control group showed p value = 0.002, there was significant difference in anxiety values, but in sleep quality control group showed p value = 0.520 (p value >0.05), it mean no significant difference in sleep quality values. Table 1 shows the results of statistical analysis tests (post intervention value) of anxiety level and sleep quality value. In intervention group showed p value = 0.001 and 0.043. The value of < 0.05 means that there was effect of Spirotif Relaxation in anxiety level and sleep quality.

4 DISCUSSION

4.1 Effect Of Spirotif Relaxation In Anxiety Level

Anxiety level decrease in elderly can be seen from result of statistical analysis by using Wilcoxon Signed Ranks Test obtained P value = 0.000, meaning there is influence of spirotif relaxation therapy to change of anxiety level in elderly.

Anxiety in the elderly has the same symptoms as the symptoms experienced by everyone, only according to Maryam et al. (2008) objects that cause
anxiety is different. Physical changes that cause anxiety include things like, hearing loss, vision ability, hunchback body, wrinkled skin, and gray hair. Psychological changes that cause anxiety in the elderly, among others, feelings of frustration feel useless, loss and loneliness that the elderly tend to be alone.

Someone who is experiencing anxiety, tend to experience a change of perception and have negative thoughts related problems facing him. If a person always thinks negatively then there are some impacts such as: declining health status, decreasing adaptation function of a person to environmental change, pessimistic attitude towards the future and depression tendency and decreasing quality of life (Park, et al., 2013). Besides negative thoughts will stimulate the brain of the prefrontal cortex to try to focus on the problems that are facing, so that someone will be more negative thoughts again to the problems experienced (Bherking & Whitley, 2008).

When someone feels anxious then the body system will work by increasing sympathetic nervous work in response to stress. The sympathetic nervous system works through the activation of the adrenal medulla to increase the release of epinephrine, norepinephrine, cortisol and decrease nitric oxide. This situation will cause changes in body response such as increased heart rate, breathing, blood pressure, blood flow to various organs increased as well as increased metabolism. To inhibit sympathetic nerve work can be done by increasing the activation of parasympathetic nerve work to generate a relaxation response.

The relaxation response induced by the parasympathetic nerves works by stimulating the adrenal medulla to decrease the release of epinephrine, norepinephrine, cortisol and increase nitric oxide. This situation will cause changes in body response such as decreased pulse rate, blood pressure, oxygen consumption, body metabolism, lactate production and a person feeling comfortable (Benson, 2000; Park, et al., 2013). If the physical condition of the body has been relaxed, then his psychic condition also feel a sense of calm (Yamamoto & Nagata, 2011). One technique for improving parasympathetic work is by relaxation techniques (Benson, 2000). Spirotif relaxation techniques can generate a relaxation response that can reduce anxiety.

4.2 Effect Of Spirotif Relaxation In Sleep Quality

Decrease of sleep quality in elderly can be seen from result of statistical analysis by using Wilcoxon Signed Ranks Test test obtained P value = 0.000, meaning there is influence of spirotif relaxation therapy to change of sleep quality of elderly in Pucangro Village. The presence of significant changes indicates that spirotiform relaxation therapy has an impact on the elderly who experience a decrease in sleep quality.

Sleep quality measurements based on the Pittsburgh Sleep Quality Index (PSQI) instrument, of the seven components are the three most dominant causes of sleep disturbances, namely sleep latency, sleep duration, and sleep efficiency. Sleep latency describes the time it takes to start sleep as measured by the time it takes to start sleeping as well as the frequency of sleeping in 30 minutes. In this study, the duration of the shortest sleep duration is 20 minutes and the longest duration is 60 minutes with an average duration of 40 minutes. Frequency can not sleep in 30 minutes generally more than 3 times per week. This situation indicates the elderly have difficulty starting to sleep .. This is in accordance with research Eshelman (2008) found more than 50% of elderly have trouble sleeping at night. Sleep duration depicts the length of bedtime. The elderly generally experience shortening of sleep duration and some are unable to achieve deep sleep (IV sleep stage and REM sleep). Though deep sleep is very useful to restore body function and maintain fitness. Sleep efficiency by comparing the amount of sleep time to the length of time in bed. Difficulty getting started, the inability to maintain sleepiness, and often awakening is a contributing factor to decreased sleep efficiency. This is in accordance with the Zarcone, Falke & Anlar (2010) study which identified 66.19% of elderly people with less than 50% of sleep efficiency. Along with the aging process that occurs in the elderly, the efficiency of sleep will be reduced so as not achieved adequate sleep quality. Indeed, a decrease in the number of hours of sleep is not a problem if the elderly feel good sleep quality, because the quality of good sleep will be able to restore body functions.

In general, sleep disorders that cause sleep quality elderly decline occur due to physical, psychological and environmental factors. Physical factors such as the presence of certain diseases suffered cause elderly can not sleep well. It is also a lot of experienced elderly in the village of Pucangro. Psychological factors such as anxiety, stress, fear,
and emotional tension are also often experienced by the elderly. The environment can be a support factor as well as a barrier to sleep. Including environmental factors such as lighting, room temperature, ventilation, and noise. The respondents of the treatment group showed improvement of sleep quality after Spirotif Relaxation practice, while in the control group there was no significant change. The trend of improving the sleep quality of the treatment group was seen from the increase in the frequency of the elderly with good sleep quality and decreased mean score of PSQI. This suggests that spirulation relaxation exercises have a positive impact on improving the quality of elderly sleep. Sprotif relaxation exercises are effective enough to shorten sleep latency, prolong sleep duration, improve sleep efficiency, reduce sleep disturbance, and reduce daytime activity disruption, resulting in improved satisfaction with sleep quality. Similar results were obtained in the study of Saeedi et al. (2012), that progressive muscle relaxation is able to reduce the cause of sleep disorders so that sleep quality increases. Conrad & Roth (2007) explains that progressive muscle relaxation techniques are able to control the activity of the autonomic nervous system and the activation of the suprasciasmatic nucleus, making it easier to start and maintain deep sleep.

Through spirotif relaxation exercises the elderly are trained to present a relaxation response so as to achieve a calm and conducive state to fall asleep. Perry & Potter (2005) states that a person will fall asleep only when they are comfortable and relaxed. Smith (2005) explains that relaxed conditions can decrease the production of cortisol in the blood, regulating adequate hormone release so as to provide emotional balance and peace of mind. Relaxed muscles will make systemic blood flow smooth, the pulse becomes normal, the frequency of breathing becomes normal, and reduce the evaporation so that the client becomes comfortable and the mind becomes calm as a result of decreased activity of Reticular Activating System (RAS) and increased brain stem activity (Joshi, 2008; Yang et al., 2012). Saeedi et al. (2007) explains that the relaxation effect is capable of improving parasympathetic neural work so that the work of the heart is reduced and the supply of oxygen is fulfilled. Someone who does spirotif relaxation exercises will show a decline levels of norepinephrine, decreased cardiac contractility, and stimulates the suprachiasmatic nucleus to create a comfortable sensation that stimulates drowsiness.

5 CONCLUSIONS

Spirotif relaxation have proven beneficial for improving the sleep quality of elderly and lower anxiety levels.

REFERENCES


