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The Effect of Lofi Music on Students' Sleep Quality

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ABSTRACT

Music therapy provides a significant deep relaxing effect, thereby improving sleep quality, the lack of individual sleep quality affects the formation of protein synthesis that has a role to renew damaged cells in the body. This study aims to determine whether musilk lofi can affect the sleep quality of UIN Raden Fatah Palembang students. The research method used was quantitative-experimental with *one group pretest-posttest design* by treating 15 student subjects. The analysis used was with the Wilcoxon Test which obtained Negative Rank results, which decreased with a hypothetical value of 0.001 (<0.005) which means that Lofi music can affect sleep quality in UIN Raden Fatah Palembang students.

Introduction

Every human being has demands in meeting a basic need that aims to be able to carry out the continuity of benefits to maintain his life and be able to stabilize the health of each individual. Sleep is one aspect of basic needs that must be met by every human being. The reason, sleep is a natural physiological state possessed by the human body in the form of decreased consciousness and response to body stimuli owned by every human being (Carley & Farabi, 2016).

The need for sleep needed by each individual varies greatly depending on the habits often done, the work done, health conditions, and also depends on the age category. Lumkatombing (2004, in Wicaksono, 2012) Explained that, referring to the age category, good sleep quality in adult individuals requires about 6-9 hours of sleep, while for good sleep quality in elderly individuals requires about 5-8 hours of sleep. According to (Wicaksono, 2012), the lack of time and quality of individual sleep affects the formation of protein synthesis that has a role to renew damaged cells in the body.

The fulfillment of sleep quality experienced by each individual has inequalities. Individuals can have quality sleep or not have quality sleep, which is caused by several factors. According to Asmadi (2008), poor quality sleep can be caused by factors that include: a) health conditions that are being experienced by each individual, b) environmental factors (cleanliness, room temperature, noise), c) feelings of anxiety that can increase the

hormone norepinephrine, d) consumption of drinks containing caffeine and alcohol, and e) excessive fatigue.

There are various forms of countermeasures to improve the quality of sleep of each individual, Referring to the results of several previous clinical studies, the use of music can affect aspects of emotions owned by individuals so that individual emotions become more positive. Music therapy is given with the aim of providing an influence for the emergence of positive emotions of individuals, which can provide calm and reduce symptoms of stress (De Witte et al., 2020; Rahayu, 2016).

Other theories of Djohan (2006) states that music therapy is an attempt that uses music to overcome deficits in physical, emotional, cognitive and social aspects in children and adults with certain diseases or diseases. This music therapy is humanistic.Instruments, clients are also encouraged to communicate, improvise, listen to music or actively play.

Music therapy is a cost-effective, independent and uncomplicated treatment that clients can use to address sleep disorders. Music intervention as a nonpharmacological treatment method is much more beneficial and does not produce long-term effects like pharmacological techniques (Ding et al., 2021). Instead, one of the results of music therapy research for insomnia is research into listening to soothing music before bed. Music therapy provides a significant profound relaxing effect, thereby improving sleep quality, and can be used as an evidence-based nursing intervention for insomnia (Chen et al., 2021).

According to Marwang et al (2020) Listening to music activates limbic system cells involved in emotional behavior and autonomic nerves. The limbic system is activated and the person relaxes. Music with a tempo of 60 beats per minute can activate the left and right hemispheres of the brain. These two hemispheres of the brain prepare the rhythm of music in such a way that it makes a person relax and feel comfortable after listening to music.

Method

This research method is experimental research with a quantitative approach. This experimental research uses *One Group Pretest-Posttest Design* Between subjects, namely testing the effect of the independent variable on the dependent variable by calculating the difference in the score of the dependent variable between groups that received different treatment from participants (Seniati et al., 2017).

This data is collected using analytical tools and analyzed using quantitative or statistical data with the aim of testing predetermined hypotheses. This method is done by providing a *Pittsburgh Sleep Quality Index (PSQI)* sleep quality measurement scale before being given treatment, then given experiments or treatment by listening to lofi music that has been set by researchers, after treatment, given a posttest with a sleep quality measurement scale Back to see the effect of the treatment.

This research used student subjects of the Faculty of Economics and Islamic Business UIN Raden Fatah Palembang and was conducted every night before going to bed for 2 weeks. In this study, the sampling technique was carried out using purposive sampling. The

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subject criteria are 1) Students of the Faculty of Economics & Islamic Business UIN Raden Fatah Palembang, 2) Students who experience poor sleep quality, 3) Willing to be participants. Therefore, 15 students were obtained as subjects to be given experimental treatment. Data collection using google form by deploying sleep quality measurement scale *(PSQI).*Data analysis using Wilcoxon Test using SPSS for Windowns application version 25.

Results and Discussion

This study aims to see whether the technique of listening to lofi music can improve the quality of sleep of UIN Raden Fatah Palembang students. This study was conducted on 15 subjects who were all individuals with poor sleep quality.

Researchers gave a pretest of sleep quality scales to draw data to see the effect of improving the quality of sleep subjects. Then given treatment in the form of listening to lofi music on the night before going to bed every day for a period of 2 weeks, after walking for 2 weeks, researchers gave a posttest by giving the *Pittsburgh Sleep Quality Index (PSQI)* sleep quality scale to see if there was an effect of the treatment on the subjects. Researchers then conducted an analysis and obtained the following results.

First, researchers looking at the reliability of the sleep quality measurement tool, namely Alpha Chorbach Value, suggested that the reliability value of the measuring instrument used was 0.913 where the significant value was >0.70.

Then the researchers analyzed the normality test using Shapiro Wilk where the test was carried out to determine the distribution of random data of a small sample used data simulation of no more than 50 samples. (Sugiyono, 2016). Shapiro Wilk's normality test is presented in the following table

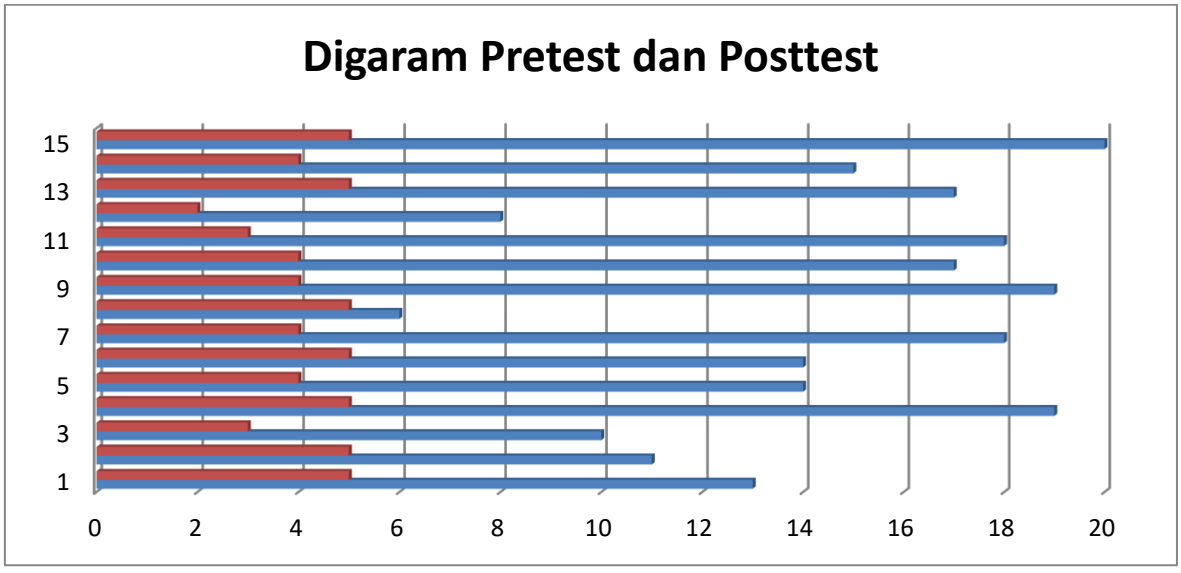
Shapiro Wilk	Statistics	Df	Significant
Pretest	0,930	15	0,273
Posttest	0,805	15	0,004

It can be concluded from the results of the normality test above, the data is normally distributed where the data is considered normal if the significance value is >0.005. In the data above, the significant value on the pretest is 0.273 (>0.005) and the posttest value is 0.004 (.0.005) which means that the data is normally distributed.

After the reliable measuring instrument and data are normally distributed, the researcher conducts the Wilcoxon test to see if there is an effect of the pretest and posttest that have been filled in by the subject, the researcher also wants to see the comparison of the pretest and posttest. Wilcoxon's test results can be seen from the following table.

		N	Mean Rank	Sums Of Rank
Posttest-Pretest	Negative Ranks	15	8.00	12.00
	Positive Ranks	0	.00	.00
	Ties	0		
	Total	15		

Based on the table above, it can be concluded that from the results of the Wilcoxon Test pretest to posttest is Negative Ranks or decreases, therefore subjects who initially experience poor sleep quality, after applying the therapy technique of listening to lofi music before going to bed the subject experienced an improvement in the quality of sleep evidenced by the posttest results of each subject. Obtained the results of the hypothesis test conducted by Wilcoxon Test, there is a significance value of 0.001 (<0.005) which means there is an effect of listening to lofi music before bed to improve sleep quality in students, therefore the hypothesis is accepted. The results of the comparison between the pretest and posttest subjects can be seen in the following bar chart.



Based on the bar chart presented, it can be seen that social media addiction in students of the Faculty of Economics and Business UIN Raden Fatah Palembang in experiments before being given treatment (pretest) was in the high category, but after being given treatment (posttest) in the form of listening to lofi music before going to bed there was an increase. Which means this technique is able to improve sleep quality in these students.

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Music is a harmonious air vibration received by the body's nerves through the body's nerves and channeled through the central nervous system, which affects the person listening to it thus affecting the individual's emotional regulation (Liu et al., 2019; Prabasari, 2016). This music therapy uses music media with the aim of improving / improving a person's physical, cognitive and social condition. Sleep quality is influenced by several factors, namely environmental factors, health status, lifestyle, diet, and academic stress. The environment where students live affects sleep, the higher the level of commotion in the environment, the more difficult it is for students to sleep and students are interested in gathering or doing games until late at night (Foulkes et al., 2019).

Everyone has different countermeasures to improve the quality of sleep. Based on the results of several previous clinical studies, the use of music can affect a person's emotional aspects so that one's feelings become more positive. Music therapy is given with the aim of influencing the development of positive emotions in a person, which can calm and reduce symptoms of stress (De Witte et al., 2020; Rahayu, 2016).

According to Cervellini fan Livi (2011 in Vinayak et al., 2017) Sleep disturbances are patient-reported side effects that typically cause nighttime sleep disturbances, causing one of the following three problems; insomnia, abnormal sensations during sleep or waking up in the middle of the night, or excessive sleepiness during the day. Given the many factors that affect sleep, including physiological and psychological factors, various psychophysical interventions such as music therapy can be considered in the event of a sleep disorder. According to Wicaksono (2012) Each individual's sleep needs are very different, often depending on habits, work performed, health conditions and also the class of the person. Explaining that by age category, quality sleep in adults needs about 6-9 hours, quality sleep in elderly people still needs about 5-8 hours. According to Wicaksono (2012), lack of sleep time and the quality of one's sleep affect the formation of protein synthesis that plays a role in the recovery of damaged body cells.

Conclusion

Based on the results of the study, it can be concluded that the application of lofi music listening techniques can improve sleep quality in students of the Faculty of Economics and Business UIN Raden Fatah Palembang. This is because music therapy is a cost-effective, independent and uncomplicated treatment that clients can use to overcome sleep disorders. Music intervention as a nonpharmacological treatment method is much more beneficial and does not produce long-term effects like pharmacological techniques.

Researchers feel that there are still many shortcomings in this study. Therefore, the advice that can be given is, first, for students, it is expected to be able to manage healthy and adequate sleep patterns. Second, for further researchers, it is expected to be able to conduct wider research on the subject, and be able to provide application techniques for a longer time.

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