The Influence Of Back Massage On Insomnia Reduction In Elderly At Wisma Asissi Nursing Home In Sukabumi In 2019

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Background: *Back massage has many benefits for the human body system such as reducing muscle pain in the cardiovascular system, improving blood circulation and stimulating blood flow throughout the body, also stimulating cell regeneration– and its effects on the nervous system is that it can reduce the risk of disruption of sleeping quality in elderly people.* ***Method:*** *This study used Quasi-Experimental with "one group of pretest post-test" design. The number of samples taken in carrying out this study was 20 people – who were chosen using the total sampling technique.* ***Results*** *There is an effect of back massage therapy on reducing insomnia in the elderly respondents at Wisma Asisi Nursing Home in Sukabumi, with pretest and post-test of 8.248 with p value of 0.000 (p <0.05).* ***Conclusion:*** *The difference in the categories of insomnia before and after being given back massage therapy at Wisma Asisi Nursing Home in Sukabumi, have sleeping quality average in the pretest of as much as 20.20 and an average in the post-test of as much as 70. This shows that the average value of sleeping quality in the post-test has decreased with the value of difference of 3.2.*

I. Introduction

According to the World Health Organization (WHO) (2013), in Southeast Asia the elderly population is 8% or around 142 million people. In 2010, the number of elderly population increased to 24,000,000 (9.77%) of the total population, and by 2020 it is estimated that the number of elderly population will reach 28,000,000 (11.34%) of the total population. In 2050, it is estimated that the elderly population will increase 3 threefold from the previous year.

Based on data from the Central Statistics Agency (CSA) of West Java in 2017, the projection results of the population in 2010-2035, the number of elderly population in West Java in 2017 amounted to 4.16 million people, while in 2015 the number of elderly population was 3.77 million people. By 2021 the number of elderly population in West Java is estimated at 5. 07 million or around 10.04% of the total population of West Java. This condition shows that West Java has entered an aging population. According to the National Sleep Foundation about 67% of 1,508 elderly in America who aged 60 y.o and over say that they experience sleeping disorders – in addition, as much as 7.3% of elderly population complain about disorders in starting and maintaining sleep or it is often referred to as insomnia. Every year in Indonesia, many elderly people – which are about about 76% – report to have experiencing disturbance in fulfilling their sleeping needs. The number of elderly group who complain of having difficulty in sleeping is as much as 40%, while the number of elderly group who complain of often waking up at night is as much as 30% and the rest complain of other disturbances in fulfilling their sleeping needs (Breus, 2010). There is a very effective and very simple measure in dealing with poor sleep quality for the elderly, which is by doing back massage therapy. (Lanywati, 2014). Back massage has many benefits for the human body system such as reducing muscle pain in the cardiovascular system, improving blood circulation and stimulating blood flow throughout the body, also stimulating cell regeneration– and its effects on the nervous system is that it can reduce the risk of disruption of sleeping quality in elderly people (Kusharyadi and Setyohadi, 2011).
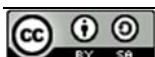
II. METHODS

This study used Quasi-Experimental with "one group of pretest post-test" design. The number of samples taken in carrying out this study was 20 people – who were chosen using the total sampling technique.

III. RESULTS

Table 3.1 Frequency Distribution Based on Respondent Characteristics

Age	Frequency	Percentage%
60-74	15	75
75-90	5	25
Gender		
Female	18	10
Male	2	90

Table 3.1 shows that almost all of the respondents – about 75% (15 people) of the total respondents – are aged 60-74 y.o. Furthermore, it also shows that 90% (18 people) of the total respondents are female.

Table 3.2 Frequency Distribution of Respondents by the Category of Insomnia before the Treatment

No	Insomnia Criteria	Frequency	Percentage (%)
1	Mild	4	20
2	Moderate	11	55
3	Severe	5	25
	Total	20	100

Table 3.2 shows that the majority of the respondents – about 55% (11 people) of the total respondents – were experiencing moderate insomnia before being given back massage relaxation therapy.

Table 3.3 Frequency Distribution of Respondents by the Category of Insomnia after the Treatment

No	Insomnia Criteria	Frequency	Percentage (%)
1	Mild	15	75
2	Moderate	2	10
3	Severe	3	15
	Total	20	100

Table 3.3 shows that the majority of respondents – about 75% (15 people) of the total respondents – experienced mild insomnia after being given back massage relaxation therapy..

Table 3.4 Normality Test of Research Data

Group	P.	sig.	Information
Pretest	.959	.520	Normal
Post-test	0.916	.083	Normal

Table 3.4 shows that from the normality test results all data have a p value (sig.) > 0.05 – this

Journal of Global Research in Public Health

means that the variables were normally distributed.

Table 3.5 The Effects of Back Massage on Insomnia Reduction in the Elderly Respondents

Group	N	The mean	p value	Std. Deviation	Std. Error Mean
Pretest	20	20,20	0,000	4,103	.917
Post-test	20	17.70		4, 093	.915

Table 3.5 shows that there is a decrease in the average number of insomnia experience after the back massage treatment in the elderly – with an average pretest of 20.20 and an average post-test of 17.70. This test results are supported by the results of the differences through the t test – which obtained a significant p value of 0.000. The results of this study indicate that the value of $pv = 0,000 < \alpha$ (0.05) which means that there is significant difference. From the results of $pv = 0,000$, it can be concluded that H_0 is rejected and H_1 is accepted. Therefore, it is proven that there is an effect of giving back massage on insomnia reduction in the elderly at Wisma Asisi Nursing Home in Sukabumi.

IV. DISCUSSION

A. Insomnia in the Elderly Before Back Massage Therapy

Based on table 3.2, it shows that the majority of the respondents – about 55% (11 people) of the total respondents – were in the category of moderate insomnia and about 25% (5 people) of the total respondents were in the category of severe insomnia before being given back massage relaxation therapy.

The results of this study are in line with (Nugroho, 2010) research which states that sleep disturbance (sleeping disorders) is a major complaint that is often experienced by the elderly. Elderly people who are aged over 60 y.o are often experiencing difficulty in sleeping and changing their sleeping patterns, a decrease in their physical, psychological as well as social conditions that is interrelated with one another. This condition may potentially cause health problems in general and mental health in particular in the elderly.

Stanley and Beare (2010) state that in the old age— aging occurs in Central Nervous System (CNS) and there is a reduction in cerebral nerve cell blood flow and also decreased metabolism that are unknown. These decrease cause a slower reflex of nerve conduction velocity and a delayed response to various stimuli that are given. In addition, there is also a reduction in kinetic sensation. With the physiological changes in the nervous system that occur during the aging process – the sleeping and waking up cycles may also change.

These results are supported by Saputri (2009) who states that the increase in the age will cause changes in physiological function, especially a decrease in the amount of sleeping time needed and sleeping quality. In addition, many elderly people also complain that they – cannot sleep soundly, suffer from many disorders and do not feel as fresh as when they were young (lose freshness after sleeping).. According to the researchers' analysis, the results of the study prior to giving back massage therapy, almost all respondents were experiencing insomnia because of their old age. Based on table 3.1, most of the respondents are aged 60 - 74 y.o (16 people). People who aged over 60 y.o have a risk of experiencing sleeping disorders because an age increase of the elderly make them to experience a degenerative period, in which the function of the organs in the body has decreased, thus some problems related to physiological changes that make the elderly people have insomnia – are often found.

Another factor that influences insomnia is gender. Table 3.1 shows that almost all respondents – about 90% of the total respondents (18 people) – are female.

This is consistent with the results of Lumbantobing (2009) research which reveals that

insomnia is often experienced by elderly women. More than 50% of elderly women complain of having difficulty sleeping at night.

Annurohim (2016) in his research also states that men have an anxiety level in the normal category (76.2%), while women have an anxiety level in the moderate category (44.8%). This means – women are more prone to experience anxiety than men, because men are more active and explorative, whereas women are more sensitive and secretive about their feelings. Anxiety will increase the production of norepineprin through the sympathetic nervous system. This substance will reduce the stage of IV NREM and REM, resulting in disruption of sleep frequency.

B.   Insomnia in the Elderly After Back Massage Therapy

Based on table 3.3 in this study, overall respondents, which is about 65% (13 people) of the total respondents, were in the category of mild insomnia after getting back massage therapy. Most respondents stated that after getting back massage therapy for about 2 weeks, they felt very happy because their body condition was getting more relaxed and comfortable to sleep.

According to Triyadini (2010), one of the direct benefits of massage is total relaxation and calmness that can provide comfort during sleep. Massage can also trigger the release of endorphins, brain chemicals (neurotransmitters) that produce a feeling of comfort.

The results of this study are in accordance with the results of previous study conducted by Lisdiyanti (2016) who states that back massage is effective in reducing anxiety, depression and improving sleep quality in the elderly.

Based on the researchers' analysis, the results of the study before the back massage therapy to respondents, the number of elderly respondents who were experiencing moderate insomnia are more than the number of elderly respondents who were experiencing mild insomnia. However, after the back massage therapy, the number of elderly respondents who were experiencing moderate insomnia mostly dropped into mild insomnia and those who were in the category of severe insomnia dropped into the category of moderate insomnia. The decline in the degree of insomnia is due to the effect of back massage that can provide comfort during sleep, this is proven by the statement of the respondents who state that back massage therapy makes a difference in their sleeping quality, thus sleeping disorders such as insomnia can be reduced.

C.   The Effect of Back Massage Therapy on Insomnia Reduction in the Elderly

Based on table 3.2 – it shows that the majority of the respondents – about 55% (11 people) of the total respondents – were experiencing moderate insomnia, but after back massage therapy was carried out on the elderly who experienced moderate insomnia, the majority of the respondents – about 65% (13 people) of the total respondents – showed a mild insomnia category.

According to Cinar & Eser (2012), giving back massage for 10 minutes for 3 days before bedtime in the elderly is proven to have improved the sleeping quality in the elderly because of the relaxing effect of massage. Stimulating by massaging the back with the right techniques and procedures can affect changes in body physiology.

As research by Potter & Perry (2009) reveal that one will fall asleep when they feel comfortable and relaxed. This condition is the needs for sleeping in the elderly, so that they will not have difficulty in sleeping and be able sleep soundly (the stage of IV NREM) and have an increase in the duration and efficiency of sleeping.

Based on the research results by Zulmi (2016) – it is found that the influence of back massage therapy on sleep quality in the elderly has a significant value of $p = 0.005$ ($p < 0.05$) and – that back massage therapy can improve sleep quality.

The results of this study are also in line with the research conducted by Andjani (2016) who states that there is an influence on the elderly blood pressure after back massage therapy at Wisma Asissi Nursing Home Sukabumi with a significant value of p = 0,000 (p <0.05). In addition, she also states that the back massage therapy can provide a sense of calmness and comfort so as to reduce insomnia in the elderly.

Based on the researchers' analysis results, from a psychological aspect back massage therapy can help the respondents to improve their sleeping quality. This is proven by the statement of the respondents who state that back massage therapy make them feel calmer, more comfortable and relaxed. Comfortable, calm and relaxed conditions will make the elderly have the desire to sleep. Back massage therapy also has a positive effect both physically and psychologically on the respondents. The researchers believe that the decrease in insomnia in this study is due to the effect of back massage therapy performed. The respondents of this study have similar characteristics, live in the same environment, and have both moderate and severe insomnia categories at the beginning of the study (pretest), and after the intervention (back massage therapy) (post-test) was performed, the respondents showed significant reduction on their insomnia.

V. CONCLUSION

The insomnia category prior to back massage therapy at Wisma Asisi Nursing Home in Sukabumi are mostly in the moderate and severe insomnia categories.

The insomnia category in the elderly respondents at Wisma Asisi Nursing Home in Sukabumi after being given the back massage therapy is almost entirely dropped into the category of mild insomnia.

The difference in the categories of insomnia before and after being given back massage therapy at Wisma Asisi Nursing Home in Sukabumi, have sleeping quality average in the pretest of as much as 20.20 and an average in the post-test of as much as 17.70. This shows that the average value of sleeping quality in the post-test has decreased with the value of difference of 3.2.

There is an effect of back massage therapy on reducing insomnia in the elderly respondents at Wisma Asisi Nursing Home in Sukabumi, with pretest and post-test of 8.248 with p value of 0.000 (p <0.05)

VI. REFERENCE

Angelia, I. 2012. Faktor-Faktor Yang Berhubungan Dengan Kualitas Tidur Yang Buruk Pada Lansia di Desa Wonojati Kecamatan Jenggawah.

Azizah, L. (2011). *Keperawatan Lanjut Usia* Edisi 1. Yogyakarta: Graha Ilmu.

Amir. (2012). *Gangguan Tidur Pada Lanjut Usia Diagnosis dan Penatalaksanaan dalam Cermin Dunia Kedokteran*. Jakarta: Grup PT Kalbe Farma.

Andria.(2018).*Pengaruh Pijat Kaki Dan Punggung Terhadap Tingkat Tekanan Darah Pada Lansia Di Panti Wredha Daerah Surakarta.*

Anderson, E.T., & Mcfarlane J. 2010. *Buku Ajar Keperawatan Komunitas Teori dan Praktik.* Edisi Ketiga. Jakarta: EGC.

Alfiq Zulmi. (2016*). Pengaruh Massage Punggung Terhadap Kualitas Tidur Pada Lansia Di UPT PSLU Jember*.

Asmadi. 2009. Konsep Dasar Keperawatan. Jakarta: EGC.

Annurohim, I. P. (2016). Tingkat Kecemasan dengan Kualitas Tidur Pada Lanjut Usia Berdasarkan Jenis Kelamin, Jurnal Keperawatan.

Azizah, L. 2011. Keperawatan LanjutUsia. Edisi 1. Yogyakarta: Graha ilmu.

Asmadi.(2008).Teknik Prosedural Keprawatan: Konsep Dan Aplikasi Dasar Klien.Jakarta: Salemba Medika

Bappenas. (2013). Proyeksi Penduduk Indonesia 2010-2035. Jakarta: Badan Pusat Statistik.

Breus, M. (2007). The National Dleep Foundation (NSF) recently Diah Nurfitriani, Onny T, Farah D. Jakarta: Salemba Medika.

Firdasus. 2011. Terapi Pijat untuk Kesehatan Kecerdasan Otak dan Kekuatan Daya Ingat. Yogyakarta: Buku biru.

Heny,Nyoman & Wira.(2013).Pengaruh Massage Punggung Terhadap Kualitas Tidur Pada Lansia Dengan Insomnia Di Panti Social Tresna Werdha Wana Seraya Denpasar.

Herdi Faizal dan Yustinus Sukarmin. (2004). Pengaruh Circulo Massage Terhadap Penurunan Perasaan Kelelahan kerja pada Guru Wanita Sekolah Dasar Negeri di Kelurahan Bener, Tegalrejo, Yogyakarta. Skripsi. Yogyakarta: FIK UNY

Jany Rizkiana & Suratini. (2018). Pengaruh Terapi Massage Punggung Terhadap Kualitas Tidur Lansia Di Balai Pelayanan Social Tresna Werdha Unit Budi Luhur Kosongan Bantul Yogyakarta.

Kemenkes RI.(2013).Gambaran Kesehatan Lansia Di Indonesia .Jakarta.

Mustolih.(2009). *Pengaruh Circulo Massage terhadap Penurunan Perasaan Kelelahan Kerja Sopir Taksi di Sekitar Rumah Sakit Panti Rapih.* Skripsi. Yogyakarta: FIK