

Review Article: Systematic Review

THE EFFECT OF SLEEP HYGIENE ACTIVITY THERAPY ON SLEEP QUALITY IN THE ELDERLY: A SYSTEMATIC REVIEW

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Abstract

Background: The quality of sleep is related to the age factor. Elderly People over the age of 65 often experience sleep disturbances. Sleep disturbances experienced vary, usually caused by poor sleep hygiene. The impact of sleep disturbances can result in non-fulfillment of quality and quantity of sleep in the elderly. this also affects the immune system of the elderly so that the elderly are susceptible to disease. Sleep hygiene activity therapy is a non-pharmacological therapy that can improve the sleep quality of the elderly.

Objective: The purpose of this systematic review is to examine the effect of sleep hygiene on sleep quality in the elderly.

Design: This systematic review was carried out by searching for articles that match the inclusion criteria, namely sleep hygiene, sleep quality, and the elderly on the Google Scholar database, PubMed with years of publication from 2018 to 2022. Then 16 articles were found that matched, and presented in the form of a PICO table.

Results: Based on the analysis of journal reviews, it was found that there was an influence between sleep hygiene activities in the elderly.

Conclusion: The overall results of the articles that have been reviewed state that, the better sleep hygiene is done or applied by the elderly, the quality of sleep will be good or optimal.

Keywords: Elderly, Sleep Hygiene, Sleep Quality

INTRODUCTION

The process of growth and development in humans will experience body changes both mentally and in health that are interrelated, and this condition can cause physical and mental health problems, namely the elderly (Li and Lansia, 2016). Changes/decreases in the body's ability/functions in adapting to the environment,

one of which is sleep quality disturbances (Nuraeni, 2022). The elderly is at risk of experiencing sleep disturbances caused by many factors such as retirement and changes in social patterns, death of a spouse, increased use of drugs, illnesses experienced, mood disorders, anxiety, and negative feelings are indicators of insomnia (Hartika, 2020). Sleep disturbances

that occur in the elderly are the impact of poor sleep hygiene activities and make the elderly apply a poor self-concept, for example the elderly with inadequate sleep patterns are prone to psychological disorders and poor physical disturbances (Hindriyastuti, 2018).

One aspect of improving the health of the elderly is sleeping behavior (Fitriyanti P, 2021). Sleep hygiene behavior is an action or effort in the form of behavioral training that someone can do with the aim of knowing how to create a comfortable environment around the bed so that they can get comfortable sleep and can improve sleep quality from bad to better (A.T, Septiyorini, Khofifah, tamara, & Nur, 2022).

Based on data (Girsang, Ramadani, Sulistyowati, Putrianti, & Wilson, 2021) the percentage of provinces in Indonesia with an elderly population greater than ten percent is as follows; DI Yogyakarta (15.52%), East Java (14.53%), Central Java (14.17%), North Sulawesi (12.74%), Bali (12.71%), South Sulawesi (11.24% %), Lampung (10.22 %), and West Java (10.18 %). According to gender, there are more elderly women than male elderly, namely 52.32% compared to 47.68%. The prevalence of insomnia in Indonesia in the 60 year old group found 7% of cases complaining of sleep problems (Gunardi & Herlina, 2021).

Based on the background that has been described, the authors are interested in conducting a literature review on the effect of sleep hygiene activities on sleep quality in the elderly.

METHODS

The method used in this study is a Systematic Review with PRISMA (Preferred Reporting Items for Systematic Review) without meta-analysis. The presentation procedure was adapted from the University of Maryland Libraries (Libraries, 2021). The following are the steps: Identification of research questions, research questions to be answered "Does the application of sleep hygiene activity therapy affect sleep quality in the elderly?" Determining Inclusion Criteria. . Inclusion criteria were made using the PICO (Population, Intervention,

Control, and Outcome) approach. Article Search, the keywords used to find suitable articles are "Sleep Hygiene, Sleep Quality and the Elderly", with issues in 2018-2022. Relevant Article Selection, Article selection was carried out by researchers using the PRISMA diagram, with the following results; identification: identification of articles from the database, namely through Google Scholar, PubMed and obtained 596 articles. Screening: based on the articles that match the keywords, they will be sorted according to trends and obtained 234 articles. Eligibility: articles that meet the inclusion criteria N: 28 articles. Included: articles reviewed N: 16 articles

RESULTS

Based on Table 1. PICO, the search results for articles from the database that have been selected by using a method that is entering keywords in accordance with the systematic review theme, we get 596 articles from Google Scholar, PubMed. After screening and eligibility, the authors obtained 16 articles that met the inclusion criteria and could be used as material for a systematic review and are presented in table 1 below.

Table 1. PICO

Title	P	I	C	O
Relationship Between Sleep Hygiene and Sleep Quality Levels in The Elderly in Jebres District, Gandekan Village RW 05 Surakarta (2022), Putri wulan Dhari, Ika Silvitasari	<i>Sleep Hygiene</i>	D : Cross sectional Ts : Simple Random Sampling S : 40 elderly A : Spearman Rank	-	There is a relationship
The Influence of Sleep Hygiene Activity Therapy on Sleep Quality of Elderly at Posbindu in Pamongan Village (2022), Sonhaji, Ni Nyoman Maryaningtyas Adinatha, Wiji Setiani	<i>Sleep Hygiene</i>	D : Quasi Experiment Pre-Post Test One Group Design without control Ts : Purposive sampling S : 16 elderly A : The results of the normality test using Shapiro Wilk	-	There is a relationship
The Relationship Between Sleep Hygiene Behavior and Sleep Quality in The Elderly at Tresna werdha Ambon Institution (2021), Fitriyanti Patarru, rosmina Situngkir, Iriane bate, Jefvans Evita akollo	<i>Sleep Hygiene</i>	D : Cross sectional study Ts : Non probability sampling with total sampling S : 35 elderly A : -	-	There is a relationship
The Effect of Sleep Hygiene on Sleep Quality in The Elderly at The Jara Mara Nursing Home Pati Buleleng (2020), Tri Suryo Wibowo	<i>Sleep Hygiene</i>	D : Pre Experimental Design with One-Group Pretest-Posttest Ts : Simple Random Sampling S : 15 Elderly A : Paired T-Test	-	There is a relationship
Efect of Sleep Hygiene Program on Sleep Quality, Depression, Anxiety and Stress among Resident Older Adults (2020), Mai Elghareap Hasaan	<i>Sleep Hygiene</i>	D : A quasi-experimental with pre-posttest research design Ts : - S : 71 older adults A : Chi square Test	-	There is a relationship
The Effect of Sleep Hygiene Activity Therapy on Sleep quality in The Elderly at The Tresna Werdha Social Service Centre Budi Luhur Unit Yogyakarta (2019), Milla Annisa Nadyatama	<i>Sleep Hygiene</i>	D : Pre Experimental Design, One-Group Pretest-Posttest Design. Ts : Simple Random Sampling S : 15 elderly A : Paired T-Test	-	There is a relationship
The Relationship Between Sleep Hygiene and Sleep Quality Among Resident of an Elderly Care Instution in DKI Jakarta (2019), Mutia Annisa, Dwi Nurviyandari Kusuma Wati	<i>Sleep Hygiene</i>	D : Cross sectional design. Ts : a purposive sample S : 103 elderly A : Chi square test	-	There is a relationship
The Correlation Between Sleep Hygiene and Sleep Quality on people With Type 2 Diabetes Mellitus (2019), Fuji Rahmawati, Angeline H. Z. Tarigan, Eka yulia Fitri Y, Indra Prapto Nugroho	<i>Sleep Hygiene</i>	D : Cross Sectional Ts : Purposive sampling S : 29 elderly A : Pearson Product Moment Test	-	There is a relationship

Title	P	I	C	O
Epidemiology of Sleep Hygiene and Related Factors in Older Adults (2019), Azita Chehri, and Leila Parsa	<i>Sleep Hygiene</i>	D : Descriptive-analytic study Ts : Random cluster sampling S : 598 elderly A : Mann-Whitney and Kruskal-Wallis tests	-	There is a relationship
The Effect of Sleep Hygiene Therapy on Sleep quality in The Elderly at The Dharma Bakti Kasih Nursing Home, Surakarta (2019), Niko Beni	<i>Sleep Hygiene</i>	D : Pre Experiment, Pretests-Posttest One group Design Ts : Non Probability sampling S : 38 Elderly A : Wilcoxon Test	-	There is a relationship
The Relationship Between Sleep Hygiene and Physical Fatigue with Fulfilling The Sleep Needs of Elderly Trades at Tripe Agrobis Market in Plaosan, Lamongan Regency (2018), Farida Rohmawati	<i>Sleep Hygiene</i>	D : Cross sectional design Ts : Purposive sampling S : 63 elderly A : Spearman Rank Test	Physical fatigue	There is a relationship
The effect of Sleep Hygiene on The Quality of Sleep of the Elderly at The Pucang Gading Elderly Home, Semarang (2018), Sarlina Mento Ambarita	<i>Sleep Hygiene</i>	D : Quasy Eksperimen, pre-post test design Ts :- S : 36 elderly A : Wilcoxon test.	-	There is a relationship
The Relationship Between Sleep Hygiene and Sleep quality in The Elderly (2018), Ifana Z. Rahmah, D. Retnaningsih, Rista Apriana	<i>Sleep Hygiene</i>	D : Cross Sectional TS : Saturated Sampling S : 35 elderly A : Spearman Rank Test	-	There is a relationship
The Effectiveness of Sleep Hygiene Program on Sleep Quality and Stress Level in Elderly population (2018), Kiran Sharma, Swati srivastava	<i>Sleep Hygiene</i>	D : Cross Sectional Ts : - S : 70 elderly A : Pearsons test	-	There is a relationship
The Effect of Sleep Hygiene and Brain Gym on Increasing Elderly Comfort and Sleep Quality (2018), Nursalam; S., Fitriana Kurniasari; Ulfiana, Elida; Efendi, Ferry	<i>Sleep Hygiene</i>	D : Pretest posttest with control group design quasy experiment Ts : Purposive sampling S : 50 elderly A : Paired t-test test	Brain Gym	There is a relationship
Effect Of Sleep Hygiene And Deep Breathing Exercise With Spiritual Care On Sleep Quality And Quality Of Life Of Hemodialysis Patient In Ahmad Yani Islamic Hospital Surabaya (2018), Siti Nur Hasina, Tintin Sukartini, Eppy Setiyowati	<i>Sleep Hygiene</i>	D : Quasy experiment with pretest posttest with control grup design Ts : Non probability sampling with total sampling technique S : 38 elderly A : MANOVA	Deep Breathing Exercise with Spiritual Care	There is a relationship

Based on the results of a review of the 16 journals that have been described in table 1 above, It was found that there was a significant effect between sleep hygiene activities and sleep quality in the elderly.

DISCUSSION

The elderly with poor sleep hygiene behavior tends to have very poor sleep quality (Patarru, Situngkir, bate, & Evita Akollo, 2021). The conditions experienced by the elderly are caused by several factors, including; environment and habits of the elderly who rarely take naps, rarely exercise, ambient noise, and some of them say they have feelings of anxiety for various reasons such as not feeling at home in the orphanage and thinking about their families, and the unstable room temperature makes the elderly feel hot and cold so that they the elderly have an uncomfortable feeling when sleeping, then improper lighting causes it to be difficult for the elderly to start sleeping (Dhari & Silvitasari, 2022).

Regulation of sleep and awakening is regulated by the brainstem (Reticular Activating System and Bulbar Synchronizing Region), thalamus and various hormones produced by the hypothalamus. Serotonin is a neurotransmitter that is responsible for the transfer of nerve impulses to the brain which plays a role in inducing drowsiness, as well as a modulator of brain work capacity. In the body, serotonin is converted to melatonin. In the elderly, this melatonin hormone will decrease with age, the amount of melatonin hormone production can be increased by doing activities that can improve blood flow. Disruption of melatonin performance in the body can be caused by various things including electrical radiation, lighting so that this can make it difficult for the elderly to sleep. The amount of melatonin hormone production can be increased by carrying out activities that can improve blood flow such as exercise (Ambarwati, 2017).

Sleep quality is a benchmark used as a reference to determine a person's ability to

easily fall asleep and maintain sleep (Sonhaji & Setiani, 2022). A person's sleep quality can be described through several items such as; long sleep time, complaints felt during sleep or conditions after waking up (Parawangsa, 2022). Good sleep quality is a condition where a person can get fitness, freshness, and satisfaction when he wakes up. The quality of sleep in the elderly is said to be good if the night's sleep is fulfilled for 6 hours, and the time needed to fall asleep is no more than 30 minutes, and they do not wake up more than 2 times at night. Decreased sleep quality can be influenced by environmental factors such as improper lighting, unstable room temperature, and the presence of noise (Savitri, 2020).

Sleep hygiene can be done by setting a wake and sleep schedule every day, being in bed only when sleeping and sleepy, making the mind and body calm and relaxed, taking naps of less than 30 minutes, sleeping with dark lighting, comfortable bedroom temperatures , avoiding loud noises, taking a warm evening shower, cleaning the bedroom regularly, eating regularly every day, not eating too much before going to bed, not drinking coffee or caffeine before going to bed, not smoking before going to bed and exercising regularly every morning (Rahmawati, Tarigan, Fitri, & Nugroho, 2019). If this method is done, then the quality of sleep will be good.

CONCLUSION

The better the sleep hygiene activities carried out by the elderly, the better the perceived quality of sleep. Sleep hygiene activities need to be carried out by regularly arranging schedules and carried out under supervision to obtain optimal results.

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AUTHOR CONTRIBUTION

Author 1:

Determine topics, make research plans, process data, and present

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REFERENCES

- A.T, I., Septiyorini, I., Khofifah, N., tamara, R., & Nur, R. A. (2022). *Pengaruh Pemberian Aromaterapi lavender dan Sleep Hygiene Education Terhadap Kualitas Tidur Lansia di Wisma Tulip dan Flamboyan UPT. PSTW Bondowoso*. Jember: Universitas dr. Soebandi Jember.
- Amalia. (2017). Hubungan Antara Kualitas Tidur Dengan Kelelahan Fisik Lansia. *JKM*, 22-31.
- Ambarwati, R. (2017). Sleep, Circadian Rhythms, and Metabolism. *Jurnal Keperawatan Florence Nightingale*, 42-46.
- Anbiya, I. N., Suryani, R. L., & Yudono, D. T. (2022). Gambaran Kualitas Tidur Pada Lansia dengan hipertensi: Literature Review. *COMSERVA: Jurnal Penelitian dan Pengabdian Masyarakat*, 721-726.
- Bacaro, V., Curati, S., & Baglioni, C. (2021). Validation Study of The Italian Version of The Sleep Hygiene. *Jurnal of Sleep Research*, 1-9.
- Dhari, P. W., & Silvitasari, I. (2022). Hubungan Antara Sleep Hygiene Dengan Tingkat Insomnia Pada Lansia Di Kecamatan Jebres Kelurahan Gandekan RW. 05 Surakarta. *Nusantara Hasana Journal*, 2(5), 71-77.
- Girsang, A. P., Ramadani, K. D., sulistyowati, N. P., Putrianti, R., & Wilson, H. (2021). *Statistik Penduduk Lanjut Usia*. Jakarta: Badan Statistik Pusat.
- Gunardi, S., & Herlina, I. (2021). Insomnia dapat Meningkatkan Resiko Depresi Lansia. *Journal of Health Science*, 34-42.
- Hidayat, A. F., Zulfitri, R., & Utami, G. T. (2022). Hubungan Kualitas Tidur Dengan Kondisi Tekanan darah: Literature Review. *Jurnal Medika Hutama*, 2498-2507.
- Hindriastuti, S., & Zuliana, L. (2018). Hubungan Tingkat stress Dengan Kualitas Tidur Lansia di RW 1 Desa Sambung, Kabupaten Kudus. *JKM (Jurnal Kesehatan Masyarakat) Cendekia Utama*, 91-102.
- Khairani, N., Juanita, & Rahmawati. (2022). Gambaran Insomnia Pada Lansia Di Kota Banda Aceh. *JIM Fkep*, 106-111.
- Libraries, U. o. (2021). Research Guides : Systemtic Review. *University of Maryland*.
- Nuraeni, A. (2022). *Intervensi Non-Farmakologi Yang Efektif Terhadap Insomnia Pada Lansia: Telaah Literatur*. Makassar: Universitas Negeri Alauddin Makassar.
- Ozcan, E., Liu, Y., Jared, V., Kamphuis, D., & Spagnol, S. (2022). Doplor Sleep: Monitoring Hospital Soundscapes for Better Sleep Hygiene. *6th International Conference on Medical and Health Informatics* (pp. 69-77). New York, USA: ACM Digital labrary.
- Pantoja, S. C., Prados, G., Chouchou, F., Holguin, M., Vinces, A. M., Ruiz, M. E., & Puerta, L. F. (2022). Insomnia Symptoms, Sleep Hygiene, Mental Health, and Academic Performance in Spanish University Student: A Cross-Sectional Study. *Journal of Clinical Medicine*, 1-13.
- Parawangsa, I. (2022). *Faktor-Faktor Yang Berhubungan Dengan Kualitas Tidur Lansia Di Panti Sosial Lanjut Usia Harapan Kita Palembang*. Palembang: STIKes Bina Husada Palembang.
- Patarru, F., Situngkir, R., bate, I., & Evita Akollo, J. (2021). Hubungan Perilaku

- Sleep Hygiene Dengan Kualitas Tidur Pada Lansia Di Panti Tresna Werdha Ambon. *Jurnal Keperawatan Florence Nightingale (JKFN)*, 4(2), 46-51.
- Rahmawati, F., tarigan, A. H., Fitri, E. Y., & Nugroho, I. P. (2019). Hubungan Sleep Hygiene Terhadap Kualitas Tidur penderita DM Tipe 2. *Seminar Nasional Keperawatan "Penguatan keluarga sebagai support system terhadap tumbuh kembang"*, 1-5.
- Savitri, R. (2020). *Insomnia pada lansia Di Posyandu Lansia Kelurahan Mojosongo*. Surakarta: Poltekes Surakarta.
- Sonhaji, A. N., & Setiani, W. (2022). Pengaruh Terapi Aktivitas Sleep Hygiene Terhadap Kualitas Tidur Lansia. *Jurnal SMART Keperawatan*, 9(1), 43-48.
- Souilm, N., Elsakhy, N. M., Alotaibi, Y. A., & Ali, S. A. (2022). Effectiveness of Emotional freedom Techniques (EFT) Vs Sleep Hygiene Education Group Therapy (SHE) in Management of Sleep Disorder Among Elderly. *Nano Research*, 1-12.

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