

Effectiveness of Cognitive Behavioral Therapy on The Sleep Quality of The Elderly at PSTW  
Budi Mulia I Cipayang East Jakarta

Endang Banon<sup>1</sup>, Omi Haryati<sup>2</sup>, Indriana Rakhmawati<sup>3</sup>, Nurhalimah<sup>4</sup>

1,2,3,4, Lecturer in Nursing Department Poltekkes Kemenkes Jakarta 3, Jawa Barat-17415

DOI: <https://doi.org/10.56293/IJASR.2022.5545>

IJASR 2023

VOLUME 6

ISSUE 4 JULY – AUGUST

ISSN: 2581-7876

**Abstract:** Physical, psychological, and social changes in the elderly can cause sleep disturbances. This disorder is caused by several things, such as physical illness or anxiety. To overcome this, can be overcome by giving Cognitive Behavioral Therapy. This therapy aims to change negative behavior into positive behavior that has an impact on improving sleep quality. Respondents were selected through a purposive sampling technique, totaling 86 respondents who met the inclusive criteria. Before the research was carried out, the respondents received an explanation of the research and signed an agreement. Data was collected by filling out a questionnaire. The intervention was carried out using a module consisting of 5 activity sessions. Data analysis using dependent t.test. The results of the analysis obtained a value of sleep quality  $p = 0.000$ , indicating a significant relationship between the administration of Cognitive Behavioral Therapy and the sleep quality of the elderly. Conclusion: Cognitive Behavioral Therapy can improve the sleep quality of the elderly.

**Keywords:** Cognitive Behavioral Therapy, elderly, sleep disturbance, sleep quality

### Introduction

According to the results of the 2015 Susenas and the 2014 Central Bureau of Statistics, the elderly population is 8.3% of Indonesia's population, which is 20.24 million people. According to statistical data from the DKI Jakarta Population Service (2017), the number of elderly in the Cipayang District area is 7829 people spread across eight urban villages, with details of 3957 male elderly and 3872 female elderly. Meanwhile, the number of elderly residents at PSTW Budi Mulya I at the two orphanages totaled 410 people.

Awareness of physical changes and the presence of diseases that appear old causes a person to often experience emotional disturbances. This condition can reduce the quality of life of the elderly.

The results of research conducted by Hermayudi (2012) stated that elderly people who are depressed will experience feelings of sadness and difficulty sleeping. The results of Novianti's research (2015) said that insomnia can occur due to the stressful conditions experienced by the elderly. Meanwhile, research conducted by Sulistyarini (2016) states that elderly women are more likely to experience sleep disturbances than elderly men. Abdullah (2012) stated in his research that sleep disturbances experienced by the elderly can be caused by factors of anxiety, depression, family support, and environmental conditions.

Cognitive Behavioral Therapy is a form of psychotherapy that aims to train clients to change negative ways of thinking and behaving into positive ways of thinking and behaving. Therefore, Cognitive Behavioral Therapy can be given to the elderly with sleep disturbance problems. The research objective is to change negative behavior into positive behavior in the elderly.

**Methods**

This study uses the research design "Quasi-Experimental Pre-Post Test with Control Group". The instruments used in this study consisted of Questionnaire A which contained the demographic data of respondents and Questionnaire B with the Pittsburgh Sleep Quality Index questionnaire.

The respondent population is the elderly who experience sleep disturbances at PSTW Budi Mulia 1. The sampling technique was carried out using purposive sampling concerning inclusive criteria.

**Results**

This study aims to determine whether the administration of Cognitive Behavioral Therapy can improve the sleep quality of the elderly who are in PSTW and whether there is a difference between the elderly who are given Cognitive Behavioral Therapy and the elderly who are not given Cognitive Behavioral Therapy.

**Table 1 Characteristics by Gender, and Education Level in the Intervention Group and Control Group (n=86)**

Variable	Intervention		Control		Total	
	N	%	N	%	N	%
<b>Gender</b>						
Female	30	69.8	27	62.8	57	66.3
Male	13	30.2	16	37.2	29	33.7
<b>Education Level</b>						
1. Elementary School	31	72.1	28	65.1	59	68.5
2. Yunior High School	8	18.6	4	9.3	12	14.0
3. Senior High School	3	7	6	14	9	10.5
4. University	1	2.3	5	11.6	6	7.0

Shows that the majority gender is female with the majority of elementary school educational background.

From the results of gender analysis, it is known that women experience more sleep disturbances than men. This is possible because women pay more attention to themselves and their environment so that when they feel there is a deficiency in themselves or there is interference from the environment that causes stress. Environmental disturbances such as noise, bright lights, and mites on the bed, women tend to experience sleep disturbances which of course will reduce the quality of their sleep. This is following what was stated by respondents when the intervention was carried out and under the results of research conducted by Darmodjo (2009). Also, research conducted by Dewi Putu (2013) and Sulistyarini (2016), states that older women with the female sex experience more sleep disturbances than older men.

Meanwhile, the results of the analysis of education level show that the elderly with primary education levels are more prone to sleep disturbances than those with education levels above elementary school. This is possible due to a lack of understanding of the factors that can affect sleep quality, especially knowledge of "sleep hygiene" to prepare the elderly for bed.

**Table 2. Differences in giving Cognitive Behavioral Therapy before and after intervention in the intervention group and the control group (n = 86)**

Variable	Kelompok	Mean	SD	95% CI	T	P value
Skor Cognitive Behavioral Therapy	Intervention					
	Before	11.09	3.161	0.566 – 0.876	9388	<b>0.000</b>
	After	4.95	1.745			
	Difference	6.14				
	Control					
	Before	1.91	0.294	-,149 – 0.010	-1,775	<b>0.83</b>
After	1.98	0.152				
Difference	0.07					

Showed that there was a significant difference in the administration of CBT in the intervention group, before and after the intervention ( $p = 0.000$ ), with a difference in the value of 6.14.

Based on the results of the analysis of differences in CBT administration before and after the intervention in the intervention group, it was shown that there was a significant difference with a p-value of  $0.000 < 0.05$  with a difference of 6.14. This difference indicates that the provision of CBT in the form of knowledge about "sleep hygiene" deep breathing relaxation techniques and five-finger hypnosis is proven to improve the quality of sleep in the elderly. This happened because the intervention group received treatment by giving CBT in 5 sessions with 1 meeting per session. During the CBT activity, there were no respondents who withdrew from the activity, and respondents seemed to actively participate in the activities of all sessions.

**Acknowledgements**

Based on an analysis of the characteristics of the respondents which included gender and level of education, it was found that the majority of the sexes were female while the highest level of education was at the elementary level. These two characteristics can play a role in influencing the sleep quality of the elderly. In the intervention group, giving CBT to the elderly who experienced sleep disturbances could have a significant effect. This can change negative ways of thinking and behave into positive ways of thinking and behaving to improve the sleep quality of the elderly.

**References**

1. Anggarwati & Kurtanti. 2016. Improving the sleep quality of elderly women through routine exercise for the elderly. Indonesian Nursing Journal. Vol. 19. No. 1. March.
2. Ariestria. 2016. Cognitive behavioral therapy to overcome social anxiety: a case study. Poor. Muhammadiyah University.
3. Asrori Adib. 2015. Cognitive behavioral therapy to overcome social anxiety disorder. Journal of Applied Psychological Science. Vol. 3 No. 1. January.
4. Hill, Evi Rakota. 2013. Sleep quality and factors of sleep disturbance in elderly clients who are hospitalized in the internal medicine room of Medan Hospital, <http://jki.ui.ac.id/index.php/jki/article/view/159/0>.
5. Bush AL, Armento ME, Weiss BJ, Rhoades HM, Novy DM, Wilson NL, Kunik ME, Stanley MA. 2012. The Pittsburgh Sleep Quality Index in older primary care patients with generalized anxiety disorder: psychometrics and outcomes following cognitive behavioral therapy. <https://pubmed.ncbi.nlm.nih.gov/22503380/>
6. Dariah. ED. & Okatiranti. 2015. The relationship between anxiety and sleep quality in the elderly at Posbindu Anyelir, Cisarua District, West Bandung Regency. Journal of Nursing Science. Vol. III No. 2 September.
7. Goddess. 2013. Factors that influence insomnia in the elderly. <http://ojs.unud.ac.id/index.php/eum/article/download>.

8. Dewi Putu Arysta & Ardani. 2013. The incidence and factors that influence sleep disturbance (insomnia) in the elderly at the Tresna Wredha Wana Seraya Social Institution, Denpasar, Bali. Faculty of Medicine, University of Udayana Bali.
9. Hendra, A. Siswanto. Hardjanta. 2013. The Effectiveness of Cognitive Therapy using the Double Column Technique. For people with depression. predictions. Psychology Studies. No. 1. Vol. 2. January-June.
10. Hermayudi. 2012. The relationship between depression and insomnia in the elderly at Panti Wredha Dharma Bakti. Surakarta. Faculty of Medicine Muhammadiyah University.
11. Insomnia National Sleep Foundation. 2023. Cognitive Behavioral Therapy for Insomnia. <https://www.sleepfoundation.org/insomnia/treatment/cognitive-behavioral-therapy-insomnia>
12. Insomnia National Sleep Foundation. 2020. Cognitive Behavioral Therapy - Uses and Lifestyle Effects Sleep Disorders Treated <http://www.sleepeducation.org/treatment-therapy/cognitive-behavioral-therapy/uses-and-lifestyle-effects>.
13. Prosperous human canopy. 2016. 14 Main Health Problems in the Elderly <http://www.kanopiinsansejahtera.co.id/14-hasil-kesehatan-utama-pada-lansia/>
14. Kismanto, Joko & Setiyawan. 2014. The effect of cognitive therapy on changes in the depressive condition of the elderly at the Wrwdha Darma Bakti Kasih Nursing Home, Surabaya. Journal of KesMaDaSka. January.
15. Khasanah Khusnul. 2014. Sleep Quality for Elderly Social Rehabilitation Center "Mandiri" Semarang, <http://www.e-jurnal.com/2014/10/kualitas-tidur-lansia-balai.html>.
16. Healthy elderly. 2013. sleep disorders in the elderly. <http://LansiaSehat.wordpress.com/2013/07/GGulan-Tidur-pada-Lansia/>
17. Marlina. 2011. Factors affecting sleep in the elderly in the village of Meunasah Balek, Meureudu City District, Pidie Jaya Regency. Journal of Nursing and Midwifery. Vol. 1 No. June 4th.
18. Mayo Clinic staff. 2016. Insomnia treatment: Cognitive behavioral therapy instead of sleeping pills <https://www.sleepio.com/cbt-for-insomnia/>
19. Moi, M.A. Dyah Widodo. Ani Sutriningsih. 2017. Relationship between sleep disturbance and blood pressure in the elderly. Nursing News Vol. 2 No. 2.
20. Nabil & Sulistyarini. 2014. Differences in the quality of sleep of the elderly who live with their families and the elderly in PSTW. Indonesian Journal of Nurses and Midwifery. Vol. 2 No.1.
21. Novianti. 2015. The relationship between stress and insomnia in the elderly in the village of Gimbaran, Mojoagung District, Jombang.
22. Silvanasar, Irwina.A. 2013. Poor sleep quality in the elderly in Wonojati Village, Jenggawah District, Jember Regency. <http://repository.unej.ac.id/handle/123456789/3229>.
23. Sulistyarini, T & Santoso, D. 2016. Description of the characteristics of the elderly with sleep disorders (insomnia) in RW 1 Ward Ward, Kediri City. Journal of Nursing Research Vol. 2. August.
24. Trilia, Santoso, Adriyani. 2013. The effect of therapy modality: music therapy on sleep quality of elderly who experience insomnia at Tresna Wredha Teratai Palembang home. Journal vol. 1. Issue 2. Nov
25. WilliamsJacob. Alicia. Karlyn. Christina. 2013. Cognitive Behavioral Treatment of Insomnia <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4694188/> Journal List Chest.