

Research Paper

Effect of Sleep Hygiene Education on Sleep Quality and General Health of Elderly Women With Sleep Disorders Living in Birjand City, Iran, in 2016



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Insomnia, Elderly, Sleep disorder, Sleep hygiene, Primary health care

ABSTRACT

Objectives The prevalence of insomnia in the elderly population is 50% to 70%. Since sleep hygiene education is the basic treatment for any type of sleep disorder, this study aimed to determine the effect of sleep hygiene education on the quality of sleep and general health of the elderly women aged 60-70 years with sleep disorders in Birjand City, Iran, in 2016.

Methods & Materials This study is a clinical trial. The study sample comprised 84 women who met the inclusion criteria and were enrolled in the study by systematic random sampling. If the elderly had a sleep disorder based on the score of the insomnia severity index, she would be included in the intervention or control group. The data gathering tools were the Pittsburgh sleep quality index and general health questionnaire, which participants completed before training and then 4 weeks later. The obtained data were analyzed in SPSS V. 21.

Results There was no significant difference in demographic data other than age, which was 64±3.3 years in the intervention group and 62±2.7 years in the control group. There were significant differences between the intervention and control groups in the mean scores of sleep quality, severe insomnia, and public health after the intervention ($P < 0.001$).

Conclusion According to the results of this study, sleep hygiene education can improve sleep quality, the severity of insomnia, and general health of older women. Therefore, it can be used as an affordable and accessible therapeutic approach.

Extended Abstract

1. Objectives

A Key characteristic of a healthy lifestyle is adequate sleep [1]. Sleep disorders can occur at any age; however, older people often face major sleep disturbances [2]. Insomnia is the most common sleep disorder [3]. Its prevalence in the elderly population is higher than other age

groups. The frequent basis for the treatment of any sleep disorder is applying sleep health education [4]; therefore, this study aimed to investigate the effect of such education on the sleep quality and general health of older women with sleep disorders.

2. Methods & Materials

This clinical trial was conducted on 84 older women aged 60-70 years. The samples were selected using systematic

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Table 1. Comparing the Mean±SD scores of insomnia intensity, general health, and sleep quality

Group	Mean±SD					
	Sleep Quality		Insomnia Intensity		General Health	
	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
Intervention	10.30±2.53	7.71±2.28	14.27±2.56	5.92±3.35	27.83±7.73	17.51±6.89
Control	11.71±2.32	11.81±2.92	15.53±3.8	15.3±2.83	29.24±10.8	26.1±7.87
P	0.01	0.001	0.12	0.001	0.49	0.001

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random sampling technique and divided into the two groups of intervention (n=43) and control (n=41). After agreeing to participate in the study, Insomnia Intensity Index (ISI) was completed during a phone interview. The ISI is a valid and reliable tool for the identification of insomnia and sensitive to the patients' responses [5]. It was a basis for assigning the study participants into the groups. For surveying the study participants, a demographic checklist, the Pittsburgh Sleep Quality Index (PSQI), and the General Health Questionnaire (GHQ) were used.

The PSQI measures sleep quality in the past month. It examines the results of clinical trials and interventions for reducing sleep disorders [6]. The GHQ assesses the general health status of respondents in the past month [7]. In both of these tools, lower scores indicate favorable conditions. After the completion of questionnaires, the intervention group received sleep health education for 4 weeks in groups of 2-5 people at healthcare centers. Each session lasted one hour. The educational program was presented by lectures, group discussion, and questions and answers. We also used a video projector, slides, and pamphlets containing images illustrating the principles of sleep health. After the completion of the intervention, the study participants completed the questionnaires again. The collected data were analyzed in SPSS. Based on the results of the Kolmogorov-Smirnov test, Paired Samples t-test was used to analyze the mean values of variations and Independent Samples t-test was applied for comparing the mean values of study variables in both groups.

3. Results

No significant difference was found between the two groups in terms of demographic characteristics, including height, weight, educational status, marital status, income, occupation, and underlying diseases; however, they had different Mean±SD ages (64±3.3 years for the interven-

tion group and 62±2.7 years for controls). The Pre-test Mean±SD score of sleep quality were 11.71±2.32 and 10.30±2.53 for the control and intervention groups, respectively. After the intervention, these values changed to 11.81±2.92 and 7.71±2.28, respectively. For insomnia intensity, the Pre-test Mean±SD scores were 15.53±3.8 and 14.27±2.56 for the control and intervention groups, respectively. After the intervention, these values changed to 15.3±2.83 and 5.92±3.35, respectively. For general health, the Pre-test Mean±SD scores were 29.24±10.8 and 27.83±7.73 for the control and intervention groups, respectively. After the intervention, these scores reduced to 26.1±7.87 and 17.51±6.89, respectively. There was a significant decrease only in the intervention group in terms of insomnia intensity and sleep quality (P<0.001). The Post-test mean score of all three variables significantly differed between the two groups (P<0.001). This indicates the improvement of sleep quality, insomnia, and general health in the samples. Comparing the general health scores suggested a significant decrease in both groups (Table 1).

4. Conclusion

Insomnia is the most prevalent sleep disorder. Moreover, sleep health education is an affordable intervention; thus, it can be used to provide primary care to the elderly in healthcare centers and increase public awareness for preventing and treating insomnia.

Ethical Considerations

Compliance with ethical guidelines

The participants were assured of the confidentiality of their information. Research objectives and method were explained to them and an informed consent was obtained from them. It a registered clinical trial approved by Shahid

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Authors' contributions

Conceptualization: Huriye Khodabakhshi, Parisa Taheri Tanjani, Maryam Mohammadi; Methodology: Koorosh Etemad; Writing the manuscript: Huriye Khodabakhshi; Supervision: Parisa Taheri Tanjani.

Conflicts of interest

The authors declared no conflict of interest.

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