

Research Paper


Effect of a Sleep Hygiene Education Program Using Telephone Follow-up Method on the Sleep Quality of the Elderly




Maryam Moradi¹, Hamideh Mohammadzadeh¹, Reza Noori², Kokab Basiri Moghadam¹, *Leila Sadeghmoghadam¹

1. Social Development and Health Promotion Research Center, Gonabad University of Medical Sciences, Gonabad, Iran.
 2. Department of Community Health and Management Nursing, Faculty of Nursing, Gonabad University of Medical Sciences, Gonabad, Iran.

Use your device to scan and read the article online



Citation: Moradi M, Mohammadzadeh H, Noori R, Basiri Moghadam K, Sadeghmoghadam L. Effect of a Sleep Hygiene Education Program Using Telephone Follow-up Method on the Sleep Quality of the Elderly (Persian)]. Iranian Journal of Ageing. 2021; 15(4):484-495. <https://doi.org/10.32598/sija.15.4.2895.1>

 <https://doi.org/10.32598/sija.15.4.2895.1>



Received: 07 Apr 2020
 Accepted: 06 Oct 2020
 Available Online: 24 Feb 2021

Keywords:
 Aging, Sleep quality, Sleep health, Telephone follow-up

ABSTRACT

Objectives Low quality sleep is one of the most common problems in old age. The present study aims to determine the effect of a sleep hygiene education program using Telephone Follow-Up (TFU) method on the sleep quality of the elderly.

Methods & Materials This quasi-experimental study was conducted on 80 eligible elderly people aged 60-74 years who were selected using a systematic random sampling method and were randomly assigned into intervention and control groups. The intervention group received a one-hour face-to-face education session on sleep hygiene. The TFU were carried out two times per week in the first month and once a week in the second month after intervention. The control group received routine care. The data collection tools were a demographic form and the Pittsburgh Sleep Quality Index (PSQI) questionnaire. The PSQI was completed for both groups immediately after the second month.

Results There was no statistically significant difference in the mean PSQI score before intervention in the intervention (8.02) and control (7.47) groups ($P=0.32$), but after the intervention, the mean PSQI score in the intervention group (5.42) was significantly reduced compared to the control group (7.67) ($P<0.001$).

Conclusion Sleep hygiene education program based on TFU improves the sleep quality of the elderly. It is recommended that health care providers use this method to improve the sleep quality of the elderly.

Extended Abstract

1. Introduction

Poor quality sleep is one of the most common complaints of elderly people seeking medical attention. Due to the physiological changes of aging, the pharmacokinetics and pharmacodynamics of drugs also change; hence, the possibility of using chemical drugs becomes more limited. One of the non-pharmacological methods to improve sleep quality is sleep hygiene education program. Sleep hygiene means improving individual, behavioral

and environmental factors that have negative effects on the sleep quality. Among the methods of care services, telephone follow-up (TFU) is a very useful method for assessing the needs for out-of-hours care of patients and reduces the number of frequent visits. It is a very useful, cheap and effective method in promoting self-care in patients that is less considered in Iran [6]. The aim of this study was to investigate the effect of sleep hygiene education program based on TFU on the sleep quality of the elderly covered by community health centers in Iran.

*** Corresponding Author:**

Leila Sadeghmoghadam, PhD.

Address: Social Development and Health Promotion Research Center, Gonabad University of Medical Sciences, Gonabad, Iran.

Tel: +98 (51) 57223028

E-mail: ls_moghadam@yahoo.com

2. Methods & Materials

This is a quasi-experimental study. Inclusion criteria were: consent to participate in the study, age 60-74 years, hearing and cognitive health, and the possibility of making telephone calls. Exclusion criteria were: Having depression, cancer, heart failure, severe lung disease, mental and physical disability, chronic pain, Alzheimer's according to the medical records, and hospitalization, death of relatives and any other similar unexpected events, and disconnection of telephone communication for 3 weeks during the intervention. The sample size was determined 40 older people for each group according to a similar study. Data collection tool was a two-part questionnaire, the first part surveys demographic information and the second part was the Pittsburgh Sleep Quality Index (PSQI).

The samples were randomly divided into control (n=40) and intervention (n=40) groups. Then, for the intervention group, a one-hour face-to-face education session was held in the form of lectures, group discussions, questions and answers. In this session, educational content were presented in terms of the importance of sleep in the elderly, sleep changes in old age, and sleep hygiene program. After the education session, TFU was done in order to follow up and ensure behavior change in the elderly in the first month, twice a week, and in the second month every week (a total of 12 follow-ups). The telephone number was also provided to the elderly for counseling. Then, immediately after the second month, the elderly were invited to refer to community health centers to complete the questionnaire on certain days. In case of not coming, the researcher went to their house to distribute the questionnaires. For the control group, routine care was provided and an educational booklet was provided to them after the end of intervention.

3. Results

The mean age of participants was 68.18 years; 62.5% were female, 53.3% were housekeeper, 76.3% were

married and most of them had primary education. The economic status of 72% of them was fair (sufficient to meet their living needs). Except for marital status, there was no statistically significant difference in demographic variables between the two groups. According to the independent statistical test results, there was no significant difference in the mean sleep quality scores between the two groups before the intervention ($P>0.05$). After the intervention, the difference between the two groups as well as the mean pre- and post-test difference was significant ($P<0.001$) (Table 1).

4. Conclusion

Sleep hygiene significantly improves the quality of sleep in the elderly. Therefore, due to the very high prevalence of insomnia and its complications in the elderly, we suggests sleep hygiene education as a non-pharmacological method for the management of sleep disorders in the elderly due to ease of use, having no complications, and improving the quality of life. This technique is more cost-effective and time-consuming compared to sleep medications, and can improve the health of the elderly dwelling in the community. This method can be taught to health center staff, nurses as well as caregivers to be used for improving the sleep quality of older people. Further studies are recommended on investigating the effect of this educational method in the elderly living in nursing homes using longer follow-up periods.

Ethical Considerations

Compliance with ethical guidelines

This study was approved by Ethical Committee of Gonabad University of Medical Sciences (Code: IR.GMU.REC.1398.020). All ethical principles are considered in this article. The participants were informed about the purpose of the research and its implementation stages. They were also assured about the confidentiality of their information and were free to leave the study

Table 1. Comparing the mean sleep quality scores of subjects in both groups before and after intervention

Sleep Quality	Mean±SD		Independent t-test Results (P)
	Intervention	Control	
Pre-test	62.3±02.8	75.2±47.7	44.0
Post-test	41.2±42.5	45.2±67.7	<001.0
Mean Dff.	40.2±60.2	23.2±20.0-	<001.0

whenever they wished, and if desired, the research results would be available to them.

Funding

This article was extracted from a research project of the Social Development and Health Promotion Research Center of Gonabad University of Medical Sciences.

Authors' contributions

Conceptualization and supervision: Leila Sadeghmoghadam and Maryam Moradi; Methodology: Leila Sadeghmoghadam, Maryam Moradi; Investigation, writing – original draft, writing – review & editing: All authors; Data collection: Reza Noori, Vahide Mohammadzade and Maryam Moradi; Data analysis: Kokab Basirimoghadam.

Conflicts of interest

The authors declared no conflict of interest.

Acknowledgments

The authors would like to thank the Social Development and Health Promotion Research Center and the Deputy for Research of Gonabad University of Medical Sciences and all participants for their cooperation.