

Surveying the relationship between the social isolation and quality of sleep of the older adults in Bam-based Elderly Care Centers in 2017

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Abstract

Background and objective: The number and population ratio of older adults are growing in all countries. Rather than living longer, the main concern of the new century is to increase the quality of life and mental welfare. The quality of life is one of the issues that affects different aspects of physical and psychological life. Social isolation, by definition, is having no-one or access to no-one to ask for help and rely on. It is one of the factors that generally affects mental-physical health of older adults. The present study is an attempt to determine the relationship between social isolation and the quality of sleep of older adults living in Bam-based elderly care centers.

Methodology: An applied study was carried out through descriptive-correlative method. Data gathering method consisted of field and library study. Study population included all older adults living in Bam, Iran in 2017. The sample group was comprised of the older adults living in Sepehr Elderly Care Center who were selected through census method. Research tools included Petersburg Sleep Quality Index and UCLA Social Isolation Scale. The collected data was analyzed using descriptive statistics and Pearson's correlation coefficient in SPSS.

Finding: Totally, 80 older adults including 36 men and 44 women took part in the study. Mean score of social isolation was 48.06 ± 15.7 and the subjects with highest social isolation score were the majority group (43.8%). Mean score of the quality of study was 16.76 ± 8.65 and the subjects with the lowest quality were the majority of the study group (38.8%). There was a significant and inverse relationship between social isolation and the mean score of quality of sleep ($r=0.675$; $p=0.000$).

Conclusion: Social isolation is one of the main factors effective on the quality of sleep of the older adults. Nurses and care providers to the older adults are required to prepare the ground for improving social interactions. Increase in the quality of sleep facilitates social interactions in the older adults.

Key words: elderly, social isolation, sleep deprivation

Introduction

Old age in Europe and the USA is defined based on calendar age. From laws and occupation points of view a senior citizen is an individual older than 65 years old. In another common way, people at the age range 65-75 are called "young-old," 75-85 as "old-old," and older than 85 as "oldest-old" [1]. Thanks to scientific advances, a surge in older adults' population has been witnessed over the past years. By 2030, the older adults' population will grow from 9% to 16% of the population in the world and from 5.6% to 17.5% of the population in Iran [2]. On the other hand, older adults experience a decrease in their capabilities both physically and mentally and they are at higher risk of diseases and mental problems. Physical diseases like heart failure, respiratory problems, osteoporosis, digestive problems, and a variety of brain traumas and mental disorders like anxiety, depression, addiction, sleep problem, and sexual problems are part of the challenges that older adults are faced with [3]. Along with the increase in life expectancy, more attention should be paid to the physical health of older adults with more emphasis on providing proper interventions to meet the emotional needs of older adults.

The necessity of more efficient psychological treatments grows with aging [4]. In addition to physical limitations caused by aging, deterioration of psychological functions is notable. Studies have shown aging intensifies psychological problems and the cognitive failure symptoms [5]. The changes induce deep effects on life and mental health and a flexible personality facilitates adaptation to changes. On the other hand, when the older adult perceives the changes negatively, a decrease in flexibility and adaptability is unavoidable [6]. Sleep problems are of the common problems among the older adult and the reason for many visits to clinics [7]. Lack of adequate sleep and low quality of sleep affects the process of treatment of physical problems and the mental pathological symptoms in older adults. Moreover, there is a vicious circle at work; the treatment process in older adults can be an external factor effective on sleep that attenuates the quality and quantity of sleep through the development of disordered sleep habits [8]. Recent studies on the quality of sleep in older adults have shown that almost one half of the subjects did not have adequate sleep overnight and there were frequent reports of day drowsiness [9]. Some authors find the lack of social support and a sense of being deserted to blame for sleep problems of older adults [4]. Taking into account vulnerability-environmental facilities theory, one of the social variables with a profound effect on the quality of sleep in older adults, and those in elderly care centers in particular, is social interaction. Residents of elderly care centers who suffer from social isolation and loss of warm relationships with family members become more susceptible to a deep sense of loneliness and life meaninglessness. Life in these centers is usually featured with the loss of meaning of life and hope, which results in a persistent sense of isolation and loneliness and further physical-mental problems [3]. Social isolation is defined as receiving no love, help, and attention from the family

members and others [10]. Studies to determine quality of sleep of the elderly and the effective factors have reported a direct relationship between sleep disorder and physical activity, flushing, anxiety, relationship with kin, and physical and care factors. Although, the majority of the participating older adults report trivial-moderate sleep disorder, taking into account popularity of sleep drugs, the actual sleep disorder must be worse than what is reported. The results have shown that the quality of sleep of older adults is related to physical, mental-social, and care factors [11]. According to Bastani et al. who surveyed the prevalence of social isolation based on social exclusion in the older adults living in Tehran, the exclusion that was objectively experienced by the subjects led to mental exclusion and social isolation eventually. Another study to determine quality of sleep and the effective factors in the retired teachers living in Kashan-Iran showed that the subjects had better quality of sleep compared with the general population [12]. Taking into account the growing population of older adults in Iran, it is essential to identify the factors effective on the improvement of physical and psychological health of individuals. In general, the negative effects of inadequate support and care provided to older adults and the effects of nurses' characteristics on the health condition and quality of sleep of older adults are mostly neglected in Iranian society. In light of this, a study in this field might be a small step toward removing ambiguities and paying more attention to the growing population of older adults in Iran. On the other hand and recognizing that prevention is better than treatment, finding proper preventive measures for the deteriorating quality of sleep in older adults and solutions to improve social support for them are essential. By devising and promoting recommendations to avoid sleep problems in older adults, the destructive consequences can be avoided. These cannot be realized unless the nurses' attitudes toward the older adults are improved and the effective factors are identified. The question asked in this work is "whether the social isolation of the older adults is related to their quality of sleep?" Thereby, the present study is an attempt to determine the relationship between social isolation and the quality of sleep in older adults living in Bam, Iran in 2017.

Methodology

With regard to the objective, the study is categorized as an applied work with descriptive-correlative design. The relationship between social isolation and the quality of sleep was examined. Study population consisted of older adults living in the elderly care centers located in Bam, Iran in 2017. A sample group was selected from the residents of Sepehr Elderly Care Center through census method (n=80). Inclusion criteria were age >60 years, no history of medical disorders (based on medical file and self-statement), no disabling chronic disease (medical file), 24/7 residence at the center, at least six months' experience of life in the center, no cigarette or alcohol dependence, and consent to participate.

The data gathering tools were a personal information questionnaire (age, gender, education, and marital

status), social isolation scale, and Petersburg's sleep quality index (PSQI).

Social isolation scale was designed by Russel et al. (1978) to survey the objective feelings of an individual about social isolation. Although, the reliability and validity of the questionnaire were acceptable, the designers introduced a new version of the scale by removing some of the weaknesses of the tool. Once more the scale was revised by Russel (1996) and the latest version with 20 statements measures social isolation of the respondent. The questions are designed based on Likert's four-point scale (never = 1, rarely = 2, sometime = 3, and always = 4). The questions 20, 19, 16, 15, 10, 9, 6, 5, and 1 are scored inversely (never = 4, rarely = 3, sometime = 2, and always = 1). Maximum and minimum scores of the scale are 80 and 20 respectively [13]. To interpret the scores, 20 - 39 is considered as low social isolation, 40-60 as moderate social isolation, and 61-80 as high social isolation. Cronbach's alpha for the social isolation scale was calculated by Russel et al. (1995) between 0.94 and 0.89 for adults, students and teachers.

Petersburg's sleep quality index is one of the renowned tools that measures the quality of sleep over the past month. The questionnaire was introduced by Daniel J. Bois (1989). Studies have reported good correlation between the results of the questionnaire and lab tests. The questionnaire is a self-statement tool. It is comprised of 9 questions and since question 5 consists of 10 secondary statements, the total number of statements is 18. The ten secondary statements of question 5 and the questions 6-9 are designed based on Likert's four-point scale (0-3). The questionnaire measures seven sub-scales of the quality of sleep including subjective quality of sleep, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbance, use of sleep medication, and daytime dysfunction. The scores obtained for each subscale are categorized as normal, trivial problem, moderate problem, and severe problem. The sum of the scores of all sub-scales gives the total score that ranges from 0 to 21 [14]. The total score 0-7 is interpreted as good, 8-14 as moderate, and 15-21 as low. Bios et al. (1989) reported the internal consistency of the tool using Cronbach's alpha equal to 0.83.

To initiate the study, the author secured a letter of recommendation from the Islamic Azad University-Isfahan (Khorasgan) addressed to the head of Sepehr Elderly Care Center. The subjects expressed their consent orally and in writing. Eighty older adults living in the center were selected through census method in Autumn 2017. Immediately after selecting the participants, they were interviewed and the tools were filled out for each one. Each participant was given 10-20 minutes to fill out the tools and they were recommended to do so by taking into account their mental condition and personality. In addition, the participants were ensured about confidentiality of their information and the subjects were informed about the date of administering the questionnaire one day in advance. In the case that any of the respondents was not ready to fill out the questionnaire, the process for that participants was postponed to the next day.

Descriptive statistical tools like mean and standard deviations in SPSS were used to describe and summarize the data. To test the hypotheses, MANOVA and Pearson's correlation coefficient were used.

Findings

The majority (37.5%) of the respondents had high school diploma and 16.3% had associates' degree. In addition, the majority (62.5%) were married and 18.8% were widow(er). The number of female participants was higher than that of male participants and mean age of the subjects was 86.37 years. Table I lists the demographics of the participants.

In terms of social isolation, the findings showed that the majority (43.8%) suffered from high social isolation. Mean score of social isolation of the subjects was 48.06 ± 15.7 ; this figure is higher than UCLA social isolation score. In addition, the majority (38.8) had low quality of sleep and mean score of quality of sleep was 16.76 ± 8.65 . This score is higher than global means score of PSQI. Table 2 lists the data about social isolation and quality of sleep of the subjects.

As listed in the table above, 22.28% had the highest means score of sleep quality, which means the lowest quality of sleep; this group also had the highest score of social isolation. Moreover, 5.83% had the lowest score of sleep deprivation, which means the highest quality of sleep; this group reported low social isolation. Pearson correlation test was significant, which means there was an inverse relationship between social isolation and the mean score of sleep quality ($P=0.000$, $r=-0.679$).

Discussion

There was an inverse relationship between social isolation and quality of sleep of the subjects; so that the higher social isolation scores were observed in the subjects with the lower quality of sleep. That is, the elderly with high social isolation had a lower quality of sleep. While no similar study was found in this area, Asgharpour and Eibpoush (2011) reported almost consistent results in their study titled "Determining quality of sleep of the older adults living in Kahrizak Care Center and the effective factors." They mentioned a relationship between quality of sleep and physical activity, flushing, anxiety, relationship with kin, physical/mental factors, and care services.

Given that the older adults are a unique group of society with special needs, providing care and nursing services to them entails specially trained experts with adequate practical and scientific capabilities. Although, providing care to the elderly is the job of a team of geriatric medicine specialists, geriatric psychiatrists, geriatric nurses, physiotherapists, psychologists, work therapists, nutrition specialists, social support experts and the like, the role of the geriatric nurse is unique and of higher importance taking into account the continuous interaction between the nurse and the older adult and the role of nurse as the coordinator of the team. The necessity of tailored health services based on the needs of the target community

Table 1: Demographics of the participants (2017)

Variable		N	%
Education	Junior high school	19	23.8
	Highs school	30	37.5
	Associates' degree	13	16.3
	Bachelors' degree	18	22.5
Marital status	Married	50	62.5
	Widow(er)	15	18.8
	Divorced	15	18.8
Gender	M	36	45.0
	F	44	55.0
Age (year)	60-64	23	28.8
	65-69	20	25.0
	70-7	28	35.0
	75-79	9	11.3

Table 2: Social isolation and mean quality of sleep score of the subjects

Social isolation	N	%	Mean quality of sleep	R	P
Low	12	15	5.83		
Moderate	33	41.3	14.87		
High	35	43.8	22.28	0.679	0.000
Total	80	100	76.16		

and, most importantly, home nursing services to older adults with severe and chronic mental, physical, and social problems is another key issue to be covered by geriatric nursing programs. Geriatric nursing services are provided at chronic and intensive care settings or outside the hospital settings and the objective is to improve and preserve functional capabilities and help the elderly to use their energy to improve their independence. The nurse helps the patient to preserve maximum physical abilities and the ability to carry out continence affairs and adapt to spiritual, mental, social, and physical limitations. The competent and authorized geriatric nurse has specialized knowledge about acute and chronic changes in the older adults [13].

Conclusion

The findings indicated an inverse relationship between social isolation and the quality of sleep in older adults. To improve the quality of sleep in older adults, nurses and cares providers need to provide the ground for more social interactions. In addition, with higher quality of sleep, older adults can have better social interactions. Proper education about preparing the ground for social interactions in older adults should be provided to the nurses and geriatric cares

providers. In addition, the environment and mood of older adults must be managed to improve their quality of sleep. Communication skills with older adults must be a part of the education provided to nurses and nursing programs. In addition, further studies in this field may shed more light on all aspects of the topic.

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