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The Influence of Islamic Ritual Training on Primary Sleep Disorders among Nurses

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Abstract

Background and Objective: Sleep is sign of God's wisdom, basic human need, has spiritual dimension. Islam provided commands for it. Nurses due to job stress and shift working, are at risk of sleep disorders. This study aimed to determine the effect of Islamic Ritual Trainings on primary sleep disorders among nurses.

Materials and Methods: In quasi-experimental study 36 military nurses with primary sleep disorder, (approved by the General Health Questionnaire, Depression, Anxiety and Stress Scale, Pittsburgh Sleep Quality Index and Epworth sleepiness scale) were trained Islamic Ritual sleep, by Precede-Proceed Model. Data were analyzed.

Results: The initial sample size in this study, was 272 nurses. 26% of nurses had mental health problems: depression 24/9% (17/5% mild to moderate depression and 7/5% severe depression) Anxiety 27/9% (19% mild to moderate anxiety and 8/9% severe anxiety) 8/23% stress. Of the 146 healthy screened nurses (with mental and physical health and without substance abuse) 27.7% (n: 36) nurses who suffered from primary sleep disorders, were being trained the Islamic Ritual. After training a statistically significant increase in the scores of knowledge and attitudes ($p < 0.05$) and a significant increase in the mean score of sleep quality ($p < 0.001$) were found.

Conclusion: According to findings of study, Islamic ritual trainings reduced sleep disturbance of nurses. It can be recommended.

Keywords: Nurses; Sleep Disorders; Islamic Ritual; Precede-Proceed Model

Background

Sleep is a biological rhythm with regular and cyclical nature, easily reversible recurring pattern, combined with relative calm and an increase in the threshold of response to external stimuli [1], one of the physiological needs, essential for mental and physical health [2], that reconstructs physical and emotional forces [3].

Primary sleep disorders often arise after conditioning due to abnormal sleep-wake mechanism [2]. They are dangerous for physical-mental health [4]. Poor quality of sleep is a stressful situation [5] that causes: anxiety, fatigue, difficulty cell repair, loss of memory, reduced quality of life [6,7] and affects immune system activities, increase energy consumption up to 25% [8]. While the ideal sleeping with high quality, provides ideal awakening, mental competence, well-being [9] welfare and better mental performance [10].

Unfortunately, the prevalence of sleep disorders in the general population 10-15% and 20% in young adults [11] and 4-5% severe daily drowsiness in Iran [12] 11/7% in Australia, 35 to 40% in America, are ignored. This Ignorance can cause: health problems, work-related accidents, human errors, reduced productivity, chronic fatigue syndrome, drowsiness, loss of consciousness, even catastrophic events [13]. This problem among nurses, who provide sensitive care through the day and night, is more important. 36/9% of hospital staff are working at night and most of them are nurses) [14]. 25% of American workers and 17.6% of employees in Europe, have night shifts in his career and 60-70% of shift workers complain of sleep disorders [15]. Sleep disorders have been

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Table 1: Demographic characteristics of participants.

	Variable	Number	%
Gender	Male	16	44.4
	Female	20	55.6
Marital status	Single	4	11.1
	Married	32	88.9
Number of children	No children	9	25
	1	9	25
	2	14	38.9
	3 to 5	4	11.1
Educational level	Postgraduate Diploma in Nursing	2	5.6
	bachelor of Nursing	34	94.4
Working hours	Up to 42 hours	17	47.3
	More than 43 hours	19	52.7
Job experience	Less than 6 years	6	16.7
	7 to 12 years	11	30.5
	13 to 18 years	11	30.5
	19 and more than 19 years	8	22.3
Working shift	Morning	8	2.22
	Night	1	2.8
	Evening and night	5	13.9
	Morning, evening, and night	20	55.6
	Morning and night	2	5.6
Night shifts per week	No night shift	9	25
	One night	5	13.9
	Two nights	11	30.6
	Three nights or more	11	30.6
Additional working shifts	yes	26	72.2
	no	10	27.8

reported in Iranian nurses included: 66% trouble falling asleep, 55% sleep interruptions, 37% less than 6 hours of continuous sleep, 68% feeling tired after awaking [16]. Among the young nurses in Tehran, these disorders included: sleep continuity disturbance 72/4%, trouble falling asleep 55/8%, early waking 52/7%, dream abnormalities 36/9%, extreme sleepiness 65/5% [17]. French nurse suffer from the early awaking caused by their shift [18].

Several factors in military nurses exacerbate sleep disorders such as: stressful occupation, emergency and disaster service, the necessity of adherence to the rules, individual freedom limitations, having responsive behavior, worrying about the moment of the incident, intervention in the crisis [19,20]. Since the effectiveness of non-pharmacological treatments is more durable and without side effects, several studies have been conducted to reduce sleep disorders in patients [21] control of environmental and personal factors [22] use of blindfolds and earplugs [23] amendment of environmental factors, adjust the lighting and noise reduction [24] massage [25] aromatherapy [26] spiritual care [5]. But research has not been done to reduce the sleep disorder of military nurses. Considering the cost of sleep-related problems, stressful nature of nursing job, double pressure in military environments, changing sleep patterns in shift workers, the impact of sleep on health, as well as the cultural context of Iran and several studies about the spiritual health and lack

of research on the Islamic rituals education on sleep disturbances of military nurse, this study aimed to investigate "the effect of the Islamic rituals training on primary sleep disorders in military nurses" based on precede-proceed model.

Methods

In quasi-experimental research with multi-stage sampling with calculating the percentage of sleep disorders and the sample size by $\alpha=0/05$ and the peak incidence in similar studies $P=28\%$, the initial sample size ($n=309$) were estimated. Therefore, after describing the purpose of the research, and obtaining the written informed consent, 310 nurses working in 29 wards of hospital were selected by census method and responded to demographic, General Health Questionnaire (GHQ-28), Depression-anxiety-stress Scale (Dass-21) questionnaires and 146 of them were diagnosed with physical and mental health. In the second phase of the study, they responded to the Pittsburgh Sleep Quality Index (PSQI), Epworth Sleepiness scale (ESS) and sleep attitude scale questionnaire.

Statistical analysis showed that 38 nurses had primary sleep disorders. An educational intervention was carried out based on Islamic Ritual training with Precede-Proceed Model for 38 nurses with primary sleep disorders. Participation in similar training sessions, an incident that leads to exposure to the crisis, such as death, immigration or accident, was exclusion criteria.

Instrument

For data collection, the following questionnaires were used during three stages of the study:

1. Demographic information questionnaire that included items: age, gender, marital status, number of children, education, job experience, working hours per week, current working ward, working shift, and monthly average income (Table 1).
2. General Health Questionnaire (GHQ-28) [27-29] which examines the somatization, anxiety and sleep disorders, impaired social functioning, depression and suicidal tendencies, mental and physical health.
3. Depression-anxiety-stress Scale (Dass-21), which studies the depression, anxiety, and stress [30,31].
4. With open questions about smoking, alcohol, pain medication, samples with addiction, were screened.
5. Pittsburgh Sleep Quality Index (PSQI) that measures: the person's attitude to the quality of sleep, a general description of the quality of sleep, delays in falling asleep, duration of effective sleep, adequate sleep, sleep disorders (waking at night), use hypnotic drugs, function in the morning in four weeks ago [32,33].
6. Epworth Sleepiness scale (ESS)(With internal stability 95%) [34,35] that examines daily sleepiness amount.

Finally tool used in the study was knowledge and attitude to sleep questionnaire.

Validity reliability

For assess content validity of knowledge and attitude questionnaire, the scale was given to 20 experts in the fields of health education, social medicine, nursing and epidemiology, and their critical comments were taken into account. Test-retest method was used to check the internal consistency reliability of the knowledge

Table 2: Comparison of knowledge, attitude, and sleep quality scores before and after intervention.

Variable	Time				Significance level
Knowledge	Before intervention	36	44.13	19.4	P<0.001* (Paired t-test)
	after intervention	36	69.17	27.4	
Attitude	Before interventions	36	81.91	20.6	P<0.004* (Paired t-test)
	after intervention	36	83.95	82.6	
Quality of sleep	Before intervention	36	33.7	68.1	P<0.001* (Paired t-test)
	after intervention	36	69.4	53.1	

and attitude questionnaire ($r=0.8$).

Intervention

For intervention, two 45-minute sessions of individual training for each nurse was considered and individual counseling were provided. Besides providing training booklet about sleep hygiene, an educational pamphlet about Islamic sleep guidelines were prepared and distributed. Every 10 days, short messages were sent to them by education topics. After two-month interval, a post-test was conducted.

Statistical analysis

SPSS 24 was used for data analysis. The Pearson correlation coefficient paired t-test, independent t-test, ANOVA, and non-parametric tests such as Chi Square and Mann-Whitney U Test were used. All values were set at 0.05.

Results

The mean score of knowledge (the first enabling factor) was 13.44 (19.4) before the intervention. After the intervention, the mean score of knowledge increased to 17.69 (27.4), which is statistically significant ($p<0.001$). Moreover, the mean scores of attitude (as the second enabling factor) before and after the treatment were 81.91 (6.2) and 83.95 (6.82). As clear, the difference is statistically significant ($p=0.004$). As Table 2 shows, there is a statistically significant increase in the scores of attitude and knowledge after the intervention. In this study, only 33.3% of the participants carried out sleep-related practices before the intervention. While the number increased to 80.6% after the intervention which is statistically significant ($p<0.02$). According to Table 3, Sleep latency ($P<0.04$), Sleep duration ($P<0.001$), Sleep efficiency ($P<0.001$) were improved after intervention. There is statistically significant increase in the scores of sleep duration, sleep latency, sleep efficiency after training.

Discussion

Effect of training based on Precede-Proceed model on knowledge

Table 3: Comparison sleep duration, sleep latency, sleep efficiency, and sleep disorders after and before intervention.

Variable		before intervention	before intervention	after intervention	after intervention	Significance level
		number	%	number	%	
Sleep latency	Half an hour and less	22	1.61	31	1.86	P<0.04* (Paired t-test)
	More than half an hour	14	9.38	5	9.13	
Sleep duration	6 hours and higher	11	6.3	30	3.81	P<0.001* (Paired t-test)
	Less than 6 hours	25	4.69	6	7.18	
Sleep efficiency	85% and higher than that	9	25	32	9.88	P<0.001* (Paired t-test)
	Less than 85%	27	75	4	1.11	
Sleep disorders	less than one time per week	31	1.86	34	4.94	P<0.04* (Paired t-test)
	More than one time per week	5	9.13	2	5.6	

and attitude of nurses with results of previous studies are compatible [36,37]. Moreover, the mean scores of attitude before and after intervention was statistically significant ($p=0.004$). There was a willingness to participate in a faith-based training that impacted on their attitude [38]. Self-report of the intervention group showed that after training, performing Islamic rituals sleep, significantly increased in samples, because Islamic guidelines include the deepest aspect of human life and experiences [39]. Grateful to God associated with improved sleep quality, decreased sleep disorders [40] which is consistent with the findings of this study, but the study of Yang, 2008 is not consistent [41]. Delays in falling asleep more frequently reported among sleep problems [42]. Quality of sleep in women is lower than men [43] that are consistent with the results of the study.

Prayer as a spiritual care [44] can shape our destiny by choosing manner of relationship with God, people, ourselves and the whole universe, thus leads to spiritual health [45,46]. Health means having a sound heart (calm spirit with a sense of hope and love, security and happiness) is achievable through faith and piety [47]. Mental relaxation, health promotion, faster recovery of disease is achievable by prayer [48]. Prayer improving quality of life by increasing the daily spiritual experiences [49]. Implementation of religious evidence-based guidelines of pastoral care, reduce anger and creates a perfect calm before sleep [50].

Conclusion

Considering the findings of the study, Islamic ritual training can increase sleep quality of the nurses. It can be used as a drug-free approach to the followers of monotheistic religions.

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Authors' Contribution

- 1) Conception and design: Mino Asadizandi and Hormoz Sanayi nasab,
- 2) Conduct research: Roughage Sayyari,
- 3) Analysis: Abbas Ebadi,
- 4) Drafting the article: Mino Asadzandi,
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