

ORIGINAL ARTICLE

Medicine Science 2018;7(1):101-5

Assessment of depression and quality of life in intensive care unit nurses in a tertiary care hospital

Mehmet Sargin¹, Mehmet Selcuk Uluer², Zubeyir Cebeci³, Fatma Sargin⁴

¹Isparta City Hospital, Department Anesthesiology and Reanimation, Isparta, Turkey

²Konya Training And Research Hospital, Department Anesthesiology and Reanimation, Konya, Turkey

³Ordu University Faculty of Medicine, Department Anesthesiology and Reanimation, Ordu, Turkey

⁴Eğirdir Bone, Joint Diseases Treatment and Rehabilitation Hospital, Department Paediatrics, Isparta, Turkey

Received 30 July 2017; Accepted 03 October 2017

Available online 05.01.2018 with doi: 10.5455/medscience.2017.06.8719

Abstract

Previous studies have shown that intensive care units (ICU) are among the most aggressive, tense and traumatic environments in the hospital. Intensive care units can cause physical and mental frazzle and damage in health care workers as much as they are for patients. In this study, it was aimed to evaluate depression and quality of life in ICU nurses in a tertiary care hospital. One hundred twenty ICU nurses, working more than 2 years in second and tertiary adult intensive care units, was included. The SF-36 Quality of Life Scale was used to assess the quality of life. The Beck Depression Inventory was used to assess depression. The demographic data of the participants were also questioned through a separate form. The average age of nurses involved in the study 31.29 years old and 65% female, 70% married, 63% have children, and 31% were smokers. There was no statistically significant difference in the quality of life and depression scale scores of the participants according to age, gender, marital status, child ownership status, duration of intensive care study and smoking ($p > 0.05$). In conclusion, sociodemographic characteristics such as age, gender, marital status, having children, duration of intensive care study and smoking did not affect the quality of life and depression level of intensive care nurses working in a tertiary hospital.

Keywords: Depression, Quality of life, nurse, intensive care units

Introduction

The fatigue that people experience in the working environment is one of the most important factors in the emergence of diseases caused by stressful stimuli in that environment. Also, according to the literature, health professionals are directly affected by living with and working with diseases and are therefore involved in direct emotional work, which can lead to involuntary defensive mechanisms, which create an exhausting and stressful process [1]. As a consequence of direct and indirect effects of these feelings, depression and decrease in quality of life are common in health workers.

The concept of quality of life is very broad and for this reason the debate still continues in the literature. Health-related quality of life is a broad concept that encompasses many factors directly or indirectly related to health. Just as in the concept of general quality of life, there is no universally accepted definition of health-related quality of life. The World Health Organization (WHO)

describes health-related quality of life; in the context of the culture and values system they live in; their perceptions of their positions in life in terms of their aims, expectations, standards and concerns [2].

Depression is used to indicate a symptom, syndrome and one or more illnesses as well as a normal state of affection (grief). Situations characterized as syndromes include mood changes (Nervousness, lack of ability to feel pleasure, apathy), including depression, cognitive, psychomotor, and vegetative changes (Sleep and appetite). The main symptoms and symptoms are: Depressed mood, feelings of sadness, feeling of self-devaluation and guilt, inability to enjoy the vast majority of activities, tiredness, feeling of loss of energy, reduction in thinking, decision-making and concentration skills. It also contains the following physiological changes: Changes in sleep and appetite and decreased sexual interest [1].

Studies have shown that intensive care units (ICU) are among the most aggressive, tense and traumatic environments in the hospital [1]. Intensive care units can cause physical and mental wear and damage in health care workers as much as they are for patients. In addition, these stressful factors in ICU have been shown to cause mental disorders, including gastrointestinal, cardiovascular disturbances and mainly depression, as well as changes in sleep

*Corresponding Author: Mehmet Sargin, Isparta City Hospital, Department Anesthesiology and Reanimation, Isparta, Turkey

E-mail: mehmet21sargin@yahoo.com

patterns of shift work of intensive care nurses [3]. In addition to all these, there is the risk of changing the quality of life of nurses, especially intensive care nurses, as they often interact with people who need care [4]. In this study, it was aimed to evaluate depression and quality of life in intensive care nurses in a tertiary care hospital.

Material and Methods

This study was conducted between 15.10.2016 - 15.01.2017 in Konya Training and Research Hospital after approval of the Necmettin Erbakan University Ethics Committee (Decision Number 2016/670) and the written approval of intensive care nurses who agreed to participate in the study. One hundred twenty ICU nurses with ICU certification, working more than 2 years in second and tertiary adult intensive care units, were included. Nurses who do not agree to participate in the study and who fail to complete the required forms for the study are excluded from the study.

SF-36 Quality of Life Scale, consisting of 36 items and 8 sub-categories [Physical Function (FF), Physical Role Strength (FR), Emotional Role Strength (ER), Energy, Vitality (EV), Mental Health (MH), Social Functioning (SoF), Pain (P), General Health Perception (GHP)], was used to assess the quality of life. The scale evaluates the last four weeks. SF-36 Quality of Life Scale assesses quality of life with subscales between 0-100 points and 0 indicates poor health status, 100 indicates good health status, and the scale does not give a total score [5].

The Beck Depression Inventory (BDI) was used to assess depression. In Turkey, the scale was validated by Hisli (1988) and is a depression screening test consisting of 21 questions with a score ranging from 0 to 3. The highest score to be taken from the BDI is 63 and the lowest score is 0. The scores obtained from the scale 17 and above were defined as depressed symptom [6].

Implementation of the scales was accomplished by distributing in a sealed envelope and ensuring the protection of personal data. In addition, demographic data such as age, gender, marital status, whether they have children, duration of intensive care study and whether they use cigarettes were also questioned by a separate form.

Statistical analyses were performed with SPSS 15.0 software (SPSS Institute, Chicago, IL, USA). Descriptive statistics are shown in frequency and row-column percentage tables. Differences between numerical variable groups were assessed by t-test for independent groups when normal distribution condition was provided, and by

Mann-Whitney U-test when normal distribution condition was not provided for two groups. One-way ANOVA was used in the presence of more frequent group presence, normal distribution condition, and Kruskal-Wallis test when normal distribution condition was not provided. Differences between categorical variable groups were determined by Pearson chi-square and Fisher's exact tests. A $P < 0.05$ was considered statistically significant.

Results

In this study, the data of 120 intensive care nurses who were working more than 2 years in medical, surgical and mixed, secondary and tertiary stage adult intensive care units were evaluated. The demographic data of the nurses involved in the study are summarized in Table 1. The average age of the nurses included in the study was 31.29, 65% were women, 70% were married, 63% were child owner and 31% were smoking.

Table 1. The demographic data of the nurses

Age, yr	31.29±5.23
Gender (F/M)	78 (65%) - 42 (35%)
Marital status (Married / Single-Divorced-Widowed-Separated)	84 (70%) - 36 (30%)
Child's ownership (Yes-No)	76 (63.3%) - 44 (36.6%)
Duration of intensive care study, yr	4.32±2.52
Smoking (No-Yes)	83 (69%) - 37 (31%)

Values are mean ± standard deviation or proportion

SF-36 and BDI score of the nurses involved in the study are summarized in Table 2.

Table 2. SF-36 and BDI score of the nurses

FF	77.18±23.94
FR	31.55±20.84
ER	33.30±23.35
EV	53.43±21.74
MH	64.69±19.39
SF	60.07±24.72
P	70.99±22.15
GHP	61.04±19.49
BDI	9.36±3.25

Values are mean ± standard deviation

The comparison of the SF-36 and BDI point averages of the nurses involved in the study according to age groups is summarized in Table 3. There was no statistically significant difference between the SF-36 subgroups and BDI scores according to age groups ($p > 0.05$).

Table 3. The comparison of the SF-36 and BDI point averages of the nurses involved in the study according to age groups

	≤ 25 n(32)	26-34 n(45)	35≤ n(43)	p
FF	88.26±15.16	73.04±27.42	73.88±7.90	0.052
FR	36.61±20.09	29.87±22.34	31.25±19.93	0.663
ER	33.91±19.74	31.67±24.95	34.70±24.36	0.844
EV	53.26±21.84	50.25±21.86	57.22±21.56	0.373
MH	64.61±18.09	60.68±20.41	66.44±18.88	0.329
SF	61.34±27.24	55.00±22.25	64.93±24.19	0.206
P	70.00±23.32	70.24±22.20	72.56±21.86	0.871
GHP	64.60±19.71	58.04±21.30	64.69±16.74	0.241
BDI	8.92±8.01	10.65±10.88	8.22±7.37	0.493

Values are mean ± standard deviation

The comparison of the SF-36 and BDI point averages of the nurses involved in the study according to gender groups is summarized in Table 4. There was no statistically significant difference between the SF-36 subgroups and BDI scores according to gender groups ($p > 0.05$).

Table 4. The comparison of the SF-36 and BDI point averages of the nurses involved in the study according to gender groups

	Female n(75)	Male n(45)	p
FF	76.71±20.80	77.85±29.61	0.821
FR	31.33±20.91	31.78±21.29	0.919
ER	32.54±24.19	34.28±22.12	0.784
EV	50.37±21.43	58.82±21.65	0.063
MH	63.70±18.71	64.68±18.99	0.801
SF	59.14±24.50	61.07±24.95	0.750
P	68.47±22.85	75.00±20.13	0.157
GHP	58.73±20.06	67.45±16.36	0.053
BDI	10.38±9.41	9.05±8.56	0.163

Values are mean ± standard deviation

The comparison of the SF-36 and BDI point averages of the nurses involved in the study according to marital status is summarized in Table 5. There was no statistically significant difference between the SF-36 subgroups and BDI scores according to marital status ($p > 0.05$).

Table 5. The comparison of the SF-36 and BDI point averages of the nurses involved in the study according to marital status

	Married n(75)	Single-Divorced-Wid- owed-Separated n(45)	p
FF	75.56±24.56	80.64±22.83	0.329
FR	29.22±21.54	36.69±18.80	0.098
ER	31.90±25.00	35.96±19.34	0.424
EV	53.78±20.99	52.09±23.83	0.720
MH	63.66±18.68	64.90±21.18	0.768
SF	57.92±22.81	64.11±21.93	0.247
P	70.42±21.49	71.37±23.71	0.843
GHP	62.00±18.70	61.09±20.95	0.829
BDI	9.69±9.40	8.93±8.55	0.707

Values are mean ± standard deviation

The comparison of the SF-36 and BDI point averages of the nurses involved in the study according to child's ownership is summarized in Table 6. There was no statistically significant difference between the SF-36 subgroups and BDI scores according to child's ownership ($p > 0.05$).

The comparison of the SF-36 and BDI point averages of the nurses involved in the study according to duration of intensive care study is summarized in Table 7. There was no statistically significant difference between the SF-36 subgroups and BDI scores according to duration of intensive care study ($p > 0.05$).

The comparison of the SF-36 and BDI point averages of the nurses involved in the study according to smoking is summarized in Table 8. There was no statistically significant difference between SF-36 subgroups and BDI scores of ICU nurses who smoked or not ($p > 0.05$).

Table 6. The comparison of the SF-36 and BDI point averages of the nurses involved in the study according to child's ownership

	Child owner n(76)	Not a child owner n(44)	p
FF	74.92±23.93	81.11±24.08	0.216
FR	29.54±21.22	35.06±20.22	0.204
ER	32.90±25.47	34.66±19.51	0.628
EV	55.07±20.58	49.97±23.79	0.260
MH	64.60±18.77	63.09±20.07	0.691
SF	65.25±23.10	57.15±27.65	0.477
P	71.28±22.63	69.65±21.29	0.701
GHP	62.48±18.78	60.33±20.45	0.593
BDI	9.43±9.01	8.50±8.09	0.075

Values are mean ± standard deviation

Table 7. The comparison of the SF-36 and BDI point averages of the nurses involved in the study according to duration of intensive care study

	<5 yr n(70)	5 yr ≤ n(50)	p
FF	75.93±22.74	74.05±25.97	0.323
FR	22.22±20.08	24.99±20.83	0.066
ER	33.15±23.67	33.34±23.08	0.886
EV	53.67±22.52	53.01±20.59	0.883
MH	68.09±20.29	62.59±17.69	0.533
SF	62.80±25.11	55.20±23.71	0.136
P	72.76±21.97	67.83±22.42	0.281
GHP	62.71±17.50	60.56±24.42	0.647
BDI	9.50±9.07	9.02±8.91	0.783

Values are mean ± standard deviation

Table 8. The comparison of the SF-36 and BDI point averages of the nurses involved in the study according to smoking

	Not smoking n(83)	Smoking n(37)	p
FF	77.52±22.43	76.12±27.77	0.787
FR	31.13±20.67	30.24±21.83	0.692
ER	32.82±22.19	33.85±26.35	0.838
EV	52.74±21.92	54.48±21.79	0.713
MH	65.69±18.51	60.25±21.06	0.124
SF	60.91±24.59	57.25±25.31	0.495
P	71.69±20.96	68.56±24.65	0.506
GHP	62.43±18.88	60.12±20.49	0.584
BDI	8.74±8.44	10.09±9.91	0.240

Values are mean ± standard deviation

Discussion

In this study, as a result of the evaluation of the data of 120 intensive care nurses working in medical, surgical and mixed, secondary and tertiary stage adult intensive care units for more than 2 years, age, gender, marital status, having children, duration of intensive care work, and consumption of cigarettes did not affect the quality of life and depression level.

In studies evaluating the sources of stress affecting the stress levels of nurses, it was shown that the first three orders as stress factors are the workload, the uncertainty in the treatment applied and the

death process [7,8]. It is evident that intensive care is more stressful than other units because of the presence of patients who need urgent intervention and precise follow-up and the greater burden of work [9]. Working in intensive care unit may increase the level of depression with physical and emotional strain in nurses due to these factors. In a study conducted with intensive care nurses, it was found that the level of emotional exhaustion was high in nurses and in this case they were related to depression [10]. In another similar study, it was reported that depressive development tendencies were more frequent in intensive care nurses [11].

There are studies in the literature where different sample groups are used to assess depression and quality of life of health professionals. It is also a natural result that different results come out as a result of these differences in the sampling groups.

In a study using a sample group of nurses working in different units in different hospitals in the same city, shown that, unlike the results of our study, the age and sex variables of nurses statistically affected the quality of life scores [12]. It was also found that the scores of depression of single / widowed / divorced / separated living nurses were higher. The sample group in this study is different from our study, but showing that depression scores of nurses working in intensive care unit are higher and this is a good indication that the target sample group in our study is correctly selected. Furthermore, unlike our study, it was shown that the scores of depression of single / widowed / divorced / living nurses were higher, but there are different opinions about this subject in the literature [13-15]. However, the sample group in these studies does not include only intensive care nurses unlike ours. In a study investigating the prevalence of depression in intensive care nurses, it was stated that divorce in intensive care nurses is significantly related to depression [1].

It has also been shown in different studies that, unlike the results of our study, there is a decline in quality of life scores as well as an increase in age [16,17]. However, we think that the age averages of the sample groups in these studies are much higher than our sample group, and this difference can be caused by this.

Similar to the relationship between the age and the quality of life stated in the literature, the decrease in the quality of life as the years of study of nurses are shown in different studies [12,17-19].

In a study evaluating quality of life in nurses working in emergency and intensive care units, male nurses were found to be in better condition than women in terms of MH, P, EV, GHP, FF and FR [18].

In the studies of Zaher and colleagues, nurses working in intensive care unit and nurses working in internal and surgical services evaluated depression, anxiety and stress situations [20].

Nurses' workplaces were associated with depression and stress, and it was shown that working in intensive care was a significant factor. It has been reported that the incidence of depression and stress among nurses in both internal and surgical units is lower than nurses working in intensive care units. In this study, variables such as age and marital status were not related to depression, anxiety, and stress incidence, similar to the results of our study. Zaher and colleagues have shown similar results in relation to depression and stress in the work places of nurses [21,22].

Conclusions

In conclusion, some sociodemographic characteristics such as age, gender, marital status, having children, duration of intensive care study and cigarette consumption did not affect the quality of life and depression level of intensive care nurses working in a tertiary hospital. However, it is obvious that there is a need for further studies in which specific groups of samples are selected, such as that of our study, which will be formed by having more participants and examining more detailed sociodemographic characteristics.

References

1. Divane de Vargas, Ana Paula Vieira Dias. Depression prevalence in Intensive Care Unit nursing workers: a study at hospitals in a northwestern city of São Paulo State. *Rev Lat Am Enfermagem*. 2011;19(5):1114-21.
2. Testa MA Simonson DC. Assessment of Quality-of-life Outcomes. *N Engl J Med*. 1996;334(13):835-40.
3. Costa ES, Morita I, Martinez MAR. Nursing staff perceptions of the effects of shift work on health and social life at the São Paulo State University hospital. *Cad Saúde Pública*. 2000;16(2):553-5.
4. Baba V, Galaperin BL, Lituchy TR. Occupational mental health: a study of work-related depression among nurses in the Caribbean. *Int J Nurs Stud*. 1999;36(2):163-9.
5. Koçyiğit H, Aydemir Ö, Ölmez N, Memiş A. SF-36'nın Türkçe için güvenilirliği ve geçerliliği. *İlaç ve Tedavi Dergisi*. 1999;12:102-6.
6. Hisli N. Beck depresyon envanterinin geçerliği üzerine bir çalışma. *Psikoloji Dergisi*. 1988;6(23):118-26.
7. Önder G, Aybas M, Önder E. Hemşirelerin Stres Seviyesine Etki Eden Faktörlerin Öncelik Sırasının Çok Kriterli Karar Verme Tekniği ile Belirlenmesi. *Optimum Ekonomi ve Yönetim Bilimleri Dergisi*. 2014;1(1):21-35.
8. Kanbay Y, Üstün B. Kars ve Artvin illerinde hemşirelerin iş ortamı ile ilgili stresörleri ve kullandıkları başatma yöntemlerinin incelenmesi. *Dokuz Eylül Üniversitesi Hemşirelik Yüksekokulu Elektronik Dergisi*. 2009;2(4):155-61.
9. Nur D. Kamu hastanelerinde çalışan sağlık personelinde iş doyumu ve stres ilişkisi. *Klinik Psikiyatri*. 2011;14(4):230-40.
10. Tunçel Yİ, Kaya M, Kuru RN, Menteş S, Ünver S. Onkoloji hastanesi yoğun bakım ünitesinde hemşirelerin tükenmişlik sendromu. *Türk Yoğun Bakım Derneği Dergisi*. 2014;12:57- 62.
11. Özgür G, Yıldırım S, Aktaş N. Bir üniversite hastanesinin ameliyathane ve yoğun bakım hemşirelerinde ruhsal durum değerlendirmesi. *Celal Bayar Üniversitesi Hemşirelik Yüksekokulu Dergisi*. 2008;12(2):21-30.
12. Merve Kızıllırmak, Satı Demir. Investigation of depression and quality of life in nurses working in hospitals. *TAF Prev Med Bull*. 2016;15(2):132-40.
13. Altıntoprak AE, Karabilgin S, Çetin Ö, Kitapçıoğlu G, Çelikkol A. Hemşirelerin iş ortamlarındaki stres kaynakları; depresyon, anksiyete ve yaşam kalitesi düzeyleri: Yoğun bakım ve yataklı birimlerde hizmet veren hemşireler arasında yapılan bir karşılaştırma çalışması. *Türkiye'de Psikiyatri*. 2008;10(1):9-17.
14. Chiang YM, Chang Y. Stress, depression, and intention to leave among nurses in different medical units: Implications for healthcare management/nursing practice. *Health Policy*. 2012;108(2-3):149-57.
15. Gökçen C, Zengin s, Oktay MM, Alpak G, Al B, Yıldırım C. Burnout, job satisfaction and depression in the healthcare personnel who work in the emergency department. *Anatol J Psychiatr*. 2013;14:122-8.

16. Koltarla, S. Taksim Eğitim ve Araştırma Hastanesi Sağlık Personelinin Yaşam Kalitesinin Araştırılması. Yayınlanmamış Uzmanlık Tezi, Sağlık Bakanlığı Taksim Eğitim ve Araştırma Hastanesi, İstanbul, 2008.
17. Aksungur, A. Dr. Zekai Tahir Burak Kadın Sağlığı Eğitim ve Araştırma Hastanesi'nde Çalışan Ebe ve Hemşirelerin İş Doyumu ve Yaşam Kalitesi Düzeylerinin Belirlenmesi. Yayınlanmamış Yüksek Lisans Tezi, Hacettepe Üniversitesi Sağlık Bilimleri Enstitüsü, Ankara, 2009.
18. Şahin DS, Önal Ö, Sütü SP, Kılınç AS, Mutluay D. Acil Servis ve Yoğun Bakımda Çalışan Hemşirelerde Yaşam Kalitesinin Değerlendirilmesi. MAKÜ Sağlık Bilimleri Enstitüsü Dergisi. 2014;2(2):81-92.
19. Gholami A, Farsi M, Hashemi Z, Lotfabadi P. Quality of life in nurses working in Neyshabur Hospitals. Thrita J Med Sci. 2012;1(3):94-100.
20. Soheila Javadi Zaher, Marjan Vafaei, Ebrahim Ebrahimi Abianeh. Comparing Depression, Anxiety and Stress among the Nurses in the Critical care and Internal Surgical units at the Selected Hospitals of the Social Security Organization of Tehran in 2016. Int J Med Res. & Health Sci. 2016;5(9):254-61.
21. Robert Janda, Eva Jandová. Symptoms of posttraumatic stress disorder, anxiety and depression among Czech critical care and general surgical and medical ward nurses. J Res. Nursing. 2015; 20: 298-309.
22. Zandi A, Sayari R, Ebadi A, Sanainasab H. Frequency of depression, anxiety and stress in military Nurses. Iranian J Military Med. 2015;13:103-8.