

Investigation of Psychiatric Symptoms in Nurses Working in a Hospital

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ABSTRACT

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Objective: This research was conducted to investigate the psychiatric symptoms and factors affecting nurses working in a hospital.

Method: This study was carried out in Dr. Burhan Nalbantoğlu General Hospital in Turkish Republic of Northern Cyprus. The study sample was composed of 360 nurses from different departments of the Hospital. Data were collected by using the Descriptive Data Form created by the researchers and the Symptom Check List (SCL- 90-R). Percentages, averages, Student-t test, one way ANOVA test, Pearson's correlation analysis were used in the analysis of the data.

Results: According to the results of the Symptom Check List, scores were high for somatization in 67.5% of the nurses, for obsessive compulsive symptoms in 57.2%, for interpersonal sensitivity in 52.5%, for depression in 50.3%, for anxiety in 50%, for hostility in 53.3%, for phobic reaction in 45.3%, for paranoid ideation in 60%, for psychoticism in 47.2% and for general symptom level in 50.3% of the nurses. Socioeconomic status, work unit, number of patients cared for by nurses, working position, weekly working hours, number of shifts per month, physical environment, problems with patients, doctors and managers, and problems in the use of equipment were found to have effect on the levels of psychiatric symptoms among nurses.

Conclusion: Nurses should be supported psychologically and attention should be given to protect the mental health of nurses. Improving psychological, physical and social conditions in the hospitals can be effective to decrease psychiatric symptoms among nurses.

Key words: Nurse, hospital, psychiatric symptoms

ÖZET

Hastanede çalışan hemşirelerde ruhsal belirtilerin incelenmesi

Amaç: Bu araştırma, hastanede çalışan hemşirelerdeki ruhsal belirtileri ve bu belirtileri etkileyen faktörleri belirlemek amacıyla yapılmıştır.

Yöntem: Araştırma, Kuzey Kıbrıs Türk Cumhuriyeti'nde, Dr. Burhan Nalbantoğlu Devlet Hastanesi'nde gerçekleştirilmiştir. Örneklem grubu, hastanenin farklı birimlerinde çalışan 360 hemşireden oluşmuştur. Veriler, araştırmacılar tarafından geliştirilen Tanıtıcı Bilgi Formu ve Belirti Tarama Listesi (SCL-90-R) ile toplanmıştır. Verilerin analizinde yüzde dağılımı, Student-t testi, varyans analizi ve Pearson korelasyon analizi kullanılmıştır.

Bulgular: Belirti Tarama Listesi sonuçlarına göre, hemşirelerin %67.5'inin somatizasyon, %57.2'sinin obsesif kompulsif belirti, %52.5'inin kişilerarası duyarlılık, %50.3'ünün depresyon, %50'sinin anksiyete, %53.3'ünün hostilite, %45.3'ünün fobik reaksiyon, %60'ünün paranoid düşünce, %47.2'sinin psikotizm, %50.3'ünün genel belirti düzeyi puanları yüksekti. Sosyoekonomik durum, çalışılan birim, bakılan hasta sayısı, çalışma pozisyonu, çalışma süresi, haftalık çalışma saati, aylık nöbet sayısı, fiziki ortam, hastalarla, doktorlarla ve yöneticilerle yaşanan sorunlar ve araç gereç kullanımının hemşirelerin ruhsal belirti düzeylerinde etkili olduğu bulunmuştur.

Sonuç: Hemşireler ruhsal yönden desteklenmeli ve hemşirelerin ruh sağlığını koruyucu girişimlere önem verilmelidir. Hastanede çalışan hemşirelerde ruhsal belirtileri azaltmak için, hastanelerde psikolojik, fiziksel ve sosyal koşulları iyileştirmek etkili olabilir.

Anahtar kelimeler: Hemşire, hastane, ruhsal belirtiler

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INTRODUCTION

Maintenance of physical and mental health of working people and prevention from harmful effects of physiological and social origin in working life

is one of the main goals of contemporary science (1). It is impossible to think to divide personal and working lives completely for individuals (2). It is a well-known fact that working life affects the individual and vice versa. A positive impact leads to individual's health and

success of the organization (3).

Physical environment, working style and working conditions are important for health professionals working at hospitals. Negative aspects of working environment and conditions may lead to negative consequences on both individuals and organizations. These problems will inevitably be reflected on individuals as interpersonal conflicts, low performance and work dissatisfaction (4,5). From an organizational point of view, these problems may lead to low working performance, corporate economic losses, high prevalence of work accidents and direct risk of people whom nurses give care and all these factors are reflected in patient care and may cause low quality of care (6,7).

Health sector has different characteristics than other working environments due to not only difficulty of serving sick people having intense stress but encountering stressful situations during routine daily working life as well (8). Nurses who have an important function in healthcare are under intense pressure and experience stress due to factors such as work overload, need for giving emotional support, lack of healthcare services, low autonomy, low income, indefinite role, limited promotional, developmental and rewarding possibilities, professional image and lack of self-esteem (9-11). International Labor Organization described the main stressors of working environment of nurses as conflicts with controllers or managers, role conflict and indefiniteness, excessive work overload, emotional stress due to patients' problems, working with patients who need intensive care or dying, conflicts with patients and problems with shift work (12).

Workers from different jobs may be psychologically affected due to working environment and their works (13,14). Exposure to stress for long periods of time may affect psychosocial status of workers (15). Somatic symptoms, depression, sleep disturbances and exhaustion are among these problems (4). Professional lives of nurses are enriched by their utilization of knowledge and skills and creating good relations with patients and their families. On the other hand, continuously dealing with patients and their families who are in physical, emotional and psychological pain

is an emotionally exhausting situation. This involvement may lead to loss of positive emotions to patients, monotypic behaviors, rigid thinking, loss of professional satisfaction and negative mental health and impairment of quality and quantity of care given by nurses (16).

Nursing needs psychologically healthy professionals more than other professions because it is based on human relations (7). It is extremely important that nurses who are responsible for the prevention and development of individual, familial and social health and planning, implementation and evaluation of therapeutic care in case of sickness within health services should be psychologically healthy to conduct their duties and responsibilities (17). It should also be taken into consideration that personal and professional issues and working environment may also affect psychological well-being of nurses. It was observed that stressor factors are different in each working environment and being exposed to intense and long-lasting stress in the working environment lead to various psychological and physical changes in workers (2). When the literature about this subject in Turkey is reviewed, several studies showed that work stress, work dissatisfaction (18-22) and exhaustion (23-26) are quite prevalent. However, studies examining psychological status of nurses and factors affecting this are not sufficient.

In this study, we aimed to determine psychological symptoms and related factors in nurses working in hospital.

METHODS

This study was conducted as a descriptive research with nurses working in Dr. Burhan Nalbantoğlu State Hospital in Turkish Republic of Northern Cyprus after obtaining permissions. Sample selection method was not used and reaching the whole universe was aimed. Universe of the study consisted of 370 nurses but 10 nurses did not want to participate so sample consisted of 360 nurses. Among nurses participated, 120 were from medical, 120 from surgical departments, 30 from intensive care units, 30 from operating rooms, 30 from

emergency department and 30 from outpatient clinics.

Descriptive Information Form and Symptom Check List were used for data collection. Descriptive Information Form consists of 14 questions to determine socio-demographic characteristics, characteristics of working environment and professional aspects of nurses.

Symptom Check List (SCL-90-R) is a scale developed by Derogatis et al. to determine the level of psychological symptoms and to what extent they are distributed and its validity and reliability were approved in different patient groups (27). In the validity study of this scale done by Dağ (27), Cronbach alpha value was reported as 0.97. SCL-90-R is being used as a valid and reliable scale in Turkey for psychopathological screenings. Scale was structured to evaluate psychiatric symptoms and signs by 90 items and in 9 sub-tests. These sub-tests are as follows: Somatization (SOM), Obsessive Compulsive Symptoms (OBCO), Interpersonal Sensitivity (IPS), Depression (DEP), Anxiety (ANX), Hostility (HOST), Phobic Anxiety (POB), Paranoid Ideation (PAR), Psychoticism (PSYC) and Supplemental Scale (SUPP). For each item in SCL-90-R, one of the following choices are ticked: "not present (0)", "very little present (1)", "moderately present (2)", "much present (3)", "very much present (4)". Scoring is between 0 and 4 for each item. Subscale scores are achieved by dividing sum of scores given to each item of each subscale by number of items. Subscale scores can be between 0.00 and 4.00. In addition to this, assessment of real functionality of SCL-90-R is GSI (Global Symptom Index), PST (Positive Symptom Total) and PSDI (Positive Symptom Distress Index) were also performed. GSI score under 1.00 mean that symptoms are not at psychopathological level and score over 1.00 mean that there is a psychopathological condition (28).

Permissions were taken first from Ege University Vocational School of Nursing and then from TRNC Dr. Burhan Nalbantoğlu State Hospital ethical committees and nurses working in the hospital were informed about the study and their consents were taken. Data were collected at locations and times appropriate for nurses. Time was not limited for data collection.

Statistical Methods

Data were analyzed by SPSS 11.5 software. In statistical analyses of data, Student's t-test was used to compare mean scores of double groups, one-way ANOVA was used to compare mean scores of groups more than one and Pearson correlation analysis was used to examine correlation between variables. Level of significance was taken as $p < 0.05$.

RESULTS

Mean age of nurses of study group was 30.61 ± 5.92 (age interval, 20-46) and 25.6% were single, 60.8% were married, 13.6% were divorced, 68.1% had children and 66.7% evaluated their socio-economic status as "good".

Educational level was undergraduate for 57.2% and graduate for 42.8% and 33.3% were working in surgical, 33.3% in medical departments, 8.3% in intensive care unit, 8.3% in operating rooms, 8.3% in emergency department, 8.3% in outpatient clinics, 35% as head-nurse or nurse-in-charge and 65% as ordinary nurse.

Mean duration of work was 9.03 ± 6.56 years, mean weekly working hours were 41.15 ± 2.99 , mean monthly number of duties were 3.49 ± 1.03 and mean number of patients under care were 38.63 ± 35.59 . 65.8% of subjects were working for 1 to 10 years, 79.7% were working 41 hours or more per week and 78.3% were on duty 5 times or more per month. Seventy percent of nurses were happy to work.

Nurses reported to feel strained due to following reasons: 76.1% due to equipment and tools, 44.4% due to physical environment, 37.2% due to patients, 24.4% due to colleagues, 20.6% due to managers and 19.2% due to physicians.

Mean scores of nurses taken from SCL-90-R were summarized in Table 1 (Table 1). When mean scores from SCL-90-R were assessed according to cut-off point of 1, mean general symptom index scores of 50.3%, mean somatization score of 67.5%, mean obsessive-compulsive symptom score of 57.2%, mean interpersonal sensitivity score of 52.5%, mean

Table 1: SCL-90-R subscale and General Symptom Index scores of nurses

SCL-90-R subscales	Mean	S.D.	Minimum	Maximum
Somatization	1.198	0.645	0	3.17
Obsessive Compulsive Symptoms	1.209	0.733	0	3.00
Interpersonal sensitivity	1.097	0.726	0	4.00
Depression	1.073	0.652	0	2.77
Anxiety	1.041	0.693	0	4.00
Hostility	1.139	0.816	0	3.67
Phobic Reaction	0.986	0.807	0	3.43
Paranoid Ideation	1.165	0.799	0	4.00
Psychoticism	1.008	0.804	0	3.30
Supplemental scale	1.165	0.766	0	3.43
General Symptom Index	1.107	0.656	0	3.29

SCL-90-R: Symptom Check List, S.D.: Standard Deviation

depression score of 50.3%, mean anxiety score of 50%, mean hostility score of 53.3%, mean phobic reaction score of 45.3%, mean paranoid ideation score of 60%, mean psychoticism score of 47.2% and mean supplemental scale score of 53.6% of nurses were found over 1.

No correlation was found between mean age of nurses and mean general symptom index scores from SCL-90-R ($r = -0.101$, $p = 0.054$).

There was no significant difference between mean general symptom index scores of subjects according to marital status ($F = 2.414$, $p = 0.091$) and having a child ($t = 0.891$, $p = 0.374$) (Table 2).

There was a significant difference between mean general symptom index scores of subjects according to their socio-economic status and mean score of the ones evaluated their socio-economic status as "moderate" was found higher ($t = 4.142$, $p < 0.001$) (Table 2).

Mean general symptom index score from SCL-90-R was significantly higher in graduate nurses than undergraduates ($t = 2.771$, $p = 0.006$) (Table 2).

Difference between mean general symptom index scores of nurses according to units they are working was significant and mean score of nurses working in medical and surgical departments were found significantly higher ($F = 11.961$, $p < 0.001$) (Table 2).

No significant difference was found between mean general symptom index score of nurses and mean number of nurses in the units they are working ($r = -0.094$, $p = 0.075$) but there was a negative correlation between mean number of patients they

took care ($r = -0.185$, $p < 0.001$).

Mean general symptom index scores of nurses was significantly higher in subjects working as ordinary nurse than subjects working as head-nurse/nurse-in-charge ($t = 4.845$, $p < 0.001$) (Table 2).

A negative correlation was found between mean general symptom index scores of nurses and mean working duration ($r = -0.213$, $p < 0.001$) and a positive correlation was found between mean weekly working hours ($r = 0.233$, $p = 0.000$) and monthly number of duties ($r = 0.325$, $p < 0.001$).

Mean general symptom index scores of nurses was found significantly higher in subjects having problems due to physical conditions ($t = -5.402$, $p < 0.001$), having problems with managers ($t = -3.299$, $p < 0.001$) and having problems with using equipment and tools ($t = -2.968$, $p = 0.003$). However, mean general symptom index scores were found significantly lower in nurses having problems with patients ($t = 5.881$, $p < 0.001$) and physicians ($t = 3.997$, $p < 0.001$). Having problems with colleagues did not have a significant effect on mean general symptom index scores of nurses ($t = -1.561$, $p = 0.119$) (Table 2).

DISCUSSION

Nursing is generally known as a stressful profession (2). It can be said that nurses are more prone to stress due to carrying important responsibilities to conduct treatment and care and having more intense patient interaction. According to research done, most of the

Table 2: Distribution of General Symptom Index scores according to some characteristics of nurses

	General Symptom Index				
	n	Mean	S.D.	F / t	p
Marital status					
Married	219	1.12	0.69		
Single	92	1.00	0.60	2.414	0.091
Divorced / widow	49	1.25	0.58		
Children					
Yes	245	1.13	0.67		
No	115	1.06	0.62	0.891	0.374
Socio-economic status					
Medium*	98	1.34	0.79		
Good	262	1.02	0.58	4.142	<0.001
Educational level					
Graduate	154	1.22	0.69		
Undergraduate	206	1.03	0.62	2.771	0.006
Unit					
Surgery	120	1.27	0.62		
Medicine	120	1.27	0.65		
Intensive care	30	1.00	0.45		
Operating room	30	0.63	0.31	11.961	<0.001
Emergency dept.	30	0.87	0.88		
Outpatient clinic	30	0.63	0.32		
Position					
Head nurse/nurse-in-charge	126	1.33	0.70		
Nurse	234	0.99	0.60	4.845	<0.001
Problems due to physical conditions					
Yes	160	1.31	0.65		
No	200	0.95	0.62	-5.402	<0.001
Problems with patients					
Yes	134	0.86	0.49		
No	226	1.26	0.69	5.881	<0.001
Problems with physicians					
Yes	69	0.83	0.41		
No	291	1.17	0.68	3.997	<0.001
Problems with managers					
Yes	74	1.33	0.70		
No	286	1.05	0.63	-3.299	<0.001
Problems with colleagues					
Yes	88	1.01	0.45		
No	272	1.14	0.71	-1.561	0.119
Problems with tool utilization					
Yes	274	1.16	0.68		
No	86	0.93	0.53	-2.968	0.003

*Six participants evaluated their socio-economic status as "bad" were included in the "medium" group. S.D.: Standard Deviation

nurses experience difficulties due to not working independently, having many responsibilities but less authority and lack of interpersonal communication (7,9-12). In our study, conditions which nurses have highest stress and difficulty were due to physical environment, relation problems with patients, physicians and managers and equipment used.

As Öztürk quoted (4), Freud described mentally well-being as "capable of loving and working" and told that the most powerful connection between human and reality is work. Working life has negative physiological and psychological aspects besides possibilities. Nurses are prone to psychological disorders due to risk factors coming from high number

of stressors and working conditions (29,30). In a study done with intensive care nurses by Sabuncu et al. (18), nurses were found prone to develop psychological symptoms. In our study, psychological symptom levels of nurses were generally found high. Moreover, except phobic reaction and psychoticism, obsessive compulsive symptoms, somatization, paranoid ideation, hostility, interpersonal sensitivity, depression and anxiety levels were found high in more than half of the nurses.

In some other studies, general psychological symptom levels of nurses were not found high (7,30). On the other hand, higher number of somatization symptoms in nurses are consistent with results of other studies (3,7). Somatization is seen in women more than men (4). Social roles and responsibilities of women and inequalities and point of view have all important roles in somatization (4). Nursing has been a female profession until recently and this may explain higher number of somatization symptoms seen in nurses in our study. Similarly, in the study done with nurses by Yılmaz et al. (7), somatization, anger, hostility and symptoms of interpersonal sensitivity were found higher than other subscales.

In the study of Aslan et al. (31), a correlation was found between being new in the profession and psychological symptoms. Most of the sample consisted of young nurses in our study. When age and general psychological symptom level in nurses was examined, no significant correlation was found between these. Some research findings support this result (3,7,29).

Most of the nurses of the study group are married and have children. Being married is considered as a preventive factor for mental health (2,31). However, marital status and having children was not found to have any effect on general psychological symptom levels of nurses. Our findings are consistent with other studies done with nurses (3,29). In the study of Altıntoprak et al. (2), nurses who are single or divorced were reported to be prone to develop depression and anxiety.

It is already known that economic problems negatively affect psychological well-beings of individuals (4). According to the study of Yılmaz et al.

(7), one of the factors affecting professional satisfaction level in nurses is the economic insufficiency of the profession. It was also found in our study that socio-economic status negatively affects general psychological symptom levels of nurses.

Study group mainly consists of undergraduate nurses. In the previous studies, no difference was found between psychological symptom levels of undergraduate and graduate nurses (3,7,29). However, in our study, general psychological symptom levels of graduate nurses were found higher than undergraduates. Expectations from jobs increase by higher educational levels. However, it was reported that nurses cannot get financial and moral satisfaction from their professions due to physically and psychologically impairing and economically insufficient nature of nursing and bad health system (7). Professional dissatisfaction may be an indicator of expectations not being met related with increasing educational level.

Working environment and conditions are among factors affecting psychological well-being (29,32-34). In another study done with nurses, anxiety and depression levels of nurses working in medical intensive care and burn units found higher than nurses working in surgical departments (35). In the study of Aslan et al. (31), psychological symptom levels of nurses working at intensive care units or emergency departments were found higher. According to some other studies, psychological symptoms in nurses do not differ between units being worked in (3,7). Similarly, in another study done with nurses working in intensive care units and wards, no significant difference of depression, anxiety and stressors of working environment was found between two groups (2). In our study, psychological status of nurses was found different according to units they were working in and psychological symptom levels of nurses working in surgical and internal medicine units were found to have a higher psychological symptom levels. Surgical units have higher patient circulation so it is possible that nurses working in these units have more stressful working conditions. Characteristics of the institution might have an impact on this finding. Work overload of surgical and internal medicine units at the institution

where this study was conducted might have contributed to this finding. Also, different numbers of nurses working in the units of the hospital where this study was conducted and smaller number of nurses working in intensive care, operating rooms, emergency department and outpatient clinics might not have sufficiently revealed the differences between groups.

According to our study, number of patients whom nurses take care was generally high. Studies showed that as a result of increasing number of patients being obliged to take care of and increasing work load, exhaustion increases and professional satisfaction decreases (36,37). However, while it was expected that higher number of patients will negatively affect psychological status of nurses, this expectation was not confirmed and it was found that by decreasing number of patients, general psychological symptom level of nurses increased.

Health professionals should work in a shift system like some other sectors (38-40). However, shift work may negatively affect physiological and psychological well-beings and social lives of individuals. Alongside with physical disorders, depression and anxiety disorders, maladjustment to social life, sleepiness, fatigue, memory and concentration disorders are frequently seen in people who should work at nights in shift work system (38-40). In studies done with nurses, shift working nurses showed more psychiatric symptoms than day workers (31,41). In our study, it was also found that most of the nurses work 40 hours or more weekly, have 5 or more duties per month and by increasing number of duties and weekly working hours general psychological symptom levels also increases. In the study of Gönül et al. (3), no difference was found in general psychological symptom levels according to weekly working hours of nurses.

One third of nurses in our study were working as a head-nurse or nurse-in-charge. According to our study, general psychological symptom levels were found higher in head-nurses or nurses-in-charge than ordinary nurses. It is generally thought that managerial positions has a prestigious position and working conditions of managers are more comfortable; however, as the number of responsibilities increase, chance of

encountering stress and pressure also increase. This might have lead to higher number of psychological symptoms in manager nurses. On the other hand, in our study, it was found that psychological symptom levels of nurses increase by decreasing number of patients. According to this finding, active patient care might have positively contributed to psychological well-beings of nurses by increasing level of professional satisfaction.

Most of the nurses participated in the study were working for less than 10 years. Nurses working for 20 years or more were few. According to this finding, it can be said that nurses work for smaller amount of time in hospitals in Cyprus. Gönül et al. reported that (3) by increasing number of years at work, professional exhaustion may occur due to always doing the same work and this may affect psychological well-beings of nurses. In the study of Karadağ et al. done with nurses (42), personal success feeling is higher in nurses working for more than 10 years. In our study, we found that by increasing number of years at work, general psychological symptom levels of nurses decrease. Increasing duration of work might have positively affected psychological well-beings by increasing professional experience and personal success feeling.

Members of nursing profession who have an important position in health care services are under intense pressure experience stress in their work environment due to reasons such as differences in working conditions, lack of adequate control of work, high demand of labor, lack of supportive working relations, worries about quality of nursing care, interpersonal relations with other nurses and other members of healthcare team, position changes and working systems (1,7,43-46). Besides these, female nature of nursing profession augments the scope of stress and problems of being a woman and mother and social pressures are added to problems of work life (2). In our study, when the effect of working environment and conditions on psychology of nurses was examined, nurses who experience problems due to physical environment and utilization of equipment and tools were found to have a higher level of general psychological symptom level.

According to previous studies, nurses describe

conflicts they had with patients, relatives of patients, physicians, managers and colleagues as sources of stress (47,48). When the intense communication and interaction of nursing profession with patients and other members of healthcare team are considered, problems are inevitable. In our study, high psychological symptom levels of nurses who had conflicts in relations with their managers is an expected finding and is consistent with findings from other studies (47,48). Although problems with patients and doctors might have negatively affected the mental health of nurses, psychological symptom levels of nurses who experienced problems with patients and physicians were found lower in our study. This finding may be due to individual characteristics of nurses. Nevertheless, having problems with their colleagues did not change psychological status of nurses. According to these results, it can be said that problems with managers is the top reason affecting psychological well-being of nurses in the hospital environment.

Our study has some limitations. First of all, our study was conducted in only one type of hospital; differences between hospitals were not examined and examined variables were kept limited. These factors limit the generalizability of the results. In spite of these limitations, high prevalence of psychological symptom levels present in an important portion of nurses participated in our study shows that nurses make a group under risk of mental diseases. In this context, psychological status of nurses should be evaluated in certain intervals, factors which affect their psychological status should be considered as risk factors and not be neglected, nurses should be supported psychologically in hospitals and preventive mental health measures should be implemented. Moreover, we think that practices towards restoring working conditions of nurses and decreasing their psychological problems will highly contribute to other members of health team and therapeutic processes.

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