

Research Article

The Effect of Work Safety on Stress in Nursing

¹Buse Gökçe, ²Hamit Altıparmak, ²Berna Uzun, ²Dilber Uzun Ozsahin

¹ University of Mediterranean Karpasia, Institute of Social Science, Şht.M. Ruso No: 79 K. Kaymaklı
ZIP: 99138 Nicosia TRNC Mersin 10- Turkey

² Near East University, Faculty of Engineering, Near East University, Near East Boulevard, ZIP:99138
Nicosia TRNC Mersin 10- Turkey

Abstract:

Background- Work accidents experienced in many sectors, institutions and organizations have increased the importance of job security and many laws and regulations on job security have been prepared for this reason. As in many professions and sectors, occupational safety and occupational health are very important for the nursing profession. Also, in nursing profession, where communication with people is much more frequent, the health of nurses can be deteriorated based on the stress. Occupational safety issues in nurses' working environments can create stress on nurses.

Methods- To assess the attitudes of nurses to occupational safety, occupational health and safety, and the stresses nurses' experience by interviewing face to face with health personnel using pre-determined open-ended questionnaires intended for this study and factor analysis used.

Results- Minimizing the stress that may arise from the work environment by creating occupational health and safety of nurses contributing to the health service in a big way should be unhealthy and prevent health service.

Conclusion- Nurses are expected to make the most correct vital decision under the stress of working 24 hours a day in their working life, while the emotional and physical workload of the health personnel is significantly higher than what is expressed. For this reason, work safety and health in the nurses' working environment is an important factor to be considered. The ability of the health personnel to provide quality service with patient satisfaction is directly related to the healthy work flow in the working environment and the stress levels they feel.

Keywords: Job Security, Nursing Profession, Stress in Working Life, Workload, Working Conditions

1. Introduction

Nursing is a health discipline which is responsible for the education, implementation and evaluation of nursing services for the purpose of protecting, developing and improving the health of the individuals and society. Since people who perform nursing profession are directly related to the individuals who have health problems and they constitute the center of the multidisciplinary operation in the health system, life at the highest point of work stress is inevitable for them.

One important factor that increases the work stress of nurses is the attitude of their working environment on occupational health and safety.

It has been proven in many studies that the stress situation is increasing in people who have health problems and have serious illnesses. In addition, the stress situations that occurred at the work place causes the physiological and psychological health problems on the employees. Stress occurs in two different situations. The first situation is that someone is in danger and the conditions associated with it lead to cognitive impairment. The other is internal, external conflict, emotional or physical trauma that interferes with one's cognitive balance and is intertwined with environmental factors. It is obvious

that the health personnels can be easily exposed to both stress factors. The national health and safety institution defines a safe and healthy hospital environment as an environment away from psychological, physical, chemical, occupational diseases, occupational accidents and ergonomic hazards that damage the health of the workforce. Healthcare workers are faced with a number of problems that increases their stress situation in hospitals. These problems include hospital infections, ergonomic disorders, material inadequacy, inadequate working conditions, hazardous wastes, puncture cutter injuries, excessive workload etc.

Today, among the most important causes of stress, it is seen that people feel themselves weak and incapacitated in the face of changes that can be seen in every field. However, psychological and physical factors are also among the causes leading to stress. As a result, conditions of work that affect the general health of a person significantly can as well affect the workplace conditions [1].

Pongruengphant and Tyson point out that intercourse with disease and death cases are the most important factors of stress sources in nursing [2]. Ross et al. reported that, working in

emergency service is another stress factor of the healthcare workers. Sveinsdo et al. showed that job satisfaction levels of nurses decreased with the increase in their workload. Therefore, nurse managers need to move more precisely when doing work distribution and workload planning [3]. It is known that the unbalanced distribution of work load increases stress and reduces motivation in nurses as well as in all professions.

Peterkin and Özabacı [4] showed that the 67,9% of the nurses who have a higher number of patients under their care, have deteriorated health levels in terms of social, physical and psychological aspect [5]. From the result of this research, it was determined that due to the excessive workload, nurses experiences problems that affect their day to day live such as deterioration of family life, stress, fatigue, nervousness and deterioration of sleep patterns [5]. Another factor that causes stress in nurses is the conditions that arise from the behavior of the patient during the treatment phase which can pose a significant risk to the safety of the patient [6].

1.1. Importance of work safety

The precautions taken to prevent the employees in the institutions and establishments from experiencing any accident, and creating a safe working environment are called work security. Along with technological improvements, the increase in industrial developments and industrial production has led to an increase in job accidents.

Work safety, which began to be emphasized by the European Union in the 1980s, has become widespread with the application directive called the EEC, which unleashed in 1989. The frame of the directive has been improved by the day-to-day development of institutions and its scope has been enlarged.

Work safety is an integrated science based on the medical and engineering sciences established for the harmony of the worker and the work, which aims to keep the health of the workers at the highest level physically, socially and psychologically. It is aimed to contribute to the increase of the performance and service quality of the institution, which will decrease the occupational diseases with job security, prevent material and moral losses caused by job accidents, avoid the low motivation caused by work stress.

1.2. Work Safety Culture

Work safety culture is basically based on the formation of the safety culture. The formation of safety culture first began in 1986 after the Chernobyl accident. The adverse effect of Chernobyl disaster on many people's lives and the environment has pushed the International Atomic Energy Agency (IAEA) to take some measures for the future. Therefore, the safety culture of the IAEA on the report prepared for the Chernobyl disaster has begun to be established, and important decisions on occupational health and safety have been taken by international organizations during this period [1]. The job health and safety culture is defined as a set of measures aimed at protecting the lives of employees, giving importance to the adequacy of safety and

health programs, their application competencies and styles in institutions and organizations. The work health and safety culture should be supported and supervised by government policies.

1.3. Stress Concept and Stress Formation

The word Stress is used to help explain how the balance of a person or any other organism is deteriorated according to the conditions and factors in dangerous situations. In this respect, stress includes all the factors that can cause the person's balance to change in a bad way. These factors are extensive including social (cultural change, environmental factors, etc.), physical (hot, cold, trauma etc.), psychological (internal and external conflicts, emotional tensions, marital problems etc.) [2]. Stress, one of the main problems of today's business world, can affect an employee's working life, social and individual lives. Stress is defined as the disease of today's world. Even if the cause is known, it creates worries such as job anxiety, material anxiety, health anxiety, that can not be overcome [7]. If these worries continue without diminishing over time, the power of resistance will weaken and the event will head towards spiritual tension.

Stress is also a factor affecting the workplace behavior and professional practices of health professionals. Nurses can also be stressed very often in the work environment like all other health care workers.

1.4. Nursing and Causes of Work Stress

Stress factors of employees in today's institutions and organizations can be classified as work load, working hours and work place order [8]. Nowadays, many professions have their own kind of difficulties and stress that they pose on their employees [3].

As in all other professions, struggling with stress and coping with stress in the nursing profession varies according to the personal characteristics and skills of the nurses. The International Council of Nurses (ICN) lists the sources of stress in nurses as follows [3];

- Some uncertainties regarding the treatment plans of patients
- Hospital directors who do not appreciate nurses
- Having limited authority to intervene in the patient when patients face vital risk situations
- Nurses' lack of training to develop their professional knowledge and personal skills leads to stress due to occupational concern in the nurses
- Increase in working hours cause nurses to be stressed
- Risk of losing patient's life
- Pressure made by patient's relatives on nurses occasionally
- Work shift, insufficient wages, and inability to choose weekly leave days as they wish
- Having a lot of workloads in the work environment
- Inadequacy of technical equipment in the working

environments of nurses

- The long distances between the places where they work and their homes
- In some hospitals and health facilities, there are not enough nurses to deal with the patients and the working nurses have to deal with more patients

According to ICN's research on nurses, the above factors are mentioned as the main sources of stress. The nursing profession is influenced by many internal and external influences [3]. For this reason, the stresses experienced by nurses according to the work environment and conditions vary.

1.5. Shape of Work Stress in Nurses

The types and effects of work stress in nurses are stated by the International Council of Nurses (ICN) as followings;

Worldwide ICN research on nurses shows that the stress of nurses cost \$ 600 million each year to the world economy. The stress of the nurses has a direct impact on the performance of the work and affects the quality of the work done. Because of this, as in many professions and sectors, stress in the nursing profession can cause financial losses in large proportions [9]. For this reason, the stress of the nurses covers 70-85% of the health problems of them.

As discovered in 2011, 36% of nurses affiliated with nurses' associations in Europe were experiencing stratified health problems, and compensation cases filed by strèse-affiliated nurses increased by 300% after 2001. Stress, unfair working conditions and bad working environments experienced by union member nurses increased their psychological problems and negatively affected their family and social life [9]. Oral violence exposure, senior staff mobbing and psychological violence also play an important role as the basis of stress formation experienced by nurses who are members of nurse unions in Europe. These problems were factors affecting the formation of stress in nurses. The results of the surveys conducted by nurse unions in Europe show that the lives of nurses vary according to the stress [9].

1.6. The Risks Generated by Job Safety in Nurses

Compared to other health workers, nurses are more likely to face health risks due to spending more time with patients and their healthcare [3].

There are many risk factors related to stress in the nursing profession and these factors are; excessive workload, long working time, difficult or complex tasks, time pressure, uniformity and physically bad working conditions (such as lighting and temperature), inadequate resting places [3]. In addition to these, there are long-term standing, nutritional disorders and insomnia in seizures depending on the intensity of the service.

In the study conducted by the Nurses Department in Europe in 2014, "Nurses' Negative Situations Affecting Their Working Life", 57.6% of nurses had leg and joint aches, 75.4% had

fatigue, 83.6% had working style problems, 54,5% insomnia, and 77.5% excessive workload, which is a factor that increases the stress in nurses.

The risk of infection, noise and stress in the working environment is among the top three in the workplace [2]. Occupational risks and hazards encountered by nurses in working life are handled in five groups as chemical, biological, environmental, physical and psychological.

1.6.1. Environmental Risks

Health workers are in frequent contact with latex, posing a health hazard. Latex-containing products pose risks not only to healthcare professionals but also to everyone's health. Everyone living in the community is more or less sensitized to latex-containing products in different shapes and proportions [2].

Another health problem involving nurses is occupational asthma. The American Nurses Association (ANA) stated that healthcare workers are also exposed to latex, formaldehyde, cleaning products, building chemicals, perfume, cigarettes, molds and dusts that are commonly use in the working environment [10].

1.6.2. Psychosocial Risks

In a study conducted in the United States, it was found that health workers' risk of exposure to violence was 16 times higher than workers in different service sectors [11]. Nurses, in particular, have been exposed to three times more violence than other health professionals.

However, the lack of materials, overcrowded health personnels in the environment, the physical characteristics of the environment (lack of heat, noise, monitors and alarms, unsafety conditions), conflict with management and working with complicated tools have also been identified as factors that increase the level of anxiety among nurses.

In addition to the factors that increase the level of anxiety in nurses; [2] stated that the following can be their emotional problems; nurse-doctor problems, nursing philosophy, nurse-nurse problems, lack of staff and excessive workload, insecurity of the knowledge and skills of the individual, smell or noise of the environment.

1.6.3. Biological and Chemical Risks

The risks posed by chemicals are widely known and are difficult to trace. Health workers and nurses are highly likely to be affected by chemical hazards in their work environment. Danger and risk factors often encountered by health workers includes; chemical solvents, chemical disinfectants, liquids used during sterilization processes, antiseptics, most dyes and solvents, ethylene oxide, ethyl alcohol and its types, iodinated compounds, formaldehyde, anesthetic gases, latex products, cytostatic drugs, solutions and medicines and chemotherapeutic agents [8].

It has been determined that the health personnel can be protected from chemicals by handwashing and the use of

preventive measures can have positive effects. In addition, there are some measures that can be included to combat the influenced of chemicals on nurses [10]. They include; Wearing protective gloves and goggles, changing old equipment, washing with plenty of water in case of contact with chemical substances and ventilating the environment.

It has been observed that health workers are faced with many risk factors every day because of the ambient conditions while they are in the working environment. One of these risks they are exposed to is biological risks that affect them personally as a result of contact with blood, blood products and body fluids etc. These risks include AIDS, Hepatitis B, Tuberculosis, etc. [3]. For this reason, it is necessary to concentrate and solve the problems that these diseases can cause on the infected patient and also the employees working in the institution.

1.6.4. Physical Risks

Shoulder, arm, neck and back pain are problems experienced by nurses all over the world.

A number of factors have been identified that are widespread in the physical hazard group for health workers and patients. These factors are as described by Waughfield [3] as radiation (laser, ionized, infra-red, ultraviolet, radioactive materials, electromagnetic radiation, etc.), electrical setup, lighting, noise, hot-cold ventilation, slippery floor and dust etc. That is why hearing loss, musculoskeletal system problems, visual disturbances, and central nervous system depression are among the health problems of the health workers.

Another area that poses a risk for health workers is; Radiotherapy department, laundry, kitchen, pathology laboratories and cabinets. The US National Institute of Occupational Safety and Health (NIOSH) conducted a study to determine the cause of fire outbreaks in hospitals and found that electrical system were in the 2nd place. Inadequate or incorrect implementation of the electrical system in the hospital working environment can also affect healthcare workers and create a very significant hazard for them [10]. NIOSH and the United States Occupational Safety and Health Administration have established some standards related to electricity; [12] the hospital socket closures must be closed, the electrical system must not touch the wet area, the extension cables should only be used in transient situations, the electrical system must be checked regularly, and warning letters must be written on electrical appliances.

1.7. The Effects of Job Safety on Nurses' Stress

Since the nursing profession is a profession that requires close contact with the community, nurses are particularly exposed to infectious and epidemic diseases. For this reason, it is necessary to take serious measures for work safety and health in the environment where they work.

One of the most important risk that nurses are exposed to is the diseases that can be transmitted from patients [13]. For this reason, health-threatening patients should be provided with

care and control in private rooms for occupational health and safety, and then there should be rooms where nurses can disinfect themselves.

Currently in Europe, where health consciousness has been developed, and in the United States, there are chambers of disinfection and special patient care and treatment units for occupational safety and health of nurses.

In addition, nurses can use specially prepared aprons, gloves and masks if the patient's problem is a contagious and serious health problem, such as the HIV virus [13]. The lack of technical equipments and materials creates psychological distress in nurses and this sometimes can affect their behavior against patients who have serious health problem [14].

Problems and deficiencies experienced by nurses in the hospital environment in terms of work safety and health continue throughout their study period and negatively affect the family life and personal morale and motivation of the nurses after work. Therefore, the problems experienced by the nurses indirectly reflect their social life and their families.

1.8. Nurses' Precautions About Occupational Safety Stress

The precautions that nurses can take regarding work safety stress can be classified as organizational and individual methods [7]. Luthans notes that a number of strategies must be used to reduce organizational stress. These strategies are; Creating a supportive organizational climate: Most organizations have a personal and non-rigid structure besides a formal and bureaucratic structure, which is seen as a source of stress. A less decentralized structure that permits communication arrangements from top to bottom, allowing participation in decision making, is of outmost importance [15].

Business enrichment: Factors related to the nature of work (such as business value and social value, skill diversity, independence and feedback) as well as job characteristics (such as authority, responsibility, recognition, use of opportunities to rise and achievements) . Careful work arrangements are effective in coping with work stress [15].

Determination of Organizational Roles and Reduction of Conflicts: It is possible that the management of workplace can lift or reduce the stress caused by them by removing the uncertainty in organizational roles [7].

Planning and consulting ways of professional development: The promotion and progress of the working people are followed and carried out by the managers. Employees want to know what professional lines are going and how to prepare for the next stage. The fact that people at work do not know the next stage in their profession is also an important source of stress.

Creating a cheerful environment in the workplace: Increasing the health and productivity of the workplace has been a result of studies that have produced positive results in the workplace and the activities that make people laugh.

Individual Methods; People can cope with stress in 4 different ways. These methods include;

Mental ways of coping: avoid distractions from stress and incompatibility,

Ways to cope with behavior: there is only one way to deal with stress, which is to remove type-A behavior [11].

The ways of coping with the body: aerobics, gymnastics, breathing exercises, proper nutrition and some relaxation methods (meditation, deep relaxation, yoga, etc.)

Ways of dealing with faith: instead of interpreting the factors that cause stress to be a threat, learning to test their ability, learning to test their assumptions, learning their irrational beliefs, sharing their feelings with others, and clearly expressing their feelings.

1.9. The Stress Influence of Business Safety According to International Nurses Association

To be healthy today, according to the International Association of Nurses, we should not only define the absence of disability and sickness but also a complete goodwill, bodily and social aspects should be defined.

The International Nurses Association has stated that one of the most important methods of protecting from work safety stress is the work of establishing a job security team besides taking work safety precautions. Precautions should be made by health professionals such as work safety specialist, workplace nurse and precautions should be taken for occupational safety and health of both patient and hospital employees. These specialists should receive suggestions from the hospital management and staff, especially the nurses in close communication with the patient, to determine the sources of stress. With the measures to be taken, the introduction of personal and social support systems in hospitals and monitoring of the stress effects of work safety must be ensured by means of measurement of the applications performed [3].

The International Association of Nurses states that deficiencies in hospitals in the area of occupational health and safety have caused more stress on nurses. For this reason, the severity of the stressful working life of nurses and the full fulfillment of their occupation have been identified as the greatest effects on nurses's stress [3].

2. Materials and Methods

Factor analysis of the scale consisting of 9 items was made by

determining the scale of the proficiency perceptions related to the stress effect of work safety. In this study the face to face survey research method was be used to determine the stress effect of job security on nurses. The statistical methods related to the analysis of the datas showed the validity and reliability of this technique.

The research was conducted on 100 nurses working in the Nicosia State Hospital, Cyprus and totally 9 questions were prepared. 3 of them was demographic questions.

The internal consistency coefficients will be determined by calculating the reliability of the questionnaire survey data obtained from the questions.

Factor analysis of the scale consisting of 9 items was made by determining the scale of the proficiency perceptions related to the stress effect of work safety. Open-ended questions were prepared in the study and there were no restrictions about the answers of participants.

The data obtained from the face-to-face interviews: In order to determine the perceptions of competence related to the data obtained from the research and the stress effect of occupational safety in nurses, we examined according to the general scale, subscale factors and proficiency perception scores of the questionnaire.

A validity reliability analysis was conducted to determine whether there was a meaningful difference between the perceptions of occupational safety of the nurses. In this study graphical analysis tools of Excel 2010 and SPSS 22 programs were used for interpretation of the findings obtained from research data.

3. Results

According to the answers given by the nurses in the survey, the gender of the nurses, the age of the nurses, the duration of their profession, the average working hours in a month, whether they are exposed to any violence in their working environment, whether they are informed about occupational diseases, how they are assessed in terms of their suitability for the work being done, the physical conditions at work, the institution's job security protocol, the stresses experienced at work, and the type of work environment was determined. Stress causes were analyzed in details and tried to be understood under the tables.

Participants	Gender	AgeRange	Work Experience
5Participants	Female	36-46	0-5 Years
5 Participants	Female	36-46	≥11Years

5 Participants	Female	25-35	6-10 Years
5 Participants	Female	25-35	6-10 Years
5 Participants	Male	36-46	≥11 Years
5 Participants	Male	25-35	6-10 Years
5 Participants	Female	25-35	6-10 Years
5 Participants	Male	25-35	0-5 Years
5 Participants	Female	25-35	6-10 Years
5 Participants	Female	25-35	≥11 Years
5 Participants	Female	25-35	0-5 Years
5 Participants	Male	25-35	≥11 Years
5 Participants	Female	25-35	0-5 Years
5 Participants	Female	25-35	≥11 Years
5 Participants	Female	25-35	0-5 Years
5 Participants	Male	25-35	≥11 Years
5 Participants	Female	25-35	6-10 Years
5 Participants	Female	25-35	0-5 Years
5 Participants	Male	25-35	6-10 Years
5 Participants	Male	25-35	6-10 Years

Table 1: General demographic information of the participants

In this survey's research, the questions consist of 2 parts. In the first part, demographic information was obtained from the nurses. The second part consists of open-ended questions.

Gender Distribution			
Female	65Participants	Percentage Distribution	%65
Male	35Participants		%35

Table 2: Gender Distribution of Nurses

In this research, 65% female nurses and 35% males nurses participated.

Age range distribution			
20-24	0	Percentage Distribution	%0
25-35	85 Participants		%85
36-46	15 Participants		%15
47-57	0		%0

Table 3: Age Distribution of Nurses

Table 3 shows that 85% of the nurses are in the 25-35 age group and 15% are in the 36-46 age group.

WorkExperience (Years)			
0-5 years	30Participants	Percentage Distribution	%30
6-10 years	40Participants		%40
≥11 Years	30Participants		%30

Table 4: Work Experience Distributions of Participants

Table 4 shows that 30% of participants have work experience over 11 years, 40% have 6-10 years and 30% have 0-5 years work experience.

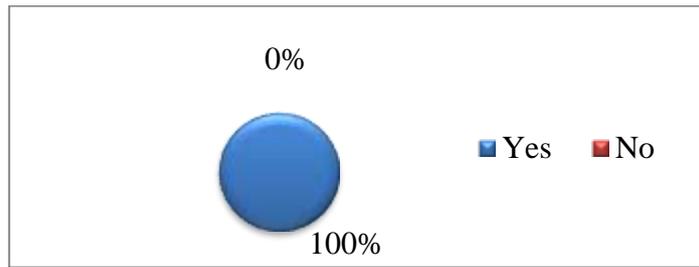


Table 5: Do you have any information on occupational diseases?

Table 5 shows that all the participants have information about occupational diseases.

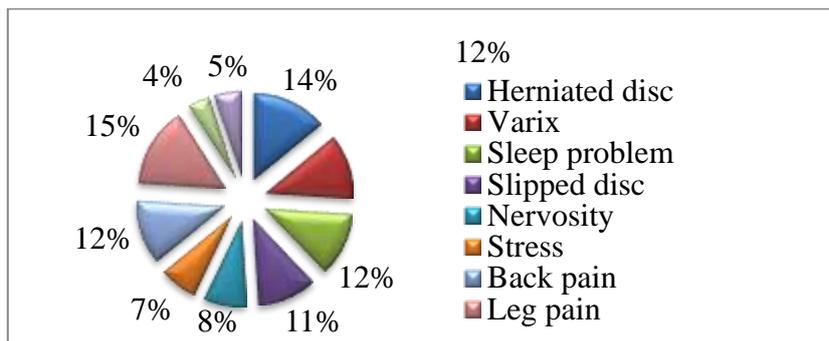


Table 6: Are you experiencing any occupational illness?

According to the answers given by the nurses, the most common occupational disorder was determined as 15% leg pain, 14% herniated disc, 12% varix and 12% sleeping problems. Nurses also frequently suffer from back pain, nutritional deficiency, stress, nervosity and shoulder problems.

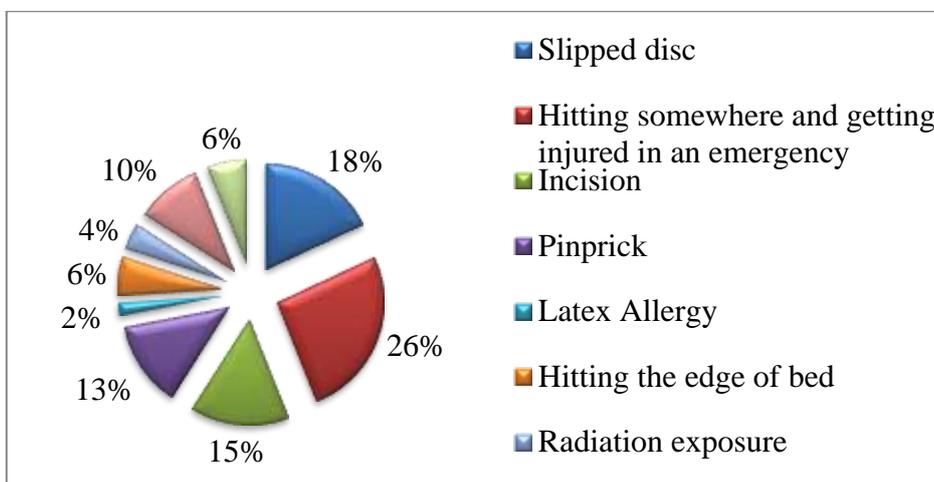


Table 7: Have you been exposed to any working accidents?

Table 7 shows that the most frequent occupational accident that nurses were exposed to was by 26% hitting an area in an emergency. In addition, being exposed to radiation due to the devices being used is among the other important work accidents that nurses have experienced.

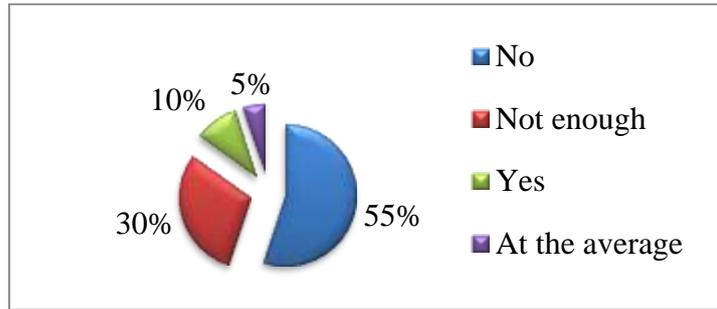


Table 8: Do you have protective practices in terms of work safety at the institution you work for?

Table 8 shows 55% of the participants stated that there is no practice in the institutions where they work in terms of job security. 30% of the nurses find their institution insufficient to protect their occupational safety. While 5% of nurses find their work safety applications at the middle level, 10% find it adequate.

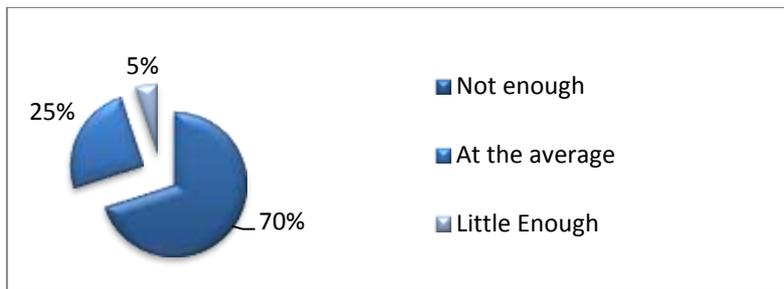


Table 9: How do you evaluate the materials and equipment you use at work in terms of suitability for the job done?

Table 9 shows that 70% of the nurses find the material and technical equipment to be inadequate in the institutions they work in. While 25% of the nurses find the material and technical equipments to be sufficient, 5% finds it to be insufficient.

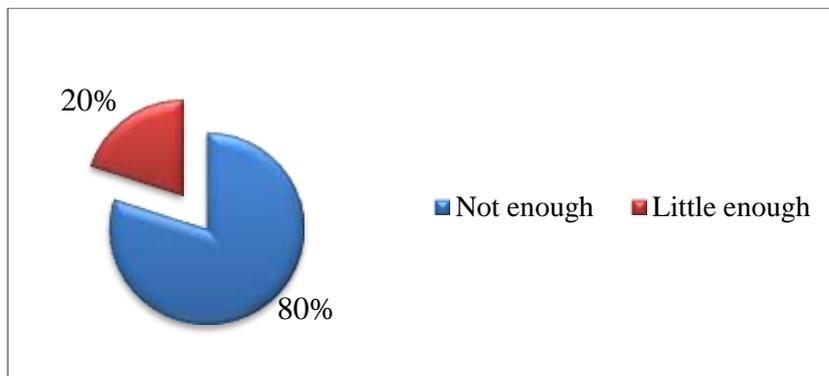


Table 10: How do you evaluate the physical conditions of your institution?

Table 10 shows that 80% of the participants evaluated the physical conditions of the institutions they work as inadequate and 20% as less adequate. Non of the nurses among the participants found the physical conditions adequate.

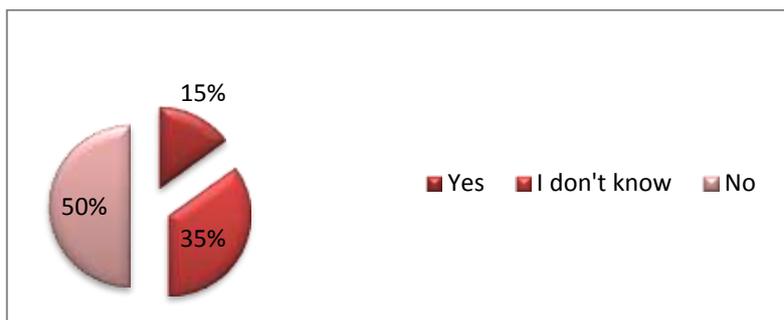


Table 11: Does your institution have a job security protocol?

According to Table 11, 50% of the nurses stated that there was no protocol about job security at the workplace. 35% of nurses do not know if there is a protocol on work safety. 15% of the nurses stated that they had a work security protocol in their institutions.

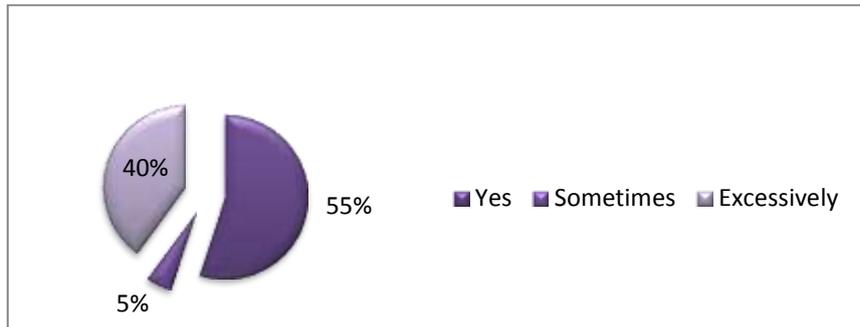


Table 12: Are you having stress at work?

Table 12 shows that, 55% of the nurses are experiencing stress. 40% of nurses live in extreme stress while 5% of nurses have stress sometimes.

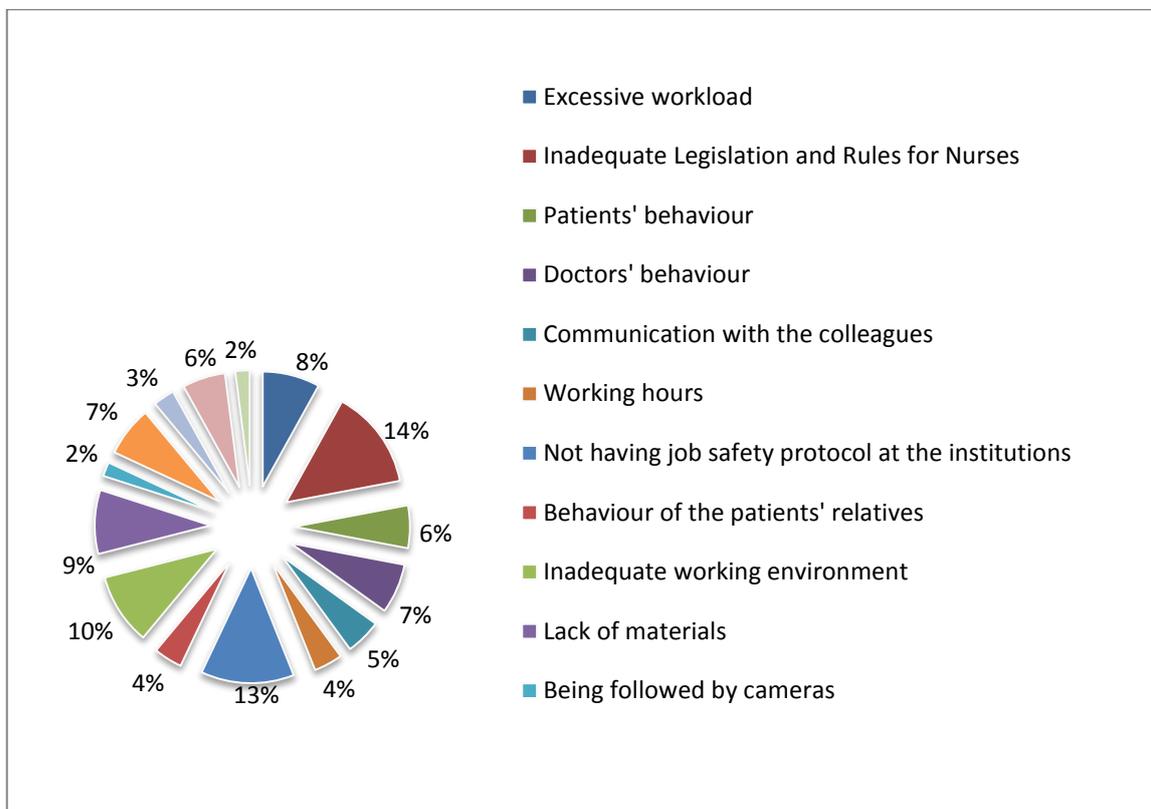


Table 13: What are the causes of stress in your working environment?

As we can see in Table 13, the causes of stress experienced by nurses significantly vary. The most important stress factors which are affecting nurses life negatively can be seen in Table 13.

Stress Sources	n	Average	SD	Groups
Phsical Conditions	98	55.18	9.12	1.group
Patients and their relatives	73	48.45	7.18	2.group
Doctors and workmatesı	76	49.23	7.16	3.group
Lack of job safety	89	66.85	8.45	4.group

Table 14: Distribution of Nurses' Stress Points

Participants	Gender	Monthly average working hours	Average
5Participants	Female	190 Hours	185.7 Hours
5 Participants	Female	200 Hours	
5 Participants	Female	170 Hours	
5 Participants	Female	200 Hours	
5 Participants	Male	200 Hours	
5 Participants	Male	180 Hours	
5 Participants	Female	180 Hours	
5 Participants	Male	170 Hours	
5 Participants	Female	200 Hours	
5 Participants	Female	170 Hours	
5 Participants	Female	200 Hours	
5 Participants	Male	200 Hours	
5 Participants	Female	170 Hours	
5 Participants	Female	170 Hours	
5 Participants	Female	200 Hours	
5 Participants	Male	165 Hours	
5 Participants	Female	200 Hours	
5 Participants	Female	200 Hours	
5 Participants	Male	170 Hours	
5 Participants	Male	180 Hours	

Table 15: Monthly Average Working Hours of Participants

Table 15 shows the monthly average working hours is 185 hours for the participants.

Cronbach's Alpha	Cronbach's Items	Standardized	N of Items
,913	,917		44

Table 16: Reliability Analysis

When the answers to questionnaires on occupational safety and stress of nurses were subjected to the obtained reliability analysis, Cronbach's value was found to be 0.913, indicating that the reliability was at an excellent level.

4. Discussions

Nowadays, job security and stress are among the most important factors affecting the performance and also social life of nurses. There are some factors that nurses are exposed to in the institutions they work in causing stress problems with job security.

Job security and stress problems experienced by nurses in the work directly affect their family and personal lives. In particular, the problems about the regulation of hospitals, the inadequate implementation of the occupational safety protocol, the lack of laws protecting the rights of nurses, the high number of patients per capita, increase the stress in nurses and cause the problem of occupational safety.

The nature and scope of the nursing profession requires communication and contact with the society. Hospital conditions, behaviors of patients and their relatives, expectations of hospital management, technical competence and material condition in the hospital directly affect the working conditions of the nurses. One or more of these factors is sufficient to affect the stress levels of the nurses.

The differences between participants' demographic characteristics differs from the problems that nurses face regarding to work safety and stress. Regardless of their age and experience, the problems faced by nurses regarding stress, work safety and health are similar.

All the nurses participating in the research were aware of the diseases related to the nursing profession. According to this survey, common Nurses' occupational diseases was found as: 15% leg pain, 14% herniated disc, 12% varix and 12% sleep problems.

In addition, nurses are also experiencing work accidents due to a lack of work security. The most frequent occupational accident that nurses were exposed to was found as (26%) hitting somewhere and getting injured in an emergency situations.

In addition, occupational accidents such as pinpricks can cause serious hazards for the health of nurses.

The lack of technical equipment and materials can increase the level of stress in nurses and decrease their work productivity. According to the survey we can say that the physical conditions at work are affecting work efficiency and stress of nurses.

For the solution of all these problems, it is important that the protocol of work safety in hospitals should be taken seriously and its supervised. Working with a number of deficiencies in terms of work safety and health can affect the personal health of nurses and their family life.

55% of the nurses participating in the survey are experiencing stress while 40% are living in extreme stress. The most important factors affecting nurses' stress are determined as; excessive workload, inadequate legislation and rules for nurses, patient behaviors, doctor's behaviors, communication

and adaptation problems with colleagues, working hours, lack of job security protocol, behaviors of patient relatives, lack of material, being followed by the cameras, lack of personnel, shift work system, insufficient salary and psychological pressure of the hospital management.

As a result, nurses, who are also one of the health care workers, also need occupational health and safety services. Therefore, it is necessary to establish occupational health and safety units in the health institutions, and to provide appropriate in-service training to protect and maintain the health of the nurses. However, the periodic inspection has very important effect for protection of nurses from occupational diseases.

In order to decrease the nurses' stress because of the excessive workload, the patient-nurse ratio has to be adjusted to the appropriate standards.

It is known that the identification of stress sources and the correct definition of stress sources will be useful for being an effective struggle with stress.

Stress in the workplace can be reduced in two different ways; providing support to the staff for the stricken that they are exposed to in the work environment and taking measures to minimize the potential and actual sources of stress in the working environment. However, improving the working conditions will reduce the nurses' job stress significantly.

Conflict of interest: The authors reported no conflict of interest related to this article.

References

1. Telman N. Psikolojide İş Sağlığı İş Güvenliği. İstanbul: Nobel Akademik Yayıncılık; 2015. p. 31-76:88-137:396-417.
2. Shalof T. A. Nurse's Story. Canada: Emblem Editions; 2014. p. 5-18:36-78.
3. Waughfield C. Mental Health Concepts. 5th ed. USA: Delmar Cengage Learning; 2016. p. 71-86:94-107.
4. Öztürk H. Tıbbi Hatalar ve Hasta Güvenliği Eğitim Rehberi. İstanbul: İstanbul Tıp Kitapevleri; 2016. p. 7-21:81-103.
5. Akpınar T. İş Sağlığı ve İş Güvenliği. İstanbul: Ekin Basım Yayın; 2013. p. 77-106:402-413.
6. Sur H., Palteki T. Hastane Yönetimi. İstanbul: Nobel Tıp Kitabevi; 2013. p. 57-168:617-688:703-717.
7. Whitmore J. Nurse Prescribers' Formulary: For Community Practitioners . USA: Pharmaceutical Press; 2013. p. 44-56:79-106.
8. Skinner J. Nursing by Heart: transformational self-care for nurses. USA: Ayn Books; 2015. p. 30-38:44-56.
9. Walsh B. Nurses Communication Skills Handbook: How Your Words & Actions Affect People in Your Care. USA: Pearson; 2016. p. 5-49:90-101.
10. Baltaş Z., Acar B. Stres ve Başa Çıkma Yolları. İstanbul: Remzi Kitabevi; 2015. p. 114-188.
11. Thompson F. Fallen Medicine: A nurse's dark journey . USA: Graham Publishing Group; 2014. p. 15-49:90-101.

12. Ocak S. İş Sağlığı ve Güvenliği Mevzuatı. İstanbul: Beta Yayınları; 2015. p. 7-28:45-78:522-565:842-913.
13. Batur N., Çakmakkaya B., Akpınar T. İş Sağlığı ve Güvenliği Eğitimi. İstanbul: Ekin Basım Yayın; 2016. p. 23-96:208-256.
14. Paşa M., Kaymaz K. Stres Yönetimi. İstanbul: Aktüel Yayınları; 2013. p. 13-92.