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## Causes of stress experienced by nurses and its effects on nurses

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### Abstract

Intense stress causes individuals to suffer from physical, psychological and work-related problems. The study was conducted to identify causes of stress experienced by nurses and negative effects of stress on nurses. This descriptive and comparative study was conducted. The nurses underwent high level of stress due to negative attitudes of patients or their families, work-environment caused by lack of nurse and other personnel, inability to spare time for themselves and their families, the fact that their rights were not protected, not being employed at the units where they wanted to work, due to physicians' not coming when they were called or not being wanted to be called. In conclusion, nurses suffer from high level of stress mainly due to negative attitudes of patients and their families and lack of nurse and other personnel, and stress leads to fatigue, sleep disorders and burnout among the nurses.

Keywords: Nursing; hospital; stress; stress causes.

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## **1. Introduction**

Stress is used to mean reaction, challenge, tension, incompatibility and physical and psychological strength spent that force one's limits (Buyukmese & Ersahan, 2015; Can, Azizoglu & Aydin, 2006; Guney, 2012; Tengilimoglu, Isik & Akbolat, 2014; Tomey, 2008). The power of stress comes from its intensity. So, experiencing stress to a certain degree may produce positive effects upon motivating individuals, succeeding, improving abilities, changing people's point of views and providing energy. However; as intensity of stress goes up; psychological and physical diseases, sleep disorders, attention deficiency and reduced problem solving ability may occur. Some studies confirm these outcomes and report that stress causes negative effects upon human health and lead to 80% of the today's diseases (Buyukmese & Ersahan, 2015; Can, 2006; Robbins & Judge, 2013). However; causes of stress are listed as intense work burden, limited time, hard and close supervision, unequal power and responsibilities/poor power and responsibilities, insecure political situations, indefinite roles, disharmony among organizational and individual values, frustration, role conflict, anxiety created by responsibilities, work conditions, broken human relations (Eren, 2014; Buyukmese & Ersahan, 2015; Can, 2006; Robbins & Judge 2013). In relation to nursing; heavy work burden, time pressure, lack of social support at work, exposure to infectious diseases, injuries by needles, threat of infectious diseases and exposure to violence at work, sleep disorders, role conflicts, career development problems, coping with patients who have difficult and serious diseases cause stress among nurses (NIOSH, 2008; Baykal & Turkmen, 2014). Besides, visit demands by patient relatives out of visiting hours, frequent day and night shifts, responsibility against more than one authorities, lacking respect and interest, poor promotion opportunities through self-development, being restricted due to excessive rules, policies and procedures, dissatisfactory wages, crowded services, uncertainty in treatments provided, long day and night shifts, conscientious responsibility and negative behaviors and attitudes of patients' significant others cause stress; too (Kanbay & Ustun, 2009; Shehri, Shimemeri, Aomry & Saleh, 2016; Onder, Aybas & Onder, 2014; Aksoy, Kaplan & Cobanoglu, 2009; Baykal & Turkmen, 2014). Similarly; stress causes decreased level of work performance, fatigue, professional alienation and concern for future, lack of motivation; -psycho-somatically- neck and shoulder stiffness, forgetfulness, stomach disorders, anger and worry (Kane, 2009; Baykal, & Turkmen, 2014) and increased smoking and alcohol consumption, reduced professional satisfaction, increased burnout (Khamisa, Peltzer & Oldenburg, 2013) and negatively affected motivation (Ocal, Kurklu & Tekin, 2015). Stress factors in nursing affect productivity of nurses psychologically and physically and their social lives directly and as a result those who are treated and cared are negatively influenced; which in turn results in professional inefficacy and alienation (Baykal & Turkmen, 2014). Activities that improve work-environment and decrease stress -which causes nurses to quit jobs and professional deficiencies- should be done. In this sense; the current study was undertaken to determine stress factors among nurses and to explore the effects of stress upon nurses.

## **2. Method**

### **2.1. Sample**

The population of the study was composed of 542 nurses who worked at a Training and Research Hospital and a state hospital under General Directorate of Public Hospitals Union. No sampling was made and the whole population was targeted. The study was conducted with 256 nurses (47%) who worked for 3 months at least.

### **2.2. Data Collection Tools**

For the data collection; a survey form that included a total of 18 questions (addressing nurses' age, sex, marital status, educational status, position, professional experience, reasons to choose nursing profession, whether or not they considered themselves fit for the profession and demographic characteristics; 9 questions addressing the hospital where they were employed, service where they worked, reasons why the service was chosen, weekly working hours, type of shift, adequacy of physical conditions, satisfaction with work setting, health related and professional problems emerging

due to work-environment and hospital conditions) was employed. Besides; the data were collected using the other inquiry with 7 parts and 89 questions addressing stressing factors among nurses under the titles of causes of stress related to patients/patients’ relatives and significant others, causes of stress related to physicians, causes of stress related to personal issues, causes of stress related to work-environment, causes of stress related to other nurses and causes of stress related to management/administration through face to face interview technique between the 9th and 30th March 2016.

### 2.3. Ethical Constration

Ethics committee approval to undertake this study was gained from General Directorate of Public Hospitals Union of Rize Province with the decision dated 09.03.2016. In addition, it was conducted with volunteer nurses to participate in the study.

### 2.4. Analyses of the Data

Numbers, percentages, arithmetical means were used to explore demographic characteristics of the nurses, their stress status and reasons to experience stress while chi-square tests were employed to their demographic characteristics, their stress status and reasons to experience stress.

### 3. Findings

Of the nurses, 91% were female, 35% were aged between 25 and 34 years, 47% had baccalaureate degrees and 48% had a work-experience of  $\geq 11$  years, 45% were employed in clinics, 82% were worked as a service nurse, 32% were worked higher and 52 hours in a week, were 50% of them were partly satisfied with work-environment and 41% partly had problems about working-hours.

Fifty-seven percent of the nurses had stress due to negative attitudes of patient and their significant others, fifty-six percent of the nurses lack of nurse and other personel; forty-four and a half of the nurses suffered from stress due to inability to spare time for themselves and their families; thirty-seven of the nurses had stress due to the fact that their rights were not protected at the meetings and they were not employed at the departments where they wanted to work. (Table 1).

**Table 1. Causes of stress**

Causes of stress	Low level		Moderate level		High level	
	n	%	n	%	n	%
Causes of stress related to patients/patients’ relatives and significant others						
Realizing procedures that give pain to patients	86	33.6	10	39.1	38	14.8
Patients with bad prognosis	51	19.9	88	34.4	80	31.3
Age of patients (being a child or an elderly patient)	63	24.6	78	30.5	81	31.6
Negative attitudes and behaviors of patients/ patients’ relatives and significant others	31	12.1	49	19.1	14	57.4
Death of a patient	63	24.6	69	27.0	88	34.4
Not knowing what to say to patients/ patients’ relatives and significant others	93	36.3	72	28.1	49	19.1
Visiting wishes of patients’ relatives and significant others out of visiting hours	50	19.5	46	18.0	12	48.0
Causes of stress related to physicians					3	
Being criticized by physicians	79	30.9	75	29.3	64	25.0

Physicians' not coming when they were called or not being wanted to be called	83	32.4	60	23.4	78	30.5
Physicians' giving prescription order late	67	26.2	78	30.5	71	27.7
Physicians' giving insufficient information about patients	81	31.6	66	25.8	68	26.6
Inability to contact with physicians in emergent cases	88	34.4	57	22.3	68	26.6
Physicians' humiliating behaviors/talks	98	38.3	51	19.9	62	24.2
Physicians' giving a treatment unsuitable for patients	112	43.8	56	21.9	47	18.4
Physicians' being insistent on a situation although they should not (for example; verbal order)	93	36.3	49	19.1	75	29.3
Unavailability of physicians in case of a patient's death	103	40.2	43	16.8	63	24.6
Causes of stress related to personal issues						
Fearing to make a mistake about the treatment given to patients	134	52.3	51	19.9	33	12.9
Inability to answer to the questions asked by patients	133	52.0	68	26.6	16	6.3
Patients requiring nursing skills and care beyond nurse's ability	109	42.6	72	28.1	36	14.1
Thinking that they are not suitable to work at night	57	22.3	95	37.1	73	28.5
Inability to rest after night shift/day shift	67	26.2	78	30.5	74	28.9
Lacking professional knowledge for some patients	120	46.9	70	27.3	27	10.5
Inability to use medical technology and tools	142	55.5	55	21.5	25	9.8
Inability to spare time for themselves and families	47	18.4	74	28.9	11	44.5
Insufficient salaries/difficulty meeting needs	48	18.8	71	27.7	99	38.7
Causes of stress related to work-environment						
Unsuitable physical conditions such as insufficient lighting, etc.	109	42.6	76	29.7	36	14.1
Late repairs and maintenance of services	76	29.7	97	37.9	51	19.9
Poor security at hospitals	48	18.8	58	22.7	12	47.7
Unsuitable design/place of resting rooms	63	24.6	80	31.3	84	32.8
Insufficient or broken materials/tools	79	30.9	86	33.6	54	21.1
Not giving time for refreshment during night shifts	68	26.6	82	32.0	70	27.3
Excessive noise/crowdedness	53	20.7	86	33.6	89	34.8
Confusion and disorder at services	46	18.0	84	32.8	94	36.7
Sharing work area with too many health care personnel	90	35.2	79	30.9	56	21.9
Unsuitable design of patient rooms being too small to move	92	35.9	75	29.3	49	19.1
Not being informed about using a special equipment / its operation	99	37.2	76	29.7	43	16.8
Providing materials late (providing medicines too late after treatment hour)	107	41.8	68	26.6	36	14.1
Causes of stress related to other nurses						
Aggressive and violent communication	121	47.3	62	24.2	33	12.9
Humiliating and disclosing weak points of each other	112	43.8	69	27.0	37	14.5

Not being open to communication/collaboration	102	39.8	68	26.6	47	18.4
Lack of collegiality / not defending colleagues	94	36.7	68	26.6	55	21.5
Slow and inconsiderate attitudes	92	35.9	74	28.9	53	20.7
Realizing responsibilities/tasks late	99	38.7	61	23.8	54	21.1
Coming to work late	102	39.8	62	24.2	48	18.8
Causes of stress related to management/administration						
Demands not related to nursing/being forced to meet these demands	56	21.9	52	20.3	108	42.2
Patient crowdedness	35	13.7	72	28.1	114	44.5
Hospitalization of patients with different care needs at services	53	20.7	60	23.4	104	40.6
Providing care for critical and intensive care patients continually	69	27.0	68	26.6	79	30.9
Providing care for deadly ill patients continually	91	35.5	52	20.3	73	28.5
Long day, night and weekend shifts	62	24.2	51	19.9	109	42.6
High number of day, night and weekend shifts	54	21.1	59	23.0	106	41.4
Working at weekend/too often	57	22.3	67	26.2	99	38.7
Lack of time to complete nursing tasks and duties	59	23.0	81	31.6	76	29.7
Lack of nurse/other personnel	35	13.7	51	19.9	143	55.9
Wasting too much time with recording	48	18.8	73	28.5	106	41.4
Falling behind of quality practices	57	22.3	79	30.9	86	33.6
Oppressive/scolding attitudes of managers/administrators	95	37.1	64	25.0	64	25.0
Unpredicted/unexpected shift list/not taking opinions of nurses	112	43.8	62	24.2	46	18.0
Nurses' inability to express opinions to implement a novel practice	103	40.2	71	27.7	45	17.6
Being charged at understaffed departments/ nurses being continually employed at different departments	98	38.3	57	22.3	61	23.8
Difficulty getting annual leaves/difficulty getting annual leaves at a time nurses want	99	38.7	54	21.1	69	27.0
Negative/cynical attitudes and criticisms	108	42.2	58	22.7	58	22.7
Not defending nurse-rights etc. at meetings	58	22.7	74	28.9	94	36.7
Always taking decisions according to physicians' opinions/ignoring nurses' opinions	54	21.1	81	31.6	88	34.4
Not giving orientation trainings	128	50.0	61	23.8	32	12.5
Not using/facilitating opportunities for career development	85	33.2	70	27.3	65	25.4
Not being employed at departments where they want to work	76	29.7	55	21.5	94	36.7
Not giving power as much as responsibilities	62	24.2	74	28.9	81	31.6

Nurses who worked at general clinics/units underwent higher level of stress than other nurses working at other departments due to inability to spare time for themselves and their families ( $\chi^2=14.630$ ;  $p=0.023$ ). When nurses' problems and work problems due to stress were investigated; 70% of the nurses felt physically tired, 63% of them suffered from psychological sleep disorders and 59% of

them had professional burnout. For nurses who had a work-experience of  $\leq 10$  years had more sleep disorders as compared to those whose work-experience was  $\geq 11$  years ( $\chi^2=10.540$ ;  $p=0.005$ ). Nurses aged between 18 and 24 years suffered from sleep disorders more as compared to other age groups ( $\chi^2=8.591$ ;  $p=0.014$ ).

#### 4. Discussion

Stress is heavily experienced due to such causes as high work load among health care workers, communicational problems between nurses and patients/patients' relatives, lack of personnel and medical materials (Tel, Karadag, Tel & Aydin, 2003). Nurses as health care workers experience high level of stress, too; which produce psycho-somatic disturbances among them (Abdelrahim & Humaida, 2012; Tel et al., 2003). Besides; stress affects intentions to quit jobs, organizational commitment and reduced job satisfaction levels (Lim, Bogossian & Ahern, 2010). Therefore; we are of the opinion that the current study will be valuable in exploring quality of professional life, professional happiness and productive performance of nurses by determining status of stress experience, causes of stress and effects of stress upon nurses.

In the study, most of the participants were female nurses, more than one third of them were aged between 25 and 34 years, nearly half of them had baccalaureate degree, had work experience of  $\geq 11$  years, half of them were employed at a training and research hospital and most of them were employed as service nurses, and more than half of these nurses stated that they had high level of stress due to negative attitudes of patients or their families. It is reported that stress is produced by such causes that nurses are continually in contact with patients, their hospital attendants as well as visitors; there are problems in coordination and patient relatives insist on visiting patients out of visiting hours. Similarly; some studies reported that inability to cope with wishes of patients and their relatives causes stress among nurses, too (Altintoprak, Karabilgin, Cetin, Kitapcioglu & Celikkol, 2008; Milutinovic, Golubovic, Brkic & Prokes, 2012; Lim et al., 2010).

In addition to patients and their relatives; insufficient number of nurses and personnel led to high level of stress among nurses in terms of causes of stress related to management/administration. Likewise; another study concurred with the finding of the current study and reported that nurses underwent stress due to lack of nurses (Adib-Hajbaghery, Khamechian & Alavi, 2012). Due to lack of nurses, their work burden increases (Shammika, Hellerawa, & Chamaru Adambarage, 2015). Thus, increased work burden may prevent nurses from establishing control over work. Some studies pointed out that control over work, requiring the jobs done with minimum sources and in the shortest time, causes nurses to experience stress, too (Yada et al., 2015; Han, Trinkoff, Storr, Geiger-Brown, Johnson & Park, 2012; Ozen, 2013; Johnston, Jones, Charles, McCann & McKee, 2013). However; nurses may face frustration and disappointment when they cannot provide a care of high quality they aim at and cannot answer patients' demands due to high work burden; which eventually leads to stress, too.

Besides; in regard to management/administration nearly two in five nurses stated that they experienced stress in meetings because their rights were not defended. In the study of Hassim (2007), it was reported that rights of health care workers were neglected or ignored. In the study of Kangasniemi, Viitalahde and Porkka (2010), it was pointed out that responsibilities and tasks of nurses as health care workers have been studied in recent years but their rights have not been discussed enough. Yet; the current study presented that two in five nurses were not employed at the department where they requested to work and therefore underwent high level of stress; which indicated that the nurses were not backed up and supported in managerial/administrative sense. Some studies argued that lack of support from managers and administrators may lead to job stress (Han et al., 2012; Ozen, 2013) and the study of Ergun and Celik (2015), suggested that to support employees is effective upon decreasing job stress.

In addition to these stress causes; nearly half of the nurses experience stress due to poor security measures at hospitals. Yet; according to quality and performance practices in health, institutions are responsible for providing security for 24 hours and it should regularly be supervised (Regulation of

Ministry of Health, 2011). Despite efforts for quality, the fact that nurses suffered from stress in terms of security highlighted the necessity to check security policies in force.

Another aspect as important as safety is the time spared by nurses for themselves and their families. However; nurses in general and those working at services in particular undergo stress due to inability to spare time for themselves and their families. According to the findings of the current study; that nearly one third of the nurses worked  $\geq 52$  hours weekly proved that the nurses were unable to allocate enough time for themselves and their families. Some studies were in agreement with the findings of the current study in that nurses felt stressed because of long and tiring working hours (Altuntas & Intepeler, 2010; Purcell, Kutash & Cobb, 2011) because long weekly working hours of nurses affects their social lives and domestic lives negatively (Arpaci, 2007). Other studies emphasized that long working hours reduced quality of life of nurses (Altıntoprak et al., 2008) and high number of day and night shifts of nurses led to stress (Cakir, Cirak, Celik & Kaykac, 2008).

Nearly one third of nurses had stress because physicians did not come when they were called or because physicians wanted not to be called. Some studies pointed out that nurses suffered from stress due to physicians (Milutinovic et al., 2012; Ince, 2014); which ends up with a conflict between physicians and nurses and stress among nurses. This elevated degree of stress may negatively affect nurses' ability to provide patient care and to take clinical decisions.

Apart from physicians; nearly one fourth of nurses stated that they suffered from intense stress caused by the reasons emerging from other nurses such as lack of collegiality and not defending each other. Likewise; some studies explored that nurses complained about not receiving support from colleagues and therefore experienced stress (Ozen, 2013; Cakir et al., 2008; Adib-Hajbaghery et al., 2012; Milutinovic et al., 2012; Karchani, Barkhordari, Pornajaf, Raei, Asaadi, Khobi & Vatani, 2012). However; this professional group should understand, support and be in solidarity with each other better.

When the effect of stress upon nurses was studied; most of the nurses -the biggest part of which was composed of female nurses- told that they felt physically tired due to stress. In the study of Ozen (2013), it was reported that female nurses had higher level of psychological and physical complaints than male nurses. As proven by these findings, fatigue and tiredness is explained as a cause of stress among nurses (Milutinovic et al., 2012).

In addition to fatigue and tiredness; nearly two third of nurses had psychological sleep disorders. In the study of Coban, Yilmaz, Ok, Erbuyun and Aydin (2011), it was stated that nurses had differences in effective sleep, wakefulness and wakefulness time. On the other hand; the study of Dolu, Elalmis and Keloglan (2013) emphasized that stress occurs depending on changes in circadian rhythm. The sleep problems are more common among individuals working at hospital environment (Turk, Eroglu & Turk, 2008; Tel et al., 2003) and poor sleep time increases job stress (Turk et al., 2008). Yet; solving sleep problems is important in patient safety and preventing injuries and occupational accidents of nurses.

Also, the current study found that nurses who had a work-experience for  $\leq 10$  years and were aged between 18 and 24 years suffered from more sleep disorders. The reason why these young and inexperienced nurses have more stress may be that they are charged in night shifts and weekend shifts more frequently than experienced nurses, are not used to work at night shifts or prefer spending the day to sleeping and resting at home or join master education, etc. On the other side; another reason may be that as nurses' ages and experiences increase so does their ability to cope with stress (Yildirim, Hacıhasanoglu & Karakurt, 2007; Karchani et al., 2012; Purcell et al., 2011).

Nurses can also have burnout due to work stress in addition to fatigue and sleeplessness. Burnout is another problem to be solved in many areas of nursing (Bakir, Ozer, Ozcan, Cetin & Fedai, 2010; Armutcuk, Sevinc, Bozkurt, Bostanci & Zencir, 2011; Onan & Isil, 2010; Balci, Demir, Kurdal, Koyuncu, Deniz, Tereci, Mandus, Yalcinkaya & Ongel, 2013). According to what Demir (2004) cited; Folkman et al. (1986) argued that poor techniques to deal with stress cause burnout. In this sense; it will be

helpful and useful that researchers interested in the topic should study nurses' techniques to cope with stress in detail.

## 5. Conclusion

Half of nurses who were female, had baccalaureate degree and had work-experience of 11 years were partly satisfied with work environment. More than half of nurses experienced stress due to mainly negative attitudes and behaviors of patients and their relatives, other nurses and lack of other personnel; nearly half of the nurses had stress because they could not spare enough time both for themselves and their families. In this sense; nurses suffered from physical fatigue, sleep disorders and burnout due to stress. Therefore; a work setting that will reduce stress affecting nurses' work performance and happiness in professional life and family life negatively should be built and their work conditions should be improved. In this sense; labor policies and work programs should be revised and formed and number of personnel should be increased and working hours should be reduced.

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