

A Descriptive Cross-sectional Study to assess the stress among nurses regarding workload of patients in Allied hospital Faisalabad

Uroosa Nizam Deen, Asma Zarish

Abstract

Objective: stress is a phenomenon that effect on physical and mental health of nurses regarding to increase patient ratio. The purpose of this study is to identify stress, job dissatisfaction and depression among nurses.

Material and method: A descriptive cross-sectional study was conducted in Medical Emergency department of Allied Hospital Faisalabad. 50 staff nurses were participated in research. After taking consent self-structured questionnaire was used to collect data from participants. Data was analyzed on SPSS version 20.

Results: Study revealed that majority of nurses 25-35 age participants were 44 (88%). All participants were female. 35 (70%) participants were single and 15 (30%) participants were married. The educational status of participants was General Nursing and Post RN (BSCN). 45(90%) participants were General Nursing and 5(10%) were Post RN (BSCN). 36 (72%) participants showed stress.

Conclusion: This study shows that effect of over patient to nurse ratio on nurses in Allied hospital Faisalabad. The increase work load of patients in hospital is a chief problem. The ratio of stress, job dissatisfaction and anxiety were increase day by day. Severe level of stress shrinkage nurses overall health including mentally and physically.

Key words: Nurse, stress, job dissatisfaction, occupational stress, nurses shortage, depression.

1. Introduction:

Nursing is a great profession that gives high quality of nursing care to solve the patient's problems. Pakistan is facing dangerous shortage of nursing experts and there is crucial need to take suitable short term and long term actions in the right direction to produce more trained professionals in this field.

Nursing require a rigorous physical and psychological health. This study shows that impact of over burden of patients on nurses. Allied hospital Faisalabad has huge gap in nurse and patient ratio in the past several decades. In this hospital, the ratio of nurses to patient is really low. The over work capacity in hospital is a chief problem. They cannot

do their duties well and commendably their physical and intellectual skills are reduced.

Nursing profession gives pleasure and satisfaction during giving proper nursing care to sick people, while it is also known to be a very traumatic profession. Severe and moderate level of occupational stress shrinks nurses overall health including mentally, bodily and socially.(Bhatia N, hospitals et al. , Badil, Shah et al. 2016)

Stress and fatigue greatly influenced by increased workload of patient on nurses.(Khanade and Sasangohar 2017). Long-lasting workload, deficiency of autonomy, lack of status, shortage of resources, conflicts, cheap pay scale, and lack of motivation are the main factors that are answerable for rising occupational stress among nurses.(Bhatia N, hospitals et al. , Badil, Shah et al. 2016). Moreover, current research proposes that several work-related stressors are related with nursing include poor social support, lake of information as well as noise pollution (Wu, Zhu et al. 2007). In many countries, increased staffing pattern is used to reduce nurses stress, fatigue, absenteeism and job dissatisfaction (Malatji, Ally et al. 2017). Decreased staffing ratio as compared to patient ratio cause increased workload on nurses and also reduce quality of nursing care (Malatji, Ally et al. 2017). Occupational stress has weighty impact on organizational general growth. Additionally, organizations whose workers are stressed may turn out fruitless, less productive and less dynamic(Park 2007). The nurses have massive workload in Pakistan and nurse to patient ratio is 1:50 in hospital. However, Pakistan Nursing Council proposes one nurse for 10 patients and two nurses for one patient in general wards and specialized units respectively (Pakistan Nursing Council. Islamabad)

[Accessed 2015 January 05]. However, stress to an overweight extent has been considered as a positive stress and employees try to achieve the desired objective. This progressive stress helps to improve the effectiveness of the employees whereas extremely increased level of stress has some detrimental consequences. (Khowaja, Merchant et al. 2005). Furthermore, unnecessary occupational stress can lead to weakened working ability and decreased the quality of workers (Wu, Chi et al. 2010) . Present study helps to define the percentage, sternness and reasons of work related stress among registered nurses in hospitals of Pakistan.

Aim:

The aim of the study is to bring awareness to the higher authorities on shortage of nurses in medical emergency ward of Allied hospital FSD.

Objectives:

- To assess the effect of high patient ratio on nurses.
- To increase awareness regarding shortage of nurses.
- To assess stress among nurses regarding the increase patient ratio.

Purpose:

This study finds out the stress, mental depression, exhaustion, and job dissatisfaction among nurses in medical emergency ward of Allied hospital FSD.

In these days shortage of nurses is a big problem in Pakistan. It is necessary to maintain nurse to patient ratio in hospitals.

2. Literature review:

This study was conducted in Marshall University U.S by Gutsan, Jami Patton, William K wills, Albeto in 2018. This study showed that exhaustion of physical and emotional strength as a result of prolonged stress and frustration among Registered Nurses is very common in U.S. Nurse's physical exhaustion is described as a long-term reaction to excessive pressure at work. The expert's notice that the causes for nurse disappointment in their position and tiredness were ascribing to wrong management of workforce and means. (Gutsan, Patton et al. 2018).

This study was conducted in Greek by Sarafis, Rousakis and Andreas in 2016. This study concluded that Nursing is a difficult and demanding job. Stress effect the health of nurses in relation to standard of life. Some stress elements are important and individualistic forecast of personal burnout, work related burnout and client related burnout. Stress occurring from disputes with administrator was directly linked with psychological health. Job stress affects nurse's health and standard of life also. Stress also affects the patient health. (Sarafis, Rousaki et al. 2016).

A study was conducted by Duffield, Roche, Diers in USA 2010. This study suggested that if we do not review the environment and increased patient ratio as compared to nurse ratio then we are not apparently feasible to recognize ideal staffing design. It also has a bad impact on nurses' health. This reveals that number of nurses should be increased. It is necessary to carefully manage the shortage of nurses and only one method cannot be used in many wards it is depend on patient's requirements.(Duffield, Roche et al. 2010)

A study was conducted by Gaudine, throne in Canada 2012. The study demonstrated three features of

nurses' moral disputes with hospitals: Importance of patient care, Importance of nurses and Importance of manpower strategies. Research result demonstrated several aspects of nurses and moral disputes with hospitals. Shortage of nurses as compared to patients cause psychological and bodily exhaustion and influence their duty performance. Increase patient ratio cause the nurses to leave their job due to job disappointment.(Gaudine and Thorne 2012).

A study was conducted by Kelly in USA 2011. He concluded that a most important concern for health care administrations along with other reasons is the transfer of nurses to other countries leading to staff shortages. (Kelly 2011).

Malatji, Ally et al. 2017 conducted a study in South Africa. This study proved enlarged mental fatigue and bodily tiredness exist among nurses. This exhibited that distribution of staff workforce was not equivalent to patient ratio. Stressful environment cause bad impact on nurse's psychological health. Shortage of nurses also has bad effect on patient health and increase patient's complaints. If nurse ratio becomes equal to patient ratio then we will be able to solve the nurses problems as well as patients problems.(Malatji, Ally et al. 2017).

Malatji, Ally et al. 2017 conducted a study in south Africa.It was found in this study that the high patient to nurse ratios and the profitability factor of private hospitals virtually dictates the type of employment patterns that are used in these hospitals. As such, the existing staffing patterns appear to necessitate nursing staff to work longer shifts and more overtime work. Various studies that matched nurse staffing patterns with patient outcomes discovered the relationship between fatigue and nursing staff.(Malatji, Ally et al. 2017).

A study was conducted by Garrett USA 2008. He reported that insufficient staffing patterns and unworkable workloads placed an unnecessary burden on nursing staff, reduced the quality of care, led to excessive fatigue, impossible expectations and incomplete tasks.(Garrett 2008).

Butts, DeJoy, Schaffer, Wilson, & Vandenberg, conducted a study in USA in 2009. It reveals that Professional stress is stress defined in terms of its physical and physiological impact on a person, and can be a mental, physical or emotional strain relating work. It can also be stiffness or a situation or factor that can cause stress.(Butts, Vandenberg et al. 2009).

Another study was conducted by Rawel and Perdashi in 2015 in Pune. Their study demonstrates that Nursing has been a stressful specialty. The present nursing shortage and high turnover is of excessive concern because of its impact upon the efficiency and effectiveness of any health-care delivery system. Additionally, recruitment and holding of nurses are persistent problems related with job stress. It is essential to reorganize work location and eliminate as many as possible stressors, along with training of staff in a ways with which they can manage job stress and realize better adjustment in order to encourage employees' health and safety. (Rawal and Pardeshi 2015).

Lu, Sun et al. conducted a study in china in 2015 Their study revealed that too much papers work, criticism, instrument shortage, night shift, rank of professional were the factors that effect work stress to positive handling styles. Decrease in document work and medical protection for emergency department nurses were the powerful factors that affect occupational stress to negative coping styles. (Lu, Sun et al. 2015).

Tao, Gue et al conducted a study in china in 2018. This study showed possible significantly negative effects of work stress on job gratification of CHNs in Southwest China. Tactics to freeing work stress, increasing chances for job training and continuing education, raising salary and enlightening promotion system are therefore highly suggested. (Tao, Guo et al. 2018).

A study was conducted by Dilip Saikia 2018 in India. The paper examines the impact of nursing shortages and deliberates the causes of nursing shortages in India, and confirms that although the numbers of nurses in the rural public health sector have been rising, the sector is still misery from acute nurse shortages. This study has found significant differing effects of the nursing shortages on risky health outcomes such as the infant death rate and the under-five mortality rate. (Saikia 2018).

The present study was conducted by Ardekani, Kakooei et al 2008 in Iran. It determines the occurrence of mental illnesses among shift work hospital nurses in Shiraz. Nurses were found to agonize from mental disorders and this was more common among females. It was concluded that the mental health pattern in hospital nurses was similar to that of overall Iranian people as the referent population. However, the prevalence rates of social dysfunction, somatization and anxiety symptoms among the nurses were higher than the referent population(Ardekani, Kakooei et al. 2008).

Another study conducted by Khodadadi, Hosseinzadeh et al 2016 in Iran. It shows that Prevalence of stress and anxiety among the Iranian nurses were at a momentous level with vulnerability to experience psychological disorders and provide

lower quality of patient care. (Khodadadi, Hosseinzadeh et al. 2016).

Shahana Naz, Ali Madeeh Hashmi, Aftab Asif 2016 conducted a study in Pakistan. It exhibit that Exhaustion in nurses was very common because of growing workload and can adversely affect their quality of life leading to compromised patient care. (Naz, Hashmi et al. 2016).

Another study was conducted by Rasheed, Rashid et al. 2017 in Pakistan. It shows that the rate of lower back pain was very high in nurses more than 30 years of age old, married, overweight/obese and those with more than 15 years of work experience. Therefore, it is suggested to maintain the Body Mass Index in the standard ranges and also sustain proper body mechanics and posture and use assistive strategies in lifting the patients. (Rasheed, Rashid et al. 2017).

3. Methodology:

Study design:

A Descriptive cross-sectional study design was used.

Study area:

Study area include medical emergency ward of Allied hospital Faisalabad.

Duration of study:

It is 4 month study from 1st January to 31 April 2019.

Data sources:

Different search engines were used like PubMed, Google scholar, books etc.

Study population:

Staff Nurses who working in Medical emergency ward of Allied hospital Faisalabad.

Sampling technique:

Convenient sampling technique was used.

Sample size calculation:

Sample size of 50 nurses was calculated.

Sample recruitment:

Inclusion criteria:

Staff Nurses with at least 1 year of work experience in Medical Emergency ward of Allied Hospital, Faisalabad.

Exclusion criteria:

All Nursing Students were excluded.

Data collection techniques:

Convenient sampling technique was used.

Data collection tool:

Structured Questionnaire was used for data collection.

Pretest or pilot study:

Pre-test was conducted on 10% of sample size.

Issues of reliability and validity:

To measure the validity of my instrument pre-testing method was use and to measure the reliability of my instrument Cronbach's alpha test was use.

Definition of key terms, concepts and variables:

Nurse: A person who is trained to care for sick or injured people and who usually works in a hospital.

Stress: Stress is a physical, mental, or emotional factor that causes bodily or mental tension.

Depression: depression is a mood disorder that causes a persistent feeling of sadness and loss of interest.

Job dissatisfaction: Job dissatisfaction refers to unhappy or negative feelings about work or the work environment.

Occupational stress: Responsibilities and pressures that do not align with a person's knowledge, skills, or expectations and inhibit one's ability to cope.

Variables of interest:

Study variables: Education, knowledge

Outcomes variable: Nurses' Shortage, Occupational stress, Job dissatisfaction, Depression.

Data analysis plan:

Data was analyzed by SSP version 20.

Ethical consideration:

Permission was obtained from the hospital management of the Allied hospital FSD. Informed consent was obtained from each of the participants after they were informed about the study.

4. Results:

Table 1: Demographical data of nurses working in Medical Emergency ward

Variables	Frequency	Percentage
Age		
25 - 35	44	88
36 - 50	6	12
Designation		
Charge nurses	50	100

Head nurses	0	0
Gender		
Male	0	0
Female	50	100
Marital status		
Single	35	70
Married	15	30
Educational status		
General nursing	45	90
Generic BSN	0	0
Post RN BSN	5	10
Religion		
Islam	36	72
Christian	14	28

Table 1: Shows the demographic data of participants. First part shows the demographic data of 50 participants. Shows age of participants. 25-35 age participants are 44 (88%) and 36-50 age participants are 6 (12%). The designation of participants which participate in study was charge nurses. 50 (100%) charge nurses participate in the study. The gender of participants was only female. 50 (100%) female charge nurses participate in the study. 35 (70%) participants were single and 15 (30%) participants were married. The educational status of participants was General Nursing and Post RN (BSCN). 45(90%) participants were General Nursing and 5(10%) were Post RN (BSCN). 36(72%) participants were Muslims and 14(28%) participants were Christian.

Table 2: Average results of nurse's stress

Variables	Yes n (%)	No n (%)
You are growing impatient due to over workload	40 (80%)	10 (20%)
Increase nurses ratio in wards can decrease the depression in nurses.	49 (98%)	1 (2%)
You are finding yourself disappoints.	30 (60%)	20 (40%)
You are satisfied with their job due to over work loaded.	27 (54%)	23 (46%)
You are feeling stifled in your professional life.	38 (76%)	12 (24%)
Nurse's shortage is cause stress and depression in nurses.	48 (96%)	4 (8%)
You are finding that your job is very hectic.	45 (90%)	5 (10%)
In high work load you are feel active on your duty.	26 (52%)	24 (48%)
In heavy work load you are complete your work on time.	21 (42%)	28 (58%)
You can deal all your patients at a time.	16 (32%)	34 (68%)
You are feeling exhausted at the end of your duty.	47 (94%)	3 (6%)

Ratio of medical errors is increase due to over workload.	47 (94%)	3 (6%)
Your behavior is change due to high workload.	46 (92%)	4 (8%)
You have sufficient time to complete your work most effectively.	24 (48%)	26 (52%)
You feel that people expect too much from you.	45 (90%)	5 (10%)
You want supportive or helpers.	47 (94%)	3 (6%)
You are working in a pressure situation.	40 (80%)	10 (20%)
You feel pain in your body due to over workload.	45 (90%)	5 (10%)

Table 2 shows the average results of nurse's stress. 40 (80%) nurses expressed the impatient due to over workload and 10(20%) nurses not show the impatient due to over workload. 49(98%) nurses display the depression can decrease if increase nurse ratio in ward. 30 (60%) nurses thought disappoints due to over workload and 20 (40%) not said disappoints. 27 (54%) nurses said the satisfaction due to over workload but 23 (46%) not show satisfaction. 38 (76%) nurses feeling stifled and 12(24%) nurses not feeling stifled due to over workload. 48 (96%) nurses showed stress and depression. 45 (90%) nurses show that job is hectic and 5 (10%) nurses not show the hectic job. 26 (52%) nurses showed activeness. 21 (42%) nurses show that they complete their work on

time due to over workload but 28 (58%) nurses show that they cannot complete their work on time due to over workload. 47 (94%) nurses show feeling exhausted but 3 (6%) show not feeling exhausted. 47 (94%) nurses said that medical error increase due to over workload and 3 (6%) nurses not show the medical error increase due to workload. 47 (94%) nurses show that they need supportive or helper . 16 (32%) participants said that they complete their work on time due to increase patient ratio and 34 (68%) participants show that they cannot complete their work on time due to increase patient ratio. High patient ratio causes change in behavior of nurses on duty. 46(92%) participants said that their behavior were change in great workload. 26(52%) nurses supposed that they have not enough time to complete your work most effectively. 45(90%) nurses believed that people expect too much from them. 40(80%) participants thought that they were work in a pressure condition. The physical condition in over work 45(90%) nurses said that they were feeling body pain in over workload.

Final result:

Stress status	Frequenc y	Percent age	Valid %age	Cumul ative %age
Stress ed	36	72.0	72.0	72.0
Unstre ssed	14	28.0	28.0	100.0
Total	50	100.0	100.0	

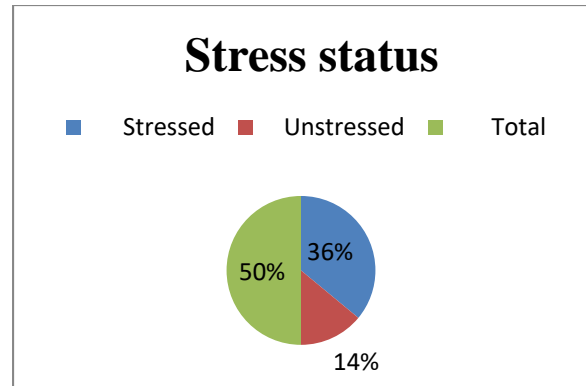


Figure Final result of nurse’s stress

Figure shows that 50 participants involve in the study and 36 (72%) show the stress of nurses.

5. Discussion:

Nurses are the chief part of our health care settings. They look after the patients and treat them in a good manner. They need to be free from stress and anxiety. Job dissatisfaction can cause stress and depression in nurses. This study was conducted in Allied Hospital Faisalabad to Access the stress among nurses regarding workload of patients. Stress among nurses in Medical Emergency department was gradually increased due to increase patient ratio. 50 participants participate in this study were under the range of 25-50 years of age. All were female and the educational status was General Nursing and Post RN (BSCN). Contributing participants were married and unmarried with marital status. 36 (72%) participants have great stress and 14 (28%) have not stress. Mean to stress was 1.28 and Std. Deviation 0.454.

A study was conducted in Karachi Pakistan on “Occupational stress among nurses”. A total of 265 nurses participate in the study. 125 (47.2%) were between 25 to 30 years of age. 160(60.4%) participants were female and out of them 148(55.8%) were married. 201 (75.8%) participants were with

diploma holders in nursing, while only 2(0.8%) have master in nursing. The study reported job stress; mild stress 2.0%, moderate stress 36.5% and severe 61.5% . (Badil, Shah et al. 2016).

A research conducted on “Occupational Stress Amongst Nurses of Two Tertiary Care Hospitals” in Delhi India. A cross sectional study was conducted. 87 randomly selected staff nurses participants were participating in research study. Working experience of participants was 1 year. This study resulted that 87.4% of the participants experienced their job stressful but 32.2% found it extremely stressing. (Bhatia, Kishore et al. 2010).

A study was conducted on “A Study to Assess the Effectiveness of Progressive Muscle Relaxation Therapy on Stress among Staff Nurses Working in Selected Hospitals at Vadodara City” in India. The sample of study was selected by non-probability convenient sampling. In this study sample size was 30 participants. Pre-tests zero (00%) samples presented no stress, 14 (46.67%) samples displayed mild stress and 12 (40%) samples presented moderate stress and 04 (13.33 %) samples showed severe stress. During the post-test 15 (50%) samples were displayed no stress and 12 (40%) samples presented mild stress and 03 (10 %) samples screened moderate stress. (Patel 2014).

A study was conducted on “Job stress, mentoring, psychological empowerment and job satisfaction among nursing faculty”. This research study was a descriptive cross-sectional study. The total sample size was (N = 959) and all were female, 53 years old. Less than 10 years of experience. Only 2.0% participants have mild stress, 36.5% participants have moderate stress and 61.5% participants have severe stress. (Chung and Kowalski 2012).

A study was conducted in Lahore Pakistan on “Burnout and quality of life in nurses of a tertiary care hospital in Pakistan”. 120 nurses asked to participate in research study. But only 106 (88.33%) participants agreed. 18(17%) nurses were doing job in Psychiatry Department, 17(16%) performed their duty in Neurology, 20(19%) participants in Medicine, 23(21.6%) in Surgery and 28(26.4%) in Obstetrics/Gynecology Department. All participants were female and range of (range: 20-50 years). 65 (61%) participants were married, while 41(39%) were unmarried. Correlation analysis presented a strong negative relationship between stress and Quality of life in nurses. 83(79%) nurses recorded severe, 8(7%) counted moderate and 15(14%) recorded low stress(Naz, Hashmi et al. 2016).

A study was conducted on “Work stress and job satisfaction in community health nurses in South West China”. 969 participants were participating in research study. 99.1% participants were female and under the age of 35 years old. 67.9% participants were married. 57.3% participants with Associate degree and 79.6% participants were junior or senior nurses. Working experience was 10 years in Hospital. 73.5% participants have average degree of work stress. (Tao, Guo et al. 2018).

A study was conducted on “Effects of job stress on work behavior amongst nurses in selected public and private hospital at Pune” in Pune. The study was conducted on 104 randomly selected nurses participants. Most of participants were in the age of 30-45yrs (48.7%). 74.4% participants were married and 1.7% was divorced. 25 (21.4%) participants were unmarried. Subjects in the study 57 nurses were working in Private hospitals and 47 in Government hospitals. (87.4%) found their jobs stressful with

32.6% (34/104) recorded severe or extreme stress. 87.4% reported some stress while 24.04% (25/104) described severe/extreme stress. (Rawal and Pardeshi 2015).

A study was conducted on “The Impact of Heavy Perceived Nurse Workloads on Patient and Nurse Outcomes” in Canada. 472 participants were participated in research study. 19 (4.1%) were participants were male and remaining participants 449 (95.9%) were female nurses. Registered Nurses 354 and Licensed practical nurses were 118. 260 (55.4%) participants showed stress among nurses and 209 (44.6%) participants showed no stress among nurses. (MacPhee, Dahinten et al. 2017).

A study was conducted on “Nurse Practice environment, workload, burnout, job outcomes, and Quality of care in psychiatric hospital, a structural equation model approach” in Belgium. N= 357 participants participated in study. 90% of the study sample was female. Participants experience was 6 years. Participants were suffering from severe stress. (Van Bogaert, Clarke et al. 2013).

A study was conducted in Pakistan on “Burnout and quality of life in nurses of a tertiary care hospital in Pakistan”. 120 participants were asked to participate in study but only 106 nurses were agreed. 18(17%) nurses belonged to Psychiatry Department, 17(16%) nurses belonged to Neurology, 20(19%) nurses selected from Medical ward, 23(21.6%) selected from Surgery ward, 28(26.4%) nurses selected from Obstetrics. All participants were female. 65 participants were married and 41 nurses unmarried. 83(79%) participants had severe stress, 8(7%) participants have moderate stress and 15(14%) nurses have low stress. (Naz, Hashmi et al. 2016).

A research was conducted on “The relation of depression, anxiety and stress with personal characteristics of nurses in hospitals of Tabriz” in Iran. 242 participants were selected. 185 (76.5%) were female and 57 (23.5%) were male nurses. 156 (64.4%) were married and 86 (35.6%) were unmarried. 224 (92.5%) participants were with Bachelor and 18 (7.5%) were with Master Degree. Data was collected from Burn unit, ICU, CCU and Emergency ward. 29 (15.7%) female participants had normal stress, 136 (73.5%) nurses had mild stress and 20 (10.8%) female participants had severe stress. In male participants 42 (73.7%) had normal stress, 15 (26.3%) participants have mild stress and 1% have severe stress. (Khodadadi, Hosseinzadeh et al. 2016).

A study was conducted in USA on “Burnout, Social Support, and Job Satisfaction among Jordanian Mental Health Nurses”. The total participants were 181 nurses. 101 (55.8%) were males. Age of the nurses between 21 and 54 years (Mean = 30.94, SD = 7.24). Members’ years of general experience as a nurse ranged between 1 and 30 years (Mean = 8.29, SD = 7.08). Contributors’ years of experience in a mental health setting ranged between 1 and 27 years (Mean = 5.85, SD = 5.98). Regarding stress in general; 33 (18.2%) described very low/low stress, 99 (45.7%) informed medium stress, and 49 (27.1%) stated high/very high stress. (Hamaideh 2011).

6. Conclusion:

A research study conducted on “Access the stress among nurses regarding workload of patients in Allied Hospital Faisalabad”. The purpose of this study is to assess the stress among nurses cause adverse effect on nurses health and behavior. Stress and fatigue greatly influenced by increased workload of patient on nurses. Nursing is a great job, which

wants a rigorous physical and psychological health. This study shows that impact of over patient to nurse ratio on nurses. Allied hospital Faisalabad has huge gap among nurse's and patient ratio in the past several decades. The population of Faisalabad is increase very fast. In this hospital, the ratio of nurses to patient is really low and upset. The over work capacity in hospital is a chief problem. They cannot do their duties well and commendably because their physical and intellectual skills are reduced. Nursing profession is such a great profession that give us pleasure and satisfaction during giving proper nursing care to sick people, while it is also known that a very traumatic profession. Severe and moderate level of occupational stress shrinkage nurses overall health including mentally and physically.

A Descriptive cross-sectional study design was used in this study. 50 participants were selected from Medical Emergency Department of Allied Hospital Faisalabad. 25-35 age participants are 44 (88%) and 36-50 age participants are 6 (12%). The designation of participants which participate in study was charge nurses. The gender of participants was only female. 36 (72%) participants were stressed and 14 (28%) participants were unstressed.

7. Recommendations:

Following are recommendations that help to reduce stress among nurses

- Increase staffing ratio as compare to patient ratio.
- Government should conduct stress reduction programs on national level.
- Increments should be given to nurses according to department.

- Teaching session should be conducted to increase the nurse's skills that help to cope the stress regarding to increase patient ratio.
- It is necessary to conduct researches on large scale to identify factors that cause stress among nurses.

8. Strengths and weaknesses:

Strength:

- It does not need too much money.
- It is quick means of data collection.
- It provides all factors that cause stress and how to reduce stress among nurses.
- It requires short duration for research study.
- Able to measure the prevalence in a given period of time.

Weakness:

- Susceptible to biases as responder bias and interviewer bias. Participants give right or wrong answer.
- No cause and effect relationship was seen.

9. References:

1. Ardekani, Z. Z., et al. (2008). "Prevalence of mental disorders among shift work hospital nurses in Shiraz, Iran." Pakistan journal of biological sciences: PJBS **11**(12): 1605-1609.
2. Badil, B., et al. (2016). "Occupational Stress among Nurses of Tertiary Care Hospitals in Karachi, Pakistan." Journal of Dow University of Health Sciences **10**(3).
3. Bhatia, N., et al. (2010). "Occupational stress amongst nurses from two tertiary care

- hospitals in Delhi." Australasian Medical Journal (Online) **3**(11): 731.
4. Bhatia N, K. J., Anand T, Jiloha RC. Occupational , et al.
 5. Butts, M. M., et al. (2009). "Individual reactions to high involvement work processes: investigating the role of empowerment and perceived organizational support." Journal of occupational health psychology **14**(2): 122.
 6. Chung, C. E. and S. Kowalski (2012). "Job stress, mentoring, psychological empowerment, and job satisfaction among nursing faculty." Journal of Nursing Education **51**(7): 381-388.
 7. Duffield, C., et al. (2010). "Staffing, skill mix and the model of care." Journal of clinical nursing **19**(15-16): 2242-2251.
 8. Garrett, C. (2008). "The effect of nurse staffing patterns on medical errors and nurse burnout." AORN journal **87**(6): 1191-1204.
 9. Gaudine, A. and L. Thorne (2012). "Nurses' ethical conflict with hospitals: A longitudinal study of outcomes." Nursing Ethics **19**(6): 727-737.
 10. Gutsan, M., et al. (2018). "Burnout syndrome and nurse-to-patient ratio in the workplace."
 11. Hamaideh, S. H. (2011). "Burnout, social support, and job satisfaction among Jordanian mental health nurses." Issues in Mental Health Nursing **32**(4): 234-242.
 12. Kelly, P. (2011). Nursing leadership & management, Nelson Education.
 13. Khanade, K. and F. Sasangohar (2017). Stress, fatigue, and workload in intensive care nursing: a scoping literature review. Proceedings of the Human Factors and Ergonomics Society Annual Meeting, SAGE Publications Sage CA: Los Angeles, CA.
 14. Khodadadi, E., et al. (2016). "The relation of depression, anxiety and stress with personal characteristics of nurses in hospitals of Tabriz, Iran." Int J Med Health Sci **5**: 140-148.
 15. Khodadadi, E., et al. (2016). "The relation of depression, anxiety and stress with personal characteristics of nurses in hospitals of Tabriz, Iran." Int. J. Med. Res. Health Sci **5**: 140-148.
 16. Khowaja, K., et al. (2005). "Registered nurses perception of work satisfaction at a Tertiary Care University Hospital." Journal of nursing management **13**(1): 32-39.
 17. Lu, D.-M., et al. (2015). "Occupational stress and coping strategies among emergency department nurses of China." Archives of psychiatric nursing **29**(4): 208-212.
 18. MacPhee, M., et al. (2017). "The impact of heavy perceived nurse workloads on patient and nurse outcomes." Administrative Sciences **7**(1): 7.
 19. Malatji, M., et al. (2017). "Nurses experiences regarding staffing patterns in the surgical wards of a private hospital in

- Gauteng South Africa." health sa gesondheid **22**: 325-332.
20. Naz, S., et al. (2016). "Burnout and quality of life in nurses of a tertiary care hospital in Pakistan." The Journal of the Pakistan Medical Association **66**(5): 532-536.
21. Naz, S., et al. (2016). "Burnout and quality of life in nurses of a tertiary care hospital in Pakistan." JPMA The Journal of the Pakistan Medical Association **66**(5): 532-536.
22. Park, J. (2007). Work stress and job performance, Statistics Canada Ottawa.
23. Patel, M. P. (2014). "A study to assess the effectiveness of progressive muscle relaxation therapy on stress among staff nurses working in selected hospitals at Vadodara City." IOSR Journal of Nursing and Health Science **3**(3): 34-59.
24. Rasheed, H., et al. (2017). "Frequency of low back pain among nurses working in Jinnah hospital Lahore."
25. Rawal, C. and S. A. Pardeshi (2015). "Effects Of Job Stress On Work Behaviour Amongst Nurses In Selected Public And Private Hospitals At Pune." SAMVAD **8**.
26. Saikia, D. (2018). "Nursing Shortages in the Rural Public Health Sector of India." Journal of Population and Social Studies [JPSS] **26**(2): 101-118.
27. Sarafis, P., et al. (2016). "The impact of occupational stress on nurses' caring behaviors and their health related quality of life." BMC nursing **15**(1): 56.
28. Tao, L., et al. (2018). "Work stress and job satisfaction of community health nurses in Southwest China." Biomedical Research **29**(3).
29. Tao, L., et al. (2018). "Work stress and job satisfaction of community health nurses in Southwest China." Biomedical Research **29**(3): 510-518.
30. Van Bogaert, P., et al. (2013). "Nurse practice environment, workload, burnout, job outcomes, and quality of care in psychiatric hospitals: a structural equation model approach." Journal of advanced nursing **69**(7): 1515-1524.
31. Wu, H., et al. (2010). "Occupational stress among hospital nurses: cross-sectional survey." Journal of advanced nursing **66**(3): 627-634.
32. Wu, S., et al. (2007). "Relationship between burnout and occupational stress among nurses in China." Journal of advanced nursing **59**(3): 233-239.