Perceived Challenges of Working Environment Among Emergency Department Nurses in Saudi Arabia

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Abstract:
Background: Emergency room nurses are faced with many challenges related to the nature of complex practices and the environment. Research has approved a number of characteristics of emergency department nurses in order to fulfill the required role. Objectives: To determine the perception of nurses of the Emergency Department to the challenges associated with their working environment. Methods: A cross-sectional design was used in four selected governmental hospitals in Hail. Among one hundred and seventy-five of Emergency registered nurses; One Hundred and Fifty-Eight emergency registered nurses were recruited conveniently based on the inclusion criteria. A closed ended questionnaire sheet was marked out by all the selected nurses to determine their perception towards challenges associated with their working environment. Results: In this study among the total population of Emergency Room staffs, 90 % of staffs were included; ages ranged between 23-29 yrs were 77.8%. Majority of female nurses were 88.6% most of the sample 83.5% hold bachelor’s degree in nursing. Moreover, 48.7% practicing as a nurse about 1-4 yrs. The ER nurses ranged from 1-4 yrs of experience were 75.9%. Majority of 79.7% were working as a staff Nurse. More than half of the Non-Saudi were working in ER was 54.4%. The variables under the quality of environment for professionals, most of them shows bad perception in working environment so far in comfort zone were 27.8%, nursing assistance and technician, hours of work shift have higher in bad perception overall level of 22.7%. In regards the Cleaning were 29.7%, Quality of materials were 37.9%, Physician were 36.7%, Number of calls per shift were 39.2%. In determining the perception of Emergency Department nurse towards challenges associated with their working environment shows higher perception level with the mean value of 32.03 and standard deviation was 5.6. Conclusion: From this study we concluded that, the healthcare policy makers may have concern about healthcare providers. The working condition of the Emergency Room nurses Perceived that they have somewhat discouragement in their working environment. Some changes in reimbursement and the practice of health care delivery required hospital to change the way they operate. These results will also propagate the managers to re-define a development plan for the Emergency Department working Environment of the selected Hospitals, in hail.

Keywords: Nurse, Perception, Emergency Department, Challenges, Working Environment.

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Introduction
In recent years, emergency departments have become increasingly important to the health care system. They are now the primary diagnostic and resuscitation centers in most hospitals (11). Emergency Room nurse provides quality care for patients who are taken in critical and non-critical seeking medical attention. This area of practice holds some special characteristics including work pressure, dealing with severely injured cases, and exposure to workplace hazards (10). Nurses experience is considered a key factor to accommodate effectively with these challenges and stressors such as physical demands, management issues, lack of resources, difficulty in balancing home and work responsibilities (4). However, studies identified some factors that impede the capacity of health care workers to adapt with the requirement of emergency care. These include lack of opportunities, heavy workload, conflicts, traumatic events etc. The impact of these factors may lead to serious physical as well as mental deteriorations (6, 7).

It is also reported that aggressive behavior and verbal harassment are treated by as many as 75% of emergency nurses. This is more than twice the percentage for nurses in other fields. Often, some nurses may experience physical abuse from clients of this kind (9, 12).

Review of Literature:
Literature related to Nurses facing challenges towards working Environment
Sahar and Hala, (2014), published an article in challenges facing Nursing Profession in Saudi Arabia. They represent a powerful force to bring the changes to meet the needs of health for all. The ministry of Health has committed enormous resources to improve health care, goal of providing free and accessible health care services for Saudis and expatriates working within the public health sector. There are number of challenges facing by nurse
practitioners. In 2010, Saudi Arabia found there was 30% of chronic shortage of nurses accompanied by high rates of turnover. Moreover, registered nurses leaving their job for different reasons including increased stress, low morale, lack of job satisfaction, family reasons such as pregnancy and child care. Some staffs experienced social rejection due to night shifts and weekend duties. Also, some nurses afraid from society and its perception, failure ad regrets, hesitant to take risks and difficulties in work. This concludes that these nurses should be competent in safe practice and care of patients to enable quality, professional and career development. The Nurses believes that a positive reinforcement from the family, colleagues, work environment and managers may support them to face challenges eventually (14).

Jose et al, (2014). conducted a qualitative, descriptive and exploratory study based on Challenges for the management of emergency care from the perspective of nurses in university hospital southern region Brazil. The study was done starting from June up to September 2009 by a Semi-structured interview. Among 32 nurses, 20 nurses participated who work in Emergency department. The interviewed questions based on the challenges faced in the care management of a hospital emergency department and asks suggestions how to overcome these has been recorded by an electronic audio device for about 10 to 50 minutes and then transcribed. Thematic Data analysis was done under the category of management of overcrowding, maintaining quality of care, and use of leadership as a management tool. By way of suggestions for overcoming these, nurses specified the necessity for healthcare scheme restructuring to concentrate on emergencies, variation in the streaming of patient care, extension of the physical structure of the unit and conducting continuous training for nursing staffs. These challenges and tactics are characterized by an improvement to develop the innovative practices through collaborative and synchronized work with the emergency care settings. It shows nurses perception in work area plays an important role to overcome the challenges (8).

Literature related to Emergency Department Nurses Perception in working Environment
Amy et al, (2016). identifies an integrative review on a Staff perception of the emergency department working environment in Australasian College for Emergency Medicine, Australia. In Emergency Department the employees reported increasing work overload because of staff shortage, budgetary cuts and overcrowding of patients and with acuity. These comprised of 24 quantitative and descriptive studies, four mixed descriptive and comparative which is (non-randomized controlled trial) studies and three qualitative studies; most of the studies done in Europe. The study used mixed method appraisal tool (MMAT) scores ranging from 0% to 100% by modal score with the large range of tools used to assess staff perception of working environment limits the comparability of the studies. A significant finding of this review found that the perceptions of working environment varied across clinical staffs. All the above studies said that there was a problematic issue in their working environment and poor staff perception of workplaces impact on staff retention. It also can be used to evaluate the effects of training and practice interventions and evidence base provided to assist maintenance of professional principal in the workspace, enhancing hospital Emergency Department practice and patient management(1).

Literature related to Nurses Working Condition
Bestise souz, (2010). conducted a study on the perception of nurses on working conditions in the emergency area of a hospital in Brazil. The aim of this study to determine the working conditions in the emergency sector in the Hospital da Restauracao. This study done in triangulation method including both qualitative and quantitative approach. The tool used to collect the data through open interviews, closed questionnaires and observations. A sample of 23 nurses were interviewed chosen randomly, in that 47.8% worked in emergency for more than 16 consecutive years, most of them female in the age range of 41 to 50 years. The result showed from the closed questionnaire that the quality of the environment for doing the work, 39.1% and 34.8% indicated Bad rate for comfort and cleanliness. In the variable equipment and supplies the prevailing rate was regular in all items, except the amount of material, which has good rating (56.5%). Regarding the number of professionals in emergency, physicians found 50% Good, nurses has high number of patients and lack of security for the development of the work were these items mostly criticized by those interviewed and observed. The study concluded that, the prevailing perceptions were poor working conditions, unsatisfactory wages, unhealthy and insecure environment, leading to poor quality of care. This reviewed study supports with the current Study undergone(3).

Fatma and Serap Sokmen, (2018). investigated a descriptive study on the working condition of nurses in public hospitals based on nurse-friendly hospital criteria in Turkey. The study reveals how nurses working in 3 major public hospitals. Among 735 nurses, 460 of them voluntarily participated. The tool used for this study was Personal information form and Adopted Nursing Work Index-Revised. Data Collection done by face to face interview and tool were distributed to the nurses then they returned on the same day. The result shows that, undergraduate nurse 53.4%, working in university hospital 37.3%, Special Area Nurses 37.2%, Clinical Nurses 92.2%, Professional Experience 0-5 years 40.4%. In the assessment of the nurses working condition showed most of them did not find the number of nurses in the clinic sufficient 64%, did not find the physical work environment satisfactory 64.1%, but found the tools and equipment in their working environment adequate 52.1%, Also, the
nurses stated that they did not have the appropriate environment to provide safe care to patients in their units 53.4%. This study concludes with the presence of quality initiative in hospitals may produce positive results for employees in terms of good working condition. For professional development, staff training, and quality initiatives may be possible to provide patient care in all the aspects. This reviewed study has a correlation to the current study (5).

Methods

Study Design/Population

A cross-sectional design was used to conduct the study that included recruiting registered emergency room nurses from four large governmental Hospitals in Hail; Hail General Hospital, King Khalid Hospital, Maternity Hospital, King Salman Specialist Hospital.

Study Population, Sample Size and Technique

The sample population consisted of nurses from selected hospitals enrolled from one hundred and seventy-five emergency room. From that one hundred and fifty-eight registered nurses were conveniently selected based on the inclusion criteria to assess nurses' perception of the challenges associated with an emergency work environment.

Sample Selection

ER staffs who were willing to participate in this study and should have more than one year of Experience in Emergency Department. ER Nurses who have a direct bedside care towards patients will be selected. None bedside care nurses or nursing administrative staff were excluded.

Research Tools

The Researcher used a Questionnaire which consists of Demographic part and assessment of Working Environment in the Emergency Department part. The data for the first part includes Age, Gender, Professional Qualification, Year of Experience as a Nurse, Year of Experience in ER, Nursing Position, Nationality. The second part was adopted from (Furtado and Junior, 2010) and consists of questions regarding Perception of nurses on working conditions in the emergency department. These included the assessment of Quality of Environment for professional, Equipment’s and supplies, Number of Professionals, Diagnostics and therapeutic Services, Routine Management and Organization. Elements were rated with 5-point rating scale (1=worst, 2=bad, 3=regular, 4=good, 5=excellent). No modifications done on the questionnaire. Content Validation was performed by a panel of expert who evaluated the questionnaire for suitability and clarity.

Data collection and procedure

The Researcher distributed a closed questionnaire to determine the perception of emergency department nurses to work-related challenges in selected hospitals in Hail, KSA. The study was conducted in four major hospitals in the Hail region. The study settings were King Khalid Hospital, Maternity Hospital, Hail General Hospital and King Salman Specialist Hospital. The total population of the Nurses Emergency Department was 175. This was attended by 158 nurses. On the basis of sample selection, 90% of nurses were selected using a convenient sampling technique. The closed questionnaire included a 5-point rating scale, which was distributed to all selected nurses and requested a genuine mark. The data collected was organized, tabulated, summarized and statistically analyzed using SPSS based on the objectives and the descriptive and inferential statistics of the study.

Ethical Considerations

This research was approved by the Ethical Committee of Participated Hospitals and granted clearance at the selected hospital level to conduct the study. A verbal consent was obtained from the participants prior to the data collection. Participation in this study was voluntary. The research team adhered to the rights, confidentiality, anonymity and respect of the respondents. The tool of this study was open and may not require for permission.

Statistical Analysis

Statistical Package for Social Science (SPSS) version 25 for windows was used for statistical entry and analysis after data collection. All variables were coded and checked for the normality of distributions. Descriptive analysis (numbers, percentage, mean and standard deviation) was used to evaluate the Emergency nurses’ perception towards challenges related to working environment.

Results

Demographic Characteristics:

A demographic characteristic was presented in Table 1. A total of 158 ER nurses participated in this study, accounting for 90% of the total number of staffs in selected ER hospitals, with 77.8% aged between 23 and 29 years. Most of the samples were female nurses was 88.6%. Approximately 83.5 % hold a bachelor's degree in nursing. Moreover, 48.7% practicing as a nurse about 1-4 yrs. The ER nurses ranged from 1-4 years of experience to 75.9%, and the ER experience was 5 % were over 10 years. A majority of 79.7% worked as a staff Nurse. Over half of the sample was 54.4 % of non-Saudi nurses working in the emergency room.
Table 1: Demographics of the Professional Profile of Nurses working in Emergency Department

| S. no | Variable                                   | Frequency (F) | Percentage (%) |
|-------|--------------------------------------------|---------------|----------------|
| 1.    | Age                                        |               |                |
|       | a) 23 - 29 years                          | 123           | 77.8           |
|       | b) 30 - 39 years                          | 30            | 16.2           |
|       | c) 40 years and above                     | 5             | 3.1            |
| 2.    | Gender                                     |               |                |
|       | a) Female                                  | 140           | 88.6           |
|       | b) Male                                    | 18            | 11.3           |
| 3.    | Professional Qualification                 |               |                |
|       | a) Diploma in Nursing                      | 19            | 12             |
|       | b) Bachelor in Nursing                     | 132           | 83.5           |
|       | c) Higher Diploma in Nursing               | 5             | 3.1            |
|       | d) Post graduate in Nursing                | 2             | 1.2            |
| 4.    | Year of Experience as Nurse                |               |                |
|       | a) 1-4                                     | 77            | 48.7           |
|       | b) 5-9                                     | 66            | 41.7           |
|       | c) > 10                                    | 15            | 9.4            |
| 5.    | Year of experience as nurse in ER          |               |                |
|       | a) 1-4                                     | 120           | 75.9           |
|       | b) 5-9                                     | 30            | 18.9           |
|       | c) > 10                                    | 8             | 5.0            |
| 6.    | Nursing Position                           |               |                |
|       | a) staff Nurse                             | 126           | 79.7           |
|       | b) Charge Nurse                            | 27            | 17             |
|       | c) Head Nurse                              | 5             | 3.1            |
| 7.    | Nationality                                |               |                |
|       | a) Saudi                                   | 72            | 45.5           |
|       | b) Non-Saudi                               | 86            | 54.4           |

Assessment by Nurses in variables associated with working environment

In Table 2 the variable shows. Under environmental quality, over half of them 55% were lacking in comfort zone for professionals, which shows from bad to regular perception in working environment. Regarding cleaning near values of 29.7% had regular opinion, 27.8% had good remark, also 24.6% nurses had bad cleaning environment. Majority of 30.3% had bad perception about resting condition. The quality of food supply for the nurses was bad which was 36.7% and 24% has worst perception. Regarding Equipment’s and supplies in hospital were the availability was good that was 36.7%. About 27.2% maintenance of equipment’s was good and 24.6% feels bad. Mostly 37.9% had regular quantity of material. In relation with number of professional working in ER the physicians were found 36.7% in regular basis. Nurses were found 30.3% in good criteria. In ER lack of Nursing Assistance and Technicians 30.3% falls on bad perception which shows the difficulty of working. In accordance with Diagnostic and Therapeutic services 34.1% in laboratory and Imaging Service and 31% in Blood Bank had regular perceptions. Hinging on the routine management and organization of work majority of 30.3% were in regular. Moreover, 39.2% perceived in regular basis on number of calls per shift and nearly 25.3% feels bad. Hours of work shift is high which falls on bad perception 28.4% and 20.8% in worst perception which shows the ER nurses were working more than the allotted hours. Nurses of 26.5% feels hospital security in regular range and equally 22.7% had perception which falls under the category of bad and worst.
Discussion

The findings of this study determined the perception of ER nurses’ challenges associated with working environment in selected hospitals hail had direct impact towards working condition related to the current study variables. Based on this study result, Cleaning, Quality of materials, Physician, Laboratory, Blood Bank, Imaging Services, Environment, Number of calls per shift, Hospital Security had the greater perception level of Regular Category. In addition, the Comfort, resting condition, Quality of food, Nursing Assistance and technician, Hours of work shift has higher Bad perception level. This shows that there were some difficulties where also facing during the working period. Moreover, availability and Maintenance of Equipment nurse’s perception level is good. While comparing the current study with previous study, the results obtained from the closed ended questionnaire were majority of the nurse’s perception level were regular 23.4%, about 22.7% were Bad, 20.8% were in the category of excellent, nearly 18.3% had worst and 14.5% had good perception. The literature review says that, the most disappointment with working conditions is the issue of overcrowding of patients, which leads to physical and emotional stress for the nurses. The excessive staffing is not considered as idyllic solution to this problem, but probably the reorganization of demand may be recommended.

A related study found that, Emergency Department are the highly stressful environments facing a variety of sentinel events. Repeated exposure of Emergency Department staff to stressful events such as sudden death, trauma, patients in acute and chronic pain, resuscitation, aggression and violence may lead to an adverse consequence on their physical, psychological and emotional health. Work overload for nurses may contribute to absenteeism and high turnover which affects the patient care. Most of the staffs where not getting adequate support from the hospital managers which leads to hurtful incident.

Upon comparing with the previous literature result shows, the quality of the environment for doing the work, 39.1% and 34.8% indicated Bad rate for comfort and cleanliness; about the variable equipment and supplies the

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**Table 2: Assessment by Nurses Perception associated with working environment in the emergency Department**

| Variable                              | Excellent | Good | Regular | Bad | Worst |
|---------------------------------------|-----------|------|---------|-----|-------|
|                                       | N         | %    | N       | %   | N     | %    |
| Quality of Environment for professional: |           |      |         |     |       |      |
| Comfort                               | 18        | 11.3 | 41      | 25.9| 43    | 27.2 | 44    | 27.8| 12    | 7.5  |
| Cleaning                              | 17        | 10.7 | 44      | 27.8| 47    | 29.7 | 39    | 24.6| 11    | 6.9  |
| Resting Conditions                    | 12        | 7.5  | 39      | 24.6| 45    | 28.4 | 48    | 30.3| 14    | 8.8  |
| Quality of food                       | 8         | 5.0  | 29      | 18.3| 25    | 15.8 | 58    | 36.7| 38    | 24   |
| Equipment and Supplies                |           |      |         |     |       |      |
| Availability of equipment’s           | 19        | 12   | 48      | 30.3| 42    | 26.5 | 39    | 24.6| 10    | 6.3  |
| Maintenance of equipment’s            | 14        | 8.8  | 43      | 27.2| 41    | 25.9 | 39    | 24.6| 19    | 12   |
| Quantity of materials                 | 10        | 6.3  | 39      | 24.6| 60    | 37.9 | 38    | 24  | 11    | 6.9  |
| Number of Professionals               |           |      |         |     |       |      |
| Physicians                            | 15        | 9.4  | 47      | 29.7| 58    | 36.7 | 28    | 17.7| 10    | 6.3  |
| Nurses                                | 41        | 25.9 | 48      | 30.3| 43    | 27.2 | 17    | 10.7| 9     | 5.6  |
| Nursing Assistants & technicians      | 10        | 6.3  | 41      | 25.9| 38    | 24   | 48    | 30.3| 21    | 13.2 |
| Diagnostics and Therapeutic Services: |           |      |         |     |       |      |
| Laboratory                            | 21        | 13.2 | 44      | 27.8| 54    | 34.1 | 28    | 17.7| 11    | 6.9  |
| Blood Bank                            | 20        | 12.6 | 47      | 29.7| 49    | 31   | 23    | 14.5| 19    | 12   |
| Imaging Services                      | 19        | 12   | 47      | 29.7| 54    | 34.1 | 25    | 15.8| 13    | 8.2  |
| Routine Management and Organization:  |           |      |         |     |       |      |
| Environment Organization              | 18        | 11.3 | 44      | 27.8| 48    | 30.3 | 37    | 23.4| 11    | 6.9  |
| Number of calls per shift             | 9         | 5.6  | 34      | 21.5| 62    | 39.2 | 40    | 25.3| 13    | 8.2  |
| Hours of work Shift                   | 14        | 8.8  | 26      | 16.4| 40    | 25.3 | 45    | 28.4| 33    | 20.8 |
| Hospital Security                     | 14        | 8.8  | 30      | 18.9| 42    | 26.5 | 36    | 22.7| 36    | 22.7 |

In Table 3, The Emergency Department Nurses perception level were assessed using rating scale. Majority of the nurse’s perception level were regular 23.4%, about 22.7% were Bad, 20.8% were in the category of excellent, nearly 18.3% had worst and 14.5% had good perception.

**Table -3: Emergency Department Nurses Perception Level**

| DOMAIN | EXCELLENT | GOOD | REGULAR | BAD | WORST |
|--------|-----------|------|---------|-----|-------|
| NURSES PERCEPTION LEVEL | (F) | (%) | (F) | (%) | (F) | (%) | (F) | (%) | (F) | (%) |
| 33     | 20.8      | 23   | 14.5    | 37  | 23.4  | 36  | 22.7 | 29   | 18.3 |
The prevailing rate was regular in all items, except the quantity of material, which has good rating (56.5%). Regarding the number of professionals in emergency, physicians found 50% Good, nurses have high number of patients and lack of security for the progress of the work (3). However, the current study found about the quality of Environment for professionals most of them were lacking in comfort zone in working environment were 27.8% which illustrates prolong hours of starvation and dehydration and Lack of Nursing Assistance and Technicians 30.3% falls on bad perception which shows the difficulty in work like shifting and transferring of patients, collection of samples and reports, Cleaning and Diapering etc.

Depending on the management and organization of work, in major 30.3% were in regular perception. Moreover, 39.2% perception in regular based on number of calls per shift and nearly 25.3% feels bad due to sudden on call duty. Hours of work shift was highly falling on bad perception since the nurses were working long period after their shift due to not able to complete the work on time. Nurses of 26.5% feels hospital security in regular and equally 22.7% had perception under category of bad and worst at times of codes and disaster. These results suggested that, the Managers need to entertainment for the reduction of overload at work to maintain a good working environment. Managers can be taken action to recognize the challenges facing by the staffs and reschedule the prioritization of work to promote a standardized working environment.

Moreover, the current study identified a significant determination in the nurse’s perception of Emergency Department towards challenges associated with their working environment had the higher perception level with mean value of 32.03 with a standard deviation of 5.6. In congruence, the working environment in the studied emergency room nurses were perceived mostly from regular to bad results point. The workplace is well thought out as inadequate offering and not dignified with respect to the staffs. With the available resources and overcrowding of patients, stabilization and treatment has been done. The situation resulting from the work environment will contributes the physical and emotional exhaustion of professionals. Whereas, positive perceptions of Emergency Room nurses were also distinguished among staffs often cited while in teamwork (6, 11).

In this current scenario of the study, the researchers believe that there will be a drastic change might be undertaken to sort out these challenges associated working environment for the emergency department nurses to promote a high-quality care.

Conclusion
Emergency department nurses must face various types of professionally Environmental challenges that may affect their work and health. The purpose of this study to describe the outcome which the nurses working in hail region hospitals as a dedicate mannerism. This study concluded that, the health care policy makers may have concern about health care providers. The working condition of the ER nurses Perceived that they have discouragement in their working environment. Some changes in reimbursement and the practice of health care delivery required hospital to change the way they operate. It is expected that, these results will also propagate the managers to redefine a development plan for the Emergency Department working Environment of the selected Hospitals, in hail.

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Conflict of interest
The researchers state that they do not have any conflict of interest about the publication of this paper.

Reference
1. Amy et’al, (2016): Staff Perception of the emergency department working environment, Integrative review of the literature Emergency. Medicine Australia, Feb; 28(1): 7–26.
2. Atencio, (2003) Secretary de Coordinate-General Urgency and Emergency. Political National of Brazil, Ministry of Brazil; 44-7
3. Bestisemia, Jose Luiz, (2010): Perception of nurses on working conditions in the emergency area of a hospital in the Hospital da Restauracao, Brazil, Vol;23(2).
4. Elizabeth, Robin, (2019): Issues Facing Emergency Room Nurses; Work - Chron.com, http:work.chron.com/issues-facing-emergency-room-nurses-27053.html.
5. Fatma and Serap, (2018): Investigation of the working conditions of nurses in public hospitals on the basis of nurse-friendly hospital criteria. International journal of Nursing Services: Turkey; Vol. 5, Issue:2.
6. Healy, S, Tyrrell, M (2011): Stress in emergency departments; Experiences of nurses and doctors, Emergency Nurse;19:31-37.
7. Howlett, Murray, LeBlanc-Duchin, Fraser and Atkinson, (2015): Burnout in emergency department healthcare professionals is associated with coping style; A cross-sectional survey. Emergency Medicine Journal;32.
8. Jose et al, (2014): Challenges for the management of emergencycare from the perspective of nurses. Acta
9. Julie Stene (2015): Work place Violence in the Emergency Department; Giving Staff the Tools and Support to Report. The Permanente Journal; vol:19(2)
10. Maria et al, (2018): Perceptions of critical and emergency department nurses regarding changes in their professional role; Rev. esc. USPE pub. Greece. March 15- vol;51
11. Manton (2016): “The biggest challenges of being an emergency room nurse”; http:creativenurse.com
12. Oisincurran, (2015): "How ER Nurses Work"; HowStuffWorks.com. https://health.howstuffworks.com/medicine/er-nurse.htm
13. Potter C. (2006): To what extent do nurses and physicians working within the emergency department experience burnout? A review of the literature, Australia Emergency Nursing J.; 9(2): 57–64p.
14. Sahar and Hala. (2014): Challenges facing Nursing Profession. Journal of Biology, Agriculture and Health Care: Saudi Arabia; Vol.4, No:7
15. Sarita Ahwal, (2015): Workplace Stress for Nurses in Emergency DepartmentInternational Journal of Emergency & Trauma Nursing www.journalspub.comvol.1: Issue 2
16. Shinde, M., and Anjum, S. (2007): Introduction to research in Nursing. Sneha publication India Pvt. Ltd., P 86-101.
17. Suresh K Sharma, PhD, MSN, RN (2012): Nursing Research and Statistics, Elsevier Pvt., Ltd., USA: P 145, 238.