A descriptive cross sectional study to assess the knowledge and practice of nurses regarding basic life support at Allied Hospital Faisalabad Pakistan.

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Abstract:

Background: Basic life support (BLS) is the the foundation for saving lives after sudden cardiac arrest. Every year thousands of people are died due to sudden cardiac arrest. In that critical situation until the trained medical help arrive, knowledge and practice of BLS/ CPR increase the survival chance of the victim. In cardiac arrest most of the victims don't received effective resuscitation that reduce the survival chance. That's way its compulsory for all health providers they have enough knowledge about BLS.

Objective: The present study is designed to assess the knowledge and practice of nurses regarding basic life support at Allied Hospital Faisalabad.

Method: After approval from institution and taking informed consent from participants. To assess the knowledge and practice of nurses used astructured questionnaire consisting on 22 questions based on demographic data, knowledge and practice of participants..For statistical analysis used the SPSS (20 version).

Results: Results shows the insufficient knowledge and poor practice of participants regarding BLS. Only (34%) participants have sufficient knowledge, (66%) have insufficient knowledge and (48%) participants have good practice, (52%) have poor practice about BLS.

Conclusion: Overall knowledge and practice of nurses regarding BLS/CPR are inefficient and poor. They must need a designed guidelines regarding BLS/CPR training and refresh courses during services.

Keywords: Basic Life Support, Cardiopulmonary Resuscitation

INTRODUCTION:

Basic life support (BLS)/cardiopulmonary resuscitation (CPR) is a type of medical emergency care. Through BLS/CPR we can able to save a apparently dead person precious life. Its critical to to perform early CPR or defibrillation(Semeraro, Ristagno et al. 2019). So BLS include identification of sudden cardiac arrest signs, foreign body airway obstruction(FBAO),stroke and also include CPR and defibrillation with the(AED) automated external defibrillation.(Yunus, Mishra et al. 2017). Results are poor in all age regarding physiological recover and survival following in hospital cardiac arrest (IHCA). sif a victim with cardiac arrest received the care within 3-5 minutes of event then the victim has the best chance of survival without neurological damage. The chance of victim survival will be double if the basic life support process started within the very first minute of cardiac arrest (Kelkay, Kassa et al. 2018). Because lack of oxygen to brain cause serious neurological damage(Sánchez García, Fernández Alemán et al. 2015).

In hospital cardiac arrest nurses are the first person who early detected and manage the patient present with cardiac arrest(Partiprajak and Thongpo 2016).it is important to every health professional especially nurses to have the expertise and basic skills to perform CPR, because it is estimated that through cardiac arrest 15-20% of all deaths occur. In both developed and developing countries cardiac arrest is a main cause of cardiovascular morbidity and mortality(Mendhe, Burra et al. 2017). So nurses must have knowledge about BLS/CPR according to guidelines from American Heart Association(AHA), (Kim and Roh 2016).Statistics also prove that if more people knew about BLS/CPR they able to save more lives (Sansare and Jacob 2018). In 1960 an article with the title of "closed-chest cardiac massage" published in the journal of American Medical Association in which first time discuss about 14 successfully managed cases with chest compression. AHA developed first CPR guidelines in 1966. In 2010 the AHA given the latest guideline for CPR and emergency cardiovascular care (Owojuyigbe, Adenekan et al. 2015). In 1998 also issued guidelines regarding BLS by European Resuscitation Council (ERC)(Handley, Koster et al. 2005).

Literature review:

- **Global:**

Life is a most precious for every person, in the whole world saving the life of a person is a noble act. In emergency situation most of the death occurs due to improper management of the victim. For emergency management as a nurse we must need to have specialized knowledge and skills about basic life support to save a person precious life(Kapurkar, Jagadale et al. 2018). To assess the effectiveness of structured teaching program on knowledge and knowledge of practice regarding advance cardiac life

support(ACLS)/basic life support(BLS) among staff nurses a study conducted at Krishna hospital,karad india.the authors of that study are mrs:kavita kapurkar,Mrs sandhya jagadale, Mrs Rohini Babar in May2017.

Through this study decide the relationship between the staff nurses demographic variables and also in post test knowledge and knowledge of practice. In this study conclusion was made that most of nurses have good knowledge and majority of having average knowledge about ACLS/BLS. Among nurses with age, gender and experience except education there is no relationship between knowledge. After the study the conclusion was made that the nurses of Krishna hospital have not sufficient knowledge about ACLS/BLS but improve their knowledge after structured teaching program.so there IS great need to improve knowledge about life threating condition to conduct various teaching program to update the nurses knowledge about ACLS/BLS.(Kapurkar, Jagadale et al. 2018)

Sudden cardiac arrest is a life threating emergency condition that's need to quick response of health professionals to provide immediately care in order to prevent neurological damage and save the person precious life. For this purposes the health professionals must have skilled and quick knowledge to reduce the mortality rate. A study conducted to evaluate the theoretical knowledge of health professionals and nurses at a public hospital in Goiania. This study was according to guidelines of American Heart Association 2015(Yancy, Jessup et al. 2016) and submitted 02.06.2018, accepted 02.15.2018. In this study asses the knowledge about cardiopulmonary arrest and cardiopulmonary resuscitation in adults. Conclusion shows that there is great deficiency of skilled knowledge in nurses regarding cardiopulmonary resuscitation and suggestion was mad that all health professionals must attend programs regarding management of cardiac arrest and improve their attitude to save the victim life.(de Oliveira, Moreira et al. 2018).(Kelkay, Kassa et al. 2018).

- **REGINAL:**

A study to analysis the relationship between knowledge and practice of BLS with potential variables. It is conducted in April 2016 among nurses in Gondar university hospital and Bahirdar hospital by Mengistu Mekonnen Kelkay, Hiwot Kassa, Zelalem Birhanu, Sinafikish Amsalu. In these participents some had good knowledge and good practice regarding BLS.different factors are associated to this knowledge and practice like assigned place where nurses are working, training places of nurses, their education status and significantly previous exposure which is related to knowledge of BLS. After the conclusion and results this is fined the overall knowledge and practice of BLS were low among nurses so there is great need to start training program and education among nurses regarding BLS knowledge and practice to achieve target results.(Kelkay, Kassa et al. 2018)

A study conducted in the bankok by suphamas partiprajak, pichaya Thongpo because the American Heart Association (AHA) reported the cardic arrest in US 2013 was estimated 209,000 cases in hospital (Go et al.,2013). The survival rate of this victims after cardiac arrest was very low, and rate improve with help of high quality CPR process (Abella et al.,2005; Meaney et al.,2013). For quality CPR in BLS nurses skilled attitude play a key role for saving the life of victim with cardiac arrest (Hemming et.al.,2003;Madden,2006). This study conducted for examine the retention of BLS knowledge, chest compression techniques and self-efficacy among undergraduate nursing students. This is based on pretest, urgently post test, and third test is conducted after three months of training program. The study also shows that there is great need to conduct training program for nurses to improve the BLS skills (Partiprajak and Thongpo 2016).

A study is accepted january17,2014 by Joes Maria Goncalves Ferandes and fellows to focused on teaching on BLS is a major part of student curriculum still it's not the compulsory part of education in health sector. So to evaluate the knowledge regarding BLS in students of public and private high school conducted a study through which give the training to students and analyses the results. School are considers best place to teach the students about basic education regarding BLS, and also assume that students are best for chest compressions because of their adult age. This study also conducted to compare and analyses the basic knowledge and the knowledge after training among public and private students. After this study also concluded that the students from private school have better knowledge rather than the students from public school. Students knows better about Basic life support then student from public school. So there is great need to arrange training program among students.(Fernandes, Leite et al. 2014).

Proposed Methodology:

Study design: Descriptive cross sectional study was used to assess the knowledge and practice of nurses regarding BLS.

Study area: Coronary care unit, Intensive care unit and Medical Emergency department of Allied Hospital Faisalabad.

Duration of study: 4months from Jan, 2019 to April, 2019.

Data sources: Different search engines were used like PubMed, Google Scholar, and Books etc.

Study population: Staff Nurses of coronary care unit, Intensive care unit and Medical Emergency in Allied Hospital Faisalabad.

Sampling technique: Consecutive sampling technique was used to assess the knowledge and practice of nurses regarding BLS.

Sample size calculation: 50 staff nurses having more than one year experience in their relevant departments.

Sample recruitment:

- ➢ **Inclusion criteria:** Staff Nurses of coronary care unit, intensive care unit and Medical Emergency of Allied hospital after one year experience in their departments.
- ➢ **Exclusion criteria:** In exclusion criteria exclude all staff nurses of other departments as,

- All students nurses
- All midwifery students
- All Head Nurses

Data collection.

Data collection tool: Data was collected through the well-structured research questionnaire comprising of 22 questions (based on demographic data, knowledge & practice of nurses regarding BLS).

Pre-test or pilot study: This questionnaire was pretested on 10% of the sample size and that was done on the population which was out of the study area but have similar characteristics. The results of the pretest were than analyzed and the necessary modification the questionnaire was made before actual data collection.

Issues of reliability and validity: Pre testing was done to measure the validity of my instrument and Cronbach's Alpha test was used to measure the reliability of the instrument.

Variables of interest:

Study Variables:

- Age
- Sex
- workplace
- Expenses
- Religion
- Educational status

Outcome Variable:

- Knowledge
- Practice

Data analysis plan. Data analyzed using SPSS (Statistical Package For Social Sciences)version 20.

Ethical considerations:

- Quality and integrity will present in my research.
- Consent will seek from study participants.
- Respect the confidentiality and anonymity of the respondents.
- All participants will participate voluntarily.
- Try to avoid any kind of harm for study participants
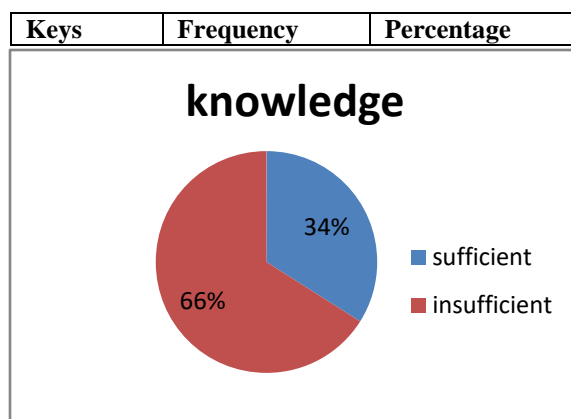
Results:

Table:1

Statistics of the knowledge

Variables	Frequency
Mean	1.66
Std.deviation	.479

Table:.1 show the results of the knowledge mean and stander deviation with 50 sample size. The mean of the knowledge was 1.66 and the stander deviation was .479.

Table: **Results of knowledge.**

Keys	Frequency	Percentage

knowledge

34% sufficient
66% insufficient

Sufficient	17	34%
Insufficient	33	66%
Total	50	100%

Table and figure shows the pesrcentage knowledge of the participants 17(34%) have sufficient knowledge and 33(66%) have insufficient knowledge regarding basic life support.

Table: 2 Statistics of the practice

Variable	Frequency
Mean	1.52
Std.deviation	.505

Above table show the results of practice mean and std. deviation with 50 sample size. The mean of the practice was 1.52 and the stander deviation was .505.

Table: Results of practice.

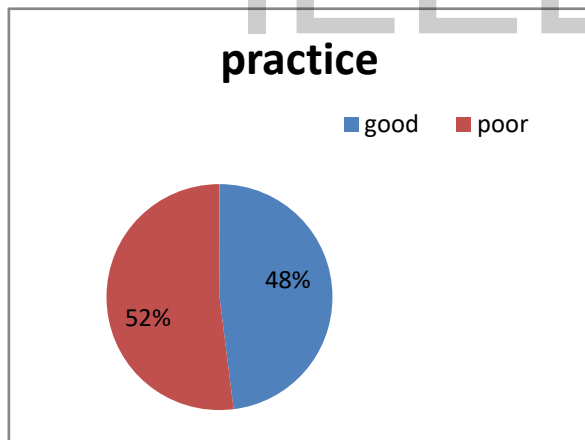| Keys	Frequency	Percentage
Good	24	48%
Poor	26	52%
Total	50	100%

practice

- good ■ poor

48%

52%

Table and figure shows the percentage practice of the participants,. In this 25(48%) has good practice and 26(52%) has poor practice regarding basic life support.

Conclusion:

Basic life support(BLS) is a medical care which is given to a victim in life threating condition until they can be given full medical care at a hospital. BLS can be provided by trained health care professionals including doctors, nurses, emergency medical technicians and by qualified bystanders.(Perkins, Travers et al. 2015). BLS basically is CPR certification; this term is more often used to refer to the level of training given to health care professionals rather than general people. The objective of BLS is not treating the victim but to buy some valuable time until the emergency medical service arrives. BLS promotes adequate blood circulation, through circulation reach the blood supply to vital organs in body. After reaching oxygen to all cells remove metabolic waste from body which is most important for normal human body.

Through this present descriptive cross-sectional study "assess the knowledge and practice of nurses regarding basic life support" working in different departments of Allied Hospital. For study 50 participants are selected and for data analysis a questionnaire tool is used, which is consist on questions about participant's knowledge and practice regarding BLS. After the data analysis through (software SPSS 20 version) the results shows the participants insufficient knowledge and poor practice regarding BLS. According to percentage results (34%) participants have sufficient and (66%) insufficient knowledge. Only (48%) participants practice is good and (52%) have poor practice about BLS.

Recommendations: After showing the poor results of participants knowledge and practice about BLS find the some ways through which improve the nurses knowledge, and the some ways are following;

- **BLS as part of curriculum:**
  About BLS knowledge and practice must include theoretical classes in nurses students course during their diploma period because that is the period of learning.
- **Conduct program at organization level:**
  Organization should arrange seminars and workshops regarding BLS/CPR training for students. Repeated training, hands-on practical demonstration are equally

necessary for acquiring knowledge. Through this experiences students must improve practice about BLS.

- **Arrange Practical approaches:**
  Organization must provide approach for practice for BLS/CPR work, through this nurses improve the confidence as well as practice.

- **Refresh courses:**
  Organization or departments must conduct refresh courses regarding BLS knowledge and practice according to latest AHA guidelines.

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