EVIDENCE BASED PRACTICE:
BARRIERS AND IMPLEMENTATION AMONG NURSES OF SERVICES HOSPITAL LAHORE.

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ABSTRACT

Introduction: On a regular basis researches are refined to produce more advanced and improved medicines, better medical devices and protocols for different procedures. Evidence Based Practice is the implementation of advance and researched based knowledge into practice. Different barriers are identified that effect the implementation of EBP. **Methods:** An analytical cross-case study was used in this study. Convenient sampling was used for data collection. Sample size was 250 nurses from Services Hospital Lahore. Conduct and Utilization of Research in Nursing (CURN) questionnaire was used for barriers to implement Evidence based practice. Evidence based practice implementation (EBPI) scale was used to check implementation. Data analysis was done by entering the data on SPSS software. **Results:** High rated barriers that were found in this study were inadequate facilities for implementation of EBP (71.9%), insufficiency of time (55.6%) and the nurse is unaware of the research (53.0%). There was a significant relationship between barriers and implementation of EBP $p<0.05$. In addition the relationship between components of barriers and implementation of EBP was also assessed. There was no relationship between organization communication, innovation and EBP implementation. There was a significant relationship between adopter and EBP implementation. **Conclusions:** On the basis of result it is concluded that there is a significant relationship between barrier and implementation of EBP. The high rated barriers investigated were inadequate facilities for implementation of EBP, insufficiency of time and the nurse is unaware of the research. The implementation of EBP among nurses is also very low. Only a few nurses were implementing evidence based practice in their daily practices.

Key words: 　　Evidence Based Practice, Implementation, Nurses.

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INTRODUCTION

In health department annually a high amount of money is spent to improve the quality of research. On a regular basis researches are refined to produce more advanced and improved medicines, better medical devices and protocols for different procedures. The basic reason of these studies is to help health care professionals, specifically nurses and doctors to improve the standards of treatment and care to the patients at hospitals.[13]

Evidence based practice consist of following steps. First step include asking question related to practices at clinical site, second step is finding the best relevant research evidence, third step include analysis of evidence, and last step include implementation of evidence based practice in clinical setting to improve the quality of care in patients. It is being found that nurses have knowledge about EBP but their implementation rate is not significant. It is also concluded that nurses learn more by discussing with their colleagues rather than by studying research articles.[14]

Nurses have positive attitude towards evidence base practice but they do not implement it in their daily practices in Iran. Certain studies have identified different barriers that effect the implementation of Evidence base practice among nurses groups.[16] An integrative review of different studies were done to in Jordan.

This review included 23 studies from all over the world. Result showed that 73.84% of studies revealed that lack of time is a major barrier for implementation of EBP. Inadequate resources 34.72% was second most rated barrier. Having no authority to implement new practice (30.38%) was the third most prevalent barrier. And fourth highly prevalent barrier in these studies was lack of organizational support.[1] According to survey conducted on 760 registered nurses a majority of nurses do not utilize research articles while making clinical decisions, 82% nurses didn't utilize libraries. However, know-ledge resources were their clinical experience, discussion with their colleagues, hospital policies and medical records of patients. Nurses prefer discussions with fellows to share knowledge instead of obtaining from articles, books or libraries.[2]

AIMS OF THE STUDY
The aim of this study was to investigate implementation and barriers of evidence based practice among nurses of services hospital, Lahore.

SIGNIFICANCE OF THE STUDY
Benefits to health care provider
This study help nurses to identify their personal barriers related to EBP. They can work on these barriers to promote EBP in their daily practices.

Benefits to nursing managers
Nursing Managers can utilize the data of this research to identify organizational barriers that restrain nurses from implementation.

Benefits to policy Makers
The policy makers of nursing schools can also make policies to add EBP in the course of student nurses. Policy makers of hospitals can adopt policies to improve implementation of EBP among nurses.

Benefits to future researcher
This study will add literature to the existing literature. Cohort, quasi-experimental or RCT, can also be carried out by using this research because this study will act as a baseline for future study.

LITERATURE SEARCH
A research study was done on Iranian nurses and midwives. Research was based on knowledge, attitude and implementation of EBP. Majority of nurses and midwives have minor knowledge and skills of EBP, however show moderately positive attitude toward EBP. Sample was based on staff nurses and midwives. Nurses have more know-ledge about EBP than midwives ($p < 0.001$). Unli-kely midwives show more positive attitude towards EBP ($p < 0.03$). Results shows that the nurses having high job experience have a little knowledge and implementation of EBP (Heydari, 2014).

A study was carried out on barriers of implemen-tation of EBP in Zehdan City of Iran. According to this study barriers at organizational level among nurses were lack of human resources (78.3%) the most highly rated barrier, the other barrier included lack of availability of internet to nurses at work (72.2%), and a high workload (70.0%), shortage of time for reading literature (83.7%). Although barriers at the individual level were inability to work by using computer (68.8%) and inadequate expertise in English language (62.0%).[8] After the organizational barriers the most rated barriers found to implement EBP in practice are the personal barriers. These barriers include nurses' inability to understand statistical term, difficulty in identifying the jargon words used in research articles and inadequate knowledge of nurses to judge the quality of research. 47% nurses of different hospitals in Singapore were found with these difficulties to implement EBP .[9]

In a rural hospital of Nigeria an investigative study was carried out. The research evaluated four

factors that affect EBP and research utilization in nurses. Factor 1 was nurses' personal attitudes and skills. Factor 2 was organizational limitations. Factor 3 was related to quality of research and fourth factor was availability of research. It was found that factor 1 and 2 were more prevalent than 3 and 4. It was further noticed that there was no significant relationship found between the working experiences of nurses and factor 1, p value was 0.323. Similarly the p values for factor 2nd, 3rd and 4th were 0.440, 1.071and 0.321 respectively indicating lack of notable relationship with experience.

In a similar study showed remarkable relationship between factor 3rd i.e. quality of research and qualification of nurses ($p < 0.001$). In contrary to this no relationship was between nurses qualification and nurses perception of 1st, 2nd and 4th factor.[11]

The relationship of EBP and its implementation among nurses was investigated. The result indicated that there is very weak relationship between barriers and implementation of EBP. p values calculated for relationship of all four barriers with implementation. For adopter (p >0.001), for innovation (p= 0.001) for communication (p=0.001). 43% of nurses give no opinion answers to innovation barrier. It could be due to lack of interest of nurses in EBP. However the relationship could be found strong in nurses who have significant interest in EBP.[2]

THEORATICAL FRAMEWORK
In previous researches different barriers were identified that affect the implementation of EBP. These factors could be lack of time, having no authority to change practice or having insufficient knowledge related to EBP.

Adoption of new clinical behaviors by the clinicians as well as by the health care organizations can help to implement more research based practices. This innovation in the behavior of nurses could be carried out by using Roger's diffusion model.

There are five stages in the model through which the changes are brought out. These stages are awareness or knowledge, persuasion, decision, implementation and in the last conformation. In the first the adopter is exposed to the new knowledge, in the second stage the adopter will identify if the new knowledge is helpful. After that in the third stage the adopter takes decision that if he/she wants to implement this new knowledge. In the fourth stage he/she will implement the practice and at the end implementation will be confirmed.[12] First two phases of diffusion model used in the current study. Nurses who are exposed to new knowledge face three barriers which are personal, organizational or communicational barriers. Once they are exposed to new knowledge they had to understand that is the new knowledge is helpful. In understanding this they may also face three barriers that are communicational barriers, organizational barriers and innovational barriers. In this study barriers will be identified and their impact on the implementation will be studied. Because these barriers highly effect on the implementation of EBP.

METHODS SETTING
The research was conducted in services hospital Lahore.

RESEARCH DESIGN
As the objective of the study was to investigate implementation of evidence based practice in nurses, to examine perceived barriers to implement EBP and to understand relationship of barrier on EBP implementation, quantitative analytical cross sectional study design was applied.

POPULATION
The target population was nurses.

SAMPLING
In this study convenient sampling was used.

RESEARCH INSTRUMENT
Conduct and Utilization of Research in Nursing (CURN) questionnaire was used for barriers to implement Evidence based practice. It was

developed by Funk, champagne, Tornquist and Wiese in 1987. Evidence based practice implementation (EBPI) scale was used to check implementation. It was developed by Melnyk, Fineout-Overholt, and Mays in 2008.

DATA GATHERING PROCEDURE

A formal written letter of permission to conduct the research was gained from institution. Questionnaire related to barriers of EBP was filled by the participants. The implementation of EBP in nurses was observed by the researcher in different departments.

METHODS USED TO ANALYZE DATA

Data analysis was done by entering the data on SPSS software. Tables were designed for representation of frequencies, mode and standard deviation. Spearman and Pearson test were applied to check relationship between barriers and implementation of EBP.

STUDY TIMELINE

The data was collected from October, 2015 to December, 2015.

ETHICAL CONSIDERATION

- **Veracity.** Participant was informed about the purpose of study.
- **Confidentiality.** Coding was done to make sure that the personal data of participants may not be leaked.
- **Non maleficence.** No incentives were given to participants. No one was forced to participate in research.
- **Autonomy.** Informed consent was signed by participants
- **Justice.** Fair procedure and outcomes was taken to select participants.

RESULTS

PROFILE OF THE RESPONDENTS

Respondents were taken from services hospital which is a governmental hospital.

Research Question 1 – what is the relationship between barriers and implementation of Evidence Based practice?

Table 1. Demographic frequency		
Variables	**Category**	**Percent**
Gender	Female	88.5
	Male	4.1
Age	Under 34	28.5
	35 - 50	63.3
	More than 50	.7
Home city	Lahore	59.3
	Other	33.3
Specialization	Yes	92.6
Highest level of education	Nursing School	32.6
	Additional education	60.0
Working experience	Under 5 years	16.3
	5 years	16.7
	Above 5 years	59.6
Designation	Staff Nurse	91.1
	Head nurse	1.5
Primary area of work	Medical - surgical department	51.1
	Intensive care unit	15.6
	Emergency unit	12.2
	Other	13.7
Working hours	Below 8 hours	91.9
	12 hours	.7

Data consisted of Male 4.1% Female 88.5%,. Age of nurses Under 34 was 28.5%, 35-50 was 63.3% and More than 50 was 0.7%. All nurses were Pakistani. 59.3% were from Lahore and 33.3% were from other city. All nurses were specialized in some category. 60% nurses had additional education and 32.6% nurses education was from nursing school. Nurses having working experience under 5 years was 16.3%, 5 years 16.7% and Above 5 years 59.6%. 91.1 nurses were staff nurses and 1.5 nurses were head nurses. Working department include 51.1 were from surgical department and 15.6 were from intensive care unit, 12.2 were from emergency department and 13.7 were from other departments. 91.9% were having duty hours below 8 hours and .7 have duty iming of 12 hours.

TABLE 2. Dependent variable frequencies		
Items	**Implemented**	**Not implemented**
Used evidence based practice in daily life.	17.4%	75.2%
nurses have informally discussed about EBP with colleague or other healthcare workers	65.2%	27.4

Table 2 shows that only (17.4%) have implemented EBP in daily practices. However (75.2%)

have not implemented EBP in last 4 weeks. However nurses have informally discussed about EBP with colleague or other healthcare workers (65.2%).

TABLE 3. Independent variable frequency	
Barriers	**To a great extent**
Inadequate facilities for implementation of EBP	71.9%
insufficiency of time to implement new ideas	55.6%
The nurse is unaware of the research	53.0%

Table 3 shows that the high rated barriers that were found in this study were inadequate facilities for implementation of EBP (71.9%), insufficiency of time (55.6%) and the nurse is unaware of the research (53.0%).

TABLE 4: Spearmen test		
Variables	**Co-relation Coefficient**	**Significance**
Barriers to Evidence Based Practice and implementation.	.141	0.026

Spearmen test was applied to check the relationship between barriers and implementation of EBP. According to this test there is a significant relationship between barriers and implementation of evidence based practice having value of p=0.026 and r_s =.141 as shown in table4.

TABLE5. Pearson Co-relation		
Variables	**Pearson Co-relation**	**Significance**
Organization and implementation	-.013	0.843
Adopter and implementation	.142	0.025
Innovation and implementation	.064	0.315
Communication and implementation	.032	0.610

According to table5 there is negative relationship between organizational barriers and implementation of evidence based practice. p= .843 and r= -.013. There is positive but small relationship between adopter barriers and implementation of evidence based practice. p= .025 and r= .142. No significant relationship is present between innovation and implementation of evidence based practice. p=.315 and r= .064. And the relationship between communicational barriers and implementation of evidence based practice is not significant having p= .610 and r= .032.

DISCUSSION

The barriers as a predictor for implementation of EBP were identified in this study like in the previous studies.[8-9-13] The relationship between barriers and implementation of EBP was also assessed. Results show that there is a little significant relationship between barriers and implementation of EBP as shown in table 5 means that barriers has a little influence over the implementation of evidence based practice among nurses.

The present study shows that the high ranked barriers in nurses are inadequate facilities for implementation of EBP, insufficiency of time and the nurse is unaware of the research. The low rated barriers are there are not worthwhile rewards for using research results, nurse feels results are not generalizable to own setting, nurse feels the benefits of changing practice will be minimal, nurse is isolated from knowledgeable colleagues with whom to discuss the research and research reports/articles are not readily available. In a research conducted in California insufficient time for searching and reading research.

Nurses have less time during working hours to implement new and innovative ideas. Unauthorized nurses have no opportunity to make changes in procedures of patient care. Another barrier noticed was lack of knowledge related to research were the high rated barriers. The lowest ranked barrier noticed was methodological insufficiencies in research.[2] Barriers in both studies were almost similar. Due to nurses shortage and increased patient ratios, the nurses may not have time for reading research. The facilities at job are also not sufficient like computers and internet, due to these inadequacies the nurse may not implement evidence based practice. The nurses may also not have interest in acquiring new knowledge or they don't have computer skills so that they can explore new knowledge and implement it in their practices.

In the current research the most rated were also inadequate facilities for implementation of EBP,

insufficiency of time. This shows that organizational barriers are most affecting barriers on implementation of EBP. A study conducted in China also had similar results as of this study. Barriers noticed were the organizational barriers which included were lack of time during working hours and lack of facilities at work place.[4] These results could be due to lack of interest of hospital management in the implementation of EBP. Poor budget of hospital so that it could provide resources to nurses to implement new practices.

In the present study about barriers, there is poor access to research evidence due to slow or lack of computers or data bases. The nurse does not have computer skills were moderately affecting on implementation of EBP. In a study the adopter barriers that most affecting are the nurse does not have computer skills, there is not a documented need to change practice and the nurse is unaware of the research. According to a study conducted in Iran barriers at the individual level were inability to work by using computer and inadequate expertise in English language.[8]

In a study conducted in Singapore most rated barriers found to implement EBP in practice were the personal barriers. These barriers include nurses inability to understand statistical term, difficulty in identifying the jargon words used in research articles and inadequate knowledge of nurses to judge the quality of research.[9]

The environment of nursing schools and colleges may not include computer courses or research in their curriculum due to which the nurses may not have computer skill and at the end the nurses may not understand research terminologies. The barriers could be overcome by increasing the standards of education in nursing school and colleges.

In present research study the relationship between communicational barriers and implementation of EBP is not significant. A study conducted in California concluded that the strongest correlation was between Characteristics of the Communication subscale of the barriers and EBP implementation.[3] The relation-

ship in the current study may not be significant due to lack of interest of nurses in research and evidence based practice. The nurses may not have adequate knowledge of research due to which they may identify the flaws or inadequacies of research. This could be a reason of insignificant relationship between communicational barriers and implementation of EBP.

In the existing study the implementation of EBP was very low among nurses. Only a few number of nurses were implementing EBP. In a study conducted in Taiwan the least EBP implementing group was nurses. Nurses have low positive attitude towards implementation of EBP than other professionals.[16] A lot of work is required to increase the implementation of EBP. The low rate of implementation may due to barriers that are identified in the research. Adopters own behaviors as well as lack of organizational support they both effect the implementation of evidence based practice among nurses. By overcoming these barriers the implementation of EBP can be improved.

In the current study there is no significant relationship between organizations, innovation, and communication with implementation of EBP. However there is a significant relationship between adopter and implementation of EBP. Overall there is a weak significant relationship between barriers and implementation of EBP. According to results of a research conducted in California, found the relationship between all for barriers to implementation of EBP. and the reesuled show no significant relationship between all for barriers with implementation of EBP.[2]

The Significant relation-ship between adopter and implementation of EBP could be due to the lack of interest of nurses in implementation of evidence based practice. Lack of interest could be due to inadequate facilities for implementation of EBP.

CONCLUSION
On the basis of result it is concluded that there is a significant relationship between barrier and implementation of EBP. The high rated barriers

investigated were inadequate facilities for implementation of EBP**,** insufficiency of time and the nurse is unaware of the research. The implementation of EBP among nurses is also very low. Only a few nurses were implementing evidence based practice in their daily practices.

LIMITATIONS

The data was collected from nurses of only one hospital. That was a government hospital. The implementation EBP may higher in private hospitals. A simple cross-sectional study design was used in this study. Study does not include cohort or quasi experimental design. As the sample was self-selected results of this study may not be generalizable to all population of nurses.

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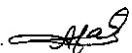
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AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author-s Full Name	Contribution to the paper	Author=s Signature
1	Sehrish Haneef	Work as a learner in this research project and play role as date collector.	
2	Muhammad Afzal	Supervise all project and provide help to student in discussion part.	
3	Sana Sehar	Working in this research project as preceptor and facilitate to student for writing the introduction and methodology of this project.	
4	Prof. Dr. Syed Amir Gilani	Supervise and facilitate for conducting this research project	