

ORIGINAL ARTICLE

**Factors Hindering to Research Utilization in Nursing Practice at
Public Tertiary Care Hospital**

Tasleem Bibi, Parveen Akhtar, Muhammad Zakariya, Aisha, Gobind Rai, Farah Anil

Tasleem Bibi (*Corresponding Author*)

Clinical Instructor
Liaquat College of Nursing
Jamshoro, Sindh-Pakistan.
Email: tasleembibi16@gmail.com

Parveen Akhtar

Assistant Professor
Peoples Nursing School
LUMHS, Jamshoro, Sindh-Pakistan.
Email: parveenimdad@gmail.com

Muhammad Zakariya

Nursing Instructor
Rising Star Institute of Nursing
Hyderabad, Sindh-Pakistan.

Aisha

Staff Nurse
NICVD Hyderabad, Sindh-Pakistan.

Gobind Rai

Clinical Instructor
Liaquat College of Nursing
Jamshoro, Sindh-Pakistan.

Farah Anil

Director Nursing
St.Elizabeth's Hospital
Hyderabad, Sindh-Pakistan.

ABSTRACT

OBJECTIVE: To identify the factors hindering nurses to use research findings in their practices.

METHODOLOGY: Analytical cross-sectional study was conducted among registered nurses working at Liaquat University Hospital Hyderabad / Jamshoro. All male and female nurses with job experience one year were included and those nurses who had no experience and who were not willing to participate were excluded from the study. Written informed consent was taken for participation and the questionnaire regarding barriers to research utilization developed by Funk et al was used in this study. Data were collected from August to October 2019. The nonprobability convenience method was applied to collect the data and a total of 141 questionnaires were distributed among registered nurses working in different departments. Data were analyzed through SPSS Version 22.

RESULTS: Results indicated that 86% of nurses agreed that research is important but a very low percentage (21%) of nurses had conducted research and only 3.3% had utilized research findings in their practice. Regarding barriers to research utilization the lack of time, nurses do not have authority to change patient care procedures, inadequate facilities, nurses lack the research knowledge, lack of research training were found the main barriers in research utilization.

CONCLUSION: Based on study findings there is a need to facilitate nurses by avoiding those barriers or providing facilitation by arranging research training and seminars, organizational motivation, and providing authority to decide on patient care will improve health care status of the patient, family, community, and country with research knowledge and application.

KEYWORDS: Factors, Barriers, Hindering, Research Utilization, Facilitation, Nursing Practice,

INTRODUCTION

Globally the research utilization has become a vital part of the nursing profession to improve health care status through implementation of research findings into practice as well as it advances the nursing profession^{1,2}. Although research and its application are considered very essential and crucial part it is the most neglected area of the health care system³. One study indicated that only twenty percent of nurses stated they are engaged in research and around 53.6 % are utilizing research at their work⁴.

The utilization of research findings signifies that nurses should have awareness of research and its importance to use research evidence in their practices. But the most of the nurses have no interest in conducting research and its utilization as well and even though nurses conduct researches but there is no focus to use those findings in practices^{1,5}. One study indicated that 60% of registered nurses do not use research findings in patient care setting⁶.

Factors hindering the utilization of research include lack of research awareness among nurses, insufficient time at the workplace, lack of cooperation by a physician, other staff at the floor, inaccessibility to research articles, difficult to understand research language, lack of proper research training and nurses lack the authority to change current practices^{1,7,8}. Many studies indicated the lack of authority to nurses as the topmost barrier and improving managerial support as the topmost facilitator of research utilization^{1,6,9,10}.

Lack of knowledge about research its method and its application cause difficulty for nurses to use research in practice. Insufficient time to read articles about current evidence or practices is challenging for nurses due to workload on the floor^{1,4,6,10}.

Nurses have a lack of interest in conducting studies, also lack knowledge about research methods and their findings that hinders the application of research in practice¹¹.

Many studies have proved these factors related to setting/organization hinder research utilization including insufficient time to read articles, implement new ideas, lack of support from manager and physician, no authority to bring change in current practices^{4,12,7,13}.

This study has provided data about the factors affecting research utilization in nursing practice and the strategies to improve the use of research to provide quality care to the patients that will improve the health status of the community through evidence-based practice.

One study found that more than 80% of nurses stated that they feel difficult to understand the analysis (statistical)¹¹. Another study also found that statistical analysis is difficult for nurses to understand^{14,15}. One study from Lahore Pakistan found that research articles do not get published fast as a barrier in research use¹².

This study has been carried out to determine the factors that are hindering nurses to use research findings in their practices. There is a scarcity of data availability in Pakistan because very limited studies have been conducted in Pakistan about research utilization and barriers hindering the adoption of research utilization in nursing. Therefore this study would also be helpful to develop the strategies to facilitate nurses for conducting research and incorporating findings in their practices to improve the health status of patients, families, community, and country as well as to meet the health care challenges of the 21st Century.

METHODOLOGY

An analytical cross-sectional study was conducted among registered nurses working in different departments/specialties at Liaquat University Hospital Hyderabad / Jamshoro Study was conducted within six months and data was collected from August to October 2019. All male and female registered nurses having one-year job experience and those nurses who were willing to participate were included in the study. Those who had experience of less than one year and who were not willing to participate were not part of the study. The sample size was calculated through Rao-soft and a total of 141 sample sizes was suggested and 121 nurses participated/filled the questionnaire. The subjects of the study were registered nurses who meet inclusion criteria. Written informed consent was taken from every subject for participation in the study. Due to limited samples, the data was collected through a non-probability sampling technique on the pre-designed questionnaire.

The questionnaire consisted of three sections as Section A contains a demographic variable, Section B contains questions related to the importance of research. C section has items regarding factors /barriers of research utilization and it has three subscales; Nurses related barriers, setting-related barriers, and research-related barriers with 5 options of the Likert Scale as strongly disagree, disagree, no-opinion, agree, and strongly agree. Most of the items have been adopted from the “Barriers Scale” that was developed by Funk et al and this questionnaire has been used by many authors with an alpha of 0.84¹⁷.

Data was collected after approval from the Ethical Review Committee Liaquat University of Medical and Health Sciences, Jamshoro, and permission was taken from the Medical Superintendent of Liaquat University Hospital Jamshoro/Hyderabad.

Data were analyzed through SPSS version 22. Chi-square test has been applied to find out the association between demographic variables and the importance of research with the level of significance (≤ 0.05). One sample T-test was applied for identifying barriers in research utilization with a P-value of less than 0.05.

RESULTS

Graph I shows 9.1 % of nurses were found in the age group from twenty-four to twenty-eight years followed by 35.5% from twenty-nine to thirty-three years,34.7% from thirty-four to thirty-eight years,18.2% from thirty-nine to forty-three years, and 2.5% in forty-four and above. The mean of age participants was 34 years with a standard deviation of 3.6 years.

Twenty percent of 121 nurses agreed that they have conducted the research but only 3.3% said they have utilized research findings or evidence in their practice

In this study, 60% of nurses said they have attended research seminars remaining 40% said they have not attended any research seminar.

Regarding qualification the study shows that more than half (64.5%) nurses had acquired Post RN BScN,18.2% had a diploma in general nursing,14% were generic BS nursing 2% nurses had master in nursing and 2% had master in public health.

According to results, there are 45.5% of nurses with seven to eleven years of job experience followed by 28.9% twelve years and above and 25.6% from two to six years of working experience in hospital.

GRAPH I: DISTRIBUTION OF PARTICIPANTS' AGE

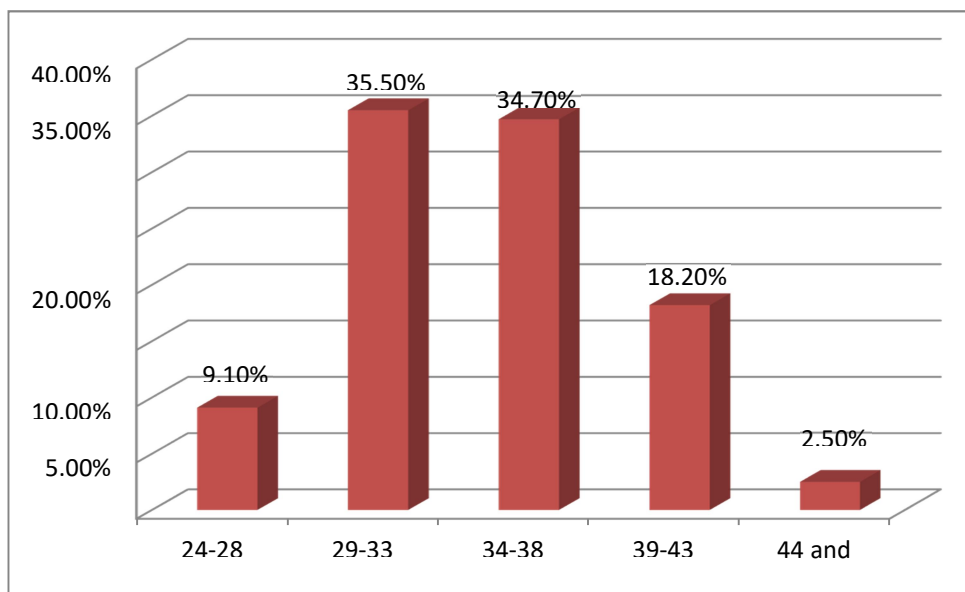


Table I shows that there is a significant association between the importance of research in nursing and participant's age and job experience p-value (< 0.05).

Results show that the factor as I don't feel to have enough authority to change patient care procedures has been main/major nurse related factors in the utilization of nursing research (mean 3.56±1), followed by as I do not see the value of research for practice (mean 3.36±1.0) and another barrier as I have no ability/skills to conduct research (mean 2.7±1.1).

In organization related barriers no facility of computer and internet has been found the main factor in the utilization of nursing research (Mean 3.98±0.66) followed by research seminars are not arranged in hospital (Mean 3.97±0.85) and another factor as there is

insufficient time on the job to implement new ideas (Mean 3.94 0.±95).

In research related barriers, the training is not conducted in the institute has been found main barrier (mean 4.0±0.7) followed by research articles are not readily available (mean 3.55 ± 0.8) and research findings are not cleared (mean 3.32 ±1).

TABLE I: ASSOCIATION OF DEMOGRAPHIC CHARACTERISTICS WITH THE SIGNIFICANCE OF RESEARCH IN NURSING

Characteristics		Yes	No	P Value
Participants 'age	24-28	9.1%	.0%	0.001
	29-33	33.1%	2.5%	
	34-38	32.2%	2.5%	
	39-43	12.4%	5.8%	
	44 and above	.8%	1.7%	
Job experience	2- 6 Years	25.6%	.0%	0.006
	7-11 years	40.5%	5.0%	
	12 years and above	21.5%	7.4%	
	In charge/Head Nurse	5.0%	5.0%	

Table II shows that in other barriers, nurses reported that workload is the main barrier (59.5%).

TABLE II: OTHER BARRIERS HINDERING NURSES' USE OF RESEARCH

Barriers	Frequency	Percentage	Mean+ SD
Workload	72	59.5	1.4
Lack of interest and support by administration	49	40.5	0.49
Total	121	100.0	

Table III shows that suggestions for facilitation of research utilization in nursing were reported as research training for nurses (38%), maintaining nurse-patient ratio to decrease burden (30%), and motivation by the organization (31%).

TABLE III: STRATEGIES TO FACILITATE RESEARCH UTILIZATION IN NURSING

Strategies	Frequency	Percentage
Research training for nurses	46	38.0
Decrease workload	38	31.4
Motivation by organization	37	30.6
Total	121	100.0

Table IV shows that the greatest barrier in research utilization was found nurses related barrier with a mean of 102.7 and standard deviation of 6.8 followed by organization related barrier mean of 96.8 and standard deviation of 14.4 and research related barriers with a mean of 91.33 and standard deviation of 8.57.

TABLE IV: SHOWS T-TEST STATISTICS FOR BARRIERS IN RESEARCH UTILIZATION

	N	Mean	Std. Deviation	Sig. (2-tailed)
Nurse related barriers	7	102.71	6.800	.000
Organization related barriers	9	96.89	14.452	.000
Research related barriers	6	91.33	8.571	.000

DISCUSSION

This study reported that 20 percent of subjects have conducted the research. One of the other authors also stated that only 21 % of nurses responded as they have conducted the research⁴. That means nurses are not too much involved in research conduction we need to identify the factors/barriers to facilitate and encourage nurses to conduct research. Nurses in public hospitals are not given an environment where they can investigate the problems related to nursing care.

In response to the utilization of research findings/evidence in practice, only 3.3% of nurses have applied/implemented research in practice. One study showed that 36% of the respondents agreed they have participated in research but only 25% of nurses stated that they have applied research results in practice¹⁶. Daphne C Duncombe¹⁸ reported that more than 70 percent of nurses never tried to implement evidence-based practice (research-based). This minimum utilization of research may be attributed to nurses' lack of interest, knowledge, maybe because of a lack of resources and cooperation for the application of the latest nursing evidence and theories.

The present study revealed that more than 60% of nurses agreed that they attend research seminars. Another study reported that more than fifty percent of nurses agreed that they participate in research-related work rarely¹⁴. It is suggested that nurses must be motivated and facilitated to use research evidence in practice. According to results, this study found the three major factors/barriers related to Nurse as I do not feel have enough authority to change patient care, I do not see the value of research for practice, and another barrier as I have no ability/skills to conduct research. One author from Lahore, Pakistan also reported that fifty percent of nurses responded that they do not feel enough authority to change the patient care procedure¹². This study is also from public tertiary care hospitals of another city of Pakistan but responses match to each other may be nurses feeling the same situation throughout the country. Additionally, many other studies from different countries also reported these factors as top barriers¹⁹⁻²¹. This means nurses are not empowered and are not allowed deciding on patient care. So nurses must be involved in decision making regarding patient care because it provides comfort to the patient besides their medication

In organization-related barriers lack of facilities at work has been found as the main factor and agreed that authority does not arrange research seminars and also agreed that there is insufficient time to implement new ideas. Public hospitals are lacking state-of-the-art facilities in Sindh, especially the availability of computer and internet facilities are the main barriers that prevent nurses 'access to new developments in nursing practices. One study answered that from 158 nurses total of 86 stated that there are inadequate facilities to implement research findings in their practice/setting and the same study also revealed that there is a significant association between insufficient time to read articles and participation of nurses in research¹⁶, a study from Spain agrees on this statement²². Mahnaz Sanjari et al, found that nurses feel they do not have sufficient time so they cannot implement new idea¹⁰.

Regarding lack of time to do research, one study found that nurses reported do not have enough time to focus on research^{23,24}.

The organization plays important role in employees' personal and professional development. It is therefore needed to provide efficient resources to the employees and distribute time/duty shifts equally so nurses can get time to focus on research.

Regarding other barriers, more than fifty percent of nurses answered workload as the main barrier (59.5%), and Lack of support by administration (40.5%). One study revealed that more than 70% of registered nurses were under moderate or strong working pressure⁸. Therefore the implementation of research findings would need to change the working routine of employees.

Regarding strategies to facilitate research utilization nurses suggested three main facilitators including research training for nurses (38%), and motivation by organization (31%) decrease workload (30%). In other studies, nurses answered these facilitating factors as work timing and training in research and motivation for research by nursing managers, cooperation from colleagues and physicians, working hours not more than eight hours, access to research library^{25,26}.

In this study T-test Statistics for barriers in research, utilization shows the nurses related barrier as the greatest barrier with a mean of 102.7 and standard deviation of 6.8 followed by organization related barrier mean of 96.8 and standard deviation of 14.4 and research related barrier with a mean of 91.3 and standard deviation of 8.5 and these means were found statistically significant with p-value < 0.001.

This study shows that all three factors/barriers may hinder nurses to apply research findings in their practice but nurse-related factors have been identified as more constraints toward research utilization. Therefore only one factor is not responsible for the least utilization of nursing research but all these three factors/barriers must be focused on and improved so nurses can apply research in nursing practice.

However, nurses need to take their interest in research activities such as finding recent information on bedsores prevention and healing, administration of medications with the lowest possible side effects, integrating the latest instructions while teaching patients, incorporating updated nursing interventions in nursing care plans.

CONCLUSION

The nurses agreed that research is important in nursing to improve patient health outcomes and for the advancement of the nursing profession. But at the same time very low percentage of nurses stated they have conducted research and applied research findings in practice. All these factors are shown importantly but the study proved that lack of time, the inability of nurses to conduct research, lack of authority, resources, and support from organization and unavailability of the research article as well as the workload are main barriers. That needs to facilitate nurses by providing facilitation by arranging research training, and motivating them for involvement in research and its application, by providing efficient resources like research articles, equal distribution of time/shift so nurses can get time to focus toward research and giving them authority to decide on patient care to improve the health of the patient, family, and community as well improve the image of nurses with research knowledge and application.

Ethical Permission:

Conflict of Interest: There is no conflict of interest among the authors.

Financial Disclosure / Grant Approval: There was no funding agency.

DATA SHARING STATEMENT: The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions

AUTHOR CONTRIBUTIONS

Bibi T: Conducted research
Akhtar P: Writing the manuscript
Zakaria M: Literature search
Aisha: Data collection
Rai G: Data analysis
Anil F: Data collection

REFERENCES

1. Bahadori M, Raadabadi M, Ravangard R, Mahaki B. The barriers to the application of the research findings from the nurses' perspective: A case study in a teaching hospital. *J Educ Health Promot* [Internet]. 2016; 5(1):14.
2. Karimian Z, Kojouri J SM. A review of evidenced-based based medical education at universities in and outside Iran. *nterdisciplinary J Virtual Learn Med Sci*. 2015; 6(1): 64–75.
3. Stokke K, Olsen NR, Espehaug B, Nortvedt MW. Evidence-based practice beliefs and implementation among nurses: A cross-sectional study. *BMC Nurs*. 2014; 13(1).
4. Kyalo Mutisya A, KagureKarani A, Kigondu C. Research Utilization among Nurses at a Teaching Hospital in Kenya. *J Caring Sci* [Internet]. 2015; 4(2): 95–104. Available from: http://journals.tbzmed.ac.ir/JCS/Abstract/JCS_71_20150530135252.
5. Mackey A, Bassendowski S. The History of Evidence-Based Practice in Nursing Education and Practice. *J Prof Nurs*. 2017; 33(1).
6. Mohsen MM, Safaan NA, Okby O. Facilitating Factors for Overcoming Barriers Facing Nurses for Research Utilization in Clinical Settings. *Am J Nurs Res*. 2016; 4(1): 13-24. doi: 10.12691/ajnr-4-1-3.
7. Tacia L, Biskupski K, Pheley A, Lehto RH. Identifying barriers to evidence-based practice adoption: A focus group study. *Clin Nurs Stud* [Internet]. 2015; 3(2).
8. Zhou F, Maier M, Hao Y, Tang L, Guo H, Liu H et al. Barriers to Research Utilization among Registered Nurses in Traditional Chinese Medicine Hospitals: A Cross-Sectional Survey in China. *Evidence-based Complement Altern Med*. 2015; 2015.
9. Nashwan AJ, Abujaber AA, Mansour DB. Barriers to Research Utilization among Registered Nurses at Hamad Medical Corporation. *Int J Res Nurs*. 2016; 7 (2): 41-48.
10. Sanjari M, Baradaran HR, Aalaa M, Mehrdad N. Barriers and facilitators of nursing research utilization in Iran: A systematic review. *Iran J Nurs Midwifery Res*. 2015; 20(5): 529-39. doi: 10.4103/1735-9066.164501.
11. Shifaza F, Evans D, Bradley H. Nurses' Perceptions of Barriers and Facilitators to Implement EBP in the Maldives. *Adv Nurs*. 2014; 2014: 1-7.
12. Kousar R, Kousar R, Azhar M, Waqas A, Gilani SA. Barriers of Research Utilization in Nursing Practices in Public Hospitals in Lahore, Pakistan. *Int J Appl Sci Biotech*. 2017; 5(2): 243.
13. Yoder LH, Kirkley D, McFall DC., Kirksey KM, Stalbaum AL, Sellers D. Staff nurses' use of research to facilitate evidence-based practice. *Am J Nurs*. 2014; 114(9): 26–37. doi: 10.1097/01.NAJ.0000453753.00894.29.
14. Nwozichi C, Ojewole F. Perceived Research Utilization Barriers among Nurses in a Rural Hospital in Nigeria. *Int J Adv Res Tech*. 2014; 3(1): 184-91.
15. Jun J, Kovner CT, Stimpfel AW. Barriers and facilitators of nurses' use of clinical practice guidelines: An integrative review. *Int J Nurs Stud*. 2016; 60: 54-68. doi: 10.1016/j.ijnurstu.2016.03.006.
16. Nkrumah I, Atuhaire C, Priebe G, Cumber SN. Barriers for Nurses participation in and utilisation of clinical research in three hospitals within the Kumasi Metropolis, Ghana. 2018; 30: 24.
17. Funk S. Barriers and facilitators of research utilization. *Nurs Clin North America*. 1995; 30(3): 395-407.
18. Duncombe DC. A multi-institutional study of the perceived barriers and facilitators to

- implementing evidence-based practice. *J Clin Nurs.* 2018; 27: 1216-26.
19. Buhaid N, Lau R, O'Connor M. A Survey of Nurses' Perceived Barriers to Research Utilization in Bahrain in Comparison to other Countries. *Middle East J Nurs.* 2014; 8(2): 3-9.
 20. Mohammadi MM, Poursaberi R, Salahshoor MR. Evaluating the adoption of evidence-based practice using Rogers's diffusion of innovation theory: A model testing study. *Heal Promot Perspect.* 2018; 8(1): 25-32.
 21. Mutisya A, KagureKarani A, Kigundu C. Research Utilization among Nurses at a Teaching Hospital in Kenya. *J Caring Sci.* 2015; 4(2): 95–104.
 22. Mohammadi MM, P[oursaberi R, Salahshoor MR. Evaluating the adoption of evidence based practice using Rogers diffusion of innovative theory: model testing study. *Heal Promot Perspect.* 2018; 8(1): 25-32.
 23. Guadarrama Ortega D. Barriers to the utilization of research. Descriptive study performed on nurses at a hospital in the southwest of Madrid. *Enferm Glob.* 2016; 15(3): 261-88.
 24. Hagan JL, Armbruster P, Ballard R. Barriers to Research among Faculty at a Health Sciences University. *Am J Educ Res.* 2019; 7(1): 44-8.
 25. Tumer A. The barriers to research utilization of the nurses who work in a training and research hospital in western Turke. 24th World Nursing and Healthcare Conference, September 13-15 2018 Copenhagen, Denmark. Available from: <https://world.nursingconference.com/abstract/2018/the-barriers-to-research-utilization-of-the-nurses-who-work-in-a-training-and-research-hospital-in-western-turkey>.
 26. Kueny A, Shever L, Lehan Mackin M, Titler M. Facilitating the implementation of evidence-based practice through contextual support and nursing leadership. *J Healthc Leadersh.* 2015; 7: 29-39.
 27. Mbirimtengerenji ND, Adejumo O. Utilization of the Teaching Strategies among Nurse Tutors in Malawi Nursing Colleges. *Open J Nurs.* 2015; 5: 276-94.