

Research Article

# A Cross Sectional Study to Assess the Barriers to Research Utilization among Registered Nurses Working in a Tertiary Care Hospital

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## A B S T R A C T

*Introduction:* Despite the increasing quantity of Nursing Researches and of improving the quality of Nursing Researches; incorporating research results into clinical practice remains a significant challenge. The development and continuation of the professional status in Nursing should include an increased awareness of the need for a research-based practice and scientific knowledge generated from it to guide and improve clinical practice.

*Recommendation:* Future research on these barriers/ facilitators and their relationships with occupational and socio-cultural factors among Nurses and Physicians is recommended. Also translating the Nursing Research findings into implementation with the help of administrative support can generate a better attitude towards Evidence Based Practice.

*Conclusions:* Enhancing the knowledge of the Nurses with the agreement and support of the administration about Evidenced Based Nursing practice can to a great extent help in bridging the gap between Research and Research Utilization.

**Keywords:** Cross- Sectional Survey, Perceived Barriers, Perceived Facilitators, Nurses

## Introduction

It wasn't long ago that hospital ICUs were typically drab, windowless rooms where inhabitants couldn't tell if it was two in the morning or two in the afternoon. Little did anyone know, until nurses found out through nifty research on the subject that dull environments slowed patient recovery and caused all kinds of illnesses among their care givers as well.<sup>1</sup>

Bedside attention from nurses has progressed far beyond being roused from sleep in the middle of the night to having the patient's temperature checked and making and making

them swallow pills from the miniature white cup. While taking vital signs, the nurse may very likely be gathering data for a research project.<sup>1</sup>

In pursuit of professionalism and quality care, utilization of research results in practice has been considered vital to the nursing profession. The widely recognized evidence-based momentum has put more emphasis on the importance of research utilization.<sup>2</sup>

Scientific research that either refines current knowledge or results in new information is regarded as the main component of nursing practice. However, the process of

incorporating good quality research findings into nursing is not as straightforward.<sup>3</sup>

## Historical Overview

Research in Nursing began with Florence Nightingale, a British Nurse. Her early interest in research is evident from her landmark publication, Notes on Nursing 1859. Based on her skillful analyses, she was successful in effecting changes in nursing care. There was also a change in emphasis in nursing research from areas such as teaching and nurses themselves tried to improve client care.<sup>4</sup>

## Background

Clinical practice without research application has no validation and is not desirable in nursing practice because the nursing goal is to provide high quality nursing care which can be ensured through efficient application of nursing research findings.

The barriers have been proved to be similar across the globe. The barriers to utilization of research among registered nurses in India need to be identified so that the gap can be reduced. Finding out the specific barriers for a certain unit may help administrative personnel implement structures and policies that can facilitate research use in a specified unit.<sup>5</sup>

## Literature Review

Scientific search that either refines current knowledge or results in new information is regarded as the main component of nursing practice. However, the process of incorporating good quality research findings into nursing practice is not straightforward. Nurses still provide nursing care based mostly on what they have learned in their baseline education and their personal experience acquired in clinical settings.<sup>6</sup>

Ghona Ali and Amina Mohd T, in their study done among nurses in Egypt showed that most nurses had a positive attitude towards research utilization. The highest barrier of research was that the nurse did not feel capable of evaluating the research.<sup>7</sup>

According to Bahadori M, Raadabadi M, Ravangard R and Mahaki B, The lack of sufficient time for reading the studies, the lack of sufficient time to implement the new ideas, the lack of adequate facilities to implement the ideas, nurses little interest in conducting studies, and the lack of authority to change the methods and patterns of care with respectively, 85%, 84.6%, 83.8%, 83.4%, and 80.5% agreement with the existence of barriers were the greatest barriers to application of research findings from the studied nurses' perspective.<sup>8</sup>

Another study done by Zou F, et al. indicated that the lack

of time on the job was ranked as the top barrier, followed by the overwhelming research publications.<sup>9</sup>

Hutchison and Johnson<sup>10</sup> indicated that the most reported barriers perceived by nurses included lack of autonomy or authority to change practice, inadequate facilities for research, limited cooperation and support from the management and physicians, and a lack of time to implement new ideas and read research. While initiating changes and updates in clinical practice have been required by the management level as an integral part of nursing<sup>11</sup> the limited organizational support perceived by nurses as the most common barriers to research utilization in many recent studies compromises the development of evidence-based nursing practice.<sup>12,13,14</sup> This makes such important changes in practice a challenge to all nurses.

## Methods

### Objectives

The objectives of the study were:

- To assess the levels of perceived barriers facilitators of research utilization in nursing practice among registered nurses in a tertiary care hospital in Mumbai
- To identify the top and lowest ranked barriers to and facilitators of research utilization among the nurses

### Design

A Cross-sectional, descriptive study design was used to elicit nurses' perceptions of the barriers to and facilitators of research utilization in their practice.

This study design, and the valid instrument used, would also allow the researchers to identify, compare and explain the nurses' perceived barriers and facilitators in relation to the subgroup characteristics of the nurses.

### Sample

**Population:** Registered Nurses working in the tertiary care hospital. There were a total of approximately 150 registered general nurses in the hospital.

**Sampling:** 50 registered nurses from the tertiary care hospital in Mumbai were randomly selected from the staff lists.

### Inclusion Criteria

- Who were registered nurses
- Who were working full-time in the hospital under study, and
- Who agreed to participate voluntarily in the study

Those who had been absent from the hospital or on long leave (e.g., maternity leave) at the time of participant were excluded.

## Instrument

Tool: A 29-item BARRIERS self - rated questionnaire was used for data collection.

The self-administered questionnaire consisted of 2 sections and required about 15 minutes to complete. The first section of the tools contains demographic data of the participants, mainly consisting of the nurses' age, gender, education level, years of post-registration experience, specialty area of nursing and training in basic nursing research.

The Barriers to Research Utilization (BARRIERS) scale was developed by Funk et.al. The participants were asked to rate each item on the 5 point Likert's type scale. The scale consist of four subscales: Nurse Characteristics (9 items), Quality of Research (6 items) and Organizational characteristics (8 items). It also asked the participants to elicit the felt factors for highest and lowest barrier and factors responsible for optimum utilization of research findings in clinical practice.

## Ethical Considerations

Permission to use the BARRIERS scale was obtained by the original author. The questionnaire and personal data were kept confidential and only accessed by the researcher. The nurses were assured that their participation in this study was on a voluntary basis.

## Data Collection

Registered nurses who were randomly selected from the staff were invited to complete the questionnaire, consisting of the self-reported BARRIERS and the demographic data sheet.

## Data Analysis

Data from the study questionnaires were numerically coded for quantitative analysis. Descriptive statistics such as frequency, mean and standard deviation were used to describe the socio-demographic characteristics of the nurse respondents and to summarize the BARRIERS scores.

## Findings

### Descriptions of the Participants

Out of the 50 participants, 42 nurses ultimately completed and returned the questionnaires. The demographic characteristics of the respondents are summarized in Table 1. All respondents were female, and their mean age was 33.33 (SD=33.05), ranging from 25 to 40 years old and almost (62.0%) had obtained a Bachelor's degree and (19%) had a Post Graduate degree in nursing. Over two-thirds (69%) of them were working in medical, surgical, pediatric and midwifery units as Nurse Practitioners while (31%) worked in college as Nurse Educators. 80.9% had undertaken their basic research courses during basic nursing or during in-service, post-registration education. Nevertheless, only

19% of the nurses had participated in clinical research since nursing registration.

**Table 1. Distribution of Samples as Per Demographic Characteristics**

Characteristic	Freq	%	Mean	SD
N=42				
<b>Age group</b>				
25-30	30	71.4		
30-35	07	16.7		
35-40	05	11.9		
<b>Education</b>				
Diploma	08	19.04	33.33	33.05
Graduate	26	61.92		
Post graduate	08	19.04		
<b>Area of work</b>				
Clinical set up	29	69.0		
Education/ College	13	31.0		

## Nurses' Perceived Barriers to Research Utilization

Table 2 shows the mean and standard deviations of the Barriers scale and its subscales.

31.3% of the respondents rated 29 barrier items as moderate barriers whereas 7.4 %of the nurses rated 'No opinion' on the 29 items of the BARRIERS scale.

As summarized in the figure below the 'Insufficient time on the job to implement new ideas 'was rated as the highest barrier followed by 'The nurse does not feel she has enough authority to change patient care procedures' shows that the nurses perceive professional factors to be the most important sources of barriers to research utilization.

## The Most and Least Important Perceived Barriers

The top ranked barrier was that there was insufficient time on the job to implement new ideas (50%) and 'The facilities are inadequate for implementation (45%). In addition to these, 'The Nurse does not feel she has enough authority to change patient care procedures was felt as a top barrier as a professional character (47%).

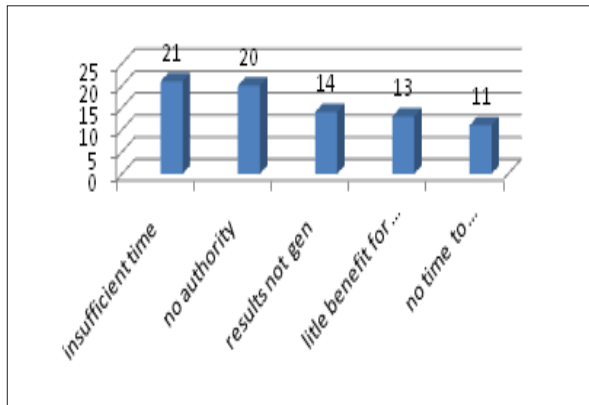
The Nurse is unwilling to change or try new ideas was felt as the least challenge which shows that the Nurses are willing to work towards adopting steps to improve patient care.

## Facilitators of Research Utilization Obtained

Advanced education to increase the research knowledge base (23%) 'Enhancing managerial support and encouragement of research implementation (23%) were perceived as the facilitators for effective use of research in the implementation quality care to patients.

**Table 2. Distribution of the Nurses Perceived Barriers to Research Utilization**

S. No.	Barrier	Frequency				
		No	Little	Moderate	Great	No opinion
1.	Research reports are not readily available	1	8	25	7	1
2.	Implication for practice are not made clear	3	15	16	7	1
3.	Statistical analyses are not understandable	7	17	9	7	2
4.	The research is not relevant to the nurse's practice	17	7	13	3	2
5.	The nurse is unaware of the research	13	7	14	7	1
6.	The facilities are inadequate for implementation	4	4	14	19	1
7.	The nurse does not have time to read research	4	12	11	11	4
8.	The research has not been replicated	0	12	18	2	10
9.	The nurse feels the benefits of changing practice will be minimal	8	14	8	10	2
10.	The nurse is uncertain whether to believe the results of research	7	12	15	6	2
11.	The research has methodological inadequacies	3	14	15	6	4
12.	The relevant literature is not compiled in one place	2	9	14	13	4
13.	The nurse does not feel she has enough authority to change patient care procedures	4	8	9	20	1
14.	The nurse feels results are not generalized to own setting	4	7	16	14	1
15.	The nurse is isolated from knowledgeable colleagues	9	7	14	9	3
16.	The nurse sees little benefit for self	9	12	13	6	2
17.	Research reports are not published fast enough	4	11	14	10	3
18.	Physicians will not cooperate with implementation	4	13	11	12	2
19.	Administration will not allow implementation	3	13	12	10	4
20.	The nurse does not see the value of research for practice	11	13	12	2	4
21.	There is no documented need to change practice	10	10	12	7	3
22.	The conclusions drawn from the research are not justified	6	17	12	1	6
23.	The literature reports conflicting results	5	10	9	9	8
24.	The research is not reported clearly and readably	5	19	9	7	2
25.	Other staff are not supportive of the implementation	4	11	12	13	2
26.	The nurse is unwilling to change or try new ideas	10	12	9	9	2
27.	The amount of research info is overwhelming	5	7	17	7	6
28.	The nurse does not feel capable of evaluating the quality of the research	7	9	15	8	3
29.	There is insufficient time on the job to implement new ideas	1	3	13	21	4
	Total	171	313	381	263	91
	Mean	243.8				
	SD	114.7				



**Figure 1. Percent of Nurse perceived barriers to Research Utilization**

**Table 3. Shows the Nurses Perception of the Top and Lowest rated Barriers**

Rank Order	Sub scale	Item	Freq (%)
1	O	There is insufficient time on the job to implement new ideas	21 (50)
2	N	The nurse does not feel she has enough authority to change patient care procedures	20 (47.6)
3	O	The facilities are inadequate for implementation	19 (45.20)
4	O	The nurse feels results are not generalized to own settings	14 (33.3)
5	O	Other staff not supportive of implementation	13 (31)
6	O	Physicians will not cooperate with implementation	12 (28.5)
7	O	The nurse does not have time to read research	11 (26.2)
8	O	Administration will not allow implementation	10 (23.08)
9	N	The nurse is unwilling to change or try new ideas	9 (21.4)
10	N	The nurse does not feel capable of evaluating the quality of the research	8 (19)

## Discussion

This study was conducted to examine the Nurses' perceived barriers and facilitators of research utilization in nursing practice and involvement in research. A high response rate (84%) was achieved in this study. Study conducted by Anne-Marie and Lars Wallin have reported the response rate to be

around 67%<sup>15</sup>. It is also seen that about 80% of the nurses (i.e., 34 out of 42) did not receive any in-service training in clinical research in the past three years and only 19.04% of them (i.e., 8 out of 42) were involved in clinical research as these nurses were Nurse Educators. These findings indicate that the training in Nursing Research is essential to enhance the knowledge base and skills to appraise the advancements in the field of medicine and Nursing.

## Nurses' Perceived Barriers to Research Utilization

As per the findings of this study, the perceived barriers to research utilization were inadequate time to implement new ideas from research evidence, lack of facilities to conduct research, the feeling of lack of authority to change practice were also found significant in the large scale survey study among nurses in Egypt.<sup>7</sup>

The two of the top barriers were 'lack of time to implement new ideas' and 'The nurse does not feel she has enough authority to change patient care procedures.' Similar barriers were rated high by the Nurses in study done by Mehrdad, et al.<sup>16</sup> Therefore, time constraints and lack of authority for applying research evidence into practice and participation in research activities has become a major barrier to their evidence-based practice.

The second top barrier was that the Nurses do not feel they have enough authority to change patient care procedures are similar to the findings of Parahoo's<sup>17</sup> study. This finding is also consistent with the idea that 'the nurse feels that the results are not generalizable to his/ her own setting', confirms that nurses find it hard to implement research evidence in practice when they perceive in themselves a lack of the authority and autonomy to make changes in their practice. Nevertheless, Indian nurses with their current low professional status in the health care system need administrative support to increase their professional autonomy in clinical decision-making and collaborative practice.

It was found that the Nurses perceive that physicians will not cooperate with implementation or that other staffs not supportive about the implementation. This reveals that the relationship between nurse and physician or other members of the health care team in India is not satisfactory. Therefore, the support and encouragement of the physicians and other staff is important to ensure high quality of patient care and to optimize benefits to all. A study done by Chau et al.,<sup>18</sup> in Hong Kong also highlights the need for cooperation and support of physicians and other staff for utilization of research findings.

This study brings out two important points of view that were rated as the least important barriers i.e. 'The nurse does not see the value of research for practice and 'the nurse is unaware of the research.' This shows that the Nurses



have a positive attitude towards research utilization which is in concurrence to a study conducted by Hannah C. which showed that effective research utilization is necessary for day to day practice and is required to provide higher quality services to the patients.<sup>6</sup>

### Nurses' Perceived Facilitators of Research Utilization

Advanced education, the availability and accessibility of research reports, managerial support and encouragement of research implementation were considered the greatest facilitators among the nurses which indicates that there is a high need for research education and the provision of more resources and organizational support and encouragement to enable nurses to initiate or implement evidence-based practice.

According to a study done by Bahadori M, Raadabadi M, Ravangard R and Mahaki B for effective research utilization managerial support in the form of efficient human resources for decreasing the workload of the nurses can encourage the use of research activities and implementation of research in clinical setup and hence develop the Nursing Profession, which leads to providing efficient and effective patient care and improving the quality of Nursing care.<sup>19</sup>

### Conclusion

Nursing research has a tremendous influence on current and future professional practice, thus rendering it an essential component of the educational process. Nurses play varied roles in the health care sector and each role carries different responsibilities. The primary goal of a professional nurse remains the same: to be the client's advocate and provide optimal care on the basis of evidence obtained through research.<sup>20</sup>

Education for all health professionals was in need of a major overhaul to prepare health professionals with new skills to assume new roles. This would require curriculum revision and updating skills of the professionals in order to focus on evidenced based quality care.<sup>21</sup>

As nurses are the front line of patient care, they are able to identify gaps in clinical practice and develop ideas and strategies for improving the health care needs of the patients. By promoting utilization of research in the clinical practice we can close the gaps between research and practice.

### Recommendations

The academic faculty must work to:<sup>22</sup>

- Improve research skill of practical nurses.
- Increasing the availability of time for reviewing and implementing research findings.
- Enhance support to Nursing Managers to formulate

a comprehensive strategy for improving research utilization.

- Initiate a link between health institutions and academic researchers for adoption of research findings.

**Conflict of Interest:** None

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