

Nurses Contribution in Research: Barriers and Solutions

Ms. Maryam Alkhalaf^{1*}, Dr. Rita Anderson², Dr. Petro Basson³ and Dr. Adel Harb⁴

¹Regional Nursing Administration, Ministry of Health, Saudi Arabia

***Corresponding author**

Ms. Maryam Alkhalaf, Regional Nursing Administration, Ministry of Health, Saudi Arabia, E-mail: manar555@hotmail.com

Submitted: 17 Sept 2020; Accepted: 25 Sept 2020; Published: 12 Oct 2020

Abstract

Background: Nursing Research is one of the pillars for improving nursing care. Motivating nurses to contribute in research and evidence based practice will improve their productivity and satisfaction that will improve patient clinical outcome and satisfaction.

Aim: This study was conducted to investigate the barriers among nurses in Saudi Arabia to contribute in nursing research and to provide some strategies or solutions for these barriers.

Method: An electronic self-administered questionnaire was developed and distributed to nursing staff in Eastern Province Ministry of Health hospitals.

Results: 480 surveys were collected and the data analyzed. The participants indicated that they value research and are willing to take part in it. However, several barriers were identified that limited their participation in research including lack of time, administration support and lack of research capacity and infrastructure. Affordable education opportunities, more funding resources, and access to databases and libraries were the most recommended solutions to increase nurses' participation in conducting research and utilizing Evidence Based Practice.

Conclusion: Further efforts are needed from High Authority toward increasing nursing research. Nursing research must be on the top priorities of the Ministry of Health agenda and must be a senior management strategic goal. Further qualitative and quantitative research is needed to explore more barriers and provide more mechanisms in motivating nurses toward research.

Keywords: Research, Nursing, Saudi Arabia, Guidelines, Conducting

Introduction

Nursing research is a growing science, not only in practice but also in education and administration [1]. It is crucial to present any new knowledge through research in a clinically useful format that can be implemented easily by all staff and that will positively impact on their performance in providing better patient care [2].

Nurses strongly believe in the importance of evidence-based practice in improving patient care quality and reducing associated costs [2]. However, implementing updated research findings might be hampered for several reasons such as lack of knowledge, time, or limited research skills [3].

The transition of nursing staff in Saudi Arabia has been noticed and recorded. This change has occurred quickly over the past few years with nurses barely able to utilize computers evolving to a new generation of nurses with good computer skills in searching and surfing databases and websites.

Background

The Ministry of Health has recognized the importance of healthcare research and has launched initiatives to promote research among health care providers including nurses. One such initiative is a 10% increase in salary for individuals conducting and publishing research. Another initiative is providing courses in research; however, accessibility to some of these courses is limited due to high fees since the courses are provided by highly specialized people.

In United Kingdom and Sweden, the barriers scale was used to highlight the most common barriers in utilizing research findings [4]. This scale has been used widely in assessing the perception of nurses towards barriers. It categorized factors into nurse related, hospital related, research and presentation [5]. This tool was found to be reliable despite the criticism for not being specific enough to guide interventions [6].

Barriers to utilizing research findings have also been investigated in other countries including Europe, China and Iran [7, 8]. Recommendations from those studies were to undertake

prospective studies to gain a better understanding of the barriers related to clinical settings and socio-cultural factors. Such studies have not been conducted in the Saudi Healthcare system; therefore, this project is crucial to advance nursing research in Saudi Arabia.

Globally, the number of nurses conducting research in their work environments is substantially lower than members of other medical careers. Nurses focus mostly on patient care and the word “research” often creates anxiety to them [9]. Nurses that do take part in research usually form part of a medical research team.

Various barriers are mentioned in the literature that prevent nurses from conducting research [10] The same situation occurs in Saudi Arabia where there were over 5,000 nurses working last year, but less than 5 research articles published. Furthermore, most of the conducted researches were done to obtain academic degree.

The aim of this research is to investigate the barriers among nurses in Saudi Arabia to contribute in nursing research and also providing some strategies or solutions for these barriers.

Methodology

Design

A quantitative cross sectional study design was utilized for this project. A pilot study was conducted to establish the time needed to complete the questionnaire and to check the clarity of the questions. The questions were modified accordingly.

Setting

The study was conducted in the Eastern Region of Saudi Arabia focusing on nurses with more than one year of experience working in ministry of health hospitals.

Sampling: A random sample of nurses that met the inclusion criteria were sent an invitation letter with the survey attached explaining that participation is voluntary.

Ethical Consideration:

The study was approved through Institute Review Board (IRB) by King Fahad medical city, dd KSA

Data collection instrument

Nursing research experts reviewed and validated the appropriateness of the items in the questionnaire. The instrument was self-administered electronically in two parts. The first part contained the demographic data including age, gender, and nationality, level of education and years of experience. The second part included the personal or healthcare system factors affecting nurses conducting research.

Results

A total of 480 nurses completed the questionnaire. The majority of the participants were female (97%). Saudi nurses exceeded non-Saudi nurses 58.8% to 41.2%. The majority of participants (55.4%) were between 30 and 40 years of age and 46.9% had more than 10 years of nursing experience. Nurses with a diploma exceeded

those with a bachelor’s degree 51.8% to 45.3%. The majority of participants were staff nurses with only a few holding administrative positions such as head nurse, deputy or manager. Nurses working in inpatient units (52.3%) exceeded those working in outpatient and critical care areas that were relatively similar at 26.9 and 20.7% respectively.

More than half of the participants expressed their willingness to conduct research studies (61.6%) as well as to participate in other staff research. However, only about one third identified that they possess sufficient knowledge (36.7%), training (32.1%) or comfort (34.9%) to conduct research with the majority being neutral at 54.4%, 52.6%, and 47.9% respectively. Almost half identified that they possess adequate English (46.5%) to conduct research. While 40.7% agreed that there are opportunities to participate in research, only 30.8% agreed that there are opportunities to publish research.

Barriers to research:

Participants identified multiple barriers for nurses to conduct research. Three of the highest were lack of time (46.8%), need of a certain qualification (53.4%) and research courses being expensive (45.4%). Almost as many respondents answered neutral to these questions, 43.1%, 34.7%, 44.2% respectively, with only 10.1%, 10.4%, and 11.9% disagreeing. Other barriers included a medical library in the hospital with 46.5% disagreeing and nursing research incentives available with 49.4% disagreeing.

The majority of respondents rated several barriers as neutral including relation to adequate facilities for conducting research (42.5%), having access to scientific nursing databases (40.0%), having support from administration (44.5%), leaders supporting nurses (44.9%), and leaders encouraging nurses (39.9%). A large majority of nurses clearly believed that research is a nursing role (57.5%) and that research is not only for doctors (71.0%) or managers (67%).

Discussion:

Our findings is supported by several studies worldwide. Chen, 2019 stated that research capacity as motivation, competency and infrastructure are essential in facilitating conducting research [11]. Research supported factors such as accessibility to research mentors, funding opportunity and appropriate training were mentioned in 15 countries including IRAQ, India, South Africa, etc [12].

Hagan and Walden (2017) agreed that nursing leadership plays important role in cultivating research capacity by implementing evidence based nursing practice strategies that facilitate better patient experiences [13]. Scala (2016) mentioned that there can be several approaches to increase nursing participation in research and each leader needs to conduct their own assessment and apply the most appropriate approach [14].

Cranley (2017) described that readiness and empowerment of staff are key to changing practice [15]. Our study findings showed that nursing staff are ready and willing to take an active part in research

involvement. Initiating research support programs with academic training and mentorship enhances research capacity as supported by Fullam (2018) [16]. According to Zhang (2020), China has implemented on the job research education as an effective method in promoting research [17].

Based on the primary barriers identified in our study that included lack of time, need for research training or qualification, and lack of incentives, the Ministry of Health could continue support nursing research by establishing nursing research targets such as having one nursing research project conducted every year in each province and then providing the budget to meet the designated target. This would require a budget that supports adequate staff, low cost or subsidized training, library resources, incentives to conduct research, and preparation of hospital and nurse leaders on how they can advocate and support their staff to conduct and participate in research. With the health care transformation in Saudi Arabia, great focus is being given to evidence based practice and enhancing the quality of patient care. Therefore, the Ministry of Health and nurse leaders must support research in order to meet the standard of care expected by patients, families and the community.

Limitations and recommendations

The study was limited to the Eastern Province and should probably be conducted throughout Saudi Arabia and perhaps the Middle East. Conducting affordable educational opportunities, more funding resource and access to databases and libraries are the most recommended solutions to increase nurses' participation in conducting research and utilize Evidence Based Practice.

Conclusion

Further efforts are needed from High Authority toward increasing nursing research. Nursing research must be on the top priorities of the Ministry of Health agenda and must be a senior management strategic goal. Further qualitative and quantitative research is needed to explore more barriers and provide more mechanisms in motivating nurses toward research.

References

1. Tingen M, et al. (2009) The Importance of Nursing Research, *Journal of Nursing Education* 48: 167-170.
2. Stevens K (2013) The impact of evidence-based practice in Nursing and the next big ideas, *The Online Journal of Issues in Nursing* 18.
3. Tagwa O (2012) Research Utilization in a Multicultural Nursing Setting in Saudi Arabia: Barriers and Facilitators, *Journal of Nursing Research* 20: 66-73.
4. Funk SG, et al. (1991) BARRIERS: The barriers to research utilization scale. *Applied Nursing Research* 39-45.
5. Boström A-M, et al. (2008) Barriers to research utilization and research use among registered nurses working in the care of older people: Does the BARRIERS Scale discriminate between research users and non-research users on perceptions of barriers?, *Implement Science* 1: 3-24. doi: 10.1186/1748-5908-3-24.
6. Kajermo KN, Boström A-M, Thompson DS, Hutchinson AM (2010) Estabrooks CA, Wallin L. The BARRIERS scale -- the barriers to research utilization scale: A systematic review.. *Implementation Science: IS*;5: 32. doi:10.1186/1748-5908-5-32.
7. Chien W-T, Bai Q, Wong W-K, Wang H, Lu X (2013) Nurses' Perceived Barriers to and Facilitators of Research Utilization in Mainland China: A Cross-Sectional Survey. *The Open Nursing Journal* 7: 96-106. doi:10.2174/1874434601307010096 .
8. Sanjari M, Baradaran HR, Aalaa M, Mehrdad N (2015) Barriers and facilitators of nursing research utilization in Iran: A systematic review, *Iranian Journal of Nursing and Midwifery Research.*;20(5):529-539. doi:10.4103/1735-9066.164501
9. AlMadani N, Alkhalaf M, AlZawad F, and Alharbi N (2019) "Exploring the Perception of Nursing Research Held by Hospital Leaders." *American Journal of Nursing Research* 7: 811-816. doi: 10.12691/ajnr-7-5-14.
10. Lewis LS, McNett M, Aucoin J, Riemen K, Yeager S, et al. (2014) Barriers to Conducting Multicenter Nursing Research. *J Nurs Care* 3: 154. doi:10.4172/2167-1168.1000154
11. Chen Q, Sun M, Tang S, Castro AR (2019) Research capacity in nursing: a concept analysis based on a scoping review. *BMJ Open* 9: e032356. Published 2019 Nov 21. doi:10.1136/bmjopen-2019-032356
12. Uys LR, Newhouse RP, Oweis A, Liang X (2013) Descriptive survey of the contextual support for nursing research in 15 countries. *Curationis* 36: E1-E8. doi:10.4102/curationis.v36i1.126
13. Hagan J, Walden M (2017) Development and Evaluation of the Barriers to Nurses' Participation in Research Questionnaire at a Large Academic Pediatric Hospital. *Clin Nurs Res* 26: 157-175. doi:10.1177/1054773815609889
14. Scala E, Price C & Day J (2016) An Integrative Review of Engaging Clinical Nurses in Nursing Research. *Journal of nursing scholarship: an official publication of Sigma Theta Tau International Honor Society of Nursing* 48: 423-430. <https://doi.org/10.1111/jnu.12223>
15. Cranley LA, Cummings GG, Profetto-McGrath J, Toth F, Estabrooks CA (2017) Facilitation roles and characteristics associated with research use by healthcare professionals: a scoping review. *BMJ Open* 7: e014384. Published 2017 Aug 11. doi:10.1136/bmjopen-2016-014384
16. Fullam J, Cusack E & Nugent LE (2018) Research excellence across clinical healthcare: a novel research capacity building programme for nurses and midwives in a large Irish region. *Journal of Research in Nursing* 23: 692-706. <https://doi.org/10.1177/1744987118806543>
17. Zhang J, Yan QY & Yue S (2020) Nursing research capacity and its management in China: A systematic review. *Journal of nursing management*, 28(2), 199-208. <https://doi.org/10.1111/jonm.12924>

Table 1: Demographics data

Demographic	n	%
Gender		
Female	448	97
Male	14	3
Nationality		
Saudi	264	58.7
Non-Saudi	186	41.3
Age		
20-30 years	123	26.7
30-40 years	255	55.4
40-50 years	64	13.9
Above 50 years	18	3.9
Missing data	Missing data	.1
Highest education		
Diploma	239	51.7
Bachelor	209	45.2
Master degree	12	2.6
PHD	2	0.4
Position		
Staff nurse	369	80
Head nurse deputy	52	11.3
Nurse manger	20	4.3
Other	20	4.3
Missing data	Missing data	.1
Years of experience		
More than 10 years	215	46.9
6-10 years	139	30.3
1-5 years	90	19.7
Less than 1 year	14	3.1
Working area		
Inpatient	238	52.4
Outpatientt	122	26.9
Critical area (ICU, PICU, NICU, OR, Burn)	94	20.7

Table 2: Barriers/Motivators to Conduct Research

Variable	%
I experience lack of time to conduct research	
Agree	46.8
Neutral	43.1
Disagree	10.1
I have support from my administration to conduct research	
Agree	30.6
Neutral	44.5
Disagree	24.9
There are adequate facilities for conducting nursing research	
Agree	20.5
Neutral	42.5
Disagree	37.0
There is a medical library at my hospital	
Agree	31.6
Neutral	21.9
Disagree	46.5
I have access to scientific nursing databases	
Agree	22.6
Neutral	40.0
Disagree	37.4
There are nursing research incentives available at my hospital	
Agree	15.6
Neutral	35.0
Disagree	49.4
Research courses are expensive	
Agree	45.4
Neutral	44.2
Disagree	10.4

Variable	%
Leaders support nurses to conduct research	
Agree	33.3
Neutral	44.9
Disagree	21.8
Leaders encourage nurses to conduct research	
Agree	37.9
Neutral	39.9
Disagree	22.2
Research is not a nursing role	
Agree	14.7
Neutral	27.8
Disagree	57.5
Research is only for doctors	
Agree	10.5
Neutral	18.5
Disagree	71.0
Research is only for managers	
Agree	9.9
Neutral	23.2
Disagree	66.9
To conduct research requires a certain qualification	
Agree	53.4
Neutral	34.7
Disagree	11.9
I am willing to conduct nursing research	
Agree	61.6
Neutral	32.9
Disagree	5.5
I am willing to participate in any research	
Agree	61.6
Neutral	32.9
Disagree	5.5
I have sufficient knowledge to conduct research	
Agree	36.7
Neutral	54.4
Disagree	8.9
I have sufficient training to conduct research	
Agree	32.1
Neutral	52.6
Disagree	15.3
There are opportunities to participate in research	
Agree	40.8
Neutral	43.5
Disagree	15.7
I feel comfortable to conduct research on my own	
Agree	34.9
Neutral	47.9
Disagree	17.2
There are opportunities for publishing my research	
Agree	30.3
Neutral	51.1
Disagree	18.6
English language competency to conduct research	
Agree	46.5
Neutral	42.1
Disagree	11.4

Copyright: ©2020 Maryam Alkhalaf, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.