PERCEIVED RESEARCH UTILIZATION BARRIERS AMONG NURSES IN A RURAL HOSPITAL IN NIGERIA

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ABSTRACT

Background
Nursing research utilization is the process of synthesizing, disseminating and using research generated knowledge to make significant impact on the existing nursing practice. Research utilization has been associated with high quality nursing practice. Despite availability of research findings and evidences, nurses have been faced with many barriers which hinder them from utilizing research knowledge in their practice.

Purpose: The purpose of this study was to evaluate the perceived research utilization barriers among nurses in a community hospital in Nigeria and to assess the relationship between their perception and selected socio-demographic variables.

Materials and method: This is a descriptive study. A total of 62 participants were included in the study through a convenient non probability sampling technique. Structured questionnaire was used to collect data on participants socio demographic variables with the BARRIER scale used to collect data on participants perception regarding research utilization

Findings: The mean and standard deviation of participants age was 34.9 and $\pm$ 1.3 respectively. Majority of participants were females, diploma holders and had four or more years of working experience. The major barriers identified by the participants were issues with administration, lack of cooperation from physicians and lack of time to read research among nurses, insufficient time to implement changes and unwillingness to change or try new things. There was a statistically significant relationship between participants qualification and their perception of characteristics of the innovation/research as barrier to research utilization at χ^2 (p value) of 8.315 (<0.001).

Conclusion: Findings from this study revealed that the highly ranked barriers were based on the characteristics of the setting in which the nurses work as well as the nurses' research values, skills and awareness. It is therefore recommended that healthcare institution should give the nurses to practice with the best evidences and not based on rituals. Institutional policies should be reviewed to favor the application of research in nursing practice and nurses should understand that research is an integral part of the profession.

Keywords: Research, barriers, utilization, nursing, evidence-based,

1.0 INTRODUCTION

Nursing is a profession that is concerned with ensuring high quality of patient care. The profession needs to continuously grow and expand its body of knowledge through research[1]. Research however has been considered as an important strategy through which a discipline, especially nursing, can generate knowledge

and utilize it in maintaining its professional status and growth. Researches are meant to be conducted as well as utilized in order to improve in the quality of patient care. Nursing research utilization is the process of synthesizing, disseminating and using research generated knowledge to make significant impact on the existing nursing practice[2]. Research utilization has been associated with the term 'evidence-based practice' which is a problem solving approach that involves the identification of clinical problems, search of literature, evaluation of research evidence and deciding on the intervention[3].

Several studies have found out that only few nurses are engaged in research[4][27] and this has led to the sluggish growth experienced in nursing profession. Increased knowledge and use of this knowledge derived through research empowers the nurse to contribute positively to the care and ensure better health outcome in patient[5]. The problem remains that there is a significant gap between nursing research and its application to practice. Nurses who are not engaged in evidence- based practice tend to routines and nursing rituals. Many of these unnecessary rituals are still present and are practiced by some nurses in health care despite availability of research-based knowledge and interventions[6].

The gap between nursing research and practice has been associated with some barriers. These barriers have been analysed by both quantitative and qualitative studies in many countries[7]. Barriers such as lack of adequate among nurses, lack of financial support, staff shortage, poor communication and understanding of research findings and over dependence of nurses on physicians in making critical decision about patient care[8][9]. Several studies have been conducted to assess the barriers existing between nursing research and its application to practice. Most findings revealed that organizational influence[10][11][12][13] and lack of research skill and development among nurses[7][14] are the major barriers to research utilization in nursing practice. Other studies have found out that lack of interest to read research papers is an important barrier[15][27]. These barriers have been proved to be similar across the globe[3]. However

clinical practice without research application has no validation and is not desireable in nursing practice because nursing goal is to provide nursing that is of high quality. This quality can be ensured through efficient application of nursing research findings.

Factors affecting research utilization among nurses have been assess severally through the use of the barrier scale. The BARRIER scale was developed and validated by Funk and colleagues to assess the perceived barriers of research utilization among nurses[10][11]. This scale has been used by so many researchers to evaluate the perception of nurses regarding the identified barriers to research utilization in the United Kingdom[16][17][18], United states[19], Greece[20] and Norway[21].

The aim of this study was to evaluate how nurses perceive the various items on the scale as barriers to research utilization in nursing and also determine the association of their perception with selected socio-demographic variables.

2.0 MATERIALS AND METHODS

This is a descriptive quantitative study aimed at assessing the perceived barriers to research utilization in nursing practice at a rural Hospital in Nigeria. A total of 62 participants were included in the study through a convenient non probability sampling technique. The structured questionnaire was used to collect data on participants demographic variables with the BARRIER scale used to collect data on participants perception regarding research utilization.

There were four categories of barriers to research utilization known as factors as adopted from barrier to research utilization scale 'THE BARRIER' developed by Funk, S.G., Champagne, M.T., Wiese, R.A., & Tornquist, E.M (1991)

Factors 1,2,3 and 4 had different items assessing participants perception regarding barriers such as characteristics of the adopter, characteristics of the organization, characteristics of the innovation/research and characteristics of the communication and how they affect research utilization in nursing.

The first factor focused on the nurse's research values, skills and awareness, the second factor focused on the setting, barriers and limitation, the third factor focused on the quality of the research while the fourth factor focused on presentation and accessibility of the research.

The various items under each factor were graded 1-4. 1 indicating to no extent, 2 represents to a little extent, 3 indicating to a moderate extent and 4 to a great extent, depending on participants perception on how this factors affect research utilization. The scores were added up and the mean value was computed. Participants whose total score were below the mean value were considered as having negative perception, meaning that they didn't perceive the factors as barriers to research utilization. The participants that scored above the mean or equal were considered to have positive perception which indicated that they perceived the factors as strong barriers to research utilization in nursing.

3.0 RESULTS

Demographic variables of participants

A total of 62 Participants were involved in this study out of which 11 (17.7%) were between the ages of 23-27 year, 9 participants (14.5%) were between the ages of 28-32 years. Majority of the participants were above the age of 32 years. Regarding participants gender, majority (83.9%) were females while 10 (16.1%) were males. Majority (74.2%) had more than four years of experience while 16 (25.8%) had less than four years of experience. Majority (71%) were diploma holders while 18(29%) had a bachelor degree in nursing.

Participants' perception regarding barrier to research utilization.

Table 1 shows the mean, standard deviation and rank of participants response regarding their perception of the barriers to research utilization. The ranking of items above indicates their position as regards to how they were perceived by participants as major barriers to research utilization. The first seven barriers identified as major barriers belong to factor 2 describing the characteristics of the organization; having 'administration will not allow implementation' and 'physicians will not cooperate with implementation' as the highest with the same mean of 3.9032 and standard deviation of 2.9806. The next highly ranked barriers are 'the nurse does not have time to read research, there is insufficient time on the job to implement new ideas,

Table 2 showed that majority (80.6% and 69.4%) of participants perceived factors 2 and 1 as strong barriers to research utilization respectively while majority (54.8% and 56.5%) did not perceive factors 3 and 4 as strong barriers to research utilization. It can be observed that factor 2 (characteristics of the organization) was the greatest barrier perceived by the participants

Table 3 showed that at χ^2 (p value) of 0.323 (0.408), there was not statistically significant relationship between participants' years of working experience and their perception of factor 1 as barrier to research utilization in nursing. There was also no significant relationship observed between their years of working experience and their perception of factors 2,3 and 4 as barriers to research utilization in nursing at χ^2 (p value) of 0.440 (0.371), 1.071(0.228) and 0.321 (0.395) respectively.

Table 4 showed that there was a statistically significant relationship between participants qualification and their perception of factor 3 as barrier to research utilization at χ^2 (p value) of 8.315 (<0.001) . However, no significant relationship was observed between their qualification and perception of factors 1,2 and 4 as barriers to research utilization in nursing at χ^2 (p value) of 2.727 (0.115) ,0.314 (0.483) and 1.077 (0.226) respectively.

4.0 DISCUSSION

The socio-demographic characteristics of participants showed that majority of the participants were above the

age of 32 with mean age of 34.9 and standard deviation of ± 1.3. which is not similar to the mean age of participants in similar study[14]. Majority (83.9%) were females which is line with the findings of Adejumo and Guobadia[27]. This could be an evidence that nursing is a female dominated profession. Majority of participants did not have a degree which is also different from findings of similar study[27] The findings of this study regarding perceived barriers to research utilization among nurses are similar to those observed in many literatures on the same subject matter. The factor which had the highest rating was the characteristics of the organization which was synonymous with result from other studies[11][12][14] followed by the characteristics of the adopter. Findings from this study reveals that participants rated the scale as moderately high barriers which is similar to the findings of study conducted in East Turkey[7] and findings of Yava and colleague[22]. It was observed from this study that the top five barriers highly rated as greatest barriers are as follows: 'administration will not allow implementation (mean =3.9032, SD± 2.9806), physicians will not cooperate with implementation (mean =3.9032, SD± 2.9806) 'the nurse does not have time to read research (mean=3.7097 SD± 0.45762) there is insufficient time on the job to implement new ideas (mean=3.6774 SD±0.47128), the nurse does not feel she has enough authority to change patient care procedure (mean=3.6613 SD±0.54151). This is similar to the findings of study carried out among RNs working in the care of older people[14] but not consistent with the findings of the study conducted in Sweden[23] which observed that more than 75% of RN working in the university hospital rated only two items as the actual barriers. Insufficient time for nurses to implement new ideas was rated fourth in this study which is not really similar to other studies where it was rated the highest[17][24][25]. Lack of time to read research was rated as the third highest barrier (mean=3.7097 SD± 0.45762) which is in line with the findings of similar studies in a community hospital[26] but not parallel to the findings of study conducted in Nigeria where majority of participant reported that they read research articles frequently[27]. There was no significant relationship between participants perception of the barriers and their years of

working experience which is not parallel to the findings of the study conducted in other part of Nigeria[27].

Regarding the characteristics of the adopter, the barriers rated highest in that category were the nurse is unaware of the research, the nurse does not feel capable of evaluating the quality of the research and the nurse is isolated from knowledgeable colleagues with whom to discuss the research. The reported isolation from knowledgeable colleagues could be as a result of the observed isolation between nursing education and practice. Regarding the characteristics of the innovation, the highest ranked barrier were that the relevant literature is not compiled in one place and statistical analysis are not understandable. This lack of time reported as a barrier could be overcome by compiling relevant literature in one place as nurses may not have the time to source for research findings from different angles. This is not the same result from other studies.[28]. There was no significant relationship observed between participants perception and their years of working experience. However there was a significant relationship between participants perception of the characteristics of the innovation/research as a barrier and their educational qualification at a χ^2 (p value) of 8.315 (<0.001). Adejumo and Guobadia [27] had a similar result.

5.0 CONCLUSION , RECOMMENDATION AND NURSING IMPLICATION

The findings of this study reveals that nurses relationship with the administrations and most physicians is not balanced with regards to cooperation in research application in nursing. Nursing is a profession and one of the characteristics of a good profession is the application of knowledge to practice. Other health care professionals should respect the autonomy advocated by nurses to enable them implement evidences in their practice. Majority of nurses have little or no time to read research maybe because of high workload or other personal reasons. It is an important responsibility of all nurses irrespective of age and working experience. The major goal of nursing is to provide quality and appropriate care to patient. They are responsible for the direct treatment of

patient. Nurses however have identified that they don't feel they have enough authority to change patient care procedure. This barrier was identified under the characteristics of the setting where they work. This gives an impression that nurses depend totally on other health care professionals, especially, physicians before they can function. This does not speak well of nurses. The nurses are as important as any other health care professionals, including the physicians. They should be giving the privilege to function according to the requirement of their profession. Another important factor identified is the characteristics of the adopter. Some nurses are unaware of research not even to talk about its implementation. Generally, nurses perceive research to be subject during their training and not as an embodiment of their profession. Some nurses are incapable to evaluate the quality of a research work. This is due to lack of practice in this aspect. Constant appraisal of researches and the intent to implement findings promotes the nurses' skill regarding assessing quality of research.

Nurses feel that research is all about statistics and most nurses do not like statistics. This has led to a low level of interest in research among nurses. This was identified as the ninth barrier in this study. However, it is also recommended that the active researchers should present their research findings in a simple and comprehensible way in order to promote the interest of practicing nurses. There should be adequate and appropriate justification for any recommendation for practice derived from research findings. It was also observed that nurses who do not see values of research for practice are less likely to participate in research studies and implementation. Hence, the need to re-orientate nurses that research is an inseparable component of nursing profession.

COMPETING INTEREST

We do not have any competing interest to declare

6.0 ACKNOWLEDGEMENT

7.0 REFERENCES

1. Sharma KS (2013). Nursing research and statistics. 4th ed. Page 4, Elsevier publisher

2. Burn N & Brove S (2005). The practice of nursing research. Conduct, critique and utilization. 5th ed. Pg 750, St. Louise, M.O. Elsevier

3. Carrion M, Woods P & Norman L. Barriers to research utilization among forensic mental health nurses. Int J Nurs Stud. 2004; 41:613-619

4. Olade RA. Evidence-based practice and research utilization activities among rural nurses. J Nurs Scholarship. 2004;36(3):220-225

5. Larsson K, Thorslund M. Chapter 8: old peoples health. Schandinavian journal of public health. 2006;67:185-198.

6. Grol R & Grimshaw J. From best evidence to best practice: effective communication of change in patients' care. Lancet. 2003;362:1225-1230.

7. Mehtao T, Zamrut AS & Funda KO: Barriers of research utilization from the perspective of nurses in Eastern Turkey. Nursing outlook. Published on 02 september, 2011.

8. French B. Contextual factors influencing research use in nursing. Worldviews. Evid Based Nurs. 2005;2:172-183

9. Adi Hajbaghery M & Salsali M. A model for empowerment of nursing in Iran. BMC Health serv Res. 2005;5:24

10. Funk SG, Champagne MT, Wiese RA, Tornquist EM. BARRIERS. The barriers to research utilization scale. Appl Nurs Res. 1991;4:39-45

11. Funk SG, Champagne MT, Wiese RA, Tornquist EM. BARRIERS. The barriers to research utilization scale. Appl Nurs Res. 1991;4:90-95

12. Kejermo KN, Unden M, Garduf A, Eriksson LE, Orton ML, Ametz BB, et al. Predictors of nurses perception of barriers to research utilization. J Nurs Manag. 2008;16:305-314

13. Marsh GW. Nolam M & Hopkins S. Testing the revised barrier to research utilization scale for use in UK. Clin Eff Nurs. 2001;5:66-72

14. Bostrom A, Kajermo KN, Nordstrom G & Wallin . Barriers to research utilization and research use among registered nurses working in the care of older adult people: Does the BARRIER scale discriminate between research users and non-research users on perception of barriers? Implement Sci. 2008;3:24.

15. Mehrdad N, Salsali M & Kazemnejad A. The spectrum of barriers to and facilitators of research utilization in Iranian nursing. J Clin Nurs. 2008 17(6):2194-2202

16. McCormack B, Kitson A, Harvey G, Rycroft-Malone J, Titchen A & Seers K. Getting evidence into practice: the meaning of 'context' J Adv Nuurs. 2002;38:94-104

17. Parahoo K & McCaughan EM. Research utilization among medical and surgical nurses: a comparison of their self reports and perceptions of barriers and facilitators. J Nurs Manag. 2001;9:21-30

18. Briggs M, Paley G, Cash K & Closs J. improving research utilization for community and mental health nurses. Foundation of Nursing studies dissemination series. 2004; 2:1-4

19. Fink R, Thompson C, Bonnes D, overcoming barriers and promoting the use of research in practice. J Nurs Adm. 2005: 35:121-129

20. Patiraki E, Karlou C, Papadopoulou D, Spyridou A, Kouloukoura C, Bare E, et al. Barriers to implementing research findings in cancer care. Greek Registered nurses' Perception. Eur J Oncol Nurs. 2004;8:245-256.

21. Hommelstad J Ruland CM. Norwegian nurses' perceived barriers and facilitators to research use AORN J. 2004;79:621-634.

22. Yava A, Tosun N, Cicek H, Yavan T, Terakye G, Hatipoglu S. Nurses use of research results of validity and reliability of the barrier scale.{in Turkish} Gulhane Medical Der. 2007;49:72-80

23. SALAR (The Sweish association of Local Authorities anr Regions) care of the elderly in Sweden today. Stocklon; 2007.

24. Orlanta O, Routasalo P, Hupli M. Barriers to and facilitators of research utilization among Finnish registered nurses. J Clin Nurs. 2002;11:205-213

25. Bryar RM, Closs SJ, Baum G, Cooke J, Briffiths J, Hostick T, et al. the Yorshire BARRIERS project: diagnostic analysis of barriers to research utilization. Int J Nurs Stud 2003; 40:73-84

26. Atkinson M, Turkel M and Cashy J. Overcoming barriers to research in a Magret Community hospital. Journal of nursing care quality 2008; 23(4):362-368

27. Adejumo PO, Guobadia PO. Nurses' attitude to reading research articles and their perception of research utilization in clinical practice in a Nigerian city. JMBR: A Peer-review Journal of Biomedical Sciences June 2013; 12(1):46-56

28. Rutledge DN, Ropka M, Greene PE, Nail L, Mooney KH. Barriers to research utilization for oncology staff nurses and nurse managers/clinical nurse specialists. Oncol Nurs Forum. 1998; 25(3):497-506.

Table 1 . on participants perception of barriers to research utilization   n=62

	Rank	Mean	SD
FACTOR 1: CHARACTERISTICS OF THE ADOPTER			
the nurse does not see value of research for practice	16	2.8387	1.24392
the nurse sees little benefit for self	19	2.5484	1.12610
the nurse is unwilling to change/try new ideas	27	1.6290	.77320
there is not a documented need to change the practice	25	2.0645	.74374
the nurse feels benefit of changing practice will be minimal	24	2.0806	.87400
the nurse does not feel capable of evaluating the quality of the research	12	2.9839	.98334
the nurse is isolated from knowledgeable colleagues with whom to discuss the research	14	2.9194	.91074
the nurse is unaware of the research	11	3.0161	1.16636
FACTOR 2: CHARACTERISTICS OF THE ORGANIZATION			
administration will not allow implementation	1	3.9032	.29806
physicians will not cooperate with implementation	2	3.9032	.29806
there is insuffecient time on the job to implement new ideas	4	3.6774	.47128
other staff are not supportive of implementation	7	3.3710	.89138
the facilities are inadequate for implementation	6	3.4516	.71695
the nurse does not feel he/she has enough authority to change patient care procedure	5	3.6613	.54151
the nurse does not have time to read research	3	3.7097	.45762
the nurse feels results are not generalizable	18	2.6774	.86412
FACTOR 3 CHARACTERISTICS OF THE INNOVATION/RESEARCH			
the research has methodological inadequacies	17	2.7581	.88123
the conclusion drawn from the research are not justified	13	2.9355	.78659
the research has not been replicated	21	2.5000	.90082
the literature reports conflicting results	20	2.5484	.96966
the nurse is uncertain whether to believe the result of the research	17	2.8387	1.04322
research report/articles are not published fast enough	23	2.2097	1.05795
FACTOR 4: CHARACTERISTICS OF THE COMMUNICATION			
implications for research are not made clear	10	3.1290	.66490
research reports/articles are not readily available	15	2.8548	.84634
the research is not reported clearly and readably	22	2.4032	.77797
statistical analyses are not understandable	9	3.1613	.70580
the relevant literature is not compiled in one place	8	3.3226	.91927
the research is not relevant to nurse's practice	26	1.8226	1.10919

Table 2: Relationship between the factors and participants perception
n=62

	Perception		SD
	Negative	**positive**	
FACTOR 1	19(30.6)	43(69.4)	± 0.5
FACTOR 2	12(19.4)	50(80.6)	± 0.4
FACTOR 3	34(54.8)	28(45.2)	± 0.5
FACTOR 4	35(56.5)	27(43.5)	± 0.5

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Table 3. Relationship between participants years of working experience and their perception regarding barriers to research utilization.

n=62

	Years of experience		X^2 (p value)
	<4 yrs Freq (%)	≤ 4 yrs Freq (%)	
FACTOR 1 Negative positive	4 (6.5) 12(19.4)	15(24.1) 31(50)	0.323 (0.408)
FACTOR 2 Negative positive	4(6.5) 12(19.4)	8(12.9) 38(61.2)	0.440 (0.371))
FACTOR 3 Negative positive	7(11.3) 9(14.5)	27(43.5) 19(30.6)	1.071 (0.228)
FACTOR 4 Negative positive	10(16.1) 6(9.7)	25(40.3) 21(33.9)	0.321 (0.395)

Table 4: Relationship between participants qualification and their perception regarding barriers to research utilization.

n=62

	Qualification		X^2 (p value)
	diploma Freq (%)	Bachelors Freq (%)	
FACTOR 1 Negative positive	11(17.7) 33(53.2)	8(12.9) 10(16.1)	2.272 (0.115))
FACTOR 2 Negative positive	8(12.9) 36(58)	4(6.5) 14(22.6)	0.134 (0.483)
FACTOR 3 Negative positive	19(30.6) 25(40.3)	15(24.1) 3(4.8)	8.315 (<0.001)
FACTOR 4 Negative positive	23(37) 21(33.9)	12(19.4) 6(9.7)	1.077 (0.226)