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Assessing Nurses' Capacity for Health Research and Policy Engagement in Nigeria

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Assessing Nurses' Capacity for Health Research and Policy Engagement in Nigeria

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Abstract

Nurses account for a significant proportion of the health care workforce in most countries. In the African continent, it is estimated that nurses constitute about 80% of the health care professionals, however they are marginally represented in health research investigations and policy/decision-making roles. A descriptive research design was used to obtain data from 120 registered nurses in Calabar municipality, Nigeria. The study aimed at assessing the extent of nurses' involvement in research and policy development. The findings revealed that only 30(25.0%) of the respondents indicated that they had been involved in research activity. Majority 74(61.7%) utilized research findings and perceived research as a tool to enhance development of nursing. 93(77.5%) respondents were not aware of any financial support for research and only 4(3.3%) had ever received research grant to support research activities. The results also revealed minimal 8(6.7%) involvement of nurses in health care policy development. A significant relationship ($P < 0.05$) existed between nursing educational qualification and involvement in research activities after school. These findings therefore suggest the building of supportive research environments and strengthening nurses' research capacity for effective participation of nurses in health care policy decisions in low and middle income countries (LMICs) and global health priorities.

Keywords: Nurses capacity, health research, health policy involvement, LMICs, Nigeria.

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1 Introduction

The contemporary society is filled with challenges and health care professionals can no longer rely on their initial training, knowledge and skills to propel them through their chosen careers. The need to combine best research evidence and clinical experience with patients' values became the panacea as far back as 2001 when Institute of Medicine (IOM) released their report of Crossing the Quality Chasm: A New Health System for the 21st Century [1]. This release was sequel to health system inability to provide the high quality of care needed and deserved by the populace [2]. The power to transform health care system into national assets rather than liabilities rest on the different stakeholders [3] and World Health Organization unreservedly maintained that building health care system is everybody's business [4]. Similarly, IOM suggested the need for the largest members of the health care system to take lead in bringing about the much needed change in the health system [1].

Nurses form the largest group of health workers as well as serve as the 'backbone' of the health care system in Africa [1, 5]. In 2008, they were 224,943 nurses in Nigeria compared to 55,376 physicians in the country, a ratio of 4 nurses to every 1 physician [6], this statistics highlight the essence of their collaborative contribution to transform health care system into national assets. Measures to attain such goals clinched on building research capacity, which increased the quality of knowledge production and positively enhanced quality of care [7]. Evidence-based nursing practice rely on available research evidence to enable individual-patient and organization attain high-quality and cost-effective care [8, 9, 10, 11, 12, 13]. Nigerian nurses by virtue of their number, knowledge and wealth of experience are well-positioned to play a leading role in improving the health of Nigerians. They form an integral part of the system because they are at the forefront of patient care and have prolonged engagement with patients and families [14, 15].

Studies in Nigeria [16,17,18] and from other countries have identified many barriers that prevent nurses undertaking research activity and utilization of research findings to include lack of adequate staff and excessive work load, lack of experienced nurse researchers, cost, lack of organizational support, unavailability of internet services and lack of nursing research mentors and leadership in the dissemination of research findings [19, 20, 21, 22, 23, 24, 25]. The nursing report, "the 10/90 gap", which was coined to convey the striking discrepancy identified between the size of disease burden and the allocation of health research funding, addressed the need to increase funding allocation to health research [26]. Furthermore, it has been observed that clinical staff prefers research on innovations rather than appraising their existing practices, or getting existing research into practice, as most nurses resist changes to their normal practices [27]. A number of studies in developed countries revealed moderate to high rates of research utilization by nurses [27, 28, 29]. The Federal Ministry of Health (FMOH) in Nigeria have reported of limited research funding [30] and also disparity on how the limited fund is distributed. Instead of 2% of health allocation to research, only 0.08% is allocated to research and this allocation is used at the Federal level with minimal funding at lower level. Enhancing nurses ability to access funding for research is very essential and also removing restriction attached to research funding, such as availability of funds to biomedical scientist and medical doctors and not nurses [31]. The authors further asserted that providing access to basic research infrastructure will also increase nurses' research

capacity and help them overcome power differentials associated with research in health care system.

Evidence-based policy (EBP) had also become a necessity following the evidence-based medicine movement and it involved using rigorously established unbiased evidence to inform policy [32]. The IOM have provided nurses with new opportunities to deliver care and play an integral role in leading change and their ability to succeed depend on their transferring from patient bedside to the boardroom where health policy are made [1, 33, 34, 35]. Few reports exist on reduced nurses presence in policy arena needed to influence decision making [16, 36]. Sometimes when some nurses engage in research production, they encounter other barriers preventing their research from shaping policy such as lack of congressional interest, not having window of opportunity, research was not focused on major health concern and lack of research visibility to broader public and policy makers [8, 37]. WHO has raised concern over the minimal representation of nurses and midwives at national, regional, and international health policy fora [6, 38]. A similar report also indicate that African nurses' roles in research productivity and policy development and implementation through research are limited [39]. In Nigeria, FMOH have publicized critical disease burden areas that health researches should target which are relevant to policy arena [30]. Therefore, by virtue of their number, nurses could generate enough power to successfully reform the health care system provided they are willing to step out of their comfort zone into policy arena [34].

Health care providers have an obvious contribution to make in bridging the "know-do" gap through uptake of evidence into policies and practice. However, their technical knowledge and experience do not systematically inform policy decisions [26, 40, 41, 42]. Other scholars have suggested the use of research capacity building to attain a sustainable change in health care system [43, 44]. This paper presents the results of a recent study on nurses' involvement in health research and policy development, and the resources available to build their capacity to engage in nursing and health research activities.

2 Methodology/Research Design

A descriptive research design was utilized to obtain information on nurses' involvement in health research and policy development in Nigeria. A convenient sampling technique was used to recruit 132 nurses who attended a local research seminar on capacity building in Cross River State, Nigeria in December 2008. 120 registered nurses ranging from Senior Nursing Officers to Directors of Nursing Services within Cross River State completely filled the structured questionnaires which contained both open and closed ended questions. The structured questionnaire consisted of four sections namely socio-demographic characteristics, nurses' involvement in conducting research, research utilization and nurses involvement in policy, making up a total of 46 items. Informed consent was obtained from respondents who participated in the research study. In the study, research engagement is perceived as nurses conducting and utilising research findings while policy engagement infer nurses involvement in any health care decision making. The generated data were analyzed using the SPSS 14.0 computer software and presented using descriptive statistics such as percentages, pie and bar charts and chi – square for inferential statistics. The level of significance was set at $\alpha = 0.05$.

3 Results

3.1 Demographic Characteristics of Respondents

Of the 132 questionnaires administered, 120 were correctly completed and returned to the investigators indicating a response rate of 91%. An analysis of the demographic characteristics of respondents revealed that the ages of the respondents were between 30 to 50 years and above with a greater number of females than males; 116 (96.7 %) female and 4 (2.3%) males. The study was based on a convenient sample derived from participants of a local research workshop offered by one of us (JE) from the University of Ottawa, Canada. This may account for the large representation of nursing officers with more than five years of experience during the workshop.

Generally nurses in metropolitan and capital cities like state capitals are more educated and occupy leadership positions in the tertiary health organizations, government departments as well as academic institutions. On the other hand, bedside nurses and junior nursing officers may not have time off or realize the significance of nursing research to attend such workshop. These maybe the possible reasons for the limited representation of this cadre of nurses in the study sample. Details of other demographic factors are presented in Table 1.

3.2 Nurses' Involvement in Conducting Research

Among the 120 nurses who participated in the study only 30 (25.0%) respondents were involved in research activities after their nursing education (Figure 1). 19(15.8%) participated in collaborative research while 11(9.2%) respondents were involved in individual or personal research.

3.3 Perspectives of the Respondents on the Usefulness of Research

Nurses generally agreed that conducting research in nursing will promote excellence in nursing science and can be used to address emerging issues in nursing science. Such findings when incorporated into decision making can facilitate changes in obsolete practice, predicts outcome in patients care, enhance both professionalism and evidenced-based nursing practice. It will also ensure professional accountability and also help the nurse to develop a better knowledge base in the chosen area of practice (Table 2).

Table 1: Socio-demographic characteristics of nurse respondents from Calabar, Nigeria.

Characteristics	Frequency	Percentage (%)
Sex		
Male	4	3.3
Female	116	96.7
Age		
< 30 years	-	-
30 – 40 yrs	19	15.8
41 – 50 yrs	62	51.7
> 51 years	39	32.5
Rank		
SNO	8	6.7
Nursing Officers	78	65
Directors	8	6.7
Lecturers	26	21.7
Highest Educational Qualification		
Nursing Diploma	92	76.7
Degrees	28	23.3
Years of Service		
5-10 years	8	6.7
11-20 years	37	30.8
> 20 years	75	62.5
Organization of Work		
Health Centre	19	15.8
School	30	25.0
Hospital	67	58.8
Industry	4	3.3
Local Government Area of Practice		
Calabar Municipality	80	66.7
Calabar South	17	14.1
Other LGAs	23	19.2
Area of Specialization		
Nursing Education	30	25.0
Clinical Practice	79	65.8
Others (Administration, Community Health Officers etc.)	11	9.2

*Nursing Officers – PNO, ACNO, CNO

**Lecturers – Assistant Lecturer, Lecturer 11, Lecturer 1, etc.

©Other LGAs – Akpabuyo, Ikom, Odukupani, Ogoja and Abi Local Government Areas (LGAs).

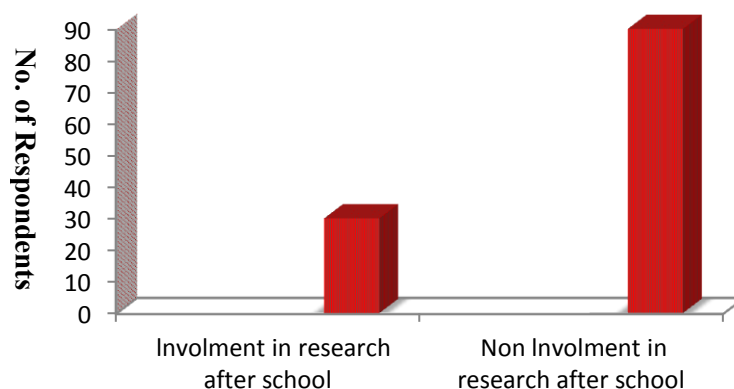


Figure 1: Extent of research involvement by nurse respondents after nursing education

3.4 Nurses' Utilization of Research Findings

As shown in Figure 2, the majority of the study respondents 74(61.7%) agreed that they had utilized research findings in their practice, while 38(31.7%) confessed they did not and 8(6.6%) were not sure if they had utilized research findings before.

Table 2: Respondents' Perspectives on the Usefulness of Research

Variables	YES		NO	
	Frequency	%	Frequency	%
Research enhance development of nursing	100	83.3	20	16.7
Research necessary for Improvement of patient care	109	90.8	11	9.2
Adopting research based enhances professionalism	104	86.7	16	13.3
Basic nursing action in research makes the action more clinically appropriate	111	92.5	9	7.5
Incorporating research evidence ensures professional accountability	116	96.7	4	3.3
Research evidence ensures social relevance and effectiveness of nursing practice	113	94.2	7	5.8
Research will eliminate obsolete practice that no longer achieve designed outcomes	94	78.3	26	21.7
Essential for the promotion of designed patient outcome and prediction of probable outcome of patient care	112	93.3	8	6.7
Promote excellence in nursing science and can be used to address emerging issues in nursing science	120	100	-	-
When research findings is incorporated into decision making their practice is enhance	115	95.8	5	4.2
Research is beneficial for changing nursing practice	113	94.2	7	5.8
Research helps the nurse to develop a better knowledge base	112	93.3	8	6.7

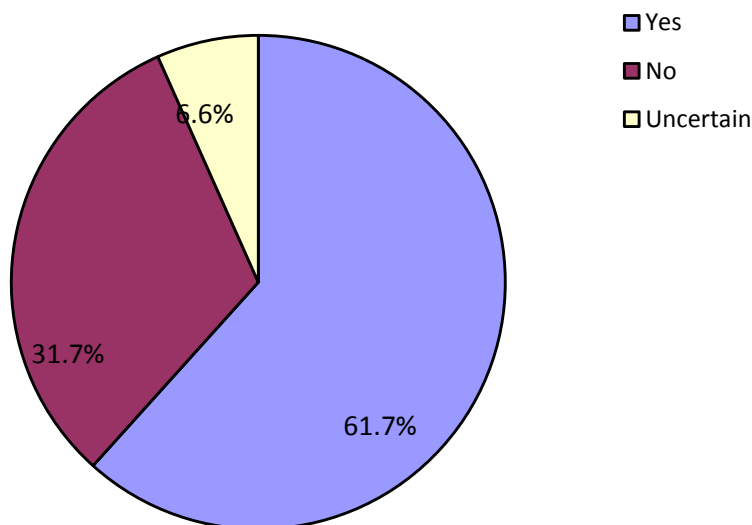


Figure 2: Extent of utilization of research results by respondents investigated

3.5 Purpose for Utilization of Research Results

Among the 74 respondents who utilized research findings, 32(26.7%) used it to solve nursing care problems and 25(20.8%) were able to improve nursing practice. For 6(5.0%) respondents, findings served as evidence-based practice but 11 (9.2%) respondents were unable to determine the usefulness of such findings (Table 3).

Table 3: Purpose for Utilization of Research results

Variable	Frequency	Percent
To solve nursing care problem	32	26.7
To improve nursing practice	25	20.8
To provide evidence-based practice	6	5.0
Yet to determine usefulness of the findings	11	9.2
Have never utilized research results	46	38.3
Total	120	100.0

3.6 Availability of Financial Support for Research

A cross section of the respondents was not aware of financial support or grant for research from their various institutions. Only 27 respondents (22.5%) were aware . Further analysis revealed that only 9 (7.5%) nurses sought for financial assistance from Government, NGOs and international organizations and only 4 (3.3%) were successful in obtaining such grants (Table 4).

Table 4: Availability of Financial Support for Research

Variables	YES		NO	
	Frequency	%	Frequency	%
Awareness of financial support from institution	27	22.5	93	77.5
Request for financial support from other sources for research (NGOs, Govt., International organizations)	9	7.5	111	92.5
Successfully in Obtaining external research grant	4	3.3	116	96.7

3.7 Factors that Hinder Nurses Research Involvement

As illustrated in Figure 3, there are several factors influencing nurse's involvement in research activities. These factors include lack of time, funding, lack of policies that foster research involvement and organizational commitments, lack of research knowledge / mentors, and overall lack of access to research resources. Majority 35(29.2%) of our study respondents felt that a significant factor that hinder their research involvement was lack of time and 28(23.3%) indicated that lack of policy to promote research in their organization and organizational commitments towards research utilization by nurses was the hindering factor. 27 (22.5%) asserted that cost and lack of research funding was a major setback. Another 22 (18.3%) argued that they lack knowledge/research mentors in conducting research, while 8(6.7%) attributed it to the absence of research resources and research databases.

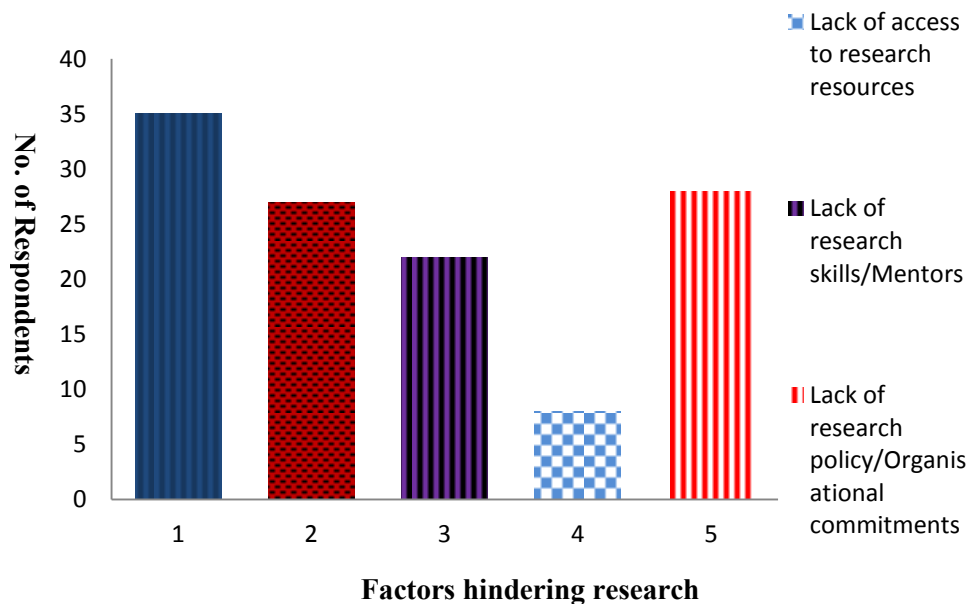


Figure 3: Factors hindering research involvement among the respondents in Calabar, Nigeria

3.8 Nurses Involvement in Policy Development

Table 5: Nurses Involvement in Policy development

Variables	Frequency	%
Not involvement in health care policy development.	112	93.3
Involvement in Policy development	8	6.7
Total	120	100

Most of the respondents, 112(77.5%) argued that they have never been involved in any health care policy formulation with other stakeholders in the health care system with references to any area of disease burden in the health care system. On the other hand, 8 (22.5%) agreed to have participated in policy development in their respective health care setting while all respondents agreed to have been involved in policy implementation (Table 5).

Table 6: Relationship between nurses educational qualification and research involvement

Highest Educational Qualification	Research involvement after school		TOTAL
	Involved	Not involved	
Nursing Diploma	7 (23.0)	85 (69.0)	92
Degree	23 (7.0)	5(21.0)	28
Total	30	90	120

Figures in brackets are expected frequencies $\sum 63.6$, $X^2_{cal} = 63.6$, $X^2_{tab} = 3.841$, $DF = 1$, $P < 0.05$.

Among 92 respondents with nursing diplomas, 7 respondents were involved in research after school while 85 respondents were not (Table 6). Out of 28 respondents with university degrees, 23 were involved in research after school while 5 respondents were not involved in research. A chi –square value of 63.6 was obtained at $P < 0.05$ showing a significant relationship between nursing educational qualification and involvement in research activities after school.

4 Discussions

As frontline health service providers, nurses are central to the prevention, care and treatment of health care consumers. Nurses provide cost-effective primary health care services in resource-poor settings, and are pivotal to reaching vulnerable groups and underserved areas. As the findings of this study have shown, although nurses are generally well-prepared educationally and they play a leadership role within their respective clinical environments, their contribution to the health research and policy development is very marginal. This is in part related to their limited experience with effective knowledge transfer strategies, and little opportunities for dialogue with policy

makers [34]. Initiatives such as the International Council of Nurses' "Leadership for Change" have begun to address these issues in terms of enhancing the link between nurses and decision makers [39] but there remain many issues to be addressed in this area especially in LMIC like Nigeria as demonstrated in the findings of this study.

4.1 Nurses' Involvement in Research

The results of this study portray clearly limited involvement of nurses in research production after their nursing educational program (Fig. 1). The significance of nurses leading health care reforms through collaborative research has been stressed [1]. It has been asserted that quality nursing care rely on current research evidence and 20 - 25% care rendered are potentially harmful or not needed since it is not based on research evidence [9]. The limited involvement of nurses in research could increase the annual preventable death toll in the area as previously reported [20]. Limited nurses involvement in this study could be attributed to non-acquisition of research skills after secondary school education and unfavourable attitude towards research. It has also been reported that degree of educational preparation has an influence on not only the nurses' knowledge of research but also on their attitudes to research and a significant correlation exists between educational qualification and active research involvement among nurses in this study [20, 27].

It has been noted that if developing nations seek to attain any economic progress, there is need to strengthen research infrastructure especially in reference to tropical disease burden [26] and nurses as the largest group of health care workers must contribute their quota to meet health care challenges. Despite limited research involvement, the nurses in this study agreed that conducting research in nursing will promote excellence in nursing science and can be used to address emerging issues in nursing science. In addition, they suggested that incorporating nursing research evidence into decision making can facilitate positive changes in practice, predict positive outcome in patients care, and enhance evidenced-based nursing practice and the overall image of the profession. Furthermore, the study revealed that nurses are well aware of the importance of research to their field of knowledge and desire to see changes in patient care but feel ill-equipped to initiate the envisioned change including active participation in research and policy development initiatives. There is need therefore to change the ways that nurses understand, value and initiate research through ideological shift which requires re-educating nurses from their set of beliefs, perceptions, values and practices [45]. The report [1] on '*the future of nursing: leading change, advancing health*' noted that, nurses have great potential to lead innovative strategies to redesign and improve the health care system. However, a number of historical, political and policy factors have created some barriers that have limited nurses' ability to facilitate transformation of the system.

4.2 Research Utilization

The study also revealed that majority of nurses have used research findings in their various areas of practice with the intent of solving clinical nursing care problems or improving various nursing services and determining the usefulness of such research findings. These findings imply nurse's affirmative disposition toward research and awareness of utilizing research evidence to inform practice. However, the question is whose research findings will they use to inform nursing practice in Nigeria, given the

limited involvement of nurses in this region in research productivity? This observation corroborates similar finding in Ireland where research utilization was also high among nurses [45]. There are also a number of Canadian studies that have shown moderate to high rates of research utilization by nurses [27, 28, 29]. A recent report on research utilization in nursing practice indicates that the extent to which nurses report research use in their daily practice is, on average, moderate-high, and has remained fairly consistent over time into the early 2000's [46,47]. This may be due to increasing awareness of the evidence based practice movement which has influenced the number of reports published on research use alone [47]. In contrast, another report [18] indicated that research utilization among psychiatric nurses in suburban/rural areas was poor due to unavailability of scientific information on patients' disease condition as at when needed.

4.3 Hindering Factors

This study has highlighted some major hindrances to research productivity in Nigeria which include lack of time due to inadequate staffing, unavailability of research funding, absence of policies that foster research involvement and organizational commitments, inadequate research knowledge/mentors and overall dearth of research resources. This agrees with other studies [21,48] which emphasized that the biggest barrier to research productivity in nursing practice is the lack of time and suggest the need for organisational change towards increasing time availability for nurses, as a way forward in achieving their goal. The additional time would be used by nurses for accessing, reading and evaluating research. The feasibility of this in the present health care environment is questionable, since staffing is often inadequate to meet the day to day demand with a mismatched nurse/patient ratio [17]. In most cases, charge nurses do not assign staff nurses to implement research.

Another barrier is inadequate electronic access to information resource (such as lack of visual library, computer networking and informatics, information and communication technology (ICT) and the appropriate skill needed to use these electronic tools effectively. A previous study have indicated that inadequate funding of the health care system is a general challenge which influences funding of resources, which could have enhanced research and evidence-based nursing practice [16]. Sometimes, where funding is made available, undue restrictions are attached which reduces nurses chances of accessing research funding especially in low and middle income countries [31]. Enhancing nurses ability to access funding and basic research infrastructure motivates and help them to overcome power differentials associated with research productivity in health care systems. The lack of research skill and mentors also surfaced as a barrier to nurses productivity among the respondents. Individuals need support to sharpen their personal and professional skills as well as adapt to their organizational roles, throughout their career [24]. Having senior research mentors provide avenue to discuss and establish ways to balance between research, teaching and practice, provide leadership on essential research areas to meet health needs and negotiate policy process [31].

During this study, majority of the respondents were not aware of sources of financial support and/or research grants and very few benefited from these grants. Further analysis revealed that only very few nurses sought for financial assistance from Government, NGOs and international organizations. It has been reported that *'the research enterprise can thrive only when certain prerequisites are in place, including a culture supportive of research and scholarship; strong mentoring in the intellectual work of the discipline;*

educational programs to ensure an adequately sized and appropriately educated research workforce; and provision for necessary infrastructure and funding mechanisms to support coherent programs of research [25]. Without these basic necessities put in place, efforts to attain health care goals involving nurses will remain unsuccessful. This is a significant factor given that research activities demand financial resources and if more nurses were aware of financial sources and able to access funding it will enhance research activities in developing countries. Inadequate funding in the health sector and the lack of funding for research and health care system have been reported to impact negatively on Nigerian nurses' ability to actively engage in research activities [16].

4.4 Nurses' Involvement in Policy Development

Most of the nurses who participated in this study were not aware of any policy that promoted research productivity and utilization in nursing practice may be due to organizational characteristics such as lack of evidence-based practice policy, protocols and other resources for transferring research evidence into practice [16]. The study also revealed limited involvement in general health care policy development but a total involvement in policy implementation. It appears the nursing profession has really been slow to recognise and utilize its power to support and impact health care policy development or emphasize on the need for nurses to participate in public policy formulation and political activities [34, 48]. This is an essential requirement if nurses are to meet their responsibilities in providing optimal health for their communities and the nation. The health care system is a conglomeration of different professionals with fewer shared knowledge but connected together to meet the health needs of the populace. Therefore, recognition of each professional contribution to achieve a common goal should involve equal representation of every group in decision making. Failure to engage all professionals in strategic communication (decision making) and action in a balance way leads to "systemic imperatives" [34, 42]. Under such circumstances, those who have the greatest power, usually have the greatest say, implying that rules and regulations would be created by others for nurses [41]. The choice of any policy reflect the values, belief and attitudes of those designing the policy [49]. Nurses have values and when governments develop policies that reflect nurses values then nurses have a right to be part of the decision making process. To create transformational change in Nigeria health care system, nursing input in research and policy should be encouraged, as their input will help in identifying bottlenecks and constraints in attaining national health care goals.

5 Implications

Although there is convincing evidence supporting the engagement of nurses in knowledge generation and in integrating research findings into their work, most observers point to the continued lack of research capacity in nursing and the low levels of funding [7,50,51]. The increasing responsibilities being taken by nurses, and the growing prominence of the areas they work in calls for a practice that is effective and cost efficient [12, 13]. Nurses work in every area of the health system, and are thus well-positioned to identify and pursue highly pertinent health services and policy research questions.

Though the African region may have its unique health care challenges, the reasons for the lack of nurses' capacity for health research and policy engagement seem to agree with global findings. Nurses, as the backbone of the healthcare system, have the potential to contribute to health research and should not be focused on as caregiver only but as health scholar in totality [23]. There seem to be a lack of attention to operational research and community-based participatory program in some countries like South Africa which further contributes to the questionable importance of nursing research [23, 52]. But nurses should conduct research that is relevant to the health research environment both nationally and internationally in order to influence and impact on decisions [53]. A number of studies have shown lack of nursing impact in knowledge generation [23, 36] and the lack of nursing research leadership in the dissemination of research findings [22]. These challenges may be related to the fact that there are relatively few PhD nurses, and University-based training is relatively new in LMICs, thus there are limited number of nurses in these countries that can provide mentoring and supervision to young researchers [23]. The lack of experienced nurse researchers has been identified as a barrier to the advancement of nursing research at both national and international levels [54, 55].

Since nurses comprise the largest health care workforce, their successes and/or failures have significant impact on the health care delivery system as a whole. Hence there is need to strengthen the knowledge and skills of nurses in ways that enable them to keep pace with the ever-changing world of health care. The nursing profession is expected to obtain new information in the form of research findings and incorporate this constantly and knowledgeably into nursing practice. This then serves as a critical link in bringing research-based changes into clinical practice. Depending on the environment, a health care organization may or may not have the resources to ensure critical, succinct, reasonable evaluation and application of research findings as they relate to the point-of-care delivery. However, to engage nurses in sustained inter-professional research and policy development and to foster integration of best practices into an effective and sustainable health system in LMICs like Nigeria, health care organizations must make targeted efforts to create mechanisms that facilitate both the creation of knowledge and translation of knowledge into clinical decisions and direct patient care activities.

In summary, this paper has presented the various challenges faced by nurses with regards to the production and utilisation of research as well their involvement in policy development. There is an urgent need for the capacity building of nurses with regards to the production/ utilisation of research as well their involvement in policy development in LMICs such as Nigeria and others. To achieve this, the following recommendations are made:

- Nursing research fund should be created to support nurse-led research
- Policy should be promulgated that fosters a culture of research and evidence based practice in health care organizations.
- International training opportunities for research and policy formulation should be provided for nurses to develop expertise in these areas.
- There is need for mentoring of young researchers by experienced ones
- Evidence-based decision making should be promoted as the norm in nursing practice.
- Nurses in LMICs should be well informed of sources of research grants including local and international research funding organizations.

6 Conclusion

Developing nursing research capacity is a challenge confronting the discipline of nursing globally and it is influenced by both professional and political factors [44]. Challenges include material constraints and organizational contexts as well as professional issues such as the changing roles and expectations of nurses. To strengthen and sustain nurses' research capacity, organizations' internal systems and structures need to be in good working order as this is a key element of organizational capacity building. Therefore institutional capacity needs to be enhanced as an integral aspect of developing a strong and successful nursing research and policy development agenda institutions. Capacity building strategies such as training, mentoring, organizational redesign can lead to sustainable change which needs to be embraced as no one strategy alone is sufficient to build the needed capacity [43].

To understand the complex interplay between these underlying factors which influence the development of nurses' research capacity and their engagement in policy formulation, a strong nursing leadership is necessary in these arenas. Evidence-based practice should be an integral aspect of nursing work as it fosters the use of the best available research evidence within individual patient and organizational contexts to attain high-quality and cost-effective care [10, 11]. In order to achieve the vision of a transformed health care system, the nursing profession must produce leaders throughout the system [1], from the frontlines to the corporate leaders and these nurse leaders must act as full partners with physicians and other health professionals. Nurses should be answerable for their own contributions to research and the delivery of high-quality health care while working collaboratively with leaders from other health professions.

In conclusion, this study has highlighted the limited involvement of nurses in health research and policy development. Although a significant portion of nurses in the study acknowledge the integration of research evidence in their practice, very few nurses actually engage in the production of knowledge for the profession. This calls for an urgent need for nursing leadership to mobilize collective efforts and to work in collaboration with other health care professionals and health care organizations to ensure the active participation of nurses in knowledge production and policy development. This is necessary for nurses to take their rightful place as leaders in the transformation of the current health care system that will ultimately enhance quality of care and patient health outcomes.

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