

Effects of Educational Intervention on Nurse Leaders' Knowledge and Perceived Self-Efficacy to Participate in the Health Policy-Making Process: A Study in Nigeria

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Background

Nurses play a central role in health care; they work with multidisciplinary health care professionals playing multiple roles (Cawthorn, 2025) and, of all health care professionals, are the largest group and easiest to reach (Wakefield et al., 2021). Nurse leaders play a pivotal role in positively influencing health care, and nurses must foster competencies across all levels and settings (Doherty & Revell, 2020). The participation of nurses in health policy development ensures safe, effective, accessible, and low-cost services (Shariff, 2015). Health policy shapes the entire health care landscape, including both patients and providers (University of North Dakota [UND], n.d.). It also assists in clarifying priorities and sets out roles for all health care actors, such as doctors, nurses, and administrators (UND, n.d.). The mission of the health care system is to ensure societal health through equitable provision of the constituent elements of service delivery (Barzegar Safari et al., 2020).

Because nurses have a unique perspective on the health care system, every nurse is qualified to be a health policy participant (Schaeffer & Haebler, 2019). The presence of nurses alongside patients during major life events such as births, illnesses, and recovery has put them in an optimal position to provide health policy information (AbuAlRub & Foudeh, 2017). Health policy-making is an invaluable nursing skill (Morris, 2025), and nurse leaders' participation in policy-making helps stakeholders make better health decisions (Hajizadeh et al., 2021). Nurse managers in policy-making assist in suggesting relevant and effective policies and support other policy actors (Hajizadeh et al., 2021). The engagement of nurses in policy development is intended to benefit consumers of health care and the public. Considering that health policy often directly affects nurses, engaging in its formulation is in their best interests (Kunaviktikul, 2014). Health policies directly affect the voice of nurses on public health issues, and policy formulation empowers nurses to play the role of advocate and leader (Annesley, 2019).

Nurses' involvement in health policy implementation is clear (Hajizadeh, 2021); however, few nurses are involved in policy-making processes (Al Yahyaei et al., 2025) or are minimally involved (Etowa et al., 2023). Nurses have historically had little involvement in policy that affects health care delivery (Brokaw, 2016). Nurses provide almost 80% of hands-on care worldwide (DeClerck, 2023), yet little is known of the experiences of nurses and midwives in policy development in low- and middle-income countries (Etowa et al., 2023). In Africa, the patriarchal system puts nurses, who are mostly women, at a disadvantage concerning policy engagement (Acheampong et al., 2021). In addition, most nurses in Nigeria are educated at the diploma level, which contributes to their infrequent invitation for policy participation. Lathrop (2013) argues that nurses have the requisite education, experience, and legacy to lead the world in addressing the social determinants of health and have a dramatic impact on the health of populations. Barriers cited for nurses' poor participation in policy-making include lack of time, lack of mentoring (AbuAlRub & Foudeh, 2017), lack of political interest and competence, and restrictive organizational culture and nursing education (Han & Kim, 2024).

Self-efficacy encompasses a person's confidence in themselves, control of their behaviour, influence over their environment, and motivation in pursuit of their goal (Cherry, 2025). Self-efficacious individuals develop a deeper interest in work, demonstrate commitment, are resilient and view challenges as tasks to be mastered (Cherry, 2025).

Limited literature exists about targeted educational intervention for nurses to improve their knowledge and self-efficacy to participate in health policy-making. What is nurse leaders' knowledge of the health policy-making process? What is nurse leaders' perceived self-efficacy to participate in the health policy-making process? What is the effect of educational intervention on nurse leaders' knowledge

and perceived self-efficacy to participate in the health policy-making process? This study aims to determine the effects of educational intervention on nurse leaders' knowledge and their perceived self-efficacy to participate in the health policy-making process.

Methods

Design

The research design for this study was quasi-experimental. The study adopted a treatment-control approach with before-treatment and after-treatment data collection. Educational intervention took place between before- and after-treatment data collection. Educational intervention was applied to the treatment group alone. However, data collection was applied to both control and intervention groups using the same data collection instrument. The study adopted the transparent reporting of evaluations with nonrandomized designs (TREND) reporting method.

Setting

This study was conducted in Nigeria, where the health care system is decentralized into federal, state, and local government levels handling tertiary, secondary, and primary health care, respectively. The Federal Ministry of Health (FMOH), the State Ministries of Health (SMoHs), and the local government health departments administer the health care system. The federal government manages federal teaching hospitals and federal medical centres; the state governments manage general hospitals and state government-owned teaching hospitals; and the local governments run dispensaries and primary health care centres.

Many universities in Nigeria are owned by the federal or state governments, and some have a department of nursing science. Every university that offers nursing science has a head of department as an administrative head nurse. Every teaching hospital or federal medical centre has a head of nursing services department as an administrative head nurse. Each SMoH has a nurse director (or deputy director) of nursing services overseeing the nursing administration in the state. These heads and directors are referred to as *nurse leaders* in this study.

This study was conducted at these universities, teaching hospitals, federal medical centres, and SMoHs. The nurse leaders in these organizations constitute the participants in this study.

Sampling

The population of the study comprised 40 purposively sampled Nigerian nurse leaders in nursing education, such as in universities' departments of nursing (e.g., head of the department); in administration (e.g., director of nursing services in a SMoH); and clinical services (e.g., director of nursing in a university teaching hospital or federal medical centre). These nurses occupy leadership positions in their organizations in all of Nigeria's six geopolitical zones.

We adopted a multi-stage sampling method. The first stage stratified the country into six geopolitical zones. The second stage was a purposive selection of two states from each geopolitical zone based on states with federal and/or state universities offering nursing science. The third stage purposively selected study participants from these states based on the inclusion criteria, which involved being in current position for a minimum of 1 year at the time of the study. Similarly, we purposively sampled heads of nursing in federal teaching hospitals or federal medical centres and the SMoHs from these states with universities offering nursing sciences. The fourth stage was a purposive assignment of participants into

control and treatment groups, which was achieved after collecting pre-intervention data. The participants were assigned into the groups using their gender (male, female), highest educational attainment (bachelor of science, master of science, doctor of philosophy), and professional sector (SMoH, university, hospital). A total of 32 nurse leaders participated in the study.

Data Collection

We collected data using a 47-question instrument with a closed-ended and Likert-format questionnaire developed and tested for reliability using Cronbach's alpha with a coefficient of reliability of 0.80. The instrument contained questions related to participants' socio-demographic characteristics, knowledge of health policy, and self-efficacy to participate in the health policy-making process.

We created an online questionnaire using Google Forms. The nurse leaders were contacted via telephone to inform them of the study. The voluntary provision of their email addresses indicated willingness to participate in the study. We sent the online questionnaire link to participants using their provided contact information.

The pre-intervention data collection lasted 4 weeks due to a lack of prompt responses. The responses went directly into the server and did not contain the email address or identity of the respondent. This process was replicated for the post-intervention data collection. We collected post-intervention data after a 6-week educational intervention.

The educational intervention provided pedagogy that expounded on policy-making and its political connection. Module 1 discussed public policy and health policy, including the meaning, goal, and forms of policy. Module 2 discussed levels and stages of the policy process, emphasizing that nurses need to feature at every stage, and compared it to the nursing process. Module 3 focused on policy makers and nurses, identifying policy makers and stakeholders as well as barriers to and benefits of nurses' participation. Module 4 considered nurses and politics, and modules 5 and 6 discussed policy-making and politics. The modules highlighted that participation in politics is a sure approach to becoming involved in policy-making, and nurses need to participate in politics at all levels.

The modules were delivered using Google Meet in June and July 2024. The post-intervention data collection lasted 4 weeks to accommodate all participants. The instrument was the same as the pre-intervention instrument.

Analysis

We analyzed pre-test and post-test data using descriptive statistics with the aid of IBM SPSS Statistics 25.0. Demographic data were analyzed using frequency, percentages, means, and standard deviation. Knowledge questions were analyzed using a scale of 0% to 100% to indicate the percentage of correct responses, where 0–40% indicated *poor knowledge*, 41–70% indicated *good knowledge*, and 71–100% indicated *very good knowledge*. This scale determined the level of knowledge at the pre-test and post-test stages of data collection. The null hypotheses were analyzed using inferential statistics. Specifically, we applied the paired *t*-test and Fisher's exact test to the study's hypotheses.

Ethical Considerations

Ethical exemption was obtained from Borno State Ministry of Health and Human Services, Ethical Committee Number 056/2024. The study was conducted according to the principles of the Declaration of Helsinki of informed consent and confidentiality. Informed consent was obtained from participants of the study after explaining the purpose of the study. The study upheld the principle of

voluntary participation and voluntary withdrawal from the study. Participants' responses were anonymous, and responses are protected from unauthorized access. The completed questionnaires were accessible only to the researchers and analysts.

Results

Socio-demographics

Of the 32 participants, almost two-thirds were female and the remainder were male. Half of the participants held a master's degree in nursing, and the most common professional rank was director/assistant director of nursing (DNS/ADNS) in teaching hospitals (see Table 1).

Table 1

Socio-demographic Characteristics of Respondents (n = 32)

Characteristic	Frequency (f)	%
Gender		
Male	11	34.4
Female	21	65.6
Highest level of education		
BSc	2	6.3
BNSc	4	12.5
MSc	16	50.0
PhD	10	31.3
Current rank		
DNS (hospital)	13	40.6
DNS (SMoH)	7	21.9
Head, department of nursing (university)	12	37.5
Duration in current rank		
1 year	7	21.8
2 years	8	25.0
3 years	7	21.8
4 years	5	15.6
5 years	2	6.2
> 5 years	3	9.3

Note. BSc = bachelor of science; BNSc = bachelor of nursing science; MSc = master of science; PhD = doctor of philosophy; DNS = director of nursing services; SMoH = state ministry of health.

Table 2 shows the effect of educational intervention on the nurse leaders' knowledge of the health policy-making process. The post-intervention responses show that in the control group, 37.5% of respondents had good knowledge and 62.5% had very good knowledge.

Table 2

Nurse Leaders' Pre-test Knowledge of the Policy-Making Process in the Control and Intervention Groups (n = 32)

	Intervention group		Control group	
Level of knowledge	Frequency (f)	%	Frequency (f)	%
Poor	0	0	0	0
Good	6	37.5	6	37.5
Very good	10	62.5	10	62.5

Note. One to five correct responses indicated poor knowledge; six to 10 correct responses indicated good knowledge; 11 to 15 correct responses indicated very good knowledge.

Table 3 shows the effect of educational intervention on nurse leaders' knowledge of the health policy-making process. The post-intervention responses show that in the control group, 25% of respondents had good knowledge and 75% had very good knowledge.

Table 3

Effect of Educational Intervention on Nurse Leaders' Knowledge of the Policy-Making Process in the Control and Intervention Groups (n = 32)

	Intervention group		Control group	
Level of knowledge	Frequency (f)	%	Frequency (f)	%
Poor	-	-	-	-
Good	-	-	4	25
Very good	16	100	12	75

Note. One to five correct responses indicated poor knowledge; six to 10 correct responses indicated good knowledge; 11 to 15 correct responses indicated very good knowledge.

Table 4 shows participants' perceived self-efficacy to participate in the policy-making process after educational intervention. The control group had a mean of 3.7644, where a mean between 3.5 and 5.0 indicated *very capable*. The intervention group had a mean of 3.9381. These findings indicate no significant difference in participants' pre-test and post-test knowledge of the policy-making process in the intervention group.

Table 4

Post-intervention Effect of Educational Intervention on Nurse Leaders' Perceived Self-Efficacy to Participate in the Policy-Making Process in the Control and Intervention Groups

	Intervention group (pre-test)		Control group (pre-test)	
Variable	Mean	SD	Mean	SD
Perceived self-efficacy	3.7238	0.26877	3.75413	0.21042
	Intervention group (post-test)		Control group (post-test)	
Perceived self-efficacy	3.9381	0.07748	3.7644	0.1176

Note. A mean under 2.5 indicates incapable; a mean between 2.5 and 3.4 indicates moderately capable; a mean between 3.5 and 5.0 indicates very capable.

We conducted a paired sample *t*-test to determine if the means of the pre-test and post-test significantly differed in the control group. The slight difference in the mean score indicates that the control group saw no obvious changes in their knowledge of the health policy-making process without any educational intervention. The mean difference between pre- and post-intervention was calculated as -0.375 . Therefore, we accept the null hypothesis that there is no significant difference between pre- and post-intervention knowledge of the health policy-making process in the control group.

Table 5

Paired Sample t-Test Statistics of Control Group's Pre-test and Post-test Knowledge of the Policy-Making Process

Test variables	Mean	SD	Std. error	<i>t</i>	Df	<i>p</i> -value	95% CI	
							Upper	Lower
Pre-test	15.7500	1.34164	0.33541	-2.087	15	0.054	-0.75802	0.00802
Post-test	16.125	0.8851	0.2213					
Mean diff.	-0.37500							

Note. $p = 0.05$; 95% CI.

We conducted a paired sample *t*-test to determine if the means of the pre-test and post-test significantly differed in intervention group respondents. The intervention group showed a much larger mean difference after educational intervention compared to before educational intervention (see Table 6).

Table 6

Paired Sample t-Test Statistics and Differences in Intervention Group's Perceived Self-Efficacy to Participate in the Policy-Making Process

Test variables	Mean	SD	Std. error	t	Df	p-value	95% CI	
							Upper	Lower
Pre-test	16.1250	1.14746	0.28687	-6.260	15	< 0.001	-3.016	-1.483
Post-test	18.3750	0.88506	0.22127					
Mean diff.	-0.16750							

Discussion

A total of 32 nurse leaders participated in the study, comprising 21 (65.6%) females and 11 (34.4%) males, which reflects the predominance of women in nursing. More than three-quarters of the respondents had a postgraduate degree, making them educationally qualified to participate in health policy-making. Nurses were at the helm of their respective units, demonstrating that nurses are trusted to lead nursing organizations.

The study's attempt to determine effects of educational intervention on nurse leaders' knowledge and perceived self-efficacy to participate in the health policy process showed the following findings.

Knowledge of the Policy-Making Process

All participants had at least good knowledge of the policy-making process at the pre-test level. This finding indicates that nurses are not naive to policy; thus, sidelining them in policy-making constitutes a great disservice to nurses and the nursing profession. Furthermore, all participants demonstrated very good knowledge of the policy-making process after educational intervention. The results indicate a statistically significant difference between the participants' pre- and post-test knowledge of the policy-making process ($p = 0.001$). Therefore, we reject the null hypothesis that there is no significant difference between the participants' pre- and post-test knowledge of the policy-making process. Shariff (2014) identified that knowledge about the policy-making process is a facilitator to nurse leaders' participation in health policy development. Shariff (2014) argues that in addition to being knowledgeable about and skilled in health policy development, nurses must have at least a university degree, and content related to health policy development must be included in the basic nursing education. Turale and Kunaviktikul (2019) insist that for nurses to take their place at the decision-making table and be rightfully engaged in policy, health reform, and advocacy, nurse leaders must provide nurses with well-thought-out policy educational programs. These programs must be wide-ranging and begin with undergraduate general knowledge of the policy process, moving to more specialized postgraduate programs focused on the specialization of some aspects of policy using a range of continuing education channels. Radford et al. (2022) note that health policy is a complex process that needs knowledge, skill expertise, and networks to be successful. Sundean et al. (2019) assert that most nurses are not formally educated about governance and do not recognize governance and leadership as part of nurses' professional identity.

Perceived Self-Efficacy in the Policy-Making Process

Nurse leaders in the study showed that they are moderately capable of participating in the policy-making process. After educational intervention, the nurse leaders that received educational intervention demonstrated that they are very capable of participating in the policy-making process. The findings indicate that nurses have strong confidence in their capacity to engage in policy-making, which was heightened after educational intervention. We found a significant difference in the control group's and the intervention group's self-efficacy to participate in the policy-making process ($p = 0.006$) after educational intervention. Rasheed et al. (2020) suggest that educational institutions and nurse leaders must adequately prepare nurses for policy-making at the organizational, system, and national levels. Inayat et al. (2023) also assert that nurses' involvement in policy-making can be enhanced by implementing grassroots-level educational strategies.

Conclusion

Nurse leaders are not naive to health policy. They demonstrate good knowledge of the policy-making process and a corresponding moderately capable self-efficacy to participate in the process before educational intervention. Targeted education provided improved performances. Health policy stakeholders need not alienate a critical segment of the health workforce and their invaluable insights. Nursing faculty must prepare to fill the gap created in allowing non-nurses to make decisions for nurses. Nurses in this study are equipped to engage in policies that can positively affect clients of the health system.

Recommendations

- Nursing faculty should include teaching focused on policy involvement of nurses at lower education levels in order to assist nurses in understanding the value of their participation in policy-making.
- Nurses should prioritize political participation, as it facilitates entry into the policy-making arena.
- Nurses should be educated with the understanding that they are equipped to be policy actors and that no profession is solely adapted to policy-making.

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