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Research Article

Interprofessional Collaboration Between Nurses and Other Health Professionals in Selected Primary Health Centres Within Jos Metropolis, Plateau State of Nigeria

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Abstract

Quality health care services require adequate collaboration among the array of different health professionals as no one single professional group can achieve this goal. Local government is the third tier of government which serves as the base for primary health care activities. There is a wide spectrum of activities rendered by different health workers in the local government system. The frontline health workers in this context include nurses, community health workers, environmental health officers, pharmacy technicians, laboratory assistants. The purpose of this study was to assess interprofessional collaboration between nurses and other health professionals in selected primary health centres in Jos metropolis. The study was motivated by the fact that the issue is a contemporary one. By implication, if interprofessional collaboration is well managed, a monumental progress would be achieved at the grassroot level which will find its expression in the quality of health services rendered. The research objectives entailed assessing the power relations between nurses and others; the level of collaboration; and the factors that impact on collaboration. The need to know how these issues of collaboration are negotiated became imperative as the existing literature does not reveal this. Hence, the setting of the study was Jos metropolis. Some primary health centres were selected through the multistage sampling approach. The nurses and other health workers in these selected centres served as respondents. The instrument used to elicit responses was questionnaire. The items therein covered all the strands that constituted the purpose of the study. The respondents were accessed by using convenience sampling technique. One hundred and fifty-three copies of questionnaire were distributed, 150 copies were retrieved thus creating 98% response rate. Research ethics such as informed consent, right to withdraw, confidentiality and anonymity were strictly adhered to. Data collected was analysed using frequent counts and percentages. Findings of the study reveal that there is high level of collaboration between nurses and other health workers as indicted by the items measuring collaboration while findings on power relations between the two groups showed that there is shared administrative role, and that role is based on professional hierarchy (Nurses, 95.5%, others, 94%), There was also a consensus on the fact that power relationship is influenced by the position they occupy (Nurses, 90.9%, others, 95%). On the factors affecting interprofessional collaboration, the findings showed that lack of interprofessional collaboration education, difference in education level affect collaboration, professional background, and huge gap in remuneration affect collaboration while both differed on the activities of union leaders as a factor as other professional groups (66%) agreed to the influence of union leaders on collaboration while nurses (36.4%) concurred.

Keywords: *Assessment; Interprofessional; Collaboration; Nurses; Health Professionals*

Introduction

Primary health care is the first level of through which individuals, families, and communities make a contact with the national health system. The essence of this was to guarantee accessibility to health care by the citizenry. Being the first level of care, the sophistication in terms of health services is relatively low. The primary health care workforce includes nurses, community health workers, environmental health officers, medical officers. The health workforce is described as all people engaged in actions whose primary intent is to enhance health [1]. Community health workers enable primary care access and quality. Their functions include care coordination, health coaching, social support, health assessment, resource linking, case management, medication management, remote care, follow up, administration, health education, and literacy support [2]. The registered nurses' general functions include telephone triage, assessment and documentation of health status, chronic illness case management, hospital transition management, delegated care for episodic illness, health coaching, medication reconciliation, staff supervision, and quality improvement leadership [3]. It was posited that nurses in primary care and public health collaboration includes relationship builder, outreach professional, programme facilitator, and care coordinator [4]. The health workforce comprises health professionals, health associate professionals, and personal care workers [5]. General practitioners, nurses and physiotherapists are captured under health professionals, while nurse assistants and medical technicians are found under health associate professionals. There is usually an overlap in the roles played by nurses and other health workers in the primary health centres because of skill mix. In Nigeria context, mix and skill sets required that the following cadres of staffs include community health officer, nurse/midwife, community health extension worker be deployed for primary health services. This skill-mix encourages rivalry to grow as each occupational group is jostling for recognition and inclined toward protecting their territories in tandem with the activities of Guilds in the Middle Ages [6]. However, despite this, there is a need to work and collaborate with one another. Quality care provision is enhanced when there is interprofessional relationships that promotes valuable communication and understanding among the members of the health care work force [7]. To ensure effective interprofessional team performance, professionals would need a wide range of collaborative traits as these include knowledge and skills, attitudes as these will enable them to delineate their respective professional roles, and that of others [8]. Interprofessional dimension entails professionals sharing a common purpose of developing mutually negotiated goals which could be actualized through concerted care plans, management, and procedures [9]. This assertion is further strengthened by emphasizing that for interprofessional care to happen in practice, health care professionals need to pool their knowledge, skills, and expertise [10]. Their shared professional viewpoints should be articulated as to create joint decisions [11]. Simply put, there should be some form of consensus building which promotes exchange and reciprocity. It has been posited that interactions among professional groups are critical to restructuring power structures and negotiation processes in the health system [12]. Following from the above, the educational arrangements should be well guided as to provide the leverage toward achieving collaboration. Interprofessional collaboration might be difficult to achieve owing to their diverse knowledge conventions hence the proclivity of the professionals to look at issues and problems from different standpoints [13]. Interprofessional collaboration may be lacking, because of the complexity inherent in the process. Four main theoretical factors have been identified as these include relational, procedural, organizational, and contextual [8,13]. The relational factors entail what affects the relationship between professions directly such as team processes, hierarchy, and professional endeavors; procedural factors address the complexity of the working environment and the time allocated for cooperation; organizational factors emphasize the collaboration in management and common goals, and the contextual factors which focus on the influence of cooperation on, among other things, culture, and gender role patterns. Effective management of all these diverse complexities in the context of interprofessional collaboration will yield robust outcomes. This study was motivated by different scenarios and frictions that take place among the health professionals in the primary health centres. The extant literature has a limited scope on how collaboration among the workers in these centres is negotiated in Jos Metropolis.

Objectives of the Study

I. To assess the level of collaboration between nurses and other health workers in the primary health centres in Jos Metropolis.

II. To determine the power relations between nurses and other health workers in the primary health centres in Jos Metropolis.

III. To determine the factors affecting collaboration between nurses and other health workers in the primary health centres in Jos Metropolis.

Materials and Methods

This was a cross sectional, descriptive and non-experimental research design aimed at examining interprofessional relationship between nurses and other health professionals in selected primary health centres in Jos Metropolis. Jos is the administrative headquarters of Plateau State. The State was created in 1976. Three tiers of health care delivery services exist in Jos. The provision of basic health care is actualized at the primary health centres. Jos Metropolis consists of both Jos North and Jos South Local Government areas. The health workforce in the primary health centres comprises nurses, community health workers, pharmacy technicians, environmental health officers, and laboratory technicians. The main frontline health workers within this system are nurses and community health workers (mainly Junior Community Health Extension Workers and Senior Community Health Extension Workers). Multistage sampling technique was used in selecting the primary health centres needed for the study. The study population comprised nurses and community health workers. The sample size for nurses was 44 while that of community health workers was 153. The instrument employed for the study is questionnaire. It has four sections: socio-demographic data, level of nurses' relationship with other health workers, level of other health workers relationship with nurses, power relations between nurses and others, and factors affecting the interprofessional relationship. Convenience sampling technique was adopted in gaining access to the respondents as they could not be reached at the same time. The purpose of the study was explained to them to gain their informed consent. They were told that they had right to withdraw their participation without any attendant victimisation. A total of 153 copies of questionnaire were distributed, 150 were retrieved thereby creating a response rate of 98%. Ethics guiding research were observed as the respondents were assured of confidentiality of information, and anonymity. The data obtained were analysed using frequency counts and percentages.

Results

Variable	Categories	Frequency	Percentage (%)
Age (years)	16-25	15	10
	26-35	60	40
	36-45	55	36.7
	45-55	15	10
	56- 65	5	3.3
	Total	150	100
Sex	Male	40	26.7
	Female	110	73.3
	Total	150	100
Marital status	Married	30	20
	Single	120	80
	Divorced	/	/
	Widowed	/	/
	Total	150	100
Religion	Christian	130	86.7
	Islam	20	13.3
	Others	/	/
	Total	150	100

Educational status	Diploma	84	56
	RN/other qualification	22	14.7
	RN/RM/ other qualifications	22	14.7
	HND/Degree	20	13.3
	Master/PhD	2	1.30
	Total	150	100
Profession	Nurse/Midwife	44	29.3
	Medical lab. Scientist	3	2
	Community health officer	76	50.7
	Pharmacy technician	4	2.7
	Lab. Technician	20	13.3
	Medical records	3	2
	Total	150	100
Work experience (years)	0-9	90	60
	10-19	20	13.3
	20-29	19	12.7
	30-39	15	10
	40-49	6	4
	Total	150	100

Table 1: *Socio-demographic distribution of the respondents.*

Table 1 shows that 15 (10%) of the respondents fall within the age category of 15 - 25 years, 60 (40%) are within 26 - 35 years, 55 (36%) are within 36 - 45 years, 15 (10%) are within 45 - 55 years while 5 (3.3%) are found within 56 - 65 years. For sex, 40 (26.7%) of the respondents are male while 110 (73.3%) are female. Marital status distribution reveals 30 (20%) are married while 120 (80%) are single. Majority, 130 (86.7%) are Christians while 20 (13.3%) are Muslims. On educational attainment, 84 (56%) respondents hold diploma qualification, 44 (29.4%) are RN and post RN qualifications holders, 20 (13.3%) are associate degree and degree holders, while 2 (1.3%) hold post graduate qualifications. Professional distribution indicates that nurse/midwife respondents are 44 (29.3%), medical-laboratory scientists, 3 (2%), community health officers, 76 (50.7%), pharmacy technician, 4 (2.7%), laboratory technicians, 20, (13.3%), and medical records officer, 3 (2%). Work experience shows that majority, 90 (60%) fall within the range of 0 - 9 years, 20, (13.3%) are found within 10 - 19 years, 19 (12.7%) are within 20 - 29 years, 15 (10%) are within 30 - 39 years while 6 (4%) are within 40 - 49 years.

Table 2 shows that 40 (90.9%) of the respondents agreed that nurses relate well with other health professionals and 4 (9.1%) differed. 24 (54.5%) concurred that patients care is done in collaboration with other health workers while 20 (45.5%) diverged. 14 (31.8%) affirmed that patient's treatment and care are adequately discussed between nurses and other health professionals while 30 (68.2%) did

Variables	Frequency (Percentage)		
	Yes (%)	No (%)	Total (%)
Nurses relate well with other health professionals	40 (90.9)	4 (9.1)	44 (100)
Patients care is done in collaboration with other health workers	24 (54.5)	20 (45.5)	44 (100)
Patients' treatment and care are adequately discussed between nurses and other health professionals	14 (31.8)	30 (68.2)	44 (100)
Decision regarding patients care in the primary health care centre is jointly made	21 (47.7)	23 (52.3)	44 (100)
Nurses do not usually ask for other health professional's opinions when planning patients care	20 (45.6)	24 (54.5)	44 (100)
Nurses feel their work is not more important than that of other health professionals	30 (68.2)	14 (31.8)	44 (100)
Other health professionals think their job is more important than that of nurses	3 (6.8)	41 (93.2)	44 (100)
Other health professionals are not willing to take into account about nurses' convenience when planning their work	8 (18.2)	36 (81.8)	44 (100)

Table 2: *Respondents' (nurses) distribution by inter-professional collaboration with others health workers.*

not concede. 21 (47.7%) asserted that decision regarding patients care in the primary health care centre is jointly made while 23 (52.3%) disagreed; 20 (45.6%) affirmed that nurses do not usually ask for other health professional's opinions when planning patients care, 24 (54.5%) expressed their contradiction; 30 (68.2%) were inclined to the notion that nurses feel their work is not more important than that of other health professionals while 14 (31.8%) differed, and 3 (6.8%) attested that other health professionals think their job is more important than that of nurses while 41 (93.3%) dissented; 8 (18.2% affirmed that other health professionals are not willing to take into account nurses convenience when planning their work, while 36 (81.8%) contradicted this assertion.

Item	Yes (%)	No (%)	Total (%)
There is no shared administrative role	10 (22.7)	34 (77.3)	44 (100)
Administrative role is based on professional hierarchy	42 (95.5)	2 (4.5)	44 (100)
Power relationship is influenced by the position they occupy	40 (90.9)	4 (9.1)	44 (100)
Educational background/ level determines the exercise of power	41 (93.2)	3 (6.8)	44 (100)

Table 3: *Respondents (nurses)' distribution on power relations with other health professionals.*

Table 3 reveals that 10 (22.7%) of the respondents agreed that there is no shared administrative role among health professionals, 34 (77.3%) differed; 42 (95.5%) demonstrated their support toward the assertion that administrative role is based on professional hierarchy while 2 (4.5%) differed; 40 (90.9%) affirmed that power relationship is influenced by the position they occupy while 4 (9.1%) held a contrary position; and 41 (93.2%) agreed that educational background/level of education determines the exercise of power while 3 (6.8%) dissented.

Table 4 reveals that all (100%) the respondents affirmed that lack of inter-professional collaboration education; and difference in educational level constitutes a bottleneck toward inter-professional collaboration; 40 (90.9%) subscribed to professional background as

Item	Yes (%)	No (%)	Total (%)
Lack of inter-professional collaboration education	44 (100)	/	44 (100)
Difference in educational level	44 (100)	/	44 (100)
Professional background	40 (90.9)	4 (9.1)	44 (100)
Gender	19 (43.2)	25 (56.8)	44 (100)
Huge gap in remuneration	41 (93.2)	3 (6.8)	44 (100)
Activities of union leaders	16 (36.4)	28 (63.6)	44 (100)

Table 4: *Respondents' (nurses) distribution on the factors affecting inter-professional collaboration.*

a factor while 4 (9.1%) respondents differed; 19 (43.2%) inclined to gender while 25 (56.8%) were not favourably disposed; 41 (93.8%) acceded to huge gap in remuneration while 3 (6.8%) disagreed; and 16 (36.4%) asserted that activities of union leaders influence collaboration while 28 (63.6%) differed.

Item	Yes (%)	No (%)	Total (%)
Nurses relate well with other health professionals	95 (89.6)	11 (10.4)	106 (100)
Patients care is done in collaboration with other health workers	100 (94.3)	6 (5.7)	106 (100)
Patients' treatment and care are adequately discussed between nurses and other health professionals	102 (96.2)	4 (3.8)	106 (100)
Decision regarding patients care in the primary health care centre is jointly made	40 (37.7)	66 (62.3)	106 (100)
Nurses do not usually ask for other health professional's opinions when planning patients care	35 (33.0)	71 (67.0)	106 (100)
Nurses feel their work is not more important than that of other health professionals	28 (26.4)	78 (73.6)	106 (100)
Other health professionals think their job is more important than that of nurses	19 (17.9)	87 (82.1)	106 (100)
Other health professionals are not willing to take into account nurses' convenience when planning their work	6 (5.7)	100 (94.3)	106 (100)

Table 5: *Respondents' (others) distribution on level of inter-professional relationship with nurses.*

Table 5 shows that 95 (89.6%) of the respondents agreed that nurses relate well with other health professionals while 11 (10.4) disagreed; 100 (94.3%) attested that patients care is done in collaboration with other health workers, 6 (5.5%) differed; 102 (96.2%) support that patient's treatment and care are adequately discussed between nurses and other health professionals while 4 (3.8%) dissented; 40 (37.7%) consented that decision regarding patients care in the primary health care centre is jointly made while 66 (62.3%) disagreed; 35 (33.%) affirmed that Nurses do not usually ask for other health professional's opinions when planning patients care while 71 (67%) differed; 28 (26.4%) agreed that nurses feel their work is not more important than that of other health professionals while 78 (73.6%) disagreed; 19 (17.9%) asserted that other health professionals think their job is more important than that of nurses and 87 (82.1%) disagreed 6 (5.7%) affirmed that other health professionals are not willing to take into account nurses' convenience when planning their work while 100 (94.3%) differed.

Table 6 reveals that 32 (30.2%) of the respondents concurred that there is no shared administrative role among health professionals while majority, 74 (69.8%) disagreed with this assertion. 100 (94.3%) claimed that administrative role is based on professional hierarchy while 6 (5.7%) differed; 95 (89.6%) affirmed that power relationship is influenced by the position they occupy while 11 (10.4%) claimed

Item	Yes (%)	No (%)	Total (%)
There is no shared administrative role	32 (30.2)	74 (69.8)	106 (100)
Administrative role is based on professional hierarchy	100 (94.3)	6 (5.7)	106 (100)
Power relationship is influenced by the position they occupy	95 (89.6)	11 (10.4)	106 (100)
Educational background/ level determines the exercise of power	99 (93.4)	7 (6.6)	106 (100)

Table 6: *Respondents' (others) distribution on power relations with nurses.*

there was a disconnect; and 99 (93.4%) agreed that educational background/level determines the exercise of power while 7 (6.6%) disagreed.

Item	Yes (%)	No (%)	Total (%)
Lack of inter-professional collaboration education	102 (96.2)	4 (3.8)	106 (100)
Difference in educational level	97 (91.5)	9 (8.5)	106 (100)
Professional background	59 (55.7)	47 (44.3)	106 (100)
Gender	20 (18.9)	86 (81.1)	106 (100)
Huge gap in remuneration	95 (89.6)	11 (10.4)	106 (100)
Activities of union leaders	66 (62.3)	40 (37.7	106 (100)

Table 7: *Respondents (others) distribution on factors affecting inter-professional collaboration with nurses.*

Table 7 reveals that 102 (96.2%) of the respondents affirmed that lack of inter-professional collaboration education is a factor affecting inter-professional collaboration while 4 (3.8%) disagreed; 97 (91.5%) agreed to the difference in educational level while 9 (8.5) held a contrary position; 59 (55.7%) conceded that professional background has an influence on interprofessional collaboration while 47 (44.3%) disagreed; 20 (18.9%) affirmed to a gender factor while 86 (81.1%) claimed that gender had no influence on collaboration; 95 (89.6%) inclined toward huge gap in remuneration while 11 (10.4%) differed; and 66 (62.3%) agreed that activities of union leaders may influence interprofessional collaboration while 40 (37.7%) saw it differently.

Discussion

The study findings showed that majority, 73.3% of the respondents are female while male respondents constitute the 26.7%. 60% of the respondents fall within the range 0 - 9 years of working experience. Study on the 'perspectives of healthcare professionals toward interprofessional collaboration in primary care settings in a Middle Eastern Country in which the majority (63.8%) of the respondents were female while the occupational experience distribution showed that 38.3% were within 6 - 10 years [14]. This similarity may be due to female dominance and fresh recruitment of health workers in the study areas. This study also found that nurses have high level of inter-professional relationship as 90.9% of nurses and 89.6% of other health professionals agreed that nurses relate well with other health professionals, and 96% nurses agreed that patients care is done in collaboration with other health workers which is higher among others (90.9%). This finding is consistent with a study which indicated that delivery of quality health care is dependent on the contributions from the various cadres of health workers that constitute the team [14]. This study also revealed that the major factors affecting inter-professional collaboration as identified by nurses are lack of inter-professional collaboration education (100%), difference in educational level (100%), professional background (90%); and huge gap in remuneration (94%), same factors are identified by the others (95.5%). Unfavourable attitude of shared education between nurses and physicians working at public hospitals in Ethiopia was implicated as a militating factor against collaboration between the two groups [15]. It also found that participants with interprofessional education experiences

showed greater interprofessional collaboration [16] Another study has also shown that effective teamwork requires integrated work and appropriate professional training [17]. In a related study, the outcome of the study on interprofessional collaboration practice in primary healthcare settings in Indonesia showed that seniority and hierarchy were found as factors affecting collaboration [18]. The finding on power relations showed that both nurses and other health workers agreed to all the items on power relations between them [19]. Hierarchical knowledge modulates the power relationships among the health workers [19]. The community health workers involved in the study revealed that nurses' exercise power through the speeches, and that the physicians themselves acknowledged nurses as people who exercise power in and on the health team. The community health workers further recognized that nurses and doctors have the highest power as they have more leadership, boss position.

Conclusion

The finding of this study showed there is high level of inter-professional relationship between nurses and other professionals in the primary health centres, even though, some degree of skirmishes may not be entirely avoided as the skill mix may cause tension among them. The results of the study inclined towards positive relationship between nurses and community health workers which is indicative of the necessity for collaboration and cooperation in respect of quality health services.

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