



Perceived Impact and Factors Influencing Multidisciplinary Collaboration in Patients Care among Healthcare Providers in Federal Medical Center Onitsha, Anambra, Nigeria

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Patient's satisfaction and quality care is paramount in any health care setting, and in order to achieve this, multidisciplinary collaboration in patient care is essential. Globally, multidisciplinary collaboration has been identified as a key means to improve quality and safety of patient care. The

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study aimed to assess the perceived impact and factors influencing multidisciplinary collaboration in patients care among healthcare providers in Federal Medical Center Onitsha. Descriptive cross sectional study was adopted for this research work. Instrument for collection of data was questionnaire formulated in a 5-point Likert scale. A reliability coefficient of 0.86 was established proving the instrument reliable. Healthcare providers from the study area made up the population, while 177 were drawn as sample using proportionate sampling technique. Data were analyzed with SPSS using mean, standard deviation, grand mean, percentage and Pearson's Chi-square. The result of the study showed that majority of the participants were female 125(70.6%) the healthcare providers have good perception on the perceived impact of multidisciplinary collaboration in patients' care. 52.1% of the nurses, 64.3% doctors and 39.1% allied health professional possess good perceptiveness on perceived nurses, doctors and allied healthcare professional related factors influencing multidisciplinary collaboration in patients care respectively. Furthermore, 60.0% and 41.2% of the participants possess good perspective on perceived organizational and client related factors influencing multidisciplinary collaboration in patient care. Several important factors play a role in a multidisciplinary collaborative in patient care. In this study, there were different perceptions regarding the factor influencing collaboration among healthcare professionals; communication gap, time constraint, negative attitude toward changes and innovation and poor managerial leadership / lack of supervision were considered as hindrances to multidisciplinary collaboration in patient care among the healthcare providers. Multidisciplinary collaboration needs to be socialized and its importance needs to be made known in every healthcare institution.

Keywords: Perceived; impact; multidisciplinary; collaboration; healthcare providers.

1. INTRODUCTION

In every healthcare context, achieving patient satisfaction and high-quality care is crucial, and interdisciplinary collaboration is necessary to make this happen [1]. Around the world, interdisciplinary cooperation and communication have been found to be essential for raising the standard and ensuring patient safety (Zwarenstein et al., 2018). It has been recognized as best practice in several healthcare professions for providing the best possible treatment for patients. The World Health Organization (WHO) has recognized the purpose of a multidisciplinary team since 1978 through the use of multidisciplinary collaboration (MDC) or multidisciplinary teams (MDT) [2]. These teams aim to unite diverse health care professionals from different fields to collaborate on developing a treatment plan for patients (Terberna et al., 2020). Degu et al., [3]. define multidisciplinary collaboration as a process that entails the mutual and active engagement of independent health professionals. During this time, each group of healthcare professionals provides patients with appropriate care by using their knowledge and skills, and their interactions are guided by shared norms and visions that have been freely agreed upon [4,5]. A variety of specialized roles that may vary depending on the patient's needs or care are performed by this multidisciplinary team, which includes nurses, midwives, surgeons, radiographers, nutritionists,

pharmacists, laboratory scientists, administrative staff, and social workers, among others (Cecilia et al., 2017) [6]. It will be possible for this team to collaborate harmoniously and efficiently to deliver excellent, customized, or patient-centered care, thanks to their knowledge, professionalism, and skill [7,8].

Webster et al. (2019) noted that although some of these conditions may get more complicated with age or longer life expectancies, the frequency and prevalence of patients with multimorbidities—that is, people with more than one concurrent chronic disease—continue to climb annually. Most of the time, these patients are hospitalized and readmitted to the hospital with depression and other mental health problems as a result of complex concerns that call for multidisciplinary care from many medical professionals (Webster et al., 2019).

Degu et al. [3] stated that multidisciplinary collaborations are ineffective throughout Sub-Saharan Africa, the area most impacted. Poor inter professional cooperation thus compromised patient safety, [3]. Given that root cause analysis indicates that 60–70% of serious patient incidents are caused by a lack of effective teamwork (such as communication), it is not surprising that ineffective multidisciplinary collaboration in patient care continues to be a primary cause of errors and near misses in healthcare [9,10]. In the medical facility, poor

interdisciplinary teamwork during patient care can impact clinical practice (e.g., timely response and treatment, accuracy of diagnosis), patient health outcomes (e.g., complications, duration of hospital stay), and employee satisfaction (e.g., health and patient outcomes).

The necessity of interdisciplinary cooperation has had a beneficial effect since each member of the team can collaborate to offer recommendations that enhance the patient's outcomes while working with the patient in their area of expertise [11,12]. Moreover, Dagala et al. (2020) contended that patient outcomes may be impacted by the degree of collaboration among healthcare providers. According to Bosch and Mansell (2015), these effects include a decline in the death and morbidity rates as well as an improvement in job satisfaction and a decrease in the amount of additional labor that healthcare professionals have to perform. According to other research, the perceived benefits of interdisciplinary teamwork include improved patient access to medical services, lower hospitalization rates, and fewer rates of complications [13,14].

But for a multidisciplinary collaboration to be successful, specific tactics were required. As stated by Okato et al., (2020), to guarantee successful multidisciplinary collaboration, it is essential to have dedication, communication, strong leadership, sufficient resources, and understanding. According to Bosch and Mansell (2023), there was also reporting on responsibility, communication discipline, a clear objective, and leadership. Healthcare providers at Federal Medical Center Onitsha, Anambra State, face a variety of obstacles that can impede their ability to perform effectively in multidisciplinary teams. In light of these challenges, the researcher aims to evaluate the perceived influence of these factors and other factors that influence multidisciplinary collaboration in patient care [15,16].

The main purpose of the study was to assess perceived impact and perceived factors influencing multidisciplinary collaboration in patients care among healthcare providers in Federal Medical Center Onitsha, Anambra State. Specifically, the study was guided by the following objectives:

1. To assess the level of perceived impact of multidisciplinary collaboration in patients care among the healthcare providers in

Federal Medical Center Onitsha, Anambra State.

2. To determine the perceived organizational factors influencing multidisciplinary collaboration in patients care among healthcare providers in Federal Medical Center Onitsha, Anambra State.

2. METHODOLOGY

This was a descriptive cross sectional study meant to assess perceived impact and perceived factors influencing multidisciplinary collaboration in patients care among healthcare providers in Federal Medical Center Onitsha, Anambra State. This study design is a non-experimental method that seeks to determine the status of the phenomenon as it exists at the time of study without influencing it. The population of the study comprised of healthcare providers working in Federal Medical Center Onitsha, Anambra State at the time of the study and they were about two hundred and sixty-eight (268). This population comprised of various professionals such as doctors, nurses and allied health professional comprising of pharmacists, medical laboratory scientists, medical laboratory technicians, nutritionists, social health workers, physiotherapists and radiographers. Proportionate sampling technique was used to select the study participants which were 177 healthcare workers. The researcher used primary data as she collected the data directly from the health care providers working in Federal Medical Center Onitsha, Anambra State. Data was collected using structured questionnaire titled "perceived impact and perceived factors influencing multidisciplinary collaboration in patients' care (PIPFIMCPQ). The questionnaire was divided into sections. Section A contained the selected socio-demographic characteristics of the respondents, sections B contained items on perceived impact of multidisciplinary collaboration in patients care in among healthcare providers, section C, D, E, F and G covered items perceived nurses related factors, perceived doctors related factors, perceived allied health professional related factors, perceived organizational factors and perceived client related factors influencing multidisciplinary collaboration in patients care among healthcare providers respectively. Sections B to G was structured in a 5-point modified Likert scale format. The response mode used in the 5-point scale was Strongly Agreed (SA) which was rated as (5points), Agreed (A) 4 points, undecided (UD) 3 points, disagree (D) 2 points and strongly

disagreed (SD) 1point. And the criterion mean is set at 3.0. The instrument was validated experts in the study area. The reliability was conducted using test-retest and a reliability coefficient of 0.87 was obtained.

Direct delivery and retrieval method was used in the administration of the instrument to the respondents. It was distributed in the hospital with the help of three assistants. These three (3) assistants were briefed about the study and instructed on how to select the participants and interpret the research questions. Those that were willing participated in the study voluntarily without coercion. In filling the questionnaire, they were informed to fill section A, B and C that were compulsory for everyone, after which they were asked to select the section that corresponds with their profession.

Total of one hundred and seventy-seven (177) copies of the study instrument (questionnaire) were administered to the respondents over a period of five days in the hospital. It took about 6 - 12 minutes for each of the healthcare workers to complete a questionnaire. The administered questionnaires were collected immediately they were completed and this helped to ensure high return rate, as all the 177 copies were retrieved making 100% return rate. The questionnaires after the analysis were stored locked-up out of reach of people to ensure safe keeping and confidentiality. According to the school policy, it can be stored till there is no need for it or for five years' maximum. Data collected were analyzed using SPSS version 21.0. Socio-demographic characteristics like gender, age, marital status, and professional history like; total years of experience, years of practice in healthcare, the professional qualifications of the health care providers and the questions covering the research questions was presented in a frequency table and analyzed using the descriptive statistics such as frequencies, percentages and mean. Chi-square was used for testing the association between health care providers' related factors and multidisciplinary collaboration in patients' care. It was also being used to determine the association between organizational factors and multidisciplinary collaboration in patients' care. P-value < 0.05 was considered statistically significant.

3. RESULTS

The study group comprised 177 participants, with varying demographic characteristics. In terms of

gender most of them were female 125(70.6%) while 50(29.4%). For the age distribution, a significant portion fell within the 40-50 years age range, constituting 85(48.0%) of the participants, while those aged 29 – 39 made up 83(46.9%), 51years and above 9(5.1%). The mean age of the participants' was 39.12±12 years. Marital status varied among the participants, with the majority being married 117(66.1%), followed by singles 58(32.8%), divorced 13(5.6%) and widowed 2(1.1%). Total years of practice revealed a diverse group, with 113(63.8%) having worked for 0 – 10years, 45(25.4%) 11 – 20years and 19(10.7%) having work experience of 21 – 30. Professional qualification, the study group included allied health professionals 46(26.0%), medical doctors 14(7.9%) and registered nurse-midwives 117(66.1%). Regarding years of practice in the facility, participants that have practiced for 6 – 10years took the lead with 79(44.6%), followed closely by those of 6 – 10years 61(34.5%), 11 – 15year 23(13.0%) and 16 – 20years 14(7.9%). Religiously the majority identified as Christians 175(99.3%), and those adhering to African traditional religions 2(1.1%). This comprehensive breakdown provides a thorough understanding of the diverse demographic composition within the study group.

According to the result shown in the Table 2 which determined the perceived impact of multidisciplinary collaboration in patients care among the healthcare providers in Federal Medical Center Onitsha, Anambra State; the variables it leads to improved patient outcome, ensures continuity of care, reduces the risk of health complications, enhances communication among healthcare professional, leads to more understanding of patients' needs, contributes to development of holistic care plan, improves overall patient experience and helps to reduce length of hospital stay have mean values and standard deviations of (4.4 ± 0.91), (4.2 ± 0.89), (4.0 ± 0.81), (3.9 ± 0.79), (3.9 ± 0.79), (3.8 ± 0.78), (3.7 ± 0.71), and (3.9 ± 0.79) respectively and grand mean of (3.8 ± 0.78). The variables possess mean values above 3.0 which enabled them to be accepted. The grand mean being above 3.0 indicates that health care providers in Federal Medical Center Onitsha, Anambra State have high level of perception on the perceived impact of multidisciplinary collaboration in patients care.

Table 3 revealed the analysis of the degree of perceived impact of multidisciplinary

collaboration in patients care among healthcare providers in Federal Medical Center Onitsha, Anambra State. Result showed that 61.6% of respondents possess high level of perception while 38.4% expressed low level of perception.

Based on the result we can conclude that majority of healthcare providers in Federal Medical Center Onitsha, Anambra State have high level of perception on the perceived impact of multidisciplinary collaboration in patients' care.

Table 1. Socio-demographic Characteristics of the Respondents

S/N	Variable	(n=177)	(%)
1.	Gender		
	Male	52	29.4
	Female	125	70.6
2.	Age (years)		
	29-39 years	83	46.9
	40-50 years	85	48.0
	51years and above	9	5.1
3.	Marital status		
	Single	58	32.8
	Married	117	66.1
	Widowed	2	1.1
4.	Professional qualification		
	Allied health professionals	46	26.0
	Medical doctors	14	7.9
	Registered nurse-midwives	117	66.1
5.	Total years of experience		
	0 - 10	113	63.8
	11 - 20	45	25.4
	21 - 30	19	10.7
6.	Years of practice in the hospital		
	0 – 5	61	34.5
	6 – 10	79	44.6
	11 – 15	23	13.0
	16 – 20	14	7.9
	Total	177	100.0

Table 2. level of perceived impact of multidisciplinary collaboration in patients care among healthcare providers

Variable	LIKERT SCALE (n=177)					Mean score	Standard deviation	Remarks
	SA (5)	A (4)	UD (3)	DA (2)	SD (1)			
Leads to improved patient outcome	96 (54.2)	69 (39.0)	5 (2.8)	4 (2.3)	3 (1.7)	4.4	0.91	Accepted
Ensures continuity of care	71 (40.1)	80 (45.2)	17 (9.6)	7 (4.0)	2 (1.3)	4.2	0.89	Accepted
Reduces the risk of health complications	59 (33.3)	81 (45.8)	19 (10.7)	15 (8.5)	3 (1.7)	4.0	0.81	Accepted
Enhances communication among healthcare	51 (28.1)	72 (40.7)	37 (20.9)	16 (9.0)	1 (0.6)	3.9	0.79	Accepted

Variable	LIKERT SCALE (n=177)					Mean score	Standard deviation	Remarks
	SA (5)	A (4)	UD (3)	DA (2)	SD (1)			
professional								
Leads to more understanding of patients' needs	56 (31.6)	68 (38.4)	28 (15.8)	23 (13.0)	2 (1.13)	3.9	0.79	Accepted
Contributes to development of holistic care plan	57 (32.2)	60 (33.9)	37 (20.9)	19 (10.7)	4 (2.3)	3.8	0.77	Accepted
Improves overall patient hospital experience	45 (25.4)	76 (43.0)	26 (14.7)	25 (14.1)	5 (2.8)	3.7	0.71	Accepted
Helps to reduce length of hospital stay	45 (25.4)	88 (49.7)	24 (13.6)	18 (10.2)	2 (1.1)	3.9	0.79	Accepted
Grand mean						3.97	0.78	

Table 3. Analysis of the degree of perceived impact of multidisciplinary collaboration in patients care among healthcare providers

Variables	(n=117)	%
Low perception	68	38.4
High perception	109	61.6
Total	177	100

/0%-50% Poor perceptive, 51%-100% Good perceptive/

Table 4. Perceived organizational factors influencing multidisciplinary collaboration in patients' care

Variable	LIKERT SCALE (n=177)					Mean Score	Standard deviation	Remarks
	SA (5)	A (4)	UD (3)	D (2)	SD (1)			
Poor or unfriendly work environment	59 (33.3)	65 (36.7)	28 (15.8)	18 (10.2)	7 (4.0)	3.9	0.75	Accepted
Poor managerial leadership / lack of supervision	59 (33.3)	80 (45.2)	36 (20.3)	16 (9.0)	7 (4.0)	4.3	0.91	Accepted
Hostile hospital policies	33 (18.1)	52 (30.0)	57 (32.2)	25 (14.1)	9 (5.1)	3.4	0.74	Accepted
Poor workers' motivation	35 (19.8)	64 (36.2)	40 (22.6)	31 (17.5)	7 (4.0)	3.5	0.74	Accepted
Inadequate manpower	38 (21.5)	60 (33.9)	52 (29.4)	20 (11.3)	7 (4.0)	3.6	0.62	Accepted
Inefficient communication channel	36 (20.3)	58 (32.8)	53 (30.0)	25 (14.1)	5 (2.8)	3.5	0.79	Accepted
Proximity between the departments	30 (16.6)	60 (34.1)	49 (27.8)	33 (18.8)	4 (2.3)	3.4	0.62	Accepted
Training programs to emphasize benefits of collaboration	33 (18.9)	66 (37.7)	43 (24.6)	27 (15.4)	6 (3.4)	3.5	0.74	Accepted
Grand mean						3.6	0.81	

Table 5. Degree of perceived organizational factors influencing multidisciplinary collaboration in patients care among healthcare providers

Variables	(n=177)	%
Low perception	69	40.0
High perception	108	60.0
Total	177	100.0

/0%-50% Poor perceptive, 51%-100% Good perceptive/

The above result determined the perceived organizational factors influencing multidisciplinary collaboration in patients care among healthcare providers in Federal Medical Center Onitsha, Anambra State. The variables; poor or unfriendly work environment, poor managerial leadership / lack of supervision, hostile hospital policies, poor workers' motivation, reduced ratio of health care providers to client (inadequate manpower), inefficient communication channel within the organization, proximity of different departments and lack of training or programs that emphasize the importance of collaboration have mean values and standard deviations of (3.9 ± 0.76), (4.3 ± 0.91), (3.4 ± 0.74), (3.5 ± 0.74), (3.6 ± 0.62), (3.5 ± 0.79), (3.4 ± 0.62), and (3.5 ± 0.74), respectively and grand mean of (3.6 ± 0.81). Having grand mean that is above criterion mean indicates that healthcare providers in the study area affirmed that the above variables are the perceived organizational factors influencing multidisciplinary collaboration in patients' care.

Result revealed that 108(60.0%) of respondents expressed high perception on the perceived organizational factors influencing multidisciplinary collaboration in patients care among healthcare providers while 69(40.0%) expressed low perception. Based on the result we can conclude that majority of healthcare providers in the study area expressed high perception on the organizational factors influencing multidisciplinary collaboration in patients' care.

4. DISCUSSION

Result of the study revealed that most of the respondents were female. For the age distribution, a significant portion fell within the age range of 40-50 years, followed by those aged 29 – 39. This agreed with the study conducted by Degu et al., [3] where most of the respondents were female and were between 26 and 30 years. The result also revealed that greater percentage of the respondents was nurses. This is also in-line with the result

reported by Degu et al., [3] where majority of the respondents was nurses. It equally agreed with Endris et al., [17-19] where majority of the respondents were female and nurses. For their years of experience, most of the respondents have worked for 0 to 10 years; this disagreed with the result of the study done by Degu et al., [3] and Endris et al., [17] which reported that most of their participants have 5 to 10 years of work experience. The result of the study revealed that health care providers in Federal Medical Center Onitsha, Anambra State have high level of perception on the perceived impact of multidisciplinary collaboration in patients' care. This agreed with the study conducted by Tanaka, et al., [20-23] which revealed that the respondents were satisfied with multidisciplinary care. It also agreed with the result of study done by Degu et al., [3] which mentioned that most respondents reported that there was high multidisciplinary collaboration among the professional team.

Result of the study further revealed that majority of the respondents agreed that multidisciplinary collaboration in patient care ensures continuity of care, reduces the risk of health complications, enhances communication among healthcare professional, leads to more understanding of patients' needs and contributes to development of holistic care plan.

The result used to determine the perceived organizational factors influencing multidisciplinary collaboration in patients care among healthcare providers in Federal Medical Center Onitsha revealed that most of the healthcare providers in the study area agreed that poor or unfriendly work environment, poor managerial leadership/ lack of supervision, poor workers' motivation, inadequate manpower, inefficient communication channel within the organization and lack of training or programs emphasize the importance of collaboration were the perceived organizational factors influencing multidisciplinary collaboration in patients care, while most of them strongly agreed. This is in-line with the study conducted by Doornebosch et

al., [24-26] where it was reported that most of the nurses reported that shortage of staff nurses is one of the major issues influencing multidisciplinary collaboration. It equally agreed with Achterberg et al., [27-29] which mentioned that low workers' motivation, poor work environment, decreased work force and increased work absenteeism influences multidisciplinary collaboration in patient care.

5. CONCLUSIONS

The study on assessment of perceived impact and perceived factors influencing multidisciplinary collaboration in patients care among healthcare providers in Federal Medical Center Onitsha, Anambra State, concluded that there is good perception of perceived impact and perceived factors influencing multidisciplinary collaboration in patients' care. Several important factors play a role in a multidisciplinary collaboration in patient care. In this study, there were different perceptions regarding the factors influencing collaboration among healthcare professionals like; communication gap, time constraint, negative attitude toward changes and innovation and poor managerial leadership / lack of supervision. Multidisciplinary collaboration needs to be socialized and its importance needs to be made known in every healthcare institution.

6. RECOMMENDATIONS

The recommendations made include:

1. There is need to improve the regular communication channels, such as meetings or development of digital platforms to facilitate more information exchange and collaboration among the healthcare providers.
2. Provision of training and educational program aimed at enhancing multidisciplinary teamwork skill, understanding of each other's roles and mutual respect among the healthcare professional is important.
3. There is need for strong leadership support and effective management structures that promote a culture of collaboration and recognize the value of multidisciplinary teamwork in achieving better patient outcome
4. Development of continuous evaluation and feedback to identify areas for improvement and address any barrier hindering effective multidisciplinary collaboration.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of manuscripts.

CONSENT

Informed and voluntary written consent was obtained from the selected participants before administration of the questionnaire.

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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