



PROFESSIONAL MANPOWER AVAILABILITY AND HEALTHCARE SERVICE DELIVERY IN FEDERAL HOSPITALS ABUJA, NIGERIA

**ATSUA, JUDITH TERKUMBUR; EZINNWAYI
MADUKOMA (Ph.D); & IKONNE, CHINYERE
.N. (Ph.D)**

*Department of Information Resources
Management. Babcock University, Ilisan-Remo.
Ogun State.*

ABSTRACT

The study examined professional manpower availability and healthcare service delivery in federal hospitals in FCT Abuja, Nigeria. The study employed survey research design. Total number of outpatient and healthcare personnel working in the National hospital and Federal Medical centre were chosen as the study population. Total enumeration

Introduction

Healthcare service delivery is important for promoting health, preventing disease and boosting economic performance. It is critical for the sustainable growth and general wellness of any nation. It involves the diagnosing, provision of treatment; supplies and other healthcare services aimed at improving the physical and mental well-being, recovery from illness and helping people stay healthy (Wager, Lee & Glaser, 2017). According to Transparency International Health Initiative (2016), healthcare service delivery encompasses the various aspects of a health system where various patients are given the care, treatment as well as supplies they are eligible to receive. World Health Organization (2008) describes healthcare service delivery as the accessibility, obtainability, coverage and usage of healthcare services to meet each individual's health needs. World Health Organization Report (2018) stated that good healthcare is a key



component to achieve sustainable development goal 3 which articulated: the right to health, reduction in disease, equity and dignity for healthcare users and population across nations.

There has been a continued concern for effective delivery of healthcare services in African countries, especially in Nigeria. Several studies have been conducted research on healthcare delivery across the globe including: Choi et al, (2004), Aragon et al, (2003), Alderman, et al, (1996) etc. but quite unfortunately, their contexts and other characteristics

(environmental, political, sociocultural as pertains to developed or western world) differ totally from that of Nigeria which is a developing one and as such their results cannot be strictly applicable to the Nigerian context. Also, these studies aside carrying it out in different context were conducted long time ago.

sampling method was employed to include 356 general outpatient patients and 264 health workers in the selected federal hospitals. Data were collected using a well-structured questionnaire and analysed at 5% ($P < 0.05$) level of significance. The study shows that qualification of personnel has a negative but insignificant effect on healthcare service delivery. Professional skills have positive but not significant effect on healthcare service delivery. Collaboration and team work posits a positive effect on healthcare service delivery. Lastly, professional manpower availability has a positive but insignificant effect on healthcare service delivery. The study concluded that Professional manpower availability has influence on healthcare service delivery in federal hospitals Abuja, Nigeria. It was recommended among others that the management in the federal hospital should deem it fit for sponsoring the health workers for training and development programmes to enhance their efficiency. Federal government should find lasting solutions to the problems of poor funding and movement of professional health workers particularly nurses/midwives to greener pastures.

Keywords: Healthcare service delivery, Professional manpower availability, Professional manpower, Healthcare service.



In the case of Nigeria, previous studies such as Abiodun and Adeyemi (2016), Kress et al (2016) Ujoh and Kwaghsende (2014), Kaibung et al (2017), Ibrahim and Daneshvar(2017) , Odeyemi and Nixon (2013) have shown that the healthcare service delivery in Nigeria is sub-optimal. Reports from previous literatures depict that the largest country in Africa, Nigeria; in terms of population is characterised by poor development and low health indicators (Maphumulo, 2019). Lack of adequate manpower availability has been assumed to be the major factor leading to poor healthcare service delivery in the country. Professional manpower deals with elements such as qualification of healthcare personnel, professional skills, collaboration and attitudes (Mosadeghard, 2014). The non-availability of professional manpower will result in poor healthcare service delivery. Ojeme (2013) asserts that healthcare facilities in hospitals in Abuja have grown in numbers but is still largely inadequate and insufficient despite Abuja being the Federal capital. Observation by this present researcher also shows that there is low service delivery in Federal hospitals which surprisingly is more evident in Abuja the Capital Territory.

Though previous studies in Nigeria have examined holistically health infrastructures/facilities and manpower either as combine indicators to access the level of healthcare service delivery in Nigeria ([Menizibeya, 2011](#)) however, not many studies have worked on the influence of professional manpower availability on healthcare service delivery. Also, not many studies have looked into the influence of professional manpower availability on the level of healthcare service delivery as perceived by patient and consumers which are end users of healthcare services. This study therefore intends to investigate the influence of professional manpower availability on healthcare service delivery in FCT, Abuja, Nigeria.

Literature Review

The Concept of Healthcare Service Delivery in Hospitals

The concept of health has evolved over the years with diverse perspective. Early definitions focused on the body's ability to function. Health was viewed as the absence of diseases, sicknesses and infirmities



(Huber, Knottnerus, Green, Jadad, Kromhout, & Schnabel, 2011). The World Health Organization (1984) initially defined health as the absence of disease and infirmity, a state of well-being, in terms of physical, social, and mental well-being but due to evolving trends, the definition could not suffice. Hence the redefinition by World Health Organization (2008) on healthcare service delivery is described as the accessibility, obtainability, coverage and usage of healthcare services to meet each individual's health needs. It involves the diagnosing, provisioning of treatments, supplies and other healthcare services aimed at improving the physical and mental well-being of healthcare users, recovery from illness and helping people stay healthy (Wager, Lee & Glaser, 2017).

The numerous services provided by medical practitioners in the health service sector to patients who can be regarded as customers are healthcare service delivery. This simply implies that the quality of healthcare service delivery can be measured through customer (patient) satisfaction (Lakshmi & Sahoo, 2013). Healthcare service delivery is multidimensional in concept with diverse aspects as well as multiple determinants. Among factors that could influence the health outcome are effective manpower which in many settings is designed to be available, affordable, accessible, and appropriate as well as being equitably distributed (Donabedian, 2003).

The Institute of Health (2003) stated that to achieve good and sustainable health in any society, there must be an effective Healthcare service delivery system. Health systems help to channel resources and manage the mechanism of service delivery that brings health-improving technologies to the populace. The aim of any healthcare service delivery system should be to achieve quality optimal health outcomes by providing cost-effective, patient-centred, quality care with a service emphasis. Healthcare service delivery systems should be designed to motivate patients and healthcare providers to make decisions consistent with this goal.

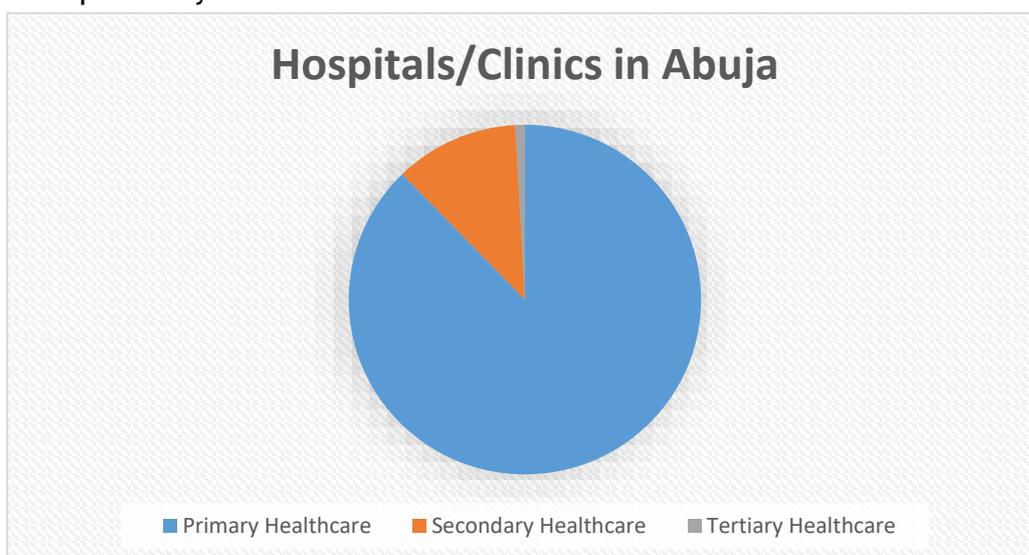
The Nigeria health system majorly consists of the primary healthcare, the secondary healthcare and the tertiary healthcare service delivery services. Primary Healthcare (PHC) is a grass-root approach to providing healthcare services to communities and managed by the local



government (Aigbiremolen, 2014). The state government largely operate secondary healthcare facilities, that is, general hospitals and comprehensive health centres. Secondary facilities are normally designed to provide services to patients referred from the primary healthcare through outpatients and in-patient services of hospitals for medical, surgical, paediatric patients and community services. At the tertiary level, the Federal Ministry of Health governs the health system. The federal government through the health ministry is responsible for health policy formulation, strategic guidance, coordination, supervision, monitoring and evaluation of the health system at all levels. This governmental level also has operational responsibility for disease surveillance, essential drugs supply and vaccine. Also, management of teaching hospitals and federal medical centres are within the purview of the federal responsibilities (Isere, Fatiregun, & Ajayi, 2015).

Healthcare Service in FCT-Abuja

FCT-Abuja is made up of 6 Area Councils (A/Cs) namely Abaji, Abuja Municipal, Bwari, Gwagwalada, Kuje and Kwali Area Councils. With a population of about 1,405,201 the Federal Ministry of Health report as displayed in fig 2 shows that there are about 925 healthcare facilities in FCT-Abuja (Muhammad, 2018). Specifically, the number of primary healthcare is 809, while the secondary and tertiary healthcare is 108 and 8 respectively.



Source: <https://hfr.health.gov.ng/statistics/tables> (2019)



Figure 1. Healthcare in Abuja

Healthcare facilities in terms of hospitals in Abuja have grown in numbers but have been seen to be largely inadequate and insufficient despite Abuja being the Federal capital (Ojeme, 2013). Ojeme (2013) reported that an estimate of patients who go to seek medical care at government hospitals located within the city centre indicates a figure of between 300 to 400 daily, while the area council is estimated to be between 150 to 200 patients. The quality of service delivery, ranging from misdiagnosis, as well as outright incompetence in the handling of patients and ethical issues related to poor capacity have continued to affect the effective delivery of health services in the Federal capital(Ojeme, 2013).

The Concept of Professional manpower availability in Hospitals

The concept of manpower is varied and multidisciplinary. It is an important and indispensable component of effective Healthcare service delivery. By health manpower, we mean the human resources involved in administering healthcare services to patients. Manpower human resource comprises the health professionals including doctors, pharmacists, nurses, midwives, laboratory technologists, administrators, accountants and other sundry workers (Adolphus, 2017). If there is not adequate health manpower, there won't be effective delivery of healthcare services, and that may slow or stall the process, either through an increased burden of ill health or through a low capacity to tackle presenting health problems (McFubaraet *al*, 2012). In essence, human effort is greatly desirable and fundamental in achieving the goals and objectives of the organization. The extent to how an organization thrives is deter, the supply of labour, technical and professional skills, which are appropriate for effective and efficient planning and implementation of development policies, programs, projects and daily functioning of the organization are their prerogative (Adolphus, 2017).

Theoretical Review

SERVQUAL Model

SERVQUAL was propounded by Valarie, Parasuraman and Leonard Berry in 1998. The model is one of the most important instruments used to test



service quality in private and public corporations (Aikins et al, 2014). SERVQUAL which implies Service Quality Model is a multidimensional research instrument designed to measure service quality by capturing patient expectations and perceptions about quality of healthcare along the five dimensions of service quality which are reliability, assurance, tangibility, empathy, and responsiveness. (Aikins et al, 2014).

The five-dimension service quality (SERVQUAL) scale is one of the most common tools for evaluating gaps between clients' perceptions and expectations. In this study, the theory is essential for providing a detailed description of patients' perceptions about healthcare service delivery and how they would rate the services. These indicators are relevant to this study because it shows the attributes which healthcare professionals working in the healthcare center should possess in order to meet the needs of their patients to achieve their goals and objectives of the healthcare center which is providing better healthcare to users. SERVQUAL theory is mostly used for the measurement of service quality of any form and healthcare service delivery is not an exception. The satisfaction of healthcare users should be the ultimate aim of every healthcare institution. Hence, the SERVQUAL model which focus on patient satisfaction as a measure of healthcare quality output guides this research in selecting variables to measure the quality level of Healthcare service delivery service in FCT Abuja.

Methodology

Survey research design was adopted for this study. The total population of the study is 264 health workers from two federal hospitals in Abuja Nigeria and 356 out patients in the two federal hospitals in Abuja. Total enumeration method was employed for eliciting information from health workers in the federal hospitals in Abuja. The only instrument used to elicit information from the respondents was a self-structured questionnaire. Data was analysed using statistical techniques like frequencies, mean, standard deviation and simple linear regression at 5% ($P < 0.05$) level of significance. Linear regression was used to determine the influence of professional manpower availability on health service delivery.



Data Analysis, Presentation and Interpretation

Table 4.1: Level of healthcare service delivery in federal hospitals FCT Abuja, Nigeria

S/N	Questions	Very High	High	Low	Very Low	Mean	Std. Deviation
Tangibles (Mean = 1.68 , SD = 0.589)							
1	Accessibility of physical facilities is	(0) 0.0%	(1) 4.0%	(129) 56.1%	(94) 40.9%	1.42	.503
2	The hospital/clinic purchases and uses of modern equipment are	(2) 0.9%	(115) 40.6%	(108) 38.2%	(30) 10.6%	2.29	.584
3	The use of physical infrastructure are put to good use	(5) 2.2%	(12) 5.2%	(112) 48.8%	(95) 41.3%	1.33	.680
Reliability (Mean = 3.55 , SD = 0.50)							
4	Hospital records of effective treatment are kept safe and secure	(105) 45.7%	(119) 51.7%	(0) 0.0%	(0) 0.0%	3.53	.500
5	The level of Provision of healthcare services is	(111) 48.3%	(113) 49.1%	(0) 0.0%	(0) 0.0%	3.50	.501
6	The dependent level of hospital services is	(114) 49.6%	(110) 47.8%	(0) 0.0%	(0) 0.0%	3.49	.501
7	The rate at which hospital provides prescribed drugs is	(31) 11.0%	(145) 51.2%	(89) 31.4%	(16) 5.7%	2.75	.501
Responsiveness (Mean = 3.66 , SD = 0.50)							
8	The level of patient care received by health workers is	(111) 48.3%	(113) 49.1%	(0) 0.0%	(0) 0.0%	3.70	.501
9	Level of sincere interest shown in patient's case is	(111) 48.3%	(113) 49.1%	(0) 0.0%	(0) 0.0%	3.70	.501



10	Health workers willingness to help patients is	(111) 48.3%	(117) 49.1%	(0) 0.0%	(0) 0.0%	3.70	.501
11	Timely response to patients is	(113) 49.1%	(111) 48.3%	(0) 0.0%	(0) 0.0%	3.53	.500
Assurance (Mean = 3.41 , SD = 0.50)							
12	The level of safety and trust in dealing with healthcare personnel is	(106) 46.1%	(118) 51.3%	(0) 0.0%	(0) 0.0%	3.54	.499
13	Health worker's consistent courteousness is	(102) 44.3%	(122) 53.0%	(0) 0.0%	(0) 0.0%	3.53	.500
14	Confidence level in the hospital, its facilities and services is	(105) 45.7%	(119) 51.7%	(0) 0.0%	(0) 0.0%	3.54	.509
15	Comfort after talking to health workers within the hospital is	(105) 45.7%	(118) 51.3%	(1) 0.4%	(0) 0.0%	3.48	.510
16	Assurance on receiving quality healthcare is	(117) 50.9%	(106) 46.1%	(1) 0.4%	(0) 0.0%	3.46	.500
Empathy (Mean = 3.51 , SD = 0.50)							
17	The level of discrimination by health workers is	(120) 52.2%	(104) 45.2%	(0) 0.0%	(0) 0.0%	3.53	.500
18	Health workers readiness to put themselves in my shoes is	(118) 51.3%	(106) 46.1%	(0) 0.0%	(0) 0.0%	3.47	.500
19	Health worker's level of care for my well-being is	(118) 51.3%	(106) 47.3%	(0) 0.0%	(0) 0.0%	3.52	.501
20	Medical Personnel's understanding of medical needs is	(107) 47.8%	(117) 52.2%	(0) 0.0%	(0) 0.0%	3.52	.501
Grand Mean						3.26	0.51

Sources: Researchers' Field Survey, 2021

Decision Scales; ≤ 1.49 = Very Low, $1.5 - 2.49$ = Low, $2.5 - 3.49$ = High ≥ 3.5 = Very High

The table above reveals that the level of healthcare service delivery in federal hospitals in FCT Abuja, Nigeria is high ($\bar{x}=3.26$). Further details



from the analysis reveal that some of the indicators show high level of healthcare service delivery. Responsiveness ($\bar{x}=3.66$) had the highest rating on the services that are provided in the hospitals. Details show that the healthcare workers have a sincere interest shown to patient's case. This findings is followed by reliability ($\bar{x}=3.55$) which shows that the healthcare workers records and secures treatment of as well as being reliable in the provision of healthcare services. Other sub indicators that rated a high level of healthcare service delivery were: Empathy ($\bar{x}=3.51$) and Assurance ($\bar{x}=3.41$) while Tangibility in healthcare service delivery is low ($\bar{x}=1.68$).

Table 4.2: level of professional Manpower Availability in Federal Hospitals FCT Abuja, Nigeria

S/N	Questions	Very High	High	Low	Very Low	Mean	Std. Deviation
Qualifications of personnel (Mean = 3.65 , SD = 0.58)							
1	Health personnel knowledgeable about their job is	(133) 42.2%	(172) 54.6%	(9) 2.9%	(0) 0.0%	3.61	.545
2	Health personnel adequacy of skills and educational requirements is	(132) 41.9%	(171) 54.3%	(11) 3.5%	(0) 0.0%	3.61	.555
3	Adequacy of training received by health personnel	(118) 37.5%	(175) 55.6%	(18) 5.7%	(0) 0.0%	3.69	.606
4	Instructions/advice about illness because of the training and skills they have acquired is	(126) 40.0%	(167) 53.0%	(20) 6.3%	(1) 0.3%	3.67	.608
Professional Skills (Mean = 3.74 , SD = 0.72)							
5	Health personnel ' ability to handle medical equipment is	(116) 36.8%	(174) 55.2%	(19) 6.0%	(3) 1.0%	3.74	.851
6	Health personnel ' ability to manage temperamental patients is	(121) 38.4%	(168) 53.3%	(21) 6.7%	(4) 1.3%	3.71	.647
7	Ability of health personnel to patiently diagnose and attend to patients is	(113) 35.9%	(172) 54.6%	(21) 6.7%	(8) 2.5%	3.76	.687
8	Level of composure of healthcare personnel at delicate times is	(31) 11.0%	(172) 60.8%	(52) 18.4%	(18) 6.4%	3.73	.679
Collaboration and Teamwork (Mean = 3.79 , SD = 0.69)							
9	Level of teamwork of healthcare personnel is	(109) 34.6%	(174) 55.2%	(22) 7.0%	(9) 2.9%	3.78	.696
10	Cooperation among senior and junior healthcare personnel is	(111) 35.2%	(171) 54.3%	(25) 7.9%	(7) 2.2%	3.77	.686
11	Unity in care delivery for patients among healthcare personnel is	(106) 33.7%	(172) 54.6%	(30) 9.5%	(5) 1.6%	3.79	.675



12	Coordination among healthcare personnel is	(110)	(160)	(39)	(5)	3.81	.709
		34.9%	50.8%	12.4%	1.6%		
Grand Mean						3.72	0.66

Sources: Researchers' Field Survey, 2021

Decision Scales; $\leq 1.49 = \text{Very low}$, $1.5 - 2.49 = \text{Low}$, $2.5 - 3.49 = \text{High}$
 $\geq 3.5 = \text{Very High}$

Table above indicates that there is a high level of professional manpower availability in federal hospitals in FCT Abuja, Nigeria ($\bar{x}=3.72$). The indicators that were rated high Collaboration and Teamwork (Mean = 3.79, SD = 0.69) showing that there is a high level of teamwork among healthcare personnel as well as cooperation among senior and junior healthcare personnel. Following that is professional skill ($\bar{x}=3.75$) indicating that the healthcare personals have the ability to handle medical equipment as well as possess the skill to handle patients that are temperamental and the ability to diagnose and attend to patients is. Other indicators that showed is high are qualification of personnel ($\bar{x}=3.65$) which indicated that the healthcare personals are knowledgeable about their job with the adequacy of skills and educational requirements needed to carry out their job.

Table 4. 3: Estimated Result of Professional manpower availability and healthcare service delivery healthcare service delivery

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.456	1.392		1.046	.297
qualification of personnel	-.017	.015	-.079	-1.114	.266
professional skill	.053	.014	.252	3.711	.000
collaboration and team work	.261	.090	.170	2.888	.004
Source of Variation	Sum of Squares	Df	Mean Square	F-Ratio	Sig.
Regression	17.478	3	5.826	7.207	.000 ^b
Residual	247.361	306	.808		
Total	264.839	309			

R = 0.257; Multiple R² = .066 R² (Adjusted) = 0.057 Standard error estimate = 0.899

a. Dependent Variable: healthcare service delivery

b. Predictors: (Constant), collaboration and team work, qualification of personnel, professional skill

Sources: Researchers' Field Survey, 2020



Note: *, **, & *** implies 10%, 5% & 1% significance level respectively.

In Table 4.3 above, it shows that Professional manpower availability has a significance influence on healthcare service delivery in federal hospital, Abuja ($Adj. R^2 = 0.057$, $F(3, 309) = 7.207$, $p < 0.05$). The model shows that professional manpower availability explains the variation of 5.7% ($Adj. R^2 = 0.057$) in healthcare service delivery in federal hospital, Abuja. These are reliable evidences that the model is fit. This implies that the linear combination of the Professional manpower availability predicts the healthcare service delivery in federal hospital, Abuja. Hence, there is sufficient evidence against the null hypotheses which says Professional manpower availability will not significantly influence healthcare service delivery in federal hospitals FCT Abuja, Nigeria. Therefore the study concluded that Professional manpower availability have significant influence on healthcare service delivery in federal hospitals FCT Abuja, Nigeria.

The professional manpower availability was proxy by collaboration and team work, qualification of personnel, professional skill. The study shows that qualification of personnel have a negative but insignificant effect on healthcare service delivery in federal hospitals FCT Abuja ($\beta = -.017$, $t = -1.114$, $P > 0.05$). This shows that an increase in qualification of personnel brings about a decrease of 1.7% in healthcare service delivery in federal hospitals FCT Abuja however not significant at 5% significant level. Similarly, professional skill have positive and statistically significant effect on healthcare service delivery in federal hospitals FCT Abuja ($\beta = 0.053$, $t = 3.711$, $P < 0.05$). This shows that a unit increase on professional skill brings about an increase of 5.3% on healthcare service delivery in federal hospitals FCT Abuja. Lastly the collaboration and team work posits a positive effect on healthcare service delivery in federal hospitals FCT Abuja ($\beta = 0.261$, $t = 2.888$, $P < 0.05$). The study shows that any unit increase in collaboration and team work brings about an increase of 0.261 in healthcare service delivery in federal hospitals FCT Abuja and statistically significant to determine healthcare service delivery.

Discussion of Findings

This study examined the influence of professional manpower availability and healthcare service delivery in federal hospitals in FCT Abuja, Nigeria. This section reports the findings of this study and discusses the findings in line with previous studies. The research questions and hypotheses



drawn for the study were intended at determining the influence of professional manpower availability, health information technology use and healthcare service delivery in federal hospitals in FCT Abuja, Nigeria. Research question one sought to find out the level of healthcare service delivery in federal hospitals in FCT Abuja, Nigeria. The findings of this study revealed that healthcare service delivery in federal hospital in FCT Abuja is high. Some of the services that are available in the federal hospitals are tangibles, responsiveness, assurance and empathy. The findings of this study negate the work of Efe (2013) on evaluation of the roles of physicians and the functionality of the healthcare system in Nigeria. The scholars have established that the healthcare system in Nigeria is poor as it relates to service delivery. Also, this assertion was corroborated by Abdulraheem, Olapipo and Amodu (2012) in their study that healthcare services delivered to Nigerian is poor and remains a huge source of concern.

Likewise, Abimbola, Okoli, Olubajo, Abdullahi, and Pate (2012) who reported that service delivery in Nigeria is very poor citing that the most of the facilities that are supposed to meet the health needs of citizens are in a bad State. However, this study reveals otherwise from the perspective of patients, reporting that the service delivery of the hospitals is high with respect to responsiveness which implies that the health workers have a sincere interest shown to patient's case. Furthermore, the findings revealed that the health workers are reliable which shows that the healthcare workers records and secures treatment of as well as reliable in the provision of healthcare services as well showing empathy and Assurance.

The finding of the study revealed that level of professional manpower availability in federal hospitals FCT Abuja, Nigeria was high. This finding goes contrary to Efe (2013) who reported that healthcare services in Nigeria are operating at a dismal level due to inadequate skilled human resources/personnel among other factors. However, there is a very high level of professional manpower availability in federal hospitals, Abuja. Though majority of the respondents agreed that the professional manpower availability in federal hospitals, Abuja is very high. But majority of the previous work like Olalekan, Adeniran, Adebukola and



Adekunle (2011) was not in support of the conclusion. Olalekan, Adeniran, Adebukola and Adekunle (2011) revealed that common causes of brain drain and emigration of skilled manpower to developed countries are due to poor working condition, search for more money, improved technology and improved living conditions. The study also found that implications of brain drain include a shortage of health manpower, dearth of highly skilled healthcare workers, and reduction in quality of care. This study also negates the work of Mcfubara (2012) who reported that hospitals have inadequate healthcare manpower training facilities, including lack of teaching hospital.

Conclusion and Recommendations

The study has succeeded in investigating the influence of professional manpower availability, and healthcare service delivery in Federal hospitals in FCT Abuja, Nigeria. The study established that the level of healthcare service delivery in federal hospitals in FCT Abuja, Nigeria is high. The level of professional manpower availability in federal hospitals in FCT Abuja, Nigeria is high has a very high usage in federal hospitals in FCT Abuja. Furthermore, professional manpower availability has a significance influence on healthcare service delivery in federal hospital, Abuja. Based on the findings of this study, the following recommendations are made:

1. There is need to sustain the healthcare service delivery in the federal hospitals in Abuja
2. The management in the federal hospital should deem it fit for sponsoring the health workers for training and development programme to sustain the service delivery in the federal hospitals
3. The government should allocate adequate resources for improving the quality of equipment's and manpower in federal hospitals
4. As a matter of policy, the federal hospitals in Abuja should continually investigate the level and nature of service delivery in the hospitals with the intention of enhancing and sustaining them.

References



- Abdulraheem, B. I., Olapipo, A. R., & Amodu, M. O. (2012). Primary healthcare services in Nigeria: Critical issues and strategies for enhancing the use by the rural communities. *Journal of public health and epidemiology*, 4(1), 5-13.
- Abiodun, A. J., & Adeyemi, K. S. (2017). Performance role models among public health facilities: An application of data envelopment analysis. *International Journal of Healthcare Management*, 6(11), 1-8.
- Aigbiremolen, A., Alenoghena, I., Eboreime, E., & Abejegah, C. (2014). Primary Health Care in Nigeria: from conceptualization to implementation. *J Med Appl Biosci*, 6(2), 35-43.
- Adolphus, A., Rathus, J. S., Rathus, S. A., & Fichner-Rathus, L. (2017). U.S. Patent Application No. 15/166,157.
- Aikins, I., Ahmed, M., & Adzimah, E. D. (2014). Assessing the role of quality service delivery in client choice for healthcare: a case study of bechem government hospital and green hill hospital. *European Journal of Logistics Purchasing and Supply Chain Management*, 2(3), 1-23.
- Donabedian, A. (2003). An introduction to quality assurance in healthcare. (1st ed., Vol. 1). New York, NY: Oxford University Press. retrieved from http://neuron.mefst.hr/docs/CMJ/issues/2003/44/5/29_BookRev.pdf
- Efe, S. I. (2013). Healthcare problem and management in Nigeria. *Journal of Geography and Regional Planning*, 6(6), 244-254
- Huber, M., Knottnerus, J. A., Green, L., van der Horst, H., Jadad, A. R., Kromhout, D., ... & Schnabel, P. (2011). How should we define health?. *Bmj*, 343, d4163.
- Institute of Health (2003). *The Future of the Public's Health in the 21st Century*. National Academy Press. Retrieved from <https://aut.ac.nz.libguides.com/APA6th/theses>
- Iseri, E. E., Fatiregun, A. A., & Ajayi, I. O. (2015). An overview of disease surveillance and notification system in Nigeria and the roles of clinicians in disease outbreak prevention and control. *Nigerian medical journal: journal of the Nigeria Medical Association*, 56(3), 161.
- Lakshmi, S. T., & Sahoo, D. (2013). Health infrastructure and health indicators: The case of Andhra Pradesh, India. *IOSR Journal of Humanities and Social Science*, 6, 22-29.
- McFubara, K. G., Edoni, E. R., & Ezonbodor-Akwagbe, R. E. (2012). Health manpower development in Bayelsa state, Nigeria. *Risk management and healthcare policy*, 5, 127.
- Mosadeghrad, A. M. (2014). Factors influencing healthcare service quality. *International Journal of health policy and management*, 3(2), 77.
- Ojome, V. (2013). *Nigeria: Health sector is suffering so much neglect*. [online] Vanguard. Available at: <https://www.vanguardngr.com/2013/11/nigeria-health-sector-suffering-much-neglect-2/> [Accessed 20 Jun. 2019].
- Olalekan, A. W., Adeniran, O. O., Adebukola, A. M., & Adegunle, O. (2011). Healthcare providers migration and brain drain phenomenon: Perception of healthcare workers in Lagos State in Southwestern Nigeria. *Continental Journal of Tropical Medicine*, 5(1), 24.
- Ujoh, F., & Kwaghsende, F. (2014). Analysis of the spatial distribution of health facilities in Benue State, Nigeria. *Public health research*, 4(5), 210-218.
- Wager, K. A., Lee, F. W., & Glaser, J. P. (2017). Healthcare information systems: a practical approach for healthcare management. John Wiley & Sons.
- World Health Organization. (2011). *Early warning surveillance and response in emergencies: report of the second WHO technical workshop*, retrieved from



- https://www.who.int/diseasecontrol_emergencies/publications/who_hse_gar_dce_20_1_2/en/
- World Health Organization report . (2018). *World health statistics 2018: monitoring health for the SDGs*, retrieved from https://www.who.int/gho/publications/world_health_statistics/2018/en/
- Aragon, A., Barba, M.I., Sanz, R., (2003). Effects of training on business results. *International Journal of Human Resource Management* 14, 956--980.
- Alderman, H., J. Behrman, D. Ross and R. Sabot, (1996). The Returns to Endogenous Human Capital in Pakistan's Rural Wage Labor Market, *Oxford Bulletin of Economics and Statistics*, 58(1), 29-55.
- Abimbola S, Okoli U, Olubajo O, Abdullahi MJ, Pate MA (2012). The Midwives Service Scheme in Nigeria. *PLOS Medicine* 9(5): e1001211.
- Choi, James J., David Laibson, Brigitte C. Madrian, and Andrew Metrick (forthcoming). "Defined Contribution Pensions: Plan Rules, Participant Decisions, and the Path of Least Resistance," in James M. Poterba, ed., *Tax Policy and the Economy*, Vol. 16 (Cambridge, MA: MIT Press).
- Kress D, Su Y, Wang H (2016) Assessment of primary health care System performance in Nigeria: using the primary health care Performance indicator conceptual framework. *Health System Reform* 2:302-31
- Maphumulo WT, Bhengu BR. (2019) Challenges of quality improvement in the healthcare of South Africa post-apartheid: A critical review. *Curationis*. 42(1):e1-e9. Doi: 10.4102/curationis.v42i1.1901. PMID: 31170800; PMCID: PMC6556866
- Menizibeya OW. (2011). The Nigerian health care system: need for integrating adequate medical intelligence and surveillance systems. *Journal of Pharmacy and Bioallied Sciences* 3: 470-485
- Odeyemi IOA & Nixon, J.(2013). Assessing equity in healthcare through the national health insurance schemes of Nigeria and Ghana: a review-based comparative analysis. *International journal for equity in health* 12(1):