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RELATIONSHIP BETWEEN MIGRATION AND HEALTH WORKERS IN LOKOJA, KOGI STATE, NIGERIA

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ABSTRACT

Migration involves the movement of people, especially whole groups from one place, country, or region to another with the intention to make permanent settlement in a new location. This paper presents results on the health workers out-migration in Lokoja Kogi State, Nigeria. The purposive sampling technique was used in the study. A set of 150 copies of well-structured questionnaires was administered to the respondents. The data was analyzed using frequencies and simple percentages. The results show that the majority of the respondents lived in high income residential areas. Respondents within the ages of 51-60 years 40(26.6%) have a significant majority of the respondents. 72% (Seventy two percent) of the respondents were married and most of them representing 89.9% were with secondary and tertiary education. The majority of the households had 5-6 household members. About 97.3% of the respondents were aware of the health workers who have migrated to other countries for better life and 100.0% had intentions to migrate. At present, most of the health workers have left Nigeria for other countries for a period of 6-10 years. The number of health workers who are not satisfied with Doctor-patient ratio 70.6% and staff motivation 60.0% was quite high. The factors highly influencing out-migration of health workers were COVID-19 outbreak with 52.0%, work incentives 46.0% and limited occupational risk at destination country with a total of 54.0%. The study recommended upward review of salaries and improved work incentives of health workers.

Keywords: *Condition, Demand, Health, Migration, Population, Relationship, Workers*

1. INTRODUCTION

Migration remains a dynamic and complex phenomenon influencing demographic and economic patterns across regions. In Nigeria, the movement of people is often driven by economic, social, and infrastructural factors, with particular consequences for the public health sector (Anyangwe and Mtonga, 2007). Lokoja, the capital of Kogi State, has experienced both in-migration and out-migration due to its strategic location and evolving urban profile. Of particular concern is the increasing out-migration of health workers, a trend that poses significant challenges to healthcare delivery and the sustainability of health systems (Obi and Agbo, 2021).

Migration refers to the movement of people, especially of whole groups, from one place, region, or country to another, particularly with the intention of making permanent settlement in a new location (Hainmueller and Hopkins, 2015). Health workers are the vehicle for access to health without skilled, supported, motivated, empathetic, trusted and well distributed health workers; it will not be possible to achieve sustainable Development Goals and Universal Healthcare (UN DESA, 2019). The joint learning initiatives, a study led by Dr. Lincoln Chen and published in 2004 showed that there is a global health workforce crisis characterized by gross shortages, maldistribution and poor working conditions.

World Bank data shows that, since 2013, the ratio of doctor-to-patients ratio has been pegged at 1 doctor to 40,000 Nigerians, which is a long stretch from the WHO, (2006), standard of 1 doctor to 600 patients. There are 72,000 registered doctors with the Medical and Dental Council of Nigeria with more than 30,000 practicing outside the country. Unfortunately, working conditions and a general lack of attention to the health sector are leading causes of high migration rate among health workers in Nigeria. These continue to aggravate the country's infant and maternal mortality (IOM, 2003). As with many developing economies, Nigeria faces several health workforce challenges, including a lack of high-quality training, geographic maldistribution of workers and loss of workers to overseas destinations (World Economic Forum (WEF), 2019).

Indeed, Nigeria has been considered to be a 'crises' country with respect to all health workforce stocks as identified by the 2006 World Health Organization Report and was one of the countries which the density of physicians, midwives and nurses fell below the WHO recommended minimum of 22.8 total midwives, nurses and physicians per 10,000 population. More recently, WHO has estimated that by 2030 this shortage will reach 18 million? The WHO report of 2006 revealed that Africa is the worst affected by these shortages of 57 countries with critical HWF shortages, 36 were in sub- Saharan Africa (sSA) (UNDESA, 2019; WHO, 2020).

The outbreak of COVID-19 pandemic has increased the demand for many doctors globally more so in the developed countries that suffered the greatest loss. Many Nigerian doctors are eager to migrate and migrate. The effects are: numerical inadequacy of health workers which has become 'the binding constraint in implementing many priority health programs in Nigeria. The proportion of households within 10km of a health Centre, clinic or hospital is 50 percent higher in urban regions, compared with rural areas. Although Nigeria's overall maternal mortality is at 1100 per 100,000 live births, among the highest in the world and within countries, analyses indicate that maternal mortality is significantly higher in the largely rural regions of Nigeria.

In Lokoja, morbidity and preventable mortality trends worsen indirect correlation with ease of access to health services. There is an acute shortage of medical personnel leading to longer waiting times. The high ratio of patients to doctor's ratio contributes to an increase in waiting

time for expecting mothers and infants. This appears to have exacerbated infant mortality and maternal deaths, especially at the wake of COVID-19. Studies have shown that during the long waiting period, some pregnant women get exhausted. The waiting hours usually take 4-6 hours in public hospitals. Some childbirth emergencies are not attended to on time, as doctors are usually busy in the theatre performing emergency cesarean section. In the case of antepartum hemorrhage (bleeding during pregnancy) and depending on the severity, the woman may bleed to death. There might also be reduced blood supply to the baby and consequent foetal death. Hence, this study seeks to investigate factors influencing health workers out-migration in Lokoja, with a view to recommending ways of curtailing these ugly trends in the healthcare system.

Lokoja is located on latitude 7˚45′N - 7˚51′N of the equator and longitude 6˚41′E - 6˚45′E of the Prime Meridian (Figure 3.1). It is the administrative headquarters of Kogi state. It is well connected and accessible through state and federal highways. It is some 160 km south of the new federal capital Abuja and straddles the strategic roads to at least five geopolitical zones out of six such in the country. It has an area of 63.82km*2* (Adeoye, 2012). It is also at the confluence of the two major rivers in Nigeria which are Rivers Niger and Benue (Ifatimehin, 2007; Anyangwe and Mtonga, 2007).

Lokoja is the first settlement of the British in Northern Nigeria (Ifatimehin, 2007). It was the capital of the British Northern Protectorate and by extension remained a convenient administrative town for the British Colonial Government after the amalgamation of the Northern and Southern Protectorates into one country called Nigeria in 1914 (Ifatimehin, 2007). It also served as a prominent centre for slave trade in the 18th and 19th centuries. It later served as a centre for freedom when Samuel Ajayi Crowther spearheaded the anti-slavery crusade in Nigeria and the erection of the Iron of Liberty at the spot where slaves were set free in Lokoja (Ocheja, 2005). The settlements found in Lokoja include Adankolo, Kabawa, Felele, Ganaja, Otokiti, Zango, etc (Ocheja, 2005).

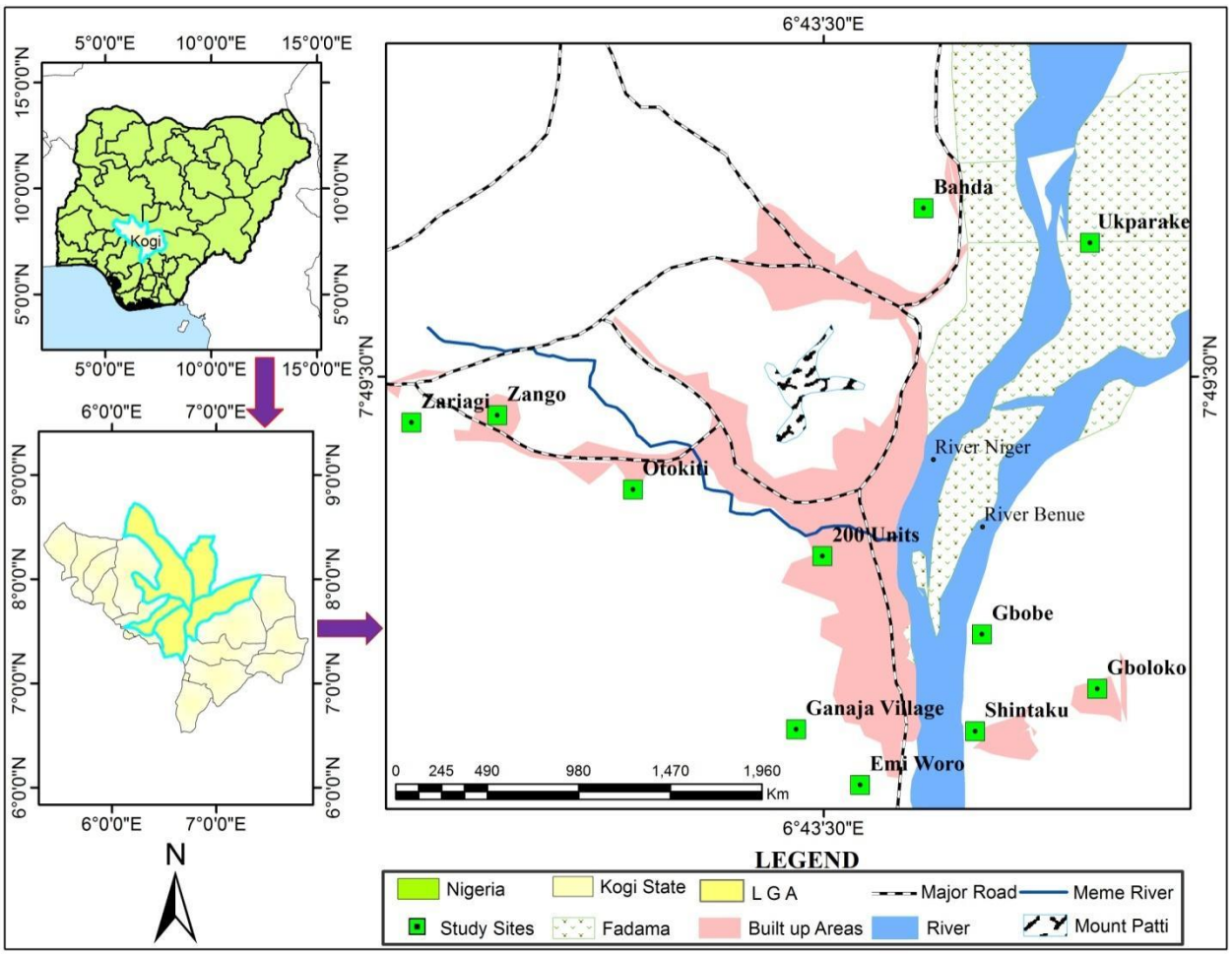

Figure 1; Lokoja, the Study Area.
Adapted from: Encarta Premium, 2015

2. MATERIAL AND METHODS

The types of data include socio-economic data, place or layout of resident data, demographic data; cultural data and perceived distance such as distance from the health care service provision is used. Data on factors influencing out-migration such as monthly salaries, work incentives, allowances, limited occupational risk and promotion. This data was collected using questionnaires. Data on the effects of health workers migration on health care delivery. This data was considered based on loss of highly skilled health workers, shortage of medical personnel, longer waiting time, high ratio of patients to doctors and emergency cases not being attended to on time.

The study utilized primary data collected from the field. The data collection process commenced with familiarization visits to the sampled health facilities. This is to enable secure approval for the study through a letter of consent. The study was framed around staff in Federal Medical Centre, comprising doctors, nurses, laboratory scientists/technicians, data entry clerks, pharmacists, community Health Extension Workers, Case Managers, Cleaners etc. The multistage sampling was adopted in the data collection process. First, all health centres in Lokoja were identified and categorized into private and public owned facilities. In the second stage, public hospitals were listed. Then, in the third stage, two secondary health centers were selected

and sampled. These are Federal Medical Centre, Lokoja and Kogi State Specialist Hospital Lokoja, Kogi State. These two hospitals were selected because they attract many patients in the study area and therefore have a considerable number of health workers. However, approval for the study was granted by only FMC. A sample of 150 health workers was purposely interviewed. The respondents were all health workers who were on duty at the time of the survey and were willing to participate in the study. The exclusion criterion was health workers who were on leave and those who have migrated.

The data analysis involved the use of frequencies, table's percentages and graphs. The hypothesis was tested using Multiple Regression Analysis (MRA). The dependent variables are health workers out-migration (y) and the independent variables are monthly salary(x_1), work incentives(x_2), allowances(x_3) , limited occupational risk (x_4) and promotion (x_5). The MRA was used to identify the most important factors influencing health workers out-migration.

The sampling strategy aligns with practices in similar studies on workforce migration, where purposive sampling allows the identification of respondents with direct experience or intent to migrate (Dovlo, 2004).

3. RESULTS AND DISCUSSIONS

Level of Income

Table 1 presents information on income level of the respondents. The result shows that majority of the respondents (30,0%) earned more than N150,000.00 A good number of the respondents representing 24.6% earned N121,000.00- N150,000.00 monthly, while 22.6% and 10,0% earned between N91,000.00- N121,000.00 and N61,000.00- N90,000.00 monthly respectively. About 9.3% and 3.3% earned N31, 000.00-N60, 000.00 and less than N30, 000.00 monthly respectively. The differences in income may be attributed to the variation in the nature of occupation engaged by the people. Indeed, the study shows that the health workers earned <N30, 000.00 and above with a good number of them earning above N150, 000.00 monthly income.

Table 1: Distributions According to Job/Professions and estimated Monthly Income of Respondents

Job/Profession	Frequency	Percentage
Doctor	23	15.3
Nurse	37	24.6
Laboratory Technician	27	18.0
Medical Record Officer	25	16.6
Pharmacist	8	5,3
Ward Attendant	15	10.0
Environmental Health Officer	9	6.0
Others Specify	6	4.0
Total	150	100.00
Estimated Monthly Income		
<30,000.00	5	3.3
N31,000.00-N60,000.00	14	9.3
N61,000.00-N90,000.00	15	10.0
N91,000.00-N120,000.00	34	22.6
N121,000.00-N150,000.00	37	24.6
>N150,000.00	45	30.0
Total	150	100.0

Source: Field Survey, 2022

The findings reveal a complex interplay between broader migration dynamics and the specific trend of health workers leaving Lokoja. General migration pattern indicates that Lokoja remains a key transit and settlement hub in North Central Nigeria due to its geographical location and proximity to the Federal Capital Territory (Awases, Gbary, Nyoni, and Chatora, 2004). The city has witnessed an influx of migrants seeking economic opportunities, administrative employment and access to education (Dovlo, 2004). However, while general migration into Lokoja continues, a concerning reverse trend is observed within the health sector. Data from the field indicate that 62% of the health professionals surveyed have either migrated previously or are considering migrating, primarily to better-equipped facilities in their destination. This outflow is largely attributed to poor working conditions, limited career progression, inadequate remuneration and a lack of infrastructure (Federal Ministry of Health, 2020).

Level Awareness of Migrated Health Workers and Intentions of Respondents

Table 2 presents data on the awareness of health workers and intentions of respondents. It shows that 97.3% of the respondents are aware of health workers who have migrated to other countries for better life and 100.0% are considering leaving the country if things do not improve. For those who have migrated, 44.6% have migrated for less than 5 years, while 52.0% have left Nigeria for other countries for a period of 6-10 years now. Only a few respondents representing 3.3% are aware of health workers who have migrated for over 10 years. This result indicates that health workers out-migration has been an old phenomenon and more recently aggravated by government policies on the economy and poor working conditions, the result also suggests that health workers have the intention of emigrating for better opportunities. The results agrees with the work of Adetayo, (2010) who cautioned that if health workers migration syndrome is not

addressed promptly, it will continue to hinder the development and delivery of medical services in Nigeria.

Table 2: Distributions by Awareness of Migrated Health Workers and Intentions of Respondents

Are you aware of any health worker who has migrated?	Frequency	Percentage
Yes	146	97.3
No	4	2.6
Total	**150**	**100.0**
Do you have any intention of migrating?		
Yes	148	99.0
No	2	1.0
Total	**150**	**100.0**
What is the number of years the health worker migrated?		
Less than 5 years	67	44.6
6-10 years	78	52.0
Above 11 years	5	3.3
Total	**150**	**100.0**

Source: Field Survey, 2022

Further analysis shows that this out-migration is not random. Interviews with respondents that many health professionals view migration as a rational response to structural weaknesses in Lokoja's health system (Adetoye, 2010). The migration trend has been particularly pronounced among mid-career professionals, many of whom cited burnout, understaffing and lack of training opportunities as key push factors. There is also evidence that the out-migration of health workers is having a direct impact on healthcare delivery in Lokoja. Several health facilities reported increased patient-to-providers ratios and delays in service delivery due to staffing shortages. In particular, rural health posts within Lokoja's outskirts are disproportionately affected, as younger professionals tend to relocate to urban centres with more amenities or abroad (Adetoye, 2010). This situation reflects broader national concerns over brain drain in the Nigerian health sector. However, the findings from Lokoja presents a localized dimension of the problem, where internal migration intersects with national and international mobility patterns to create a critical shortfall in healthcare personnel (World Health Organization, 2020). .

Factors Influencing Out-Migration of Health Workers by Respondents

Table 3 presents results on the factors influencing out-migration of health workers in the study area. The result shows that 52.0% of the respondents are of the opinion that COVID-19 outbreak is one of the major factors that significantly influence out-migration of health workers in the study area, followed by work incentives with 46.0% of the respondents and limited occupational risk at destination country constitutes 54.0% respondents. However, these are factors that significantly influence health workers out-migration in the study area. Other factors are ethnic discrimination which has 45.3% respondents, monthly salary constitute 44.6% respondents, work incentives made up of 40.0% respondents also increase in allowances constitutes 34.0%

proportion of the respondents. This agrees with the studies of Bludau, (2021) who opined that theoretical studies have shown that factors influencing migration usually operate around push and pull factors. Despite the limitations of push-pull analysis, when used in context, it is still a useful lens through which to understand migrant's motivations.

Table 3: Distribution According to Factors Influencing Out-Migration of Health Workers

Factors	Very high	High	Undecided	Low	Very Low
COVID-19 Outbreak	78(52.0%)	43(28.6%)	13(8.6%)	14(9.3%)	2(1.3%)
Monthly Salary	56(37.3%)	67(44.6%)	8(5.3%)	15(10.0%)	4(2.6%)
Work Incentives	69(46.0%)	60(40.0%)	15(10.0%)	5(3.3%)	1(0.6%)
Limited Occupational Risk at Destination	81(54.0%)	45(30.0%)	10(6.6%)	6(4.0%)	6(4.0%)
Promotion	23(15.3%)	25(16.6%)	26(17.3%)	34(22.6%)	42(28.0%)
Allowances	43(28.6%)	51(34.0%)	32(21.3%)	15(10.0%)	9(6.0%)
Ethnic Discrimination	63(42.0%)	68(45.3%)	12(8.0%)	5(3.3%)	2(1.3%)

Source: Field Survey, 2022

Findings from this study are consistent with national trends in Nigeria, where poor working conditions, inadequate infrastructure, and professional dissatisfaction are key drivers of health worker out-migration (Oyeyemi and Abidoye, 2019; Federal Ministry of Health, 2020). The preference for relocation to Abuja, Lagos, or overseas destinations aligns with broader concerns about brain drain in the Nigerian healthcare system (Obi and Agbo, 2021). Additionally, the World Health Organization (2020) has emphasized the importance of investing in health workforce education, working conditions, and career development factors that are currently lacking in many Lokoja-based institutions. These findings underscore the urgency of targeted interventions to retain qualified personnel.

Level of Satisfactions of Health care Delivery of Respondents

Respondents were asked to rate their level of satisfaction of quality of medical personnel, laboratories/ equipment, functional infrastructural facilities, Doctor-patients ratio and staff motivation as well as hospital administration/ Governance. Table 4 shows that 22.6% of the respondents were very satisfied with the quality of medical personnel in the study area. While 15.3% were satisfied, 45.3% were not satisfied and 16.6% were undecided. However, with respect to doctor-patient ratio, 11.3% were very satisfied, 16.0% were satisfied, 70.6% were not satisfied and 2.0% were undecided. The result on the level of satisfaction with staff motivation shows that 8.6% were very satisfied, 22.6% were satisfied, 60.0% were not satisfied and 8.0% were undecided. The table also shows that 36.0% were very satisfied with the governance/administration of the hospital, 28.6% were satisfied, 28.0% were not satisfied and 7,3% were undecided. From the result, it can be inferred that the number of health workers who are not satisfied with Doctor-patient ratio 70.6% and staff motivation 60,0% is quite high and this is likely to cause the migration of health workers to places where they are well motivated and not overburdened with workload. This agrees with the work of Oyeyemi and Abidoye

(2019), low job satisfaction due to poor pay and benefits remains a critical driver of brain drain in Nigeria's health sector.

Table 4: Distribution of Respondents on the Level of Satisfactions on the availability of the followings in the healthcare system

Factors	Very satisfied	Satisfied	Not satisfied	Undecided
Quality of medical personnel	34(22.6%)	23(15.3%)	68(45.3%)	25(16.6%)
Laboratories/equipment	45(30.0%)	33(22.0%)	59(39.3%)	13(8.8%)
Functional infrastructural facilities	29(19.3%)	56(37.3%)	40(26.6%)	25(16.6%)
Doctor-patient ratio	17(11.3%)	24(16.0%)	106(70.6%)	3(2.0%)
Staff motivation	13(8.6%)	34(22.6%)	91(60.0%)	12(8.0%)
Hospital administration/governance	54(36.0%)	43(28.6%)	42(28.0%)	11(7.3%)
Rapid promotion	45(30.0%)	33(22.0%)	59(39.3%)	13(8.8%)

Source: Field Survey, 2022

Effects of Health Workers Out-Migration on Healthcare Delivery

Table 5 presents results on the effects of health workers out-migration on the healthcare delivery system in the study area. The results show that 61.3% of highly skilled health workers were lost or migrated. Also 60.0% very high impact was reported on longer waiting time in the health care system as a result health workers out-migration has also caused very high negative impact on emergency cases not being attended to on time. It equally has a high negative impact on the high ratio of patients to doctors in the study area. However, it has a low impact on the shortage of medical personnel. This low impact on shortage of medical personnel may be connected with the fact that the problem of health workers deficits has been perennial of which many respondents do not link to health workers out-migration but limited production (with respect to training and graduation). This agrees with the work of Adeloye et al. (2017) which stated that Nigeria's health system suffers from a severe shortage of professionals due to brain drain, especially among mid-level and highly specialized personnel.

Table 5: Distribution by Effects of the following Factors on Healthcare Delivery

Factors	Very high	High	Undecided	Low	Very Low
Loss of highly skilled health workers	92(61.3%)	23(15.3%)	27(18.0%)	5(3.3%)	3(2.0%)
Shortage of medical personnel	51(34.0%)	59(39.3%)	21(14.0%)	15(10.0%)	4(2.6%)
Longer waiting time	90(60.0%)	49(32.6%)	5(3.3%)	2(1.3%)	4(2.6%)
High ratio of patients to doctors	53(35.0%)	62(41.3%)	20(13.3%)	7(4.6%)	8(5.3%)
Emergency cases not being attended to on time	88(58.6%)	51(34.0%)	8(5.3%)	1(0.6%)	2(1.3%)

Source: Field Survey, 2022

Attempts were made to determine if health workers out-migration is influenced by monthly salaries, work incentives, allowances, limited occupation risk and rapid promotion. This hypothesis was tested using stepwise multiple regression analysis. The result obtained is shown in table 6 and it implied that among the 5 factors used or entered into the model, only monthly salary and work incentives were retained and significantly explained health workers out-migration. The result further revealed that monthly salary ($t = 3.083$, $p<0.05$) and work incentives ($t=2.543$, $p<0.05$) exerted significant influence on health workers out-migration. This goes to show that monthly salary and work incentives are potent factors that substantially explain the out-migration of health workers in the study area. An important explanation for this result may be the current salary of health workers in Nigeria that falls short of the African average or international standard. Many health workers, especially Doctors and nurses, as a result, have no option than to migrate to other countries with better monthly salaries.

In addition, the positive regression signs for the two regression coefficients indicate increase in the health workers out-migration with the increase in monthly salary and work incentives at destination countries. This means that these two variables positively support the migration of health workers. A look at the standardized regression coefficients revealed that each of the retained variables contributes differently to out-migration of health workers with monthly salary contributing more to the phenomenon of health workers out-migration than work incentives. This is because the former variable explains 42.9% of the changes in health workers-outmigration, while the latter variable explains 35.3% of the changes in health workers out-migration. The result, therefore based on the regression weights, identifies monthly salary as a significant factor that substantially contributes to the out-migration of health workers in the study area.

Table 6: Distribution by Summary of Stepwise Multiple Regression

Predictor Variables	Coefficient		
	B	B	t-value
Monthly Salary	260.71	0.429	3.086
Work incentives	394.63	0.353	2.543
Test results			
F-Value	10.307*		
R	0.614		
R^2	0.0377		
Constant	-6442.24		

*Significant at 5% significance level
Source: Field Survey, 2022

4. Conclusion

This study contributes to the growing literature on the health workforce crisis in sub-Saharan Africa, where inequitable distribution and retention challenges persist. It also highlights how localized migration patterns in Lokoja reflect systemic issues identified in national policy documents (Federal Ministry of Health, 2020). The findings of this study have established the fact that the migration of health workers is very high in Federal Medical Centre, with serious negative impact on the delivery of healthcare.

5. Recommendations

The findings suggested that the general health workers population is aware that there is high out-migration of health workers and those left behind are also willing and ready to migrate. Furthermore, based on the significant influence of monthly salary and work incentives on out-migration of health workers in this study, government policies particularly targeting wage increase and improved working conditions are essential for health workers retention both in the urban and rural areas. Hopefully, by increasing wages via improvement in monthly salary and enhancing the working conditions of the workforce in the health system, particularly in Federal Medical Center's, optimistic gains will be made and the current brain drain in the healthcare system would be reversed. The study recommends upward review of salaries and allowances of health workers such as hazard allowance, responsibility allowance and proper placement of medical personnel as at when due.

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