

An Assessment of Prevalence of HIV/AIDS in Chanchaga Local Government from 2018 to 2022: Niger State, Nigeria

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Abstract: The Research was aimed at determining the prevalence of HIV/AIDS cases among the population of Chanchaga local government area of Niger State from 2018-2022 as well as determining factors contributing to the prevalence of cases of the disease in the years under review and review literature on the HIV/AIDS taking into cognizes Age, Gender and Year in which information on the disease was documented. Research Purpose: The purpose of this research were mainly to ascertain the HIV/AIDS cases recorded in the General Hospital Minna mainly from Chanchaga Local government Area with the view to understand disease trend and the epidemiology of the infectious among population of Chanchaga community, consequently this development were be a yardstick to proffer public health intervention in reducing the morbidity as well as mortality among the population and the existing HIV/AIDS patients were advised on adequate dietary intake, medication as well exercise to prolong their life. Methodology: The methods the researcher employed was cross-sectional designed and secondary data from hospital records of HIV/AIDS patients as well as literature review of HIV/AIDS cases from World Health Organization, Nigeria Agency for Control of AIDS United Nations Agency for the Control of AIDS. etc. Results: The study was based on Secondary data obtained through the records of HIV/AIDS cases in General Hospital Minna Chanchaga however the results reveal the prevalence of HIV/AIDS from 2018 to 2022 to be at 2,403 cases with more than 80% of the case seen in the age group range of 20-40 years. The present study shows that young women are much more susceptible to HIV/AIDS than young men as they have highest (70%) prevalence through the years. It also indicated a clear decrease of the prevalence from 2019 – 2022 with 2019 having the highest prevalence.

Keywords: HIV/AIDS Prevalence, Chanchaga Local Government, Niger State, Nigeria

1. Introduction

The two first index case of HIV was uncovered in the year 1985 in Nigeria and reported in 1986 in the then capital city of Nigeria, which was a young female sex worker from one of the West African countries as we also the similar case of Ebola and COVID19 which were also imported into Nigeria [1].

HIV prevalence does not really means that a community has an AIDS epidemic rather shows the need for proactive measures from public health institution to ensure that the

individuals who undergo screening test shows positive result has access to antiretroviral drugs and maintain good dietary intake with the view to prolong life of the patients thereby preventing complication that may arise from poor management from the condition, as HIV and AIDS are separate conditions. Consequently, HIV incidence reveals that people have the virus but have not reached the stage of AIDS but remain alive despite the infection. With the correct medication, HIV is a manageable chronic condition, like other chronic disorders such as diabetes, heart disease, and hypertension. [2]. A population with a larger proportion of

diabetes, means more people are receiving treatment for the condition, hence a population with a larger proportion of HIV-positive people, means more people are living with HIV, among which perhaps would want to be present for medication and counseling, HIV cases from epidemiological surveillance and disease notification in a given region or country perhaps be replication of HIV infection rate of population of such country or region. [3]. Epidemiological surveillance of HIV prevalence rates revealing statistics of HIV/AIDS occurrence with insignificant figures of the prevalence of HIV/AIDS may affected efforts in combating menace of HIV among the population health and health institutions concerning fight against HIV/AIDS may relax and this development may to increase the resurgent of the cases of disease in such region. Consequently, HIV Infection are seen mostly in young adults, especially women. In many low and middle-income countries most incidences. [4].

From recent study on HIV/AIDS as it reveals that the prevalence of disease was common among young adults with over 1 million orphans were estimated to be living with the infection [5].

1.1. HIV/AIDS Incidence Among Young Adults

Young men report concurrent relationships about three times more frequently compared to young women (23% vs 8.8%), but HIV infection in young men remains lower than in young women [6]. Young individuals with many or simultaneous partners also face increased HIV risk [7]. Even though gender and other factors strongly influence this association between young male adults and female counterpart which may resulted sexual relationship and stand the risk of HIV/AIDS. [8]

However, several neighboring countries to Nigeria have experienced drops in their incidence rate from 2001-2010 of at least 25%. Epidemiological surveillance report from Nigerian health institution has showed that the prevalence of HIV/AIDS has been estimated be around 1.4% among adults' population. [9]

In 2019 HIV/AIDS Epidemiological surveillance conducted has reveal the estimated figure which is slightly below 2 million people are living with HIV and AIDS in country. Consequently prevalence is common among population of sex workers, high-risk drug users, especially those individuals who inject drugs, prisons, truck, and trailer drivers. A recent study reveals that 2.8% of people in prisons and 9% of individuals who inject drugs live with HIV/AIDS. The ranking of countries with highest HIV/AIDS prevalence, however Nigeria happens to be among countries and this clear indication case HIV is alarming and proactive measures needed to be taken to strengthen the HIV screening and intervention to further reduce the burden of the infection in Nigeria. [10].

Previously the believe most population of Nigerians hold regarding the HIV/AIDS epidemic were of traditional and wick craft and none consider it as sexually transmitted disease and this development seriously increased the rate of transmission of the disease. [11].

The initial HIV/AIDS incidence in the country has resulted in uncertainty about the infection, HIV/AIDS was viewed by many as the disease of American homosexuals. Many individual opinions that were introduced to reduce the human population however scientists and professionals gave their own view regarding the emergence of the HIV/AIDS epidemic.

HIV/AIDS estimated figure were ranging to 2 million population in Nigeria. Consequently, infection are major public health concern with an increase in mortality and morbidity and this a threat to humanity before 2030 proffer solution should address toward finding a vaccine that will reduce the disease burden in Nigeria, "said His Excellency Muhammad Buhari, president of Nigeria stressing the need for all hands must be on the desk to increase the momentum. The proactive measure was also required to push for the last mile. [12]. By the national HIV and AIDS strategic framework (2019-2021). Over 680,000 [480 000-1.0 million] people died of HIV-related illness. [13].

In view to the address the menace of HIV/AIDS, however, ART was introduced, and the number of population of people living with HIV/AIDS to access and receive ART in all health facilities was estimated at 747,382 with a 3.0million projected population of female and male young adult to have been diagnosed with the disease in 2014. According to epidemiological surveillance and disease notification reports with regard to the prevalence of HIV/AIDS around the globe, South Africa has the highest burden of the disease which was projected to be 6.8million while Nigeria has the second largest HIV disease burden in the world with 3.2million.

1.2. HIV/AIDS Prevalence

According to Awoyemi Abayomi Awofalaa et al. [12], the epidemiological report made available by the National Agency for the Control of AIDS, 2012, in collaboration with the United States Agency for International Development, however, reveal that some state in the country are leading regarding HIV/AIDS prevalence while in some states the infection tends to be generally low, [14]. The variation in the trend of HIV/AIDS prevalence in different state in country perhaps as result of a number of factors that interplay such cultural affiliation, religion inclination socio-economic and level of education, however it obvious these factors are determinant HIV/AIDs Prevalence in states. [11].

1.3. Access to Anti-retroviral Therapy

Expand access to anti-retroviral therapy (ART) and a declining incidence of HIV infection have led to a steep fall globally in the number of adults and children dying from HIV-related causes. The estimated 680,000 [480 000-1.0 million] people dying from HIV globally in 2020 were 64% fewer than in 2004 (the peak) and 47% fewer than in 2010 in spite of a period of substantial population growth in many high-burden countries. Nevertheless, there is no room for complacency. However, commitment to public health is required to drastically reduce the morbidity and mortality

HIV/AIDS epidemic public health by 2030. [15].

2. Methodology

This section presents the research design and methodology employed by the researcher to address the objectives of the study. It begins with research design, research settings, target population, sampling and sampling techniques, research instrument, inclusion criteria, exclusion criteria, data collection procedure, and data analysis procedure.

2.1. Research Design

The study designed will be a cross-sectional descriptive study. The data were collected through hospital records of HIV/AIDS Patients. The captured information on age, gender, and year variation of the prevalence, the correlation between the years of the incidence.

2.2. Research Setting

Chanchaga is a local government area in Niger State, with headquarters in the city of Minna which is also the capital of Niger State. Chanchaga local government area falls within the Zone B senatorial district of Niger State.

The Chanchaga 346,700 Population [2022] – Projection 79.87 km² Area 4,341/km² Population Density [2022] 3.4% Annual Population Change [2006 → 2022]. The climate is Tropical Hinterland and the vegetation is Guinea savanna lies on latitude 9°38' N and Longitude 6°33' East. Minna it is about 90 km away from Bida to the south, 100km away from Suleja to the east, and about 130 km.

Hausa, Gbagyi Nupe, and Fulani languages are one of the most commonly spoken languages in Chanchaga. The average level of rainfall received in the Chanchaga Local area annually is 1209.7 (47.6in) percent while the average wind speed in the LGA is 12 km/h. LGA hosts several markets where a variety of commodities are bought and sold and these include the Minna central market among others.

2.3. Target Population

The study population includes some adults living within the Chanchaga metropolis both male and female with HIV/AIDS Positive attending General Hospital Minna. Based on the investigation carried out, a total of number female adults was 1700 and total number male adults were 703 respectively were identified in the years under review this makes a total 2403 of the patient with HIV/AID to have reported for medication and counseling within the Chanchaga Local government of Niger State.

2.4. Inclusion Criteria

The study includes Adults both men and women who are residents within the Chanchaga metropolis to have captured in the database Health Management record in General Hospital Minna.

Exclusion criteria

The study excludes all the patients whose tests reveal

Negative results for HIV/AIDs and other people who are not reported for screening within the Chanchaga metropolis.

Sample and sampling technique

A systematic sampling technique was used for this study.

3. Result

3.1. Introduction

This is chapter reveal the results of research findings of HIV/AIDS prevalence in Chanchaga Local Government Area of Niger Stare, Nigeria from 2018-2022 however it also went further to discuss the findings with references with similar research findings.

Table 1. The total prevalence of HIV in 2018.

2018	Age Group	Gender
569	0-20 = 21 (3.69%)	Female =355 (62.39%) Male = 214 (37.61%)
	20-40 = 306 (53.78%)	
	40 above = 242 (42.53%)	

Table: shows that the total prevalence of HIV in Chanchaga LGA within the year 2018 is (569) the study has shown that in 2018 the prevalence among the aged 0 -20 was 3.69% while the sample that fell within the age of 20-40 years have 53.78% and those above the age of 40 stood at 42.53% This shows that the prevalence of HIV is higher among adults, this is evident in people between the age of 0 - 40 having higher percentages. It further shows that there are more females living with HIV as of 2018 with a population of 62.39% compared to their male counterparts 37.61% of the population.

Table 2. Prevalence of HIV Cases in Chanchaga LGA in 2019.

2019	Age Group	Gender
665	0-20 = 47 (7.07%)	Female = 440 (66.17%) Male = 225 (33.83%)
	20-40 = 365 (54.73%)	
	40 above = 254 (38.2%)	

Table: shows the total prevalence of HIV cases in Chanchaga LGA within the year 2019 is (665), the study has shown that in 2019 the prevalence among the aged 0 -20 is 7.07% while the sample that falls within the age of 20-40 years have 54.73% and those above the age of 40 stood at 38.2% This shows that the prevalence of HIV is higher among adults, this is evident in people between the age of 20 – 40 above having higher percentages. It further shows that there are more females living with HIV as of 2019 with a population of 66.17% compared to their male counterparts are 33.83% of the population.

Table 3. Prevalence of HIV Cases in Chanchaga LGA in 2020.

2020	Age Group	Gender
433	0-20 = 40 (9.245%)	Female =324 (74.80%) Male =109 (25.2%)
	20-40 = 352 (81.3%)	
	40 above = 41 (9.46%)	

Table: shows that in 2020 the prevalence among the aged 0 - 20 was 9.24% while the sample that falls within the age of 20-

40 years was 81.3% and those above the age of 40 stood at 9.46% This shows that the prevalence of HIV is higher among adults this is evident in people between the age of 0 - 40 having higher percentages. It further shows that there are more females living with HIV as at 2020 with a population of 74.80% compared to their male counterparts are 25.2% of the population. However these findings compared to 2018 and 2019 respectively have shown a decline in the HIV prevalence in the Chanchaga local government and this may be due to the COVID-19 lockdown, and stay-at-home orders enforced by the state which eventually limit access to HIV tests.

Table 4. Prevalence of HIV Cases in Chanchaga LGA in 2021.

2021	Age Group	Gender
388	0-20 = 35 (9.020%)	
	20-40 = 327 (84.28%)	Female = 300 (77.32%)
	40 above = 40 (6.70%)	Male = 88 (22.68%)

Table: indicate the total prevalence of HIV case in Chanchaga LGA to be 388 in 2021, It has shown that in 2021 the prevalence among the aged 0 -20 is 9.020% while the sample that falls within the age of 20-40 years have 84.28% and those above the age of 40 stood at 6.70% This shows that the prevalence of HIV is higher among adults, this is evident in people between the age of 20 – 40 above having higher percentages. It further shows that there are more females living with HIV as of 2021 with a population of 77.32% compared to their male counterparts are 22.68% of the population.

Table 5. Prevalence of HIV Cases in Chanchaga LGA in 2022.

2022	Age Group	Gender
348	0-20 = 25 (7.2%)	
	20-40 = 308 (88.50%)	Female = 281 (80.75%)
	40 above = 15 (4.3%)	Male = 67 (19.25%)

Table: indicate the total prevalence of HIV case in Chanchaga LGA in the year 2022 to be (348), It also shows that in 2022 the prevalence among the aged 0 -20 is 7.2% while the sample that fall within the age of 20-40 years have 88.50% and those above the age of 40 stood at 4.3% This shows that the prevalence of HIV is higher among adults, this is evident in people between the age of 0 - 40 having higher percentages. It further shows that there are more females living with HIV as of 2022 with a population of 80.75% compared to their male counterparts are 19.25% of the population.

3.2. Discussion

The study reveals the prevalence of HIV in Chanchaga LGA from 2018-2022, however, the findings research reveal significant and spatial autocorrelation of the HIV/AIDS prevalence from 2018-2022. Indicating that HIV prevalence has various ways of transmission in the overall HIV prevalence index from 2018 – 2022, including unprotected sex, illiteracy, and blood transfusion.

The findings further reveal that there was high HIV prevalence in 2019 due to a lack of practice of safe sex,

unfaithful partners, and sex workers. In addition, the study indicated a decline in the prevalence of HIV/AIDS from 2019 to 2022, this resulted in proactive measures taken in health education and practicing safe sex, screening of blood of donors before transfusion, guidance and counseling.

The prevalence of HIV among young female adults is slightly higher than that of males, consequently, research has revealed that women are more prone to the disease. It's a well-established fact that women are more vulnerable than men to sexually transmitted diseases.

However young females aged 15-19 are five times more likely than men in this group to be infected with HIV, and females aged 20-24 are three times more likely than men in the same age group, this is due to the vulnerable nature of female young adults. Various reasons, though devoid of reliable research evidence, have been put forth as to why young women are more at risk than men. These include gender-specific biological factors, the tendency for younger women to have sexual relationships with older men, and the poor economic status of women.

Epidemiological and disease notification survey reports of previous findings regarding HIV/AIDS prevalence reveal that 74.1 percent of men aged 15-49 years are mindful of the infection as well as the preventive measures against the infection compared to 70.7 percent of women aged 15-49 years. [12]

The recent Epidemiological survey by National Agency for control of AIDS findings reveal data differentiate HIV prevalence by state, signifying an epidemic that is having a greater impact in certain areas of the country. The South-South zone of the country has the highest HIV prevalence, at 3.1% among adults aged 15–49 years. HIV prevalence is also high in the North Central zone (2.0%) and in the South East zone (1.9%). HIV prevalence is lower in the South West zone (1.1%), the North East zone (1.1%) and the North West zone (0.6%). [16].

In addition, the previous research indicated that 1.7 percent of female adults aged 15-49 have developed an infection, while 0.8 percent of male adults aged 15-49 have been screened to show positive means of contact with the virus. [5]

Despite the prevalence of HIV/AIDS among a population of women, the population of women who are knowledgeable about prevention measures regarding HIV/AIDS is higher among men than among women. [5]

In the other Epidemiological research findings indicates Women in poor households often have limited knowledge about the risks of HIV/AIDS. While low social education system has been linked to risky sexual behaviour and increased vulnerability of HIV; recent evidence indicates that economic inequality is a factor of HIV transmission not poverty.[17] In similar research findings results reveal that was a relatively high level of HIV/AIDS knowledge level in 2007 and 2016–2017 surveys (64.6 and 64.1%, respectively), however a decrease in HIV/AIDS knowledge trend was observed in 2011 (45.6%) in both gender in Nigeria.[18] Many research shows similarity with respect to woman and men from 40 and above are less susceptible than young adult

of female and male aged 20-30 adult have higher susceptibility to HIV/AIDS infection. HIV prevalence is 1.4% among adults aged 15–49 years, women aged 15–49 years are more than twice as likely to be living with HIV than men (1.9% versus 0.9%.) Among children aged 0–14 years, national HIV prevalence measure of 1.4%. [19] However viral suppression among the population living with HIV/AIDS are aged 15–49 years which stands at 42.3%.

(45.3% among women and 34.5% among men). When people living with HIV are virally suppressed, they remain healthy and transmission of the virus is prevented. [20].

In another research similar to this research, the research finding reveal that out of a total of 495,718 people tested for HIV between 2012 and 2015, 30,450 people were positive for HIV infection thereby representing an average prevalence of 6.1% HIV infection in Plateau state. There was a steady decline in the HIV prevalence in the general population from 13.1% in 2012 to 3.2% in 2015, with the rapid decline recorded between 2013 and 2015. [21].

In another development research conducted in south African reveal that in the context of the HIV pandemic, it renders young women even more vulnerable to HIV infection and further limits their ability to protect themselves. The overall power imbalances between men and women, at both societal and individual relationship levels, have their roots in adolescence [22] numerous research has indicated, there is a strong association between poverty and ill health—wealthier countries and wealthier individuals enjoy better health as measured by a variety of indicators such as life expectancy or incidence of waterborne diseases. Many researchers have had the same expectation about AIDS, which has often been described as a “disease of poverty” [23].

4. Conclusion

The findings reveal a certain increase as well as a decline in the rate of population contracting infections in the region from 2018-2022, the statistical data further reveal females are at risk of contracting infections than males which is also in line with the recent release by United Nation Joint on HIV/AIDS on the prevalence of HIV in Nigeria, even though stringent measures have been taken by National Action for Care of AIDS (NACA) to reduce HIV/AIDS mortality and morbidity as well as the burden in the country.

Accurate, effective testing kits need to be made available at Local, State, and federal healthcare hospitals with the view to effectively containing the spread of infection at the local government level as well as the state.

5. Recommendation

- 1) Government and non-governmental organizations should support in providing essential prevention and treatment modalities.
- 2) There is a need for communities' diagnosis and mobilization on the necessity for periodic HIV screening among susceptible groups with the view to

ensure early detection and diagnosis of the disease as well as prevention.

- 3) Government or non-governmental organizations should ensure the provision of ARV drugs efficiently, and screening kits.
- 4) The government should also enhance the national HIV surveillance system.
- 5) Enlightening the people about the risks and dangers of the disease through health education guidance and counseling.

Authors Contribution

Jamil Hassan Abdulkareem Developed the topic, gathered Literature, and developed the manuscript

Hafsat Abdulkarim: Review the work and make some addition

Fatima. y. Aliyu: went to the field and collected data on HIV Patient

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Conflicts of Interest

The authors declare that they have no competing interests.

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