Research Article

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Fear of Adverse Drug Reactions (ADRs) to HAART among Adult HIV/AIDS Patients in FMC, Makurdi, North Central, Nigeria

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Abstract: Aim and Objective: To evaluate the fear of ADRs to HAART among adult HIV patients who enrolled in free HIV care in Makurdi, Northcentral, Nigeria. **Methodology:** The study was conducted among adult naive HIV-positive patients attending HIV clinic at Federal Medical Centre (FMC), Makurdi, Northcentral, Nigeria. We employed structured questionnaires and records from patients' folders and databases to obtain appropriate information (gathered by experts who were key-informant interviewers in conjunction with trained HIV counselors) about the various types of fears exhibited by adult HIV patients at the initiation of ART. Study participants were drawn from the population of People Living with HIV/AIDS (PLWHA) in Makurdi and its environs using 150 recruited patients. **Results:** Of the 150 respondents who participated in the study, forty (40) were males (M) and one hundred and ten (110) were females (F); ratio1M/2.75F. The majority of the respondents were in the low socio-economic class (62%). While 31.3% of the respondents stopped at secondary school level, 33.3% of them had post-secondary education. Fear ADRs to HAART was reported by 19(12.67%) patients. This was only superseded by fears related to both the direct and indirect cost of treatment, majorly the fear of not having enough money to maintain self while on ARVs, 39 (26%) and the fear of stigmatization and the psychological trauma accompanying this illness, is being expressed by HIV-positive patients. This could be a major barrier to enrolment into free HIV care services among PLWHA. Further studies, therefore, may be needed in this area to ascertain the contribution of fear of ADRs to HAART as barrier to enrolment. Health care providers (HCPs) should help allay the fear of ADRs to HAART among PLWHA to achieve optimum enrolment into free HIV/AIDS care in Makurdi.

Keywords: Anti-retroviral Drugs, People living with HIV/AIDS (PLWHA), Clients Fear, HIV Patients, Barriers, Middle Belt

1. Introduction

For many years, the possibility of treating viral infections such as Human Immunodeficiency Virus (HIV) infection with drugs appeared remote because viruses enter the host and make use of the host enzymes and constituents. A drug that would block viral reproduction also was thought to be toxic for the host. However, inhibitors of virusspecific enzymes and life cycle processes have now been discovered, and several drugs are used therapeutically (Bertram and Anthony, 2015). HIV infection is one of the greatest health and developmental challenges globally since the beginning of the pandemic in 1981 in the United State of America (USA) (Becker, 2004). There has been an increase in the prevalence of the disease. Globally, about 38 million people are living with HIV and 690 000 people died from AIDS-related illnesses and 1.7million people were newly infected in 2019 (WHO, 2020). Treatment of HIV infection was a major public health concern until the discovery and introduction of anti-retroviral drugs (ARVs) for treating HIV/AIDS patients in the 1990s. This has brought hope to the affected people, reducing mortality, and improving the quality of life of people living with HIV/AIDS (PLWHA) (WHO, 2002).

A new global effort has meant that the number of people receiving HIV treatment has increased dramatically in recent years, particularly in resource-poor countries. However, much still need to be done to reach the UNAIDS' 95-95-95 targets of 2030 for prevention and treatment (WHO, 2020). For instance, only 72.2% of PLWHA, representing 26million, worldwide were currently accessing antiretroviral therapy as of 2020(WHO, 2020). To increase the current number of PLWHA accessing ARVs, emphasis should be laid on the need for increased uptake of free HIV care after diagnosis.

All HIV-positive persons need to access care and preventive interventions on time (Felix and Ceolim, 2012; UNAIDS, 2014; Shiana *et al.*, 2014; UNAIDS, 2018) and to prevent HIV transmission to partners and morbidity and mortality (WHO, 2002; Rabkin *et al.*, 2002; FMoH, 2016). Accessing free HIV care is still low in developing countries like Nigeria due to some perceived fears that serve as barriers to enrollment. Fear of ADRs to ARV has been reported as being among barriers to enrollment (Gertrude *et al*, 2013).

ADR is a response that is noxious and unintended, and which occurs at doses normally used in humans

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for the prophylaxis, diagnosis, or therapy of disease, or modification of physiological function (WHO, 2013). Studies have shown that ADRs are single commonest reasons why HIV patients do not adhere to their medications (Charles et al., 2006 and Lut et al., 2012). Apart from a study by Gertrude and his colleagues showing that fear of ADRs to HIV medications could serve as barrier to enrollment into HIV care (Gertrude et al., 2013), there are not many studies done yet, especially in this part of the world, to evaluate the contribution of fear of ADRs to HAART as barriers to enrolment into free HIV care. It is therefore necessary to undertake a study on fear of ADRs to HAART in Makurdi, Northcentral, Nigeria which is considered as part of the 'hot zone' for HIV/AIDS. Moreover, this is the first study that tends to evaluate the impact of fear of HAARTassociated ADRs on HIV patients' enrollment in Benue State despite the high prevalence of HIV/AIDS in Benue State, Nigeria.

2. Materials and Methods

2.1 Study Area

Benue State lies within the lower river Benue trough in the middle belt region of Nigeria. Its geographic coordinates are longitude 7° 47' and 10° 0' East. Latitude 6° 25' and 8° 8' North; Benue occupies a landmass of 34,059 square kilometers. Makurdi, the state capital is divided by a river called river Benue into north and south banks. In 2007, Makurdi had an estimated population of 500,797(NPC, 2006).

2.2. Study Design

This was a retrospective cohort study conducted at Federal Medical Centre (FMC), Makurdi, North Central, Nigeria. We used clinical records of the patients combined with structured questionnaires to extract the biodata of the respondents and the various types of fears, especially fear of ADRs to ARV, exhibited by the HIV-positive patients at the initiation of ART.

2.3. Study Setting and Participants

Study participants were drawn from the population of treatment naive adult HIV-positive patients in Makurdi and its environs. The data of people attending the HIV Counselling and testing clinic anchored by Harvard School of Public Health through Aids Initiative Programme (APIN) in conjunction with FMC, Makurdi as well as those obtained via well-structured questionnaire were captured and analyzed. All the audience include treatment naive adult HIV-positive individuals who accepted their HIV status, received post-test counseling and education on the need to enroll for HIV care immediately, and were referred to the APIN unit based on their meeting days on the weekly basis. However, these patients delayed enrolment due to the reasons which this study tends to investigate.

2.4 Data Collection and Sampling Strategy

Adult HIV patients who enrolled between January to October 2019 and volunteered to participate were included in the study. Patients' clinical records were examined to find out the various documented type of fears exhibited among these patients at the initiation of ART. Patients were also interviewed on the various types of fears they had as they relate to the illness or ARV directly or indirectly.

2.5 Data Analysis

The data were analyzed using descriptive statistics. Findings were presented in form of pie charts, bar graphs, frequency tables, and percentages.

2.6 Ethical Considerations

Approval for the study was obtained after information regarding the study was explained to the FMC management for participation in the study was gotten following the defense before the approval by the ethical committee of the hospital (ethical reference no: FMH/FMC/MED.108/VOL.I/X). All study participants were informed of study procedures, risks, and benefits and provided written consent/assent for enrolment. Research assistants were well trained in the conduct of qualitative data collection and the ethical issues in human research. Participants received unique study numbers and containing personal identifiers. data sets Participants were assured of confidentiality, and each interview was conducted in private.

3. Results

3.1. Respondents' Characteristics

A total of 150 HIV-positive participants who developed various types of fear at the commencement of ART were contacted and completed the interviews.



Figure 2: Sex of the Clients Who Attend the Clinics



Figure 3: Age of the Clients Who Attend the Clinics



Figure 4: Weight of the Clients on Last Visit (kg)

Height (cm)	Male	%	Female	%	Frequency	%
1.20 - 1.29	0	0	1	0.9	1	0.7
1.30 - 1.39	0	0	1	0.9	1	0.7
1.40 - 1.49	2	5.0	8	7.2	10	6.7
1.50-1.59	3	7.5	20	182	23	15.3
1.60-1.69	10	25.0	56	50.9	66	44.0
1.70 - 1.79	22	55	21	19.1	43	28.7
1.80 - 1.89	2	5.0	2	1.8	4	2.7
1.90 - 1.99	1	2.5	1	0.9	2	1.3
TOTAL	40	100	110	100	150	100

Table 1: Height of the Clients

Table 2: Marital Status of the Clients

Marital status (adults)	Frequency	Percentage (%)	
Married	60	40.0	
Single	71	47.3	
Separated	13	8.7	
Widowed	6	4.0	
Total	150	100	



Religious Participation	Male (%)	Female (%)	Frequency (%)	
Christian	39 (97.5)	108 (98.2)	147 (98.0)	
Muslim	1 (2.5)	2 (1.8)	3 (2.0)	
Total	40 (100)	110 (100)	150(100)	





Figure 7: Different Types of Fears Expressed by HIV Positive Patients

4. Discussion

This study tends to investigate the various types of fears, especially the fear of ADRs to HAART, exhibited by adult HIV-positive Makurdi. The study revealed different types of fear expressed by the HIV-positive patients which could prevent them (barriers) from enrolling in the free HIV care. Each of these fears may serve as a barrier to enrolment are highlighted in figure (7) above.

The fear of developing ADRs to the HAART was exhibited by 19 (12.7%) comprising of 3 (2.0%) males and 16 (10.7%) females. A previous study by Gertrude et al., (2013) and Powell-Cope et al., (2003) showed that fear of HIV medications forms part of the catalog of fears serving as barriers to enrolment into free HIV care services among HIV positive patients. Others include fear of stigma or the negative consequences of HIV status disclosure, lack of support from the male partner, barriers including the economic cost of transportation to the hospital where they need to pick their drugs, long clinic waiting time, distance to the clinic, and inadequate respect by clinic staff.

Also, evidence showed that up to 25% of patients discontinue their initial HAART regimen because of toxic effects (Bhuvana, Hema and Sangeetha, 2014). The low turnout of men attending the HIV care service in the study may be because men cannot endure certain stress from medical attention (long clinic waiting time, distance to the clinic, and inadequate respect by clinic staff) unlike women.

HIV-infected persons are always afraid of stigmatization in their communities. From the current study, 9 (6.0%) HIV-positive females were afraid of notifying their husbands while 3 (2.0%) HIV-positive males were afraid of notifying their wives. Similarly, 9 (6.0%) males and 19(12.7%) females were afraid of telling their parents. All these results from fear of stigmatization. The study is consistent with the previous findings by Gertrude *et al.* (2013) which showed that stigma was manifested as expressions of fear of being seen by other people at the HIV clinic, hence, inadvertently disclosing their HIV status. According to him, participants anticipated disrespect, ill-treatment, or social isolation by their community or peers if

known to be HIV infected. Entry into HIV care was also associated with fear of exclusion from participation in community social and political events or falling out with a social or peer group. Other scholars who are of similar opinions include Sayles et al., (2009); Beer et al., (2009); Gilbert and Walker, (2010). Stigmatization could also explain why 20 (13.3%) respondents (2 (1.3%) males and 18 (12.0%) females) were afraid of getting whom to marry because if they are seen by people and their status disclosed, there may be every tendency of being turn down in marriage, hence, the fear of getting who to marry. Furthermore, investigations from previous studies also revealed that, among ten participants (20.8%), disclosure of one's positive HIV status and entry into HIV care was linked to negative consequences such as loss of a sexual partner or marital dissolution and family rejection; participants also reported the fear of losing social support from caretakers if they disclosed their HIV status by entering HIV care. This affirmed the 9 (6.0%) female patients who were afraid of notifying their husbands about their HIV status (Gertrude et al., 2013; Weiss, Ramakrishna, and Somma, 2006). Moreover, the 9 (6.0%) female patients that have the fear of husband notification in the study was also in line with the findings by Tumwine and Heggenhougen, (2012) that, most HIV-positive women do not disclose their HIV status to sexual partners for fear of abandonment, violence, and accusation of bringing HIV infection into the family. Nonetheless, only three of the men had fear of notifying their wives. This result corroborates with a similar study by Bwambale et al., (2008) which showed that males are known to have low uptake of voluntary counseling and testing services.

The study showed that 13(8.7%) males and 26 (17.3%) females were afraid of money to maintain themselves while taking the medications. This included money to feed well (eat balanced diet which is necessary to combat the possible side effects of the drugs) and transport money to travel to points of picking up the medications. This fear is still there despite the mortality report by Nadkar and Bajpai, (2009) resulting from HIV, which showed that 34.1% of ART-eligible patients who did not initiate ART died within six months. Gertrude et al., (2013) and Powell-Cope et al. (2003) also reported similar findings in their study where it was observed that economic barriers including the cost of transportation to the hospital where HIV patients need to pick their drugs serve as barriers to enrolment.

The study also revealed that more females 110 (73.3%) than males 40 (26.7%) developed fear at

initiation of ART (figure 6). Females may be more afraid to disclose their status to their male partners than vice versa because of the fear of being abandoned, thrown out of the marriage, or lack of supports if their status is revealed. Other studies have also highlighted this fear, stress, and the complexities of HIV disclosure to sexual partners (Gertrude et al., 2013; Rujumba, 2012). The majority (91.3%) of the respondents that developed fears were young adults between the age of 15-44 years. Apart from the fact that the disease is more common among this set of population due to their sexual activity, some of these may still be under their parents and may not want to disclose their status to their parents for the fear of being abandoned. Hence, some may prefer not to enroll so that they would not be seen by people and reported to their parents. This research revealed a high incidence of fear among 29 (19.3%) unemployed patients, followed by 26(17.3%) salaried workers and 23(15.3%) waged laborers or casual workers (figure 4). It showed that occupation can also influence fear and enrolment into HIV care. This is justified by the earlier observation where some patients were afraid of money to maintain themselves and pay their children's school fees while taking ARVs. Hence, majority of the respondents that developed fear were the unemployed. The results from the study which showed that 33.1% of the patients attained secondary education, 33.3% patients attained postsecondary education, and 26.7% patients had never been to school (figure 5) have more and attest to the fact that academic knowledge does not mean that an uninformed individual will not be scared of ARV adverse reactions.

5. Conclusion and Recommendation

The present study revealed some of the common fears manifested by HIV-positive patients. The study has shown that fear of developing ADRs to ARVs, among others (fear of notifying the husband/wife or parents, money for patients to take care of themselves, and transport to where to pick the medications) was manifested by these patients. This could serve as a major barrier to enrolment into free HIV care services. Thus, further study, especially community-based study is recommended to evaluate the contribution and impact of the fear of HAART-related ADRs as a barrier to enrolment into free HIV care and services among HIV positive patients who are yet to enroll in the service. The fear of developing ADRs to HAART should be allayed among the HIV patients via proper community health education and at the point of initiation of treatment. New ARVs with minimal adverse effects should be encouraged and used by Health Care providers (HCP) for these patients. They should be deployed into the various HIV

clinics and service centers. This will increase the number of HIV patients accessing the ARVs and achieve the UNAIDS' goal of ensuring 95% of HIV-positive patients are on ARVs by 2030. Furthermore, more financial assistance should be provided by relevant governmental and nongovernmental agencies to assist PLWHA. The drugs could be made readily available to the patients in the community close to their houses or in their houses. This will reduce even stigmatization that goes with being seen by people at where they pick their drugs and the cost of transportation fare. This will improve enrolment and management of the disease.

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