

## Attitude, Perception and Antiretroviral Adherence pattern among HIV Infected Patient in Ibadan, Nigeria

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### Abstract

**Background:** Suboptimal antiretroviral adherence remains a global concern in the care for HIV infected patients. It brings about complications in the management process of the disease. This study determined the attitude, perception and antiretroviral adherence level of HIV infected patients in Ibadan, Nigeria.

**Methodology:** The study was a cross-sectional study that utilized qualitative method of data collection. Purposive sampling was used to select two tertiary hospitals while gender and age bracket was used to select 62 patients that participated in the study. Focus group discussion (FGD) guide was used to obtain information from the participants. A total of eight FGD was conducted with at least seven participants in each group. All discussions were recorded, transcribed and thematically analysed.

**Results:** Majority (77%) of the participants were females and 80% were traders by occupation. Majority of the participants expressed concerns about the duration of antiretroviral medication while majority responded positively as regards the continuity of the drug even without any symptoms of sickness. Most of the participants perceived antiretroviral medication as beneficial and suboptimal adherence as a threat to wellbeing. Perceived barriers identified in this study include fear of disclosure, distance to health facility and hospital waiting time. Majority of the participants in this study had optimal adherence.

**Conclusion:** Optimal adherence in HIV care is essential. To achieve this, it is important that patients cultivate the right attitude and perception towards antiretroviral medication. Health promotion interventions that seeks to modify and reinforce patients' attitude, perception and adherence pattern is therefore recommended.

**Keywords:** Antiretroviral, HIV, attitude, perception, adherence.

### Introduction

Ever since the index case of HIV was documented in Nigeria in 1986, the disease has continued to advance in territorial coverage affecting all demographics (gender, age and ethnicity) in the country <sup>[1]</sup>. According to the 2018 Nigeria HIV/AIDS Indicator and Impact Survey, an estimate of about 1.9 million people are living with HIV infection in Nigeria. This amount to about 1.4% of the overall population of HIV/AIDS infected patients. The report of this survey further revealed that the highest prevalence was recorded among females of age 35-39 years (3.3%) and males of age 50-54 years (2.3%) <sup>[2]</sup>.

However, various efforts have been made by different field of health sciences especially the

field of pharmacology and clinical medicine in turning HIV infection from a terminal illness into a manageable disease <sup>[3]</sup>. Antiretroviral medication has shown strong efficacy in reducing the viral load of HIV infected patients, prevents opportunistic infections and reduce the development of new viral strains. It also reduces the symptoms of HIV in an infected person and boosts the immunological functions <sup>[4]</sup>. Irrespective of the numerous advantages of antiretroviral medication, optimal adherence of  $\geq 95$  is required to achieve quality health among infected persons <sup>[5, 6]</sup>. Yet, adherence to antiretroviral medication has been reported to be inadequate with the level of adherence ranging from ranging from 27% to 80% across different studies <sup>[7]</sup>.

The global HIV care continuum stands at 79-78-86 of whom 86% are virally suppressed corresponding to viral suppression in 53% of people living with HIV <sup>[8]</sup>. This does not meet up with the 90-90-90 goal which was set to be achieved in the year 2020 <sup>[8]</sup>. Furthermore, the prevalence of virally suppressed HIV infected patients in Nigeria stands at 44.5% <sup>[2]</sup>.

Patients' attitudinal disposition and perception are important individual behavioural factors that influence antiretroviral medication adherence <sup>[9]</sup>. Several studies have been conducted to assess the attitude and perception of HIV infected patients towards antiretroviral medication. However, to the best of our knowledge very few qualitative studies have been conducted to assess these two factors as a predictor of antiretroviral medication among HIV infected patients in Nigeria. Also, this study was conducted in Ibadan located in the south west region of Nigeria with an HIV prevalence rate of 1.2% and viral load suppression of 43.1% <sup>[2]</sup>. This study was further guided by the Health Belief Model (HBM) which is a behavioural theory that is considered to be suitable for studying health behaviour <sup>[10]</sup>.

The objective of this study was to determine the attitude, perception and the level of antiretroviral medication adherence of HIV infected patients in Ibadan, Nigeria.

## **Materials and Methods**

### **Study design, study population and sampling technique**

This study was a cross-sectional study design that employed qualitative method of data collection. A Focus group discussion (FGD) guide was used to obtain information from the participants. The population for this study was HIV patients attending Adeoyo Maternity Teaching Hospital (AMTH) and St Mary Hospital, Eleta (SMH).

Purposive sampling was used to select AMTH and SMH. Gender and age brackets were used to select HIV infected patients that participated in the Focus group discussion. The participants were grouped into male and female after which the following age was used to group the participants. This includes; 18-20years, 21-34years, 35-59 years and 60 years & above. A total of eight (8) FGD was conducted during this study. Two (2) FGD was conducted with male

participants and each group had seven (7) participants. Six (6) FGD was conducted with female participants where each group had eight (8) participants.

### **Instrument development**

The FGD guide had three sections. Section A captured the socio-demographic characteristics of participants such as age, gender, level of education, religion, marital status and occupation. Section B of the instrument obtained information on the attitude of the participants towards antiretroviral medication. Under this section, the participants were asked to talk about their attitude towards the duration of drug and they were also asked to advice an HIV patient that feels better as regards the continuity of the drug. Section C of the instrument measured the perception of the participants using three (3) constructs from the Health Belief Model (HBM) which include; Perceived threat, perceived benefits and perceived barrier. The instrument developed was validated by experts in the field of public health to ensure that the variables and statements conform to the conceptual framework that guided the study.

### **Data collection and analysis**

The FGD was conducted with the help of five (5) research assistants. Each section lasted for about 35-50 minutes. A tape recorder was utilized for the interviews. Furthermore, informed consent was obtained from all FGD participants for the use of a tape recorder. The discussions were transcribed and data retrieved were thematically analysed.

### **Inclusion and exclusion criteria**

Patients enrolled for antiretroviral medication at the health facility selected for this study and the patients who have started antiretroviral medication for at least two (2) months were included in this study while patients who refused to grant consent for the study and patients who had been on antiretroviral medication for less than two (2) months were excluded in this study.

### **Ethical consideration**

Ethical approval was sought and obtained from the Babcock University Research Ethics Committee (BHUREC) and Oyo State Ethical

Review Committee before carrying out the research.

## **Results**

### **Socio-demographic characteristics**

A total of eight 8 FGD was conducted during the course of this study. Six (6) groups out of the eight (8) FGD had eight (8) participants each and they were all female while the remaining two (2) groups had seven (7) participants each and they were all male. The total number of participants for the FGD was 62 (N=62). The gender distribution of the participants was 48 (77%) female and 14 (23%) male. Majority 38 (61%) of the participants falls between the age group 35-59 years. Also, majority of the participants practice Islam as their religion. Many of the participants were married 45 (72%). As regards the participant's level of education most of the participants have finished secondary education 36 (58%) while few have finished primary education 19 (30%). Also, majority 50 (80%) of the participants were traders while very few 7 (11%) were civil servants.

### **Attitudinal disposition of HIV infected patients towards antiretroviral medication**

Majority of the participants expressed concerns about the duration of antiretroviral medication. The major concern expressed was due to the fact that the drug must be taken every day. Typical quotes include;

"it is not as if I don't know the importance of the drug, but I am worried that I will keep on taking this drug forever" (55 years old female).

"before I got to know that I have HIV, I don't take drugs, now that I am positive, I feel somehow that I have to keep taking this drug" (42 years female).

"am I not supposed to get tired of taking a drug every day of my life, thank God the size of the drug as even reduced now and I don't feel the way I use to feel before but I don't like taking drug all the time" (28 years old female).

Very few participants were not concerned about the duration of the drug. Some quotes include;

"It is not a burden, what they are doing for us here is very good. Using this drug for a life time is not a burden to me, I know it is for my good" (43 years old female).

Another participant said that

"At the beginning when I started using this drug, it use to be a burden for me, this is because I don't use drug before and I don't like taking drug but when I started taking this drug they told me it's for a life time and I don't have a choice, I have to continue using it" (36 years old female).

Furthermore, majority of the participants responded positively when they were asked to advice an HIV patient on antiretroviral medication as to whether he/she should continue the drug when he/she feels better. Here are some of the responses.

A participant said that

"There is no need to deceive ourselves, the truth is that anybody that feels well should continue using the drugs. The love for oneself is very important, if the person uses the drug well, nobody will even ask if you are sick or not. They said (health care providers) we should use it continuously; they did not say we should stop" (56 years female).

Furthermore, a 54 years old male used his personal experience to answer the question and he said in a loud voice:

"The person should continue taking the drug. This is because I have experienced it before, I stopped taking my drug for about a year so when the sickness came back again, I had to run back to the hospital".

Likewise, a 51years old female said that

"see there are no two ways about it, it is possible that the person feels better but such person must continue taking the drug. Like me now, if you see me outside you will not know that I have the disease even my friends are asking me that what are you using that is making you look good but that does not say I should stop using my drug".

Also, a 44years old female said that

"They've (health care providers) told us that the drug that will cure HIV is not yet available so even if one feels better, it is good to continue the drug. But if one stops it is possible that the sickness will come back."

### **Perception of HIV infected patients towards antiretroviral medication**

Three sub-themes were identified and used to describe the perception of the participants. The responses of the participants varied across the sub-themes. The sub-themes include; Perceived

threat (which includes perceived susceptibility and perceived severity), perceived benefits and perceived barriers.

Responses that cut across the groups as regards perceived threat revealed that, majority of the participants perceived that suboptimal adherence can lead to contracting other opportunistic infections, cause an increase in viral load, drug resistance HIV and reduce the quality of life. Elaborating on this, some of the participants averred that:

“It is possible that if one does not use this our drug properly, the person can get other infections. They (health care providers) use to tell us that TB and HIV are friends so...” (43 years old female).

“Not using this drug can create problem, I know somebody on second regimen, this our own drug is no longer working for the person” (55 years old female).

“I know that not taking this drug properly can cause so many bad things to happen. I know that my viral load will not reduce as it should if I don’t take my drug properly. Anytime I miss my drug most especially when I travel out of town, anytime I come back, the nurse use to tell me that my viral load is not reducing” (47 years old male).

“It is possible that if one does not take the drug well, it can cause other infections...It is a very serious thing because the one in the body we are still fighting it and praying for God to answer our prayers, then another one will now come again, that is a big problem” (34 years old female).

Furthermore, there was a response that stood out among the responses. The participant said:

“if this drug that we are taking should stop working, it is a big problem and I know that it is possible because so many people come here and they don’t look good, some will even be coughing, the nurse will ask them to sit somewhere and cover their mouth When I asked the nurse, she said that it is because they are not using their drug well so...”(46 years old female).

For perceived benefit of antiretroviral medication, all the respondents stated that antiretroviral medication is beneficial.

A 52 years old male said that

“I can testify that there is benefit in using this drug because I was very sick before I came here, it was when I started taking this drug that I regained myself”.

Likewise, a 41 years old female said that

“there is a great benefit in using this drug because I have spent a lot of money running up and down before I came here, but since I started the drug, I have seen a great change”.

Another participant said that

“you see, what I noticed personally is that, if I take my drug properly, I use to feel very healthy and ok, in fact, there was a time that I had an injury on my leg. When I sustained that injury, I was so worried that it will not heal up fast because of my HIV status but to my surprise, the injury did not even take time at all, everything healed up, if I take my drug properly I know that it can prevent some infection” (42 years old male).

As regards perceived barrier to antiretroviral medication adherence, majority of the participants mentioned disclosure to partner or family members and distance to the health facility as a barrier while about two-third of the respondents mentioned work schedule as a barrier. Few participants also complained about discrimination and waiting time in the hospital.

Particularly for disclosure to partner or family member, a 36 years old female participant said that

“when I got sick and I finally discovered that it was HIV, I was so sad and I decided to tell my sister, immediately she saw me from afar she shouted that what happened to me and why am I looking like someone that has HIV that is ready to die, she’s then said that I don’t even feel comfortable walking with you on the street. Since then I decided that I will not tell anybody my status”.

Also, a 34 years old female participant said that,

“The major challenge I have is from my family because I have not told them, most especially my husband, he has gone for test and his negative so I just decided to keep quiet about it”.

Another participant said that

“I have tried so many times to tell my husband but I don’t just feel comfortable, I told him to come and do general tests in the hospital but he refused so I did not tell him my status” (49-year-old female).

As regards discrimination a participant said that:

"It is this thing that I have that made my first husband send me out of the house, I don't have father and I don't have mother, the new husband that I am with now does not know that I have HIV and I don't want to tell him so that he will not send me out" (34 years old female).

The participants that mentioned distance as a barrier said that;

"Where I come from is very far and sometimes, I think of the transportation fee before coming" (36 years old female).

"I come from ilesha to this place, it is not easy for me, I face a lot of things on the road while coming..." (57 years old female).

Sample quote of a participant that mentioned work schedule as a barrier said that:

"...now I am supposed to be in my shop selling because I want to pay my daughter's school fees, but I have to come to the hospital because my drug has finished" (43 years old female).

The issue that stood out for perceived barrier was waiting time at the hospital. This was also majorly heard among the males. Some participants heard their views that the waiting time before receiving drugs is too long and not convenient. Some of them averred that;

"The time we spend here is too much, we have to come here early in the morning and before we collect drug it will be around past 11 am" (45 years old male).

"I came here yesterday, but because I came after 10 am they said (health care providers) they will not attend to me, see I am here today again I have not collected drugs" (36 years old male).

### **Self-reported antiretroviral medication adherence among HIV infected patients**

Majority of the participants said that they take their drugs regularly according to prescription, however, a significant number of participants said that they have missed some doses in the last two (2) months. Typical quotes include;

"I don't joke with my drugs, I have an alarm that will remind me every time to use it, even when I am in class, if my alarm rings, I must go and use my drug" (32 years old female).

"Taking my drug is not something difficult for me, I use it in the morning before going to work" (45 years old male).

"There is no time that I don't take my drug and before the one I have finishes, I will come to

the clinic to get another one, so I don't even finish my drug, I must have some left" (48 years old female).

"...Even if I am travelling, I usually take my drug along with me, I have this prescription nylon that I transfer the drug to so that people will not know, I even put some inside calcium bottle just to hide it from people so I use to take it anywhere I go" (37 years old female).

Some participants that miss their drug gave reasons for not adhering to the regimen. Majority of the reasons given includes work schedule, travelling without the drug and forgetfulness. Responses include;

"About my drug, it is not as if I use to forget to use it, sometimes when I travel, to remove the drug inside my bag is not convenient for me because of the people around me, so I might miss my drug around that period" (56 years old female).

"let me not lie to you, I miss my drugs sometimes, sometimes I just rush out, sometimes I forget" (48 years old male).

"When I am not around, I miss my drug, also I have changed the container of the drug so that people will not know, so sometimes I forget the drug at home" (35 years old female).

One of the participants gave a different reason for missing her drug in the last two months. She said that

"I have only missed my drug once and that is because I did not come to the hospital when I am supposed to come" (51 years old female).

### **Discussion**

This study was conducted to determine the attitudinal disposition and perception of HIV infected patients towards adherence to antiretroviral medication in Ibadan, Nigeria. The result of this study revealed that majority of the participants expressed concerns about the duration of antiretroviral medication. They were concerned that the drug has to be taken for a life time. Some patients mentioned that they get tired of taking drugs, while some averred that because they don't like taking drugs before they were diagnosed with HIV so the change in lifestyle is difficult for them to adjust. Also, some participants mentioned that they just get tired of taking the drug continuously.

The result of the attitudinal disposition of participants reported in this study is contrary to

the study conducted by Curioso et al where majority of the respondents had a positive attitude towards antiretroviral medication. Specifically, factors that influenced the level of attitude in their study was the need for compliance, faith in treatment and belief in the efficacy of the drugs <sup>[11]</sup>. Also, a study conducted by Chen et al reported that almost all the participants had positive perception towards antiretroviral medication. This result was attributed to the benefits of the drug, improvement in physical health and quality of life <sup>[12]</sup>.

Conversely, majority of the participants in this study responded positively when they were asked to advice an HIV patient on antiretroviral medication as to whether he/she should continue the drug when he/she feels better. This response could be as a result of adequate counselling from the health care providers. This is because most of the patients referred to what they were told in the hospital during the discussion. Also, the responses could also be as a result of personal experiences of the patients as some of the participants used themselves as an example.

In this study, perception towards adherence to antiretroviral medication was measured using three (3) major constructs; perceived threat (which includes; perceived susceptibility and perceived severity), perceived benefit and perceived barriers. The result showed that majority of the participants perceived suboptimal adherence as a threat to wellbeing. They expressed perceived susceptibility and severity of drug resistant HIV, opportunistic infections, an increase in viral load, and reduced quality of life. The result of our findings correlates with the study of Hornschuh et al where most of their participants perceived that non-adherence can cause viral resistance and decrease overall health <sup>[13]</sup>. More so, in our study, majority of the participants perceived antiretroviral medication to be beneficial. This may be as a result of the positively perceived threat of the participants towards suboptimal adherence to antiretroviral medication.

Furthermore, the perceived barriers to antiretroviral medication adherence expressed in this study include fear of disclosure to partner, lack of family support, discrimination, distance to the health facility, work schedule and waiting time at the hospital. These findings correlate with

the study of Curioso et al where they reported daily schedules, fear of disclosure, stigma and financial constraints as perceived barriers to optimal antiretroviral medication <sup>[11]</sup>. Also, other researchers reported lack of transport, financial barriers, stigma and disclosure as major barriers to antiretroviral medication adherence <sup>[14,15]</sup>.

Majority of the participants in our study had optimal adherence to antiretroviral medication. However, some of the participants reported that they've missed a few doses in the last two (2) months. This report could be as a result of the participants' attitudinal disposition towards the duration of antiretroviral medication and the barriers encountered. This result is in line with the study conducted by other researchers where they reported an adherence level of 78.4% <sup>[16]</sup> and 69.0% <sup>[17]</sup>.

## Conclusion

Suboptimal antiretroviral adherence is a major public health concern globally. This study revealed that patients' attitude and perception can serve as a facilitator of optimal adherence to antiretroviral medication. In this study although optimal adherence was reported among majority of the study participants, a significant number said that they have missed some doses in the last two (2) months. This result falls short of the 90-90-90 goal that was set to be achieved in the year 2020. Furthermore, this result poses a threat to the 95-95-95 goal which has been set to bring an end to the HIV/AIDS epidemic by 2030. Therefore, a suitable health promotion intervention that seeks to modify and reinforce the patients' attitude, perception and adherence pattern towards antiretroviral medication is highly recommended.

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