

IMPACT OF ANTIRETROVIRAL THERAPY AND FOOD SUPPLEMENTS ON LIFE OUTCOMES OF PEOPLE LIVING WITH HIV AND AIDS IN DELTA STATE, NIGERIA

Introduction:

Human Immunodeficiency Virus Infection has become widespread in the world. All sectors all over the world are not silent about the disease and its impact. Strategies to improve the health status and quality of life of PLWHA have been put in place. In fact, good care can greatly improve the quality and length of life of people with HIV. Care includes emotional and spiritual support for PLWHA, their families and communities. It also includes treatment for people with the virus.

In Nigeria, the Federal Government as part of its care and support strategies initiated the national Antiretroviral Drug Access programme with the goal of providing access to affordable ARV drugs to improve the health and quality of life of people living with HIV and AIDS.

This is to enable them meaningfully contribute to sustainable development of the Nation. Specifically, the programme was to provide immediate access to ARV, fully utilize the infrastructure for a coordinated care agenda and develop an environment that would support a broader access to antiretroviral across the nation through the environment for a long term collaboration between the Nigerian Government and other partners.

A report by the National Agency for the control of AIDs in 2011 (NACA, 2011) estimated that nearly a million of the estimated 3.5 million PLWHA in Nigeria are currently on active ART while a report in 2015 (NACA, 2015) showed that only about 51% of adults have access to ART, a figure expected to improve to 80%.

Good nutrition contributes to the well-being of people with HIV and AIDS at all stages of the disease and may even prolong life. Ignatavicus and Workman (2006) stated that good nutrition is needed for proper immune function. White blood cells are highly active cells that constantly shed surface proteins and need nutrients to remake these components. Immunodeficiency related to nutrition results from biologic, political, economic and cultural factors. Immunodeficiency from poor nutrition can be prevented and treated.

Malnutrition is a major cause of global immunodeficiency, seen most often in less affluent countries. Malnutrition can impair any aspect of immune function. The degree of impairment is related to the severity of malnutrition. Nutrient excess especially fats and carbohydrates also have detrimental effects on immune function. Nutritional problems are often a complex of deficiency or excess of one or more nutrients. The above facts must be built into counseling PLWHA on nutrition to prevent immunodeficiency thus enhance very good quality of life. It is therefore important to start nutritional counseling early in HIV disease and subsequently.

On the above notes, this study investigated the roles of ART and the use of food supplements in improving patients' lives in Nigeria's Niger Delta region.

Materials and Methods:

This was a descriptive cross-sectional study designed to assess the impacts of antiretroviral therapy and food supplements on life outcomes of people living with HIV and AIDS in Delta State, Nigeria.

Delta State is an oil producing state in Nigeria situated in the South-South Geo-political zone. It is made up of twenty-five Local Government Areas. It is administratively grouped into three senatorial districts namely Delta North, Delta South and Delta Central for easy administrative purposes.

Purposive sampling technique was used to recruit 513 participants from four hospitals located in the three senatorial districts (Delta North: Federal Medical Centre, Asaba and Central Hospital Agbor, Delta Central: Baptist Hospital, Eku and Delta South: Central Hospital Warri) See figure 5.

These centres recorded high population of PLWHA receiving treatment as compared to other centres in the state. Nonetheless, the eligibility criteria were met:

Eligibility Criteria:

Inclusive Criteria:

- Adults living with HIV and AIDS
- Attended ARV clinic in the selected hospitals
- PLWHA on ART or Immunopius and Scptrin and received treatment for at least six months.
- PLWHA not on ART or have not received ART for at least six months were recruited as not on treatment.
- The respondents were mentally stable, thus there was no signs and symptoms of mental illness.

Exclusion Criteria:

- Females must not be pregnant
- Children did not participate in the study
- The respondents that were not mentally stable

Questionnaires, Semi-structured interview and records were used to collect data. Section on the items were the distribution of respondents based on treatment received, respondents duration on treatment, the distribution of PLWHA health on treatment, the distribution of respondents based on food supplement and respondents overall quality of life. Validity of the instrument

was ensured through experts (Physicians, Nurses) into HIV and AIDS care. However, the World Health Organization HIV instruments (WHO QoL-HIV Instrument, 2002) used to assess the quality of life of PLWHA was developed for HIV population and has been shown to be valid in multi-cultural settings of heterogeneous social-economic strata including African Countries (Multimural, Stewart and Crowther, 2004).

Reliability was ensured through test-retest and a Cronbachs alpha (α) of 0.85 was obtained. Ethical approval was obtained from each institutions' Ethical review committees (Ministry of Health, Asaba, Federal Medical Centre, Asaba, St Francis Catholic Hospital, Okpara Inland). Participants consent was obtained by either signing or thumb printing and anonymity was protected by ensuring that no patient identifiers existed in the data collection instrument. Participant was totally voluntary. Participants were told from the beginning of the investigation that they had the right to withdraw from the research study at any time.

Results and Discussion

A large proportion of the respondents in this study (80%) were actively on antiretroviral therapy as shown in Figure 1a. Thirty of the respondents (6%) were on immunoplus and septrin while 72 respondents (14%) were not on any treatment. As shown in Figure 1b, 412 respondents (94%) on treatment affirmed that their health status had improved since the beginning of treatment. This study supported other studies that demonstrated that the introduction of combination antiretroviral therapy dramatically improved life expectancy and overall health status of PLWHA (Hsiao & Hewitt 2002; Grierson et al., 2004). Among the respondents on ART, 13 (3%) indicated fluctuating health, 9 (2%) indicated that they had not noticed any change, while 4 (1%) indicated that their health had declined since beginning treatment. One limitation of this study,

however, was that adherence was not systematically measured and as such no correlation could be drawn between the general perceived improvements in health status of patients on ART.

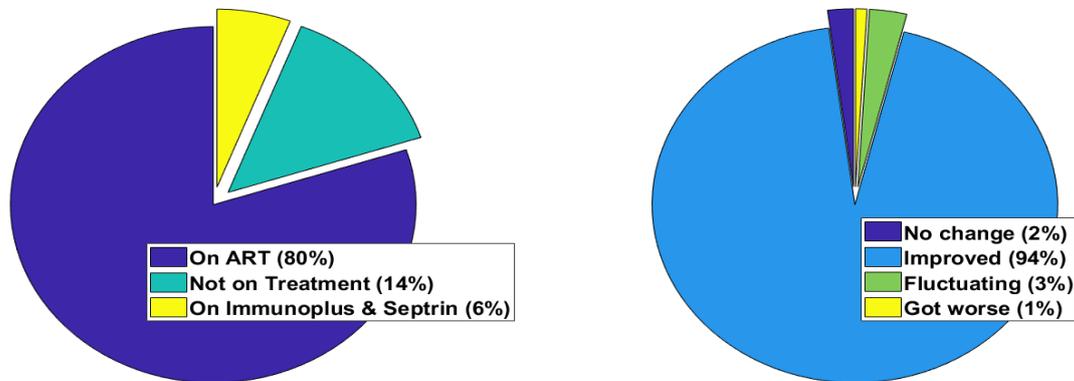


Figure 1: Respondents' treatment regimens (1a) and perceptions about their health status (1b)

HIV care is necessary to maintain health in infected individuals and has greatly been enhanced with the increase in access to ART in resource limited countries such as Nigeria. Global intervention programmes such as the US Presidential Emergency Plan for Aids Relief (PEPFAR, 2003) have greatly increased the number of Nigerians with access to ART. Antiretroviral drugs were given free to all PLWHAs in all the centres sampled in this study as confirmed by the respondents. Despite this availability, however, the proportion of respondents in this study not on active antiretroviral therapy (20%) raises public health concerns. Reasons for non-enrolment in antiretroviral therapy included stigmatization, adverse effects of drugs, as well as misinformation. Some respondents expressed the opinion that the disease is terminal whether treatment regimens are adhered to or not. The respondents on antiretroviral therapy reported the following side effects: deep sleep, deafness, anaemia, excessive weight gain, and extreme dizziness with inadequate food. A respondent in Central Hospital, Warri who was on AZT (Azidothymidine), 3TC (Lamivudine) and EFV (Efavirenz) reported sleep disturbances (bad dreams). Respondents in Baptist Hospital, Eku on D4T (Stavudine) who were

experiencing excessive sleep and excessive weight gain, reported that their drug was changed to AZT. HIV care, besides being crucial to the reduction of morbidity and mortality in infected individuals, is also indispensable in preventing the spread and progression of the disease (Dalhatu et al., 2016). Adherence to antiretroviral therapy among patients has been demonstrated to have positive measurable biological outcomes in individuals infected with the virus, having effect on the HIV RNA levels, disease progression, and CD4 lymphocyte levels (Oguntibeju, 2012). A total of 318 of the 438 respondents (73%) that were on either ART or immunoplus and septrin had been on treatment for at least 1 year (Figure 2).

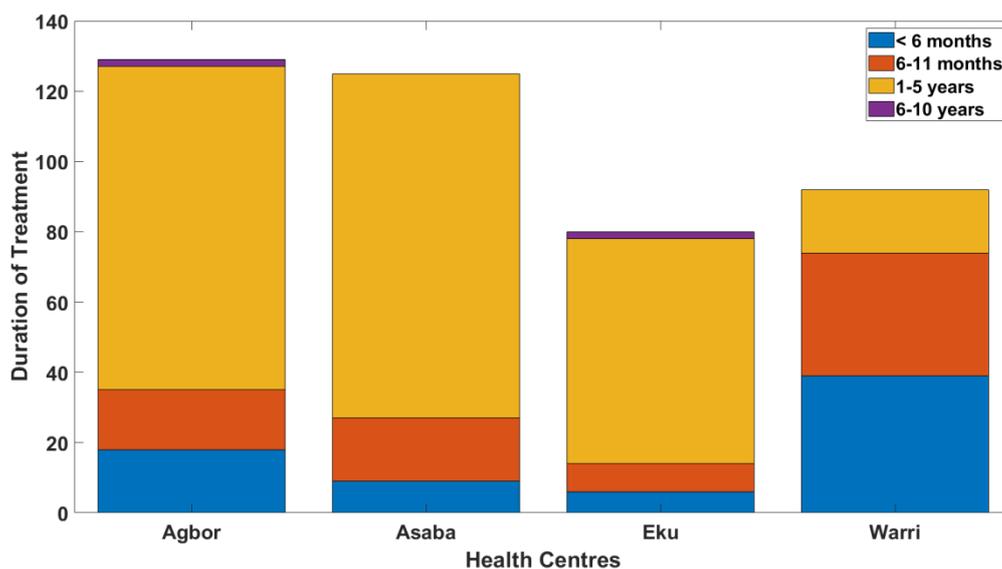


Figure 2: Duration of treatment of PLWHA.

Figure 3 shows the distribution of the respondents according to their WHO stages of disease as documented in their clinical reports. 241 respondents (47%) were in Stage 2, 134 (26%) were in Stage 1, 131 (26%) were in stage 3, and 4 (1%) were in stage 4 of the disease. The WHO clinical stage has been shown to have a significant impact on the psychological and environmental domains of health-related quality of life of PLWHA (Liping et al., 2015). More importantly, however, this index is a clear indication of the proportion of PLWHA at risk of

mortality and morbidity in Delta State, Nigeria. Over a quarter of infected individuals in this study were presented in clinical stages 3 and 4 of the disease and reflects the demand for antiretroviral medications and aggressive management and care. Still, the proportion of patients in stage 1 may be an indication of the efficacy of routine testing practices in Delta State as patients in this stage are characteristically asymptomatic.

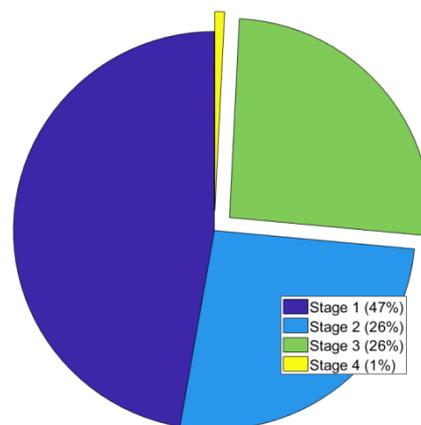


Figure 3: Respondents' clinical stage of HIV infection.

The mean scores of quality of life of PLWHA on treatment showed a statistically significant difference in all the domains except in the environmental domain (Figure 4). This finding is consistent with those of Fatiregun, Mofolorunsho, & Osagbemi (2009) who observed poor QoL scores in patients that were on ART in Kogi State, Nigeria. As observed by Ndubuka and his colleagues (Ndubuka, Lim, Van der Wal, & Ehlers, 2016), poor QoL scores in the environmental domain may be attributed to lack of social support and stigmatization, amongst others. For respondents on treatment, it was observed that the PLWHA attributed their improved health and quality of life to treatment. However, they consistently indicated the need for better adherence to treatment and strict compliance with hospital appointments. Smeltzer, Bare, Hinkle, & Cheever (2008) note that the goals of treatment included maximal

and sustained suppression of viral load, preservation of immunologic function and improved quality of life.

The PLWHA on anti-retroviral therapy or immunoplus and septrin had the highest scores in all the domains compared to those not on treatments.

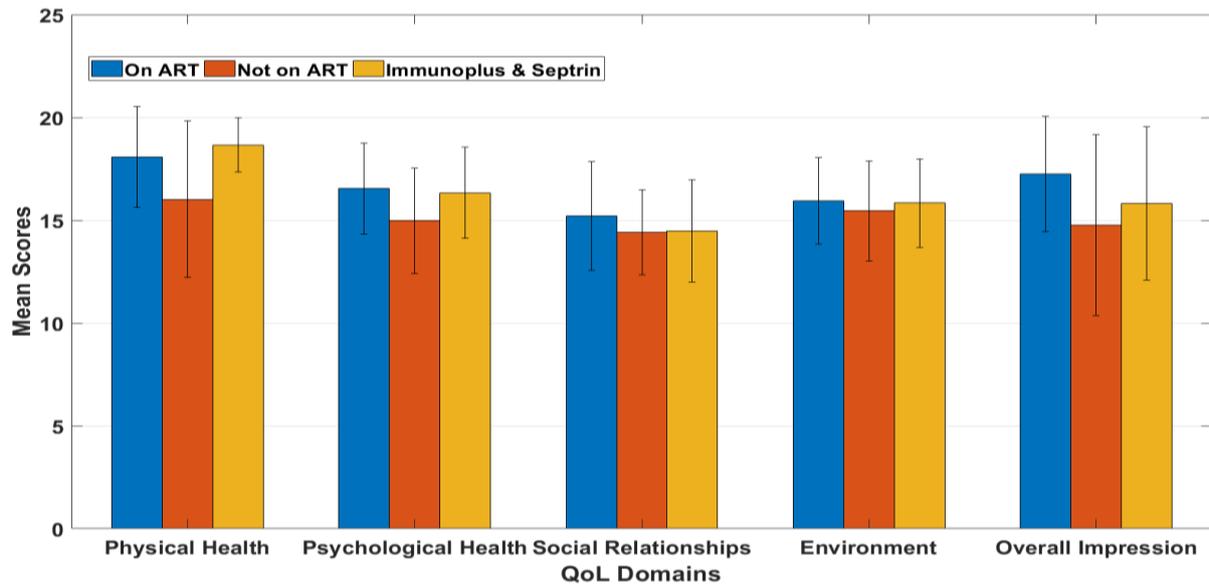


Figure 4: Impacts of treatment on Respondents' Quality of Life in different domains.

The development of ART and its continued availability has resulted in a shift in the view of PLWHA that the disease is no longer fatal but chronic and manageable and this has probably contributed to the higher QoL scores observed among patients undergoing treatment. ART-related improvement in QoL as observed in this study necessitates the advancement of measures to facilitate improved access to ART for all PLWHA.

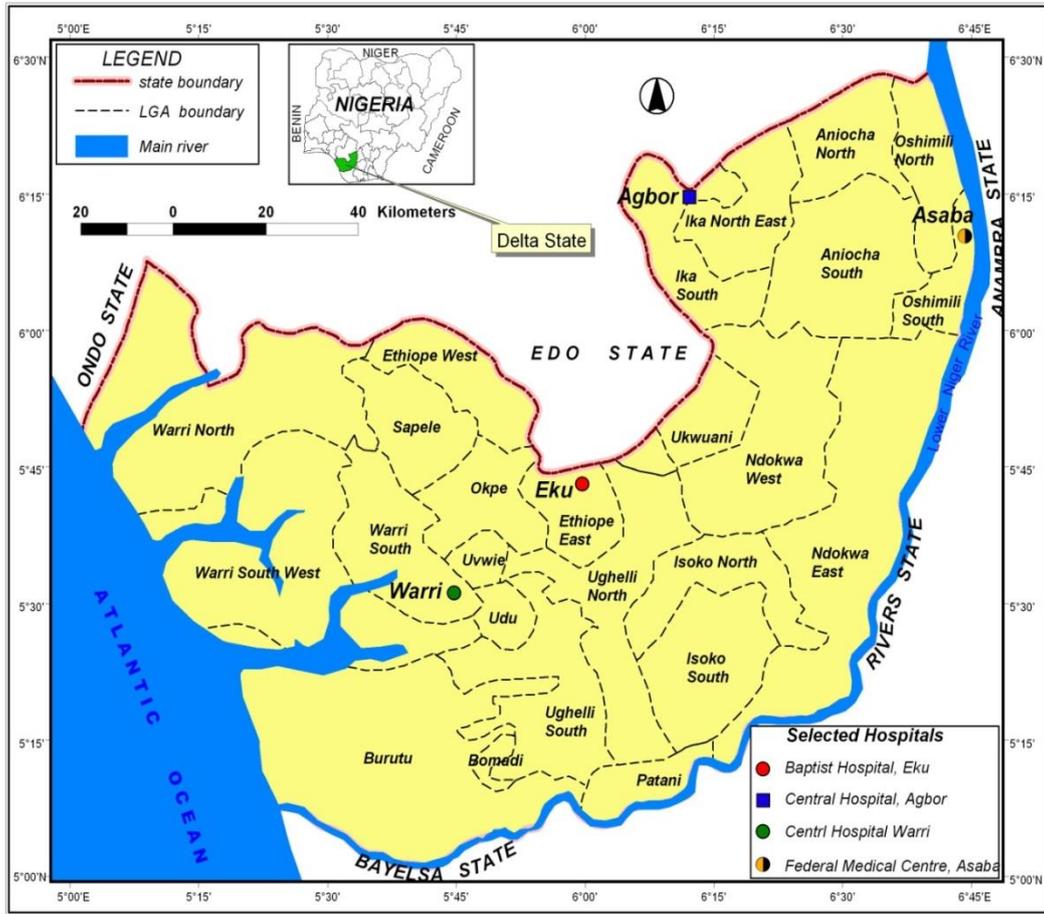


Figure 5: Map of Delta State showing selected Hospitals

SOURCE: Ministry of Lands, Survey and Urban Development, Asaba (2004)

TABLE 1: DISTRIBUTION OF RESPONDENTS BASED ON FOOD SUPPLEMENT

CHARACTERISTICS	FREQUENCY	PERCENTAGE
Are you on food supplement		
Yes	37	8.0%
No	423	92.0%
TOTAL	460	100%
Health since commencement of food supplement		
No change	-	-
Improved	37	100%
Fluctuating	-	-
Worst	-	-
TOTAL	37	100%

Table 1 showed that 8% (37) of the respondents were on food supplement. The respondents indicated improved health with food supplement. However, majority of the respondents were on drugs (Biostrath, Multivite etc.) that improve appetite. This result supported Finberg (2006) that reported a nurse at good Shepard Hospital in Siteki, Swaiziland indicated that “Food and antiretroviral therapy were 50/50 components for treating HIV, you cannot divorce them”.

Conclusion

ART has been demonstrated to provide positive biological outcomes in individuals infected with HIV. In this study, the researcher reported the positive impact of ART on the Quality of Life of people living with HIV and AIDS as measured in the psychological, physical, and social domains. It is recommended

that the focus of policy makers and health care givers should be directed at maximizing the positive effects of ART through continuous patient education and access to treatment, especially in resource-limited settings. Willingness to enroll in ART programs should also be encouraged by addressing issues of stigmatization and discrimination which have been demonstrated to also contribute negatively to patients' treatment-seeking behaviours. Side effects arising from the use of ARTs which is another factor contributing to patient refusal to enroll in treatment programs or adhere to treatment regimens can be mitigated by routine clinical assessment with the view to potentially maintain adherence with fewer undesired side effects, counselling, and general patient education on the benefits of ART.

This study also revealed that PLWHA indicated that food had great positive impact on their health when on antiretroviral therapy. There is therefore great need to address this with families of PLWHA. This should be built into counseling PLWHA and their families.

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