

RESEARCH ARTICLE

AN ASSESSMENT OF MEDICATION ADHERENCE AND RISK PERCEPTION AMONG YOUNG PEOPLE LIVING IN NIGER STATE, NIGERIA

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Manuscript Info

Manuscript History

Received: 10 January 2022

Published: March 2022

HIV, Young People, Nigeria

Key words:-

Final Accepted: 15 February 2022

RiskPerception, Medication Adherence,

Abstract

Background:Young People living with HIV (YPLHIV) enrolled in HIV treatment experience a higher rate of interruption in treatment, sub-optimal medication adherence, and greater HIV-related mortality compared with younger children or adults.This study assessed the relationship between risk perception and medication adherence among Young people aged 18 to 24 years living with HIV in Niger State, Nigeria

Methods:A cross-sectional survey was conducted in February 2022 utilizing a pretested 43-item questionnaire (Cronbach's alpha of 0.7654) among 208 randomly selected Young People Living with HIV (YPLHIV) from four facilities in Niger State, Nigeria. The data was analyzed using STATA 15.0 with significance level set at p<0.05.

Results:Results indicated that 161 (77.4 %) females and 47(22.6%) males with mean age 21.47 \pm 1.92 years participated in the study.Perception of risk of complications from poor treatment measured on a 36-point scale recorded a mean score of 15.21 \pm 13.77 and medication adherence measured on a 27-point scale similarly recorded a mean score of 14.72 \pm 8.59 representing, representing 54.5% adherence rate for the participants in the study.There was no significant difference in measures of adherence to treatment and perception of risk of poor treatment recorded between males and females.

Conclusion: The findings suggest that the medication adherence rate among YPLHIV in this study was sub-optimal and require stimulation through appropriate health promotion intervention to improve ART treatment outcomes.

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Introduction:-

Globally since the HIV pandemic began in 1981, the Joint United Nations Programme on HIV/AIDS (UNAIDS) estimates that more than 76 million people have been infected and 37.7 million people are currently living with the disease as of the end of 2020 [1]. Africa has the world's largest HIV epidemic with over two-thirds, 25.4 million Africans living with HIV in 2020 [2] [3]. Approximately 1.7 million young people aged 10 to 24 years have HIV, accounting for about 5% of all People Living with HIV [4].

Corresponding Author:- Olugbenga Asaolu Address:- Department of Public Health, Babcock University, Ilishan-Remo, Ogun State, Nigeria. Nigeria accounts for 4.7% and 7.1% of the HIV burden globally and in Africa respectively, with an estimated 1.8 million people living with HIV [5]. This is the fourth largest in the world coming behind South Africa (7.2 million), Mozambique (2.2 million) and India (2.1 million) with the highest HIV/AIDS number of cases by the end of 2019 [6] [7] [8].

Young people aged 15 to 24 years made up approximately a third of all new HIV infections in sub-Saharan Africa. They account for about 7% of persons living with HIV in Nigeria and often have poorer treatment outcomes compared to adults [4]. Young People living with HIV (YPLHIV) enrolled in HIV treatment experience a higher rate of interruption in treatment, sub-optimal medication adherence, and greater HIV-related mortality compared with younger children or adults (UNAIDS, 2018). About one quarter of the young people aged 18 to 24 years enrolled in HIV care in Niger State are inactive as at the end 2021 quarter 3 [5].

Poor adherence is associated with lower rates of viral suppression across all ages [9] [10] [11] but young people have disproportionally lower levels of adherence when compared with adults. Some of the frequently reported barriers to ART adherence and retention among youths are forgetfulness, adverse effects of medication, and depression [9]-[18]. This study, therefore, assessed the correlation between risk perception and medication adherence among Young people aged 18 to 24 years living with HIV in Niger State, Nigeria

Methodology:-

This is a descriptive cross-sectional study carried out in February 2022 among young persons between age 18-24 years currently receiving HIV treatment in four comprehensive HIV treatment facilities in Niger State, Nigeria. The health facilities were: General Hospital Suleja, General Hospital Sabon-Wuse, General Hospital Minna and General Hospital Kagara. The four facilities were purposively selected as they have high YLHIV enrollment and treatment drop-outs. The 43-item pretested questionnaire (Cronbach's alpha of 0.7654) was used to collect information about HIV medication adherence and clinic attendance. Informed consent was sought from all patients who accepted to participate.

Data Collection

Two hundred and eight young persons between ages 18-24 years currently receiving HIV treatment in one of the four facilities were systematically selected and were enrolled for the study. The participants were then approached by a trained interviewer to complete a structured questionnaire which lasted between 40 to 50 minutes. The instrument was a semi-structured questionnaire that sought information on the socio-demographic characteristics, ART History, and patient self-report ART medication adherence.

Data Analysis

Descriptive statistics such as means and standard deviation were used to summarize quantitative demographic characteristics while correlation coefficient was used to measure association between perceived risk and medication adherence. The results were presented in appropriate tables. The data analysis was conducted using STATA 15.0. The significance level was set at (p<0.05) for all statistical procedures.

Results:-

The study was designed to measure levels of perceived risk of seriousness of complications arising from poor medication adherence among young people presently enrolled four comprehensiveHIV treatment centers in Niger State Nigeria. The result showed that 161 (77.4%) females and 47 (22.6%) males with a mean age of 21.5 ± 1.92 years participated in the study (see Table 1). Most of the participants 148 (71.1%) had formal education while 60 (28.8%) only had Islamic education. Self-reported perception of risk resulting from poor ART medication adherence which was measured on a 36-point aggregated scale, revealed that the participants in this study scored a mean of 15.21 ± 13.77 (95% CI: 13.33-17.09). Similarly, on a 27-point aggregate scale measuring ART medication adherence, the participants scored a mean of 14.72 ± 8.59 (95% CI: 13.55-15.89). Adherence rate in this study translates to 54.5%. There was no significant difference in perceived risk of complication resulting from poor medication adherence between males and female participants in this study (p=0.51). Also, there was no significant difference in the means scores for adherence to ART medications between males and females in this study (p=0.17). Bivariate analysis revealed that perception of severity and susceptibility of AIDS complications from poor ART medication adherence (r=0.53, p<0.0001).

| Variables | Maximum Point | Mean Score | Standard Deviation |
|--|---------------|------------|--------------------|
| Age | - | 21.47 | 1.92 |
| Males | | 20.59 | 1.94 |
| Female | | 21.73 | 1.84 |
| Perception of Risk of Complications from ART | 36 | 15.21 | 13.77 |
| adherence* | | | |
| Perceived Severity | 24 | 10.54 | 8.06 |
| perceived Susceptibility | 12 | 4.67 | 5.79 |
| Medication Adherence | 27 | 14.72 | 8.59 |
| | | | |
| | | | |

Table 1:- Summary of descriptive statistics for major variables in the study among YPLHIV surveyed.

*This variable is a composite aggregate of the components.

Discussion:-

This study presents therisk perception and ART medication adherence baselinedata to inform any intervention that would be developed to stimulate optimal adherence in HIV care. In this study we report adherence rate for ART medication adherence among the respondents of 54.5% which is well below what is considered optimal to sustain viral suppression that would prevent further disease progression and continuous transmission.

Perceived risk of participants towards complications arising from poor adherence to medications measured on a maximum aggregate scale of 36-points showed that the participants scored a mean of 15.21 with a standard deviation of 13.77 suggesting that they perceived themselves at some risk but not sufficiently high to bring about very significant impact on adherence to treatment, as can be observed in this study. The medication adherence mean score on a maximum of 27 points was 14.72 with a standard deviation of 8.59 translates to 54.5%, well below the recommended adherence rate suggested by other researchers [15].

In conclusion, the medication adherence rateamong the YPLHIVparticipants in this study is sub-optimal and needs serious improvement through well designed cost-effective youth-friendly health literacy interventions to improve adherence to antiretroviral therapy among this population. The public health education intervention also needs to have components that would improve risk perception among YPLHIV. The present study has implications for future research, as data from this study would serve as baseline for any intervention planned to stimulate adherence in the HIV care and treatment program.

Acknowledgement:-

The authors thank clients of the facilities who participated in the research and the leadership of the treatment centers.

Conflict Of Interest

None.

References:-

1. UNAIDS. FACT SHEET 2021 Global Hiv Statistics. End AIDS epidemic. 2021;(June):1-3.

2. Johnson SC, Cunningham M, Dippenaar IN, Sharara F, Wool EE, Agesa KM, et al. Public health utility of cause of death data: applying empirical algorithms to improve data quality. BMC Med Inform DecisMak. 2021;21(1):1–20.

3. Club T, Club T. The effects of Teen Clubs on retention in HIV care among adolescents in Windhoek , Namibia. 2010;1–9.

4. Foster C, Ayers S, Fidler S. Antiretroviral adherence for adolescents growing up with HIV: understanding real life, drug delivery and forgiveness. TherAdv Infect Dis. 2020;7.

5. Federal Ministry of Health. Nigeria HIV/AIDS Indicator and Impact Survey (NAIIS) - Fact Sheet. NatlSumm fact sheet [Internet]. 2019;(March):1–5. Available from: https://naca.gov.ng/wp-content/uploads/2019/03/NAIIS-PA-NATIONAL-FACTSHEET-FINAL.pdf

6. FHI. Young People Most at Risk of HIV/HIV. Young People Most at Risk for HIV/AIDS. 2009. 92 p.

7. Visser M. HIV/AIDS prevention through peer education and support in secondary schools in South Africa. Sahara J. 2007;4(3):678–94.

8. Millage A. Opportunity in Crisis. Intern Audit [Internet]. 2009;65(3):7. Available from: http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=41566003&site=ehost-live

9. Mehra N, Tunje A, Hallström IK, Jerene D. Effectiveness of mobile phone text message reminder interventions to improve adherence to antiretroviral therapy among adolescents living with HIV: A systematic review and metaanalysis. PLoS One. 2021;16(7 July).

10. M. Pahor, Manini and MC. NIH Public Access. Bone. 2008;23(1):1-7.

11. Beccaria et al. HHS Public Access. PhysiolBehav. 2018;176(5):139-48.

12. Kanters S, Park JJH, Chan K, Socias ME, Ford N, Forrest JI, et al. Interventions to improve adherence to antiretroviral therapy: a systematic review and network meta-analysis. Lancet HIV [Internet]. 2017;4(1):e31–40. Available from: http://dx.doi.org/10.1016/S2352-3018(16)30206-5

13. Aberg JA, Gallant JE, Ghanem KG, Emmanuel P, Zingman BS, Horberg MA. Primary care guidelines for the management of persons infected with HIV: 2013 update by the HIV medicine association of the infectious diseases society of America. Clin Infect Dis. 2014;58(1):1–34.

14. Hansana V, Sanchaisuriya P, Durham J, Sychareun V, Chaleunvong K, Boonyaleepun S, et al. Adherence to antiretroviral therapy (ART) among people living with HIV (PLHIV): A cross-sectional survey to measure in Lao PDR. BMC Public Health. 2013;13(1):1–11.

15. Luseno WK, Iritani BJ, Maman S, Mbai I, Ongili B, Otieno FA, et al. "If the mother does not know, there is no way she can tell the adolescent to go for drugs": Challenges in promoting health and preventing transmission among pregnant and parenting Kenyan adolescents living with HIV. Child Youth Serv Rev. 2019;103(August 2020):100–6. 16. Anyaike C, Atoyebi OA, Musa OI, Bolarinwa OA, Durowade KA, Ogundiran A, et al. Adherence to combined antiretroviral therapy (cART) among people living with HIV/AIDS in a tertiary hospital in Ilorin, Nigeria. Pan Afr Med J. 2019;32:1–12.

17. Afolabi MO. IKFAOO. Determinants of adherence to antiretroviral drugs among people living with HIV. African J Prim Heal Care Fam Med. 2009;1(May 2014):1–6.

18. Mj M, Ao W, Zinski A, Davila J, Ml D, Li G, et al. Measuring retention in HIV care : the elusive gold standard . PubMed Commons. 2014;61(5):1–2.