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Predictors of quality of life of women of childbearing age living with HIV/ AIDS in selected hospitals in North Central and South Western Nigeria

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Abstract

Background: Women living with HIV/AIDS often face a myriad of emotional demands and cognitive disorders as they adapt to this chronic, life-threatening illness. This greatly influences their quality of life which can be improved if treatments are commenced early. Several studies have assessed the quality of life of people living with HIV/AIDS from many parts of Nigeria, but there is paucity of data on the predictors of quality of life of women of childbearing age living with HIV/AIDS in the study areas, hence this study. The study assessed the predictors of quality of life of women of childbearing age living with HIV/ AIDS in selected hospitals in North-centraland South-Western Nigeria.

Methods: The study adopted descriptive survey research design. Sobi Specialist Hospital, Ilorin and Oyo State Hospital, Ogbomoso were purposively selected and a total of 320 women were recruited randomly from both hospitals. Data were collected with the use of an adapted WHOQOL-HIV BREF questionnaire and five domains of quality of life (physical, psychological, level of independence, social relationship, environmental and spiritual) were measured and analyzed using SPSS version 16.Quality of life scores for each of the domains ranged from 7.0 – 20.0 except for the physical domain which ranges from 5.0 – 20.0. The reliability of the instrument was statistically determined using the test re-test correlation. The correlation coefficient for each of the domains ranged between 0.78 and 0.95.

Results: The determinants of quality of life included marital status, period of ART use, self-evaluation of health status, and self-perception of being ill (R^2 = 56.6%; F = 13.1, p < 0.001).Mean quality of life was significantly higher in singles (96.52 ± 8.47) and married (96.40 ± 11.26) women compared to women who were separated, widowed and divorced (92.12 ± 11.96) (F = 4.05, p = 0.02). Women who had been using ART for 4 years or more had a significantly better quality of life compared to those who had been using it for fewer than 4 years (F = 6.43, p < 0.001). Quality of life was highest among women who evaluated their health status as good (97.29 ± 9.29), followed by those who stated it was neither poor nor good (83.11 ± 14.05) and those who rated it as poor (73.86 ± 22.51) (F = 40.34, p <0.001). Women who did not perceive themselves to be ill (96.86 ± 9.76) had better quality of life compared to those who felt they were ill (80.84 ± 15.64) (F = 6.43, p < 0.001).

Conclusion: An understanding of these factors and how they affect the quality of life of women can guide the health care provider in providing individualized care that would meet their physical, emotional and psychological needs and thus improve their overall quality of life.

Keywords: *HIV, quality of life, women, ART, health status.*

Résumé

Contexte: Les femmes vivant avec le VIH / sida sont souvent confrontées à une myriade de demandes émotionnelles et de troubles cognitifs lorsqu'elles s'adaptent à cette maladie chronique qui met leur vie en danger. Cela influence grandement leur qualité de vie qui peut être améliorée si les traitements sont commencés tôt. Plusieurs études ont évalué la qualité de vie des personnes vivant avec le VIH / SIDA dans de nombreuses régions du Nigéria, mais il y a peu de données sur les prédicteurs de la qualité de vie des femmes en âge de procréer vivant avec le VIH / SIDA dans les zones d'étude, d'où cette étude. L'étude a évalué les prédicteurs de la qualité de vie des femmes en âge de procréer vivant avec le VIH / sida dans certains hôpitaux du centre-nord et du sud-ouest du Nigéria.

Méthodes: L'étude a adopté un plan de recherche descriptif. Sobi Specialist Hospital, Ilorin et Oyo State Hospital, Ogbomoso ont été sélectionnés à dessein et un total de 320 femmes ont été recrutées au hasard dans les deux hôpitaux. Les données ont été collectées à l'aide d'un questionnaire BREF WHOQOL-VIH adapté et cinq domaines de qualité de vie (physique, psychologique, niveau d'indépendance, relation sociale, environnemental et spirituel) ont été mesurés et analysés à l'aide de la version 16 de SPSS. Pour chacun des domaines varie de 7,0 à 20,0, sauf pour le domaine physique qui varie de 5,0 à 20,0. La fiabilité de l'instrument a été déterminée

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statistiquement à l'aide de la corrélation de test re-test. Le coefficient de corrélation pour chacun des domaines variait entre 0,78 et 0,95.
Résultats: Les déterminants de la qualité de vie comprenaient l'état matrimonial, la période d'utilisation du TAR, l'auto-évaluation de l'état de santé et l'auto-perception d'être malade (R2 = 56,6%; F = 13,1, p <0,001). La qualité de vie moyenne était significativement plus élevée chez les femmes célibataires (96,52 ± 8,47) et mariées (96,40 ± 11,26) par rapport aux femmes séparées, veuves et divorcées (92,12 ± 11,96) (F = 4,05, p = 0,02). Les femmes qui utilisaient le TAR depuis 4 ans ou plus avaient une qualité de vie significativement plus élevée que celles qui l'utilisaient depuis moins de 4 ans (F = 6,43, p <0,001). La qualité de vie était la plus élevée chez les femmes qui évaluaient leur état de santé comme bon (97,29 ± 9,29), suivies de celles qui déclaraient qu'il n'était ni mauvais ni bon (83,11 ± 14,05) et celles qui le jugeaient médiocre (73,86 ± 22,51) (F = 40,34, p <0,001). Les femmes qui ne se percevaient pas malades (96,86 ± 9,76) avaient une meilleure qualité de vie par rapport à celles qui se sentaient malades (80,84 ± 15,64) (F = 6,43, p <0,001).
Conclusion: une compréhension de ces facteurs et de la façon dont ils affectent la qualité de vie des femmes peut guider le fournisseur de soins de santé dans la prestation de soins individualisés qui répondraient à leurs besoins physiques, émotionnels et psychologiques et amélioreraient ainsi leur qualité de vie globale.

Mots clés: *VIH, qualité de vie, femmes, TAR, état de santé.*

Introduction

HIV/AIDS is a chronic, potentially life-threatening condition that affects the body by damaging body's immune system and interfering with its ability to fight the organisms that cause diseases [1]. It is a severe condition that has so many impacts on the life ofwomen of child bearing age [2]. HIV/AIDS affect all aspects of women's life and the affected individuals must adapt to this chronic, life-threatening illness with its associated physical and mental challenges such as stress, anger, grief, helplessness, depression, and cognitive disorders and if treatments are commenced on time, quality of life can greatly be improved [3]. However, poorly managed HIV/AIDS poses heavy burdens, complications and grave consequences on the patients which could affect all aspects of their quality of life [4].

In 2010, 3.1million people in Nigeria were living with HIV/AIDS and 1.5 million of these people, require HIV drugs [5]. The Nigeria's HIV statistics as at 2011 were as follow: adult (15-49) with HIV/AIDS- 2,600,000, women with HIV/AIDS - 1,400,000, children with HIV/AIDS-220,000, deaths due to AIDS -170,000 and orphans due to AIDS-1,200,000 [6]. About twenty-five percent of people living with HIV/AIDS were among female sex workers (FSW), 17.2% were among men who have sex with men (MSM) and 4.2% were injection drug users [7]. Six states revealed a downward trend between 2005 and 2010, whereas eight states revealed a consistent rise, other states showed no consistency in trend, and HIV prevalence among youths 15-24 years showed a consistent decline from 2001 to 2010 [5]. Studies have also shown the prevalence of HIV/AIDS of 2.2% and 2.6% in Kwara state and Oyo state respectively [8,9].

Several studies have identified predictors of quality of life which could either enhance or impede the quality of life of women of child bearing age living with HIV/AIDS [10]. Factors that could enhance their quality of life include being employed, high immunological status, social support andadherence to antiretroviral therapy; [10] higher educational levels and income; [11] stable income and low clinician recorded HIV disease stage; [12] high level of CD4 count, place of residence (e.g. urban residence) and awareness of the significant others about their HIV status; [13] knowledge of the source of infection, living with partner/significant others, young age, disclosure of their HIV status to their spouse or family members, health status and compliance with antiretroviral therapy; [14] marital status (being married), long duration of antiretroviral therapy, being employed, having fewer financial concerns, and not having depression and other medical co-morbidities [15,16].

The factors that could impede the quality of life of women of childbearing age living with HIV include presence of symptoms, depression and low immunological status; [10] clinician recorded high HIV/AIDS disease stage; [12] discrimination; [11] high number of dependent children and presence ofsymptoms; [13] divorce, living alone and old age; [14] homo-affective relationship, having been stigmatized or suffered prejudice, the presence of psychological symptoms and having acquired opportunistic infections; [17] depression, presence of opportunistic infections, low educational level and female gender were at risk of poor quality of life [18].

The researcher observed during his one-year clinical experiences in two different HIV clinics in Kwara and Oyo states about two years earlier,that most women of child bearing age living with HIV/AIDS who visited the clinics were faced with lots of physical and psychosocial symptoms that could affect their quality of life. For this reason,they moved about with frowned faces and non-verbal expressions of hopelessness. Some women were highly dependent on their relatives and significant others, and one-on-one interactions with some of the affected women revealed low morale and loss of hope. On further enquiry, it was noted that lots of literature existed on quality of life of people living with HIV/AIDS from many parts of Nigeria, but there was paucity of data on the predictors of quality of life of women of childbearing age living with HIV/AIDS in the study areas. Owing to these observations and the fact that there had been no documentation of any research on this topic in the two clinics, the researcher undertook this study to assess the predictors of quality of life of women of childbearing age living with HIV/AIDS in selected hospitals in North-centraland South-Western Nigeria.

Objectives

The specific objectives of this study were to determine:

- the influence of the respondents' socio-demographic characteristics on their quality of life.
- the influence of respondents' period of ART use on their quality of life.
- The influence of respondents' means of contracting HIV on their quality of life.
- The influence of respondents' self-evaluated health status on their quality of life.

Hypothesis

H_O: There is no significant relationship between respondents' marital status and their quality of life.

Materials and methods

Research design

A descriptive survey research design was used in the study to assess the predictors of quality of life of women of childbearing age receiving treatment for HIV/AIDS in Sobi Specialist Hospital, Ilorin and Oyo state Hospital, Ogbomoso.This research design was considered appropriate for the study because it enabled the researcher to derive relevant information which could be generalized within the population.

Recruitment of study participants

The study population consisted of 1069 women of childbearing age between ages 18 and 49 years living with HIV/AIDS and receiving treatment on out-patient basis at the two hospitals. The total sample size was 320 andwas statistically calculated using Taro Yamane's formula.The sample size for each hospital was also calculated according to their proportion to the total sample size. Respondents who met the inclusion criteria were recruited by simple random sampling technique. 'Yes' or 'No' was written on different pieces of papers, folded and mixed up in a box and the prospective participants were asked to pick one paper from the box. Only the participants who picked a "YES" were recruited into the study. This process was repeated every clinic day (two days in a week) until the estimated sample size was reached which took about 6 weeks to complete. Data were collected with the use of questionnaire adapted from the 2012 WHOQOL-HIV BREF [19] with 100% return rate.

Ethical consideration

The study followed the ethical principles guiding researches involving human subjects and was approved by Kwara State Ministry of Health (ref number: MOH/KS/EU/777/193) and BOWEN University Teaching Hospital, Ogbomoso (Reg number: NHREC/12/04/2012) Ethical Committees. The written ethical approvals were presented to the Hospital Managements of Sobi Specialist Hospital Ilorin and Oyo State Hospital, Ogbomoso to seek for their permission to carry out the study in the hospitals. The ethical approvals were also presented to the Hospital Managements of the BOWEN University Teaching Hospital, Ogbomoso where the pilot study was conducted.

Informed consent

The researchers provided adequate information regarding the research to the participants, their rights to refuse participation, researchers' responsibilities and the likely risks and benefits that could be incurred during their participation.The participants were assured that they had the right to voluntarily decide whether or not to participate in the study, without the risk of incurring any penalties or prejudicial treatment. They were also assured that they had the right to decide at any point to terminate their participation, to refuse to give information or to ask for clarification about the purpose of the study or specific study procedures.Consent forms were provided to the participants in the language they understood (either English or Yoruba)for consenting participants to sign before participating in the study.

Validity and reliability

The instrument was subjected to both face and content validity and its reliability was statistically determined using the test re-test method. This was done twice within two weeks' interval. The questionnaire was administered to thirty-two (10% of the sample size) women of childbearing age living with HIV/AIDS receiving treatment at BOWEN Teaching Hospital, Ogbomoso and after two weeks the questionnaire was re-administered to the women. The results were collected and the reliability of the instrument was statistically determined using Cronbach's alpha's measure of internal consistency.The minimum score obtained was 0.81, therefore, the questionnaire was considered fit for use in assessing the predictors of quality of life among women of childbearing age living with HIV/AIDS in the selected hospitals.The study can be generalized to women of childbearing age living with HIV/AIDS in Kwara state and Oyo state.

Study setting

The study settings were Sobi Specialist Hospital, Ilorin and Oyo state Hospital, Ogbomoso. They are government owned General Hospitals in Ilorin South Local Government Area, of Kwara State and Ogbomoso South L.G.A, Oyo State respectively. The hospitals were used because they serve as referral centers for many primary health centers, hospitals and are patronized by a good number of women from different ethnic and cultural backgrounds.The HIV clinics are operated on out-patients' basis.

Data analysis

Statistical Package for the Social Sciences (SPSS) version 16 was used for data analysis. Socio-demographic variables were presented as frequency tables, quantitative variables for quality of life scores were presented as mean $\pm$ SD, and data on predictors of quality of life wereanalyzed using multiple linear regression, ANOVA and T-test. Level of significance was set at $p \leq 0.05$ and $p \leq 0.01$.

Table 1: Socio-demographic characteristics of respondents (n=320) (original)

Variables	Frequency	Percentage (%)
Age (years)		
18-29	70	21.9
30-39	149	46.6
40-49	101	31.6
Mean ± SD	34.8 ± 7.3	
Marital status		
Single	28	8.8
Married	221	69.1
Divorced	34	10.6
Widowed	37	11.6
Period of ART use (years)		
1 year	79	24.7
2 years	42	13.1
3 years	36	11.3
4 years and above	163	50.9
Who is aware of your HIV status?		
Husband	171	38.0
Parent	104	23.1
Sibling	88	19.6
Friend	36	8.0
Children	39	8.7
Nobody	26	2.7
How do you think HIV was transmitted to you?		
Casual sex	119	37.2
Husband	154	48.1
Carelessness	13	4.1
Don't know	34	10.6
HIV status disclosure		
Yes	294	91.9
No	26	8.1

Table 2: Influence of socio-demographic characteristics onquality of life (original)

Variables	Mean ±SD (Quality of life mean score)	Test Statistics (F) ANOVA	p-value
Age (years)			
29 or less	94.93 ± 9.94		
30-39	95.56 ± 11.18		
40-49	95.46 ± 12.48	0.10	0.91
Marital status			
Single	96.52 ± 8.47		
Married	96.40 ± 11.26		
Others	92.12 ± 11.96	4.05	0.02
Education			
Primary	94.06 ± 11.97		
Secondary	95.30 ± 10.59		
Tertiary	98.57 ± 9.81		
None	95.49 ± 13.32	1.90	0.13
Religion			
Christianity	95.10 ± 11.06		
Islam	95.74 ± 11.60	0.92	0.40
Parity			
One 93.44 ± 13.24			
Two 94.83 ± 12.92			
Three	97.48 ± 9.95		
Four or more	95.51 ± 10.78		
None	93.46 ± 10.18	1.11	0.35
Occupation			
Trading	95.33 ± 10.90		
House wife	92.93 ± 12.02		
Farming	98.96 ± 7.66		
Civil Servant	95.06 ± 15.52		
Dependant	94.88 ± 13.38		
Vocational Job	101.56 ± 5.69	1.23	0.29

Significant at p< 0.05

Details of the analysis are described below:

- To determine the influence of the respondents' socio-demographic characteristics on their quality of life was analysed using ANOVA, P<0.05.
- To determine the influence of respondents' period of ART use on their quality of life was analysed with T-test, P<0.01.
- To determine the influence of respondents' means of contracting HIV on their quality of life was analysed with T-test, P<0.01.
- To determine the influence of respondents' self-evaluated health status on their quality of life was analysed with T-test, P<0.01.
- H_O: There is no significant relationship between respondents' marital status and their quality of life was analysed using T-test, P<0.01.

Results

From table 1, the mean age of the respondents was 34.8 ± 7.3 years. Majority of the women (70%) were married,approximately 51% of the women had bn on antiretroviral therapy for four or more years, while 8.1% of the respondents did not disclose their HIV positive status to anyone. When asked about how they got HIV, 48.1% said from the husband.

From tables 2, 3 and 4, the results showed that the determinants of quality of life included marital status, period of ART use, self-evaluation of health status, and self-perception of being ill.

Table 2, revealed that mean quality of life was significantly higher in single (96.52 ± 8.47) and married (96.40 ± 11.26) women compared to women who were separated, widowed and divorced (92.12 ± 11.96) (F = 4.05, p = 0.02). Significant differences did not exist when mean quality of life was compared between categories of other socio- demographic characteristics.

From table 3, quality of life was highest among women who evaluated their health status as good (97.29 ± 9.29), followed by those who stated it

Table 3: Influence of means of contracting HIV, self-evaluated health status, period of ART use and HIV disclosure on the respondents' quality of life (original)

Variables	Mean ±SD (QoL)	Test Statistics (t test)	p-value
Self-evaluated health status			
Poor	73.86 ± 22.51		
Neither poor or good	83.11 ± 14.05		
Good	97.29 ± 9.29	40.34	< 0.0001
Perceives having illness			
Yes	80.84 ± 15.64		
No	96.86 ± 9.76	60.70	< 0.0001
Period of ART use (years)			
1	90.74 ± 14.21		
2	96.69 ± 7.51		
3	97.71 ± 7.72		
4 or more	97.94 ± 11.33	6.43	< 0.0001
How do you think HIV was transmitted to you?			
Casual sex	94.33 ± 11.65		
Husband	96.60 ± 11.14		
Carelessness	91.55 ± 11.44		
Don't know	96.19 ± 10.97	1.24	0.29
HIV status disclosure			
Yes	95.35 ± 11.43		
No	96.65 ± 10.21	0.31	0.58

Significant at p< 0.01

was neither poor nor good (83.11 ± 14.05) and those who rated it as poor (73.86 ± 22.51) (High QoL = mean scores 15- 20, intermediate QoL =11- 14, low QoL =5- 10). The difference in means was statistically significant (F = 40.34, p <0.0001). Furthermore, quality of life also improved with increase in the period of ART use. Women who had been using ART for 4 years or more had a significantly higher quality of life compared to those who have been using it for fewer than 4 years (F = 6.43, p < 0.0001). Finally, women who did not perceive themselves to be ill (96.86 ± 9.76) had a better quality of life compared to those who felt they are ill (80.84 ± 15.64) with the difference in mean values being statistically significant (F = 6.43, p < 0.0001).

In table 4, the regression model predicted 56.6% of the variance and the model was suitable for predicting the outcome (F = 13.1, p < .0001). The table showed that the determinants of quality of life included marital status, period of ART use, self-evaluation of health status, and self-perception of being ill. More specifically, women who were married had five times better quality of life than those who were single while women who were widowed, divorced or separated had about 4.47 times poorer quality of life than those who were single. Women who claimed their health status was good had 15.6 times better quality of life than who rated their health status as poor while those who perceived themselves to be ill had about 9 times lower quality of life compare to those who felt they were healthy. The use of antiretroviral therapy had a significant improvement on the quality of life of the HIV positive women. Those who had been using ART for two, three and four or more years had 5.32, 5.32, and 6.33 times better quality of life than those who had only used it for a year.

Discussion

The major factors that promote quality of life of women of childbearing age living with HIV/AIDS as revealed by this study were being single or married, being in good health, longer period of ART use, and self-perception of being healthy. These findings hold the views of the findings of a study on quality of life of HIV/AIDS patients in a secondary healthcare facility, Ilorin, Nigeria[15] which revealed that HIV sero-positive married women had the highest quality of life scores in all the domains compared to those with a different marital status.The study also found that patients who had received treatment for more than a year had higher quality of life scores in the

Table 4: Multiple linear regression for the predictors of quality of life of women of child bearing age living with HIV(original)

	Beta (B)	Standard Error (SE)	T-test (T)	Significance
(Constant)	80.31	5.31	15.13	<0.0001
Marital status				
Single (Ref)				
Others(widowed, divorced)	-4.47	1.31	-3.40	<0.0001
Married	5.32	1.82	2.92	<0.0001
Level of education				
None (Ref)				
Primary	-1.61	1.83	-0.88	0.38
Secondary	-0.88	1.80	-0.49	0.62
Tertiary	1.09	2.08	0.52	0.60
Self-evaluated health status				
Poor (Ref)				
Neither poor or nor good	5.99	4.67	1.28	0.20
Good	15.60	4.65	3.35	<0.0001
Perceives having illness				
No (Ref)				
Yes	-9.02	2.22	-4.05	<0.0001
Period of ART use (years)				
One (Ref)				
Two	5.32	1.82	2.92	<0.0001
Three	5.32	1.95	2.73	0.01
Four or more	6.33	1.33	4.76	<0.0001
Dependent Variable: Overall QOL; $R^2 = 56.6\%$; $F = 13.1$, $p < 0.0001$.				

Significant at p< 0.01

psychological and social domains[15]. The findings also agreed with that of another study on factors influencing quality of life amongPeople living with HIV in Coastal South, India[20] which showed that quality of life was high among young patients, married participants, longer duration on ART, absence of opportunistic infections and higher CD4 count.

Women living with HIV are more likely to experience a range of mental health issues which could be associated with long lasting psychological health deficit and reduced quality of life[3], hence, understanding these issues and how they affect the quality of life of these women can guide the health care provider in providing individualized care that would meet their physical, emotional and psychological needs and thus improve their overall quality of life.In view of the findings of this study, it is recommended that health management programs on HIV/AIDS should be targeted towards improving the health of women living with HIV/AIDS and promoting their compliance with antiretroviral therapy by:

- Encouraging the women to have trusted support persons who can stand by them when they need help. Social interaction should also be encouraged among the women.
- Making ART accessible to the women without making them go through burdensome hospital protocols. Defaulters should be tracked and encouraged.
- Making counselling sessions integral part of HIV management programs where the women should be given opportunities to share their burdens and get solutions to their emotional problems
- Encouraging the women to actively participate in support groups.

Conclusion

Inadequate and inconsistent management of HIV/ AIDS pose heavy consequence on women of childbearing age thereby reducing aspects of their quality of life. However, if treatments are commenced on time and all the factors that impede health status are controlled; their quality of life can greatly be improved. The study identified the following as determinants/ predictors of quality of life: marital status, period of ART use, self-evaluation of health status, and self-perception of being ill. It is therefore,

recommended that the health care providers put the identified predictors into consideration during planning for care of women living with HIV/AIDS in order to achieve positive outcome and high quality of life.

Limitations of the study

The following constraints were encountered in the course of the study:

- There was difficulty in gaining consent of some of the participants because of fear of misuse of information, hence they had to be reassured repeatedly that their information was confidential.
- There was difficulty in getting accurate and complete information from some of the women because they were either eager to see their doctor for their drugs or hurrying to meet up with other clinic demands, hence they had to be cajoled to complete the questionnaires without altering the integrity of the study.
- Some participants got emotional when answering some questions, hence extracting certain information from them took longer time than allocated thus making the study more resource consuming.

References

1. Mayo Foundation for Medical, Education and Research. HIV/AIDS Treatment and Drugs-Definition, Diseases and Conditions. 2014; 20: 373-524. Available at:http://www.mayoclinic.org/diseases-conditions/hiv-aids/basics/definition/con-20013732?_ga=1.10169781 .140593 8796.1422961702
2. Folasire OF, Irabor AE and Folasire AM. Quality of life of People living with HIV and AIDS attending the Antiretroviral Clinic, University College Hospital, Nigeria. African Journal of Primary Health Care and Family Medicine. 2012; 4: 294-298.Available at:http://dx.doi.org/10.4102/phcfm.v4i1.294
3. American Psychiatric Association. HIV and AIDS. 2014.Available at: http://www.psychiatric.org/hiv-and-aids
4. Heitz D. People with HIV suffer from depression caused by shame trauma, and substance abuse. 2014; 090-214. Available at: http://www.healthline.com/health-news/hiv-patientssuffer-from-depression-090214
5. Federal Ministry of Health. The Technical Report on the 2010 national ANC HIV Sentinel Survey among Pregnant Women attending Antenatal Clinics in Nigeria. 2010
6. Africa Forums General Health Community Boards. The history of HIV in Nigeria you should know and statistics. 2011. Available at:http://www.amref.org
7. UNAIDS. Global Plan towards the Elimination of New HIV Infections. Among Children by 2015 and keeping their mothers alive. 2011; 20: 110-609. Available at:http://www.zero-hiv.org/.../Global-Plan-
8. Ismail RA. Measure to curtail the spread of HIV/AIDS by National Agency for the Control of AIDS (NACA). 2013. Available at:http://www.theheraldnews.info/nacas-measure-to-curtail-spread-of-hivaids
9. Olisa L. Oyo State records 2.6% low HIV/AIDS prevalence ratio. 2012.Available at:http://www.africansearchlight.com/oyo-state-records-2.6-low-hiv/aids-prevalence-ratio/
10. Degroote S, Vogelaers D and Vandijck DM. What determines health related quality of life among people living with HIV? 2014; 72(1)40. Available at:http://www.archpublichealth.com/content/72/1/40
11. Mofolorunsho KC, Nwankwo EO and Mofolorunsho TB. Socio-economic factors influencing quality of life of people living with HIV/AIDS in Kogi, Nigeria.Natural Science. 2013; 11: 33–39.Available at:http://www.sciencepub.net/nature.6
12. Ruutel K, Pisarev H, Loit H and Uuskula A. Factors influencing quality of life of people living with HIV in Estonia.Journal of the International AIDS Society. 2009; 12(1)13. Available at:http://www.biomedcentral.com/1758-2652/12/13
13. Imam MH, Karim MR, Ferdous C and Akhter S. Health related quality of life among people living with HIV. 2011;77:915-790. Available at:http://www.banglajol.info/index.php/BMRCB/article/view/7791/5790
14. Bunjoungmanee P, Chunloy K, Tangsathapornpong T and Apisarnthanarak. D. Quality of life assessment among people living with HIV/AIDS at a tertiary care hospital in Thailand.[updated 2014;08:591-811. Available at:www.tm.mahidol.ac.th/.../08-5918-11.pdf
15. Bello SI and Bello IK. Quality of life of HIV/AIDS patients in a secondary healthcare facility, Ilorin, Nigeria. 2013.Available at:http://www.unilorin.edu.ng/publications/bellos/QualityofoflifeofHIVAIDSpatientsinsecondary healthcare.pdf
16. Nobre N, Pereira M, Rione RP, Sinronen H and Sutinen J. Factors associated with theQuality of life of People living with HIV in Finland. AIDS Care. 2017; 29(8). Available

at:www.tandfonline.com/doi/abs/10.1080/09540121.2017.1281879

17. Oliveira FB, Moura ME, Araujo TM and Andrade EM. Quality of life and associated factors inPeople living with HIV/AIDS. ActaPaulista de Enfermagem.2015; 28:510-516.Available at:https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4120872/
18. Mutabazi-Mwesigire D, Katamba A, Martin F, Seeley J and Wu AW. Factors that affect quality of life amongPeople living with HIV attending an urban clinic in Uganda: a cohort study. *PLoS ONE*. 2015;10(6).Available at:www.journals.plos.org/plosone.article?id=10.1371/journal.pone.0126810
19. WHO.WHOQOL-HIV BREF. Mental Health: Evidence and Research Department of Mental Health and Substance Dependence, World Health Organization Geneva.2012;03.Available at:http://www.int/mental-health/publ...
20. Arjun, BY, Unnikrishnan, B, Ramapuram, JT et al. Factors influencing quality of life amongPeople living with HIV in Coastal South, India. Journal of the International Association of Providers of AIDS Care. 2017; (30): 247 – 253.Available at:https://www.ncbi.nlm.nih.gov/m/pubmed/26251226/

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