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RESEARCH ARTICLE

"I Visited a Traditional Healer Because I Felt I wasn't Getting any Better by Using Active Antiretroviral". Understanding Cultural Imperatives in the Context of Adherence to Highly Active Antiretroviral Therapy

Matombo Ondwela[1], Tebogo Mothiba[1], Nozuko Mangi[2] and Daniel Ter Goon[3,*]

[1]*Department of Health Sciences, University of Limpopo, Pretoria, South Africa*
[2]*Department of Health Sciences, University of Fort Hare, East London, South Africa*
[3]*Department of Public Health, University of Fort Hare, East London, South Africa*

Abstract:

Background:

Anecdotal and empirical evidence seems to indicate that many people across the African continent indulge in different cultural practices that impinge on their adherence to the Highly Active Antiretroviral Therapy (HAART). These cultural practices vary between ethnicities or regions.

Objective:

The aim of this paper was to explore the cultural practices affecting HIV positive patients' adherence to HAART in the Mopani district in Limpopo province, South Africa.

Methods:

A qualitative, explorative, descriptive study was conducted. Data were collected through one-to-one unstructured interviews using an interview schedule guide. Data were analysed using Tesch's method of qualitative data analysis.

Results:

The findings indicate that cultural practices and beliefs concerning diseases and cure, prevailing faith that traditional health practitioners (THPs) could treat HIV/AIDS, stigmatisation of HIV patients, and the belief that HIV is caused by witchcraft and demons were the factors affecting patients on HAART. Clearly, HIV positive patients on HAART concurrently visit and patronise the THPs. This practice is affected by their cultural orientations and negatively impact on their adherence to HAART.

Conclusion:

The increased patronage of traditional medicine among HIV individuals are HAART calls for the integration of traditional health services into public health, and a multi-disciplinary collaboration would be beneficial to the community.

Keywords: HIV, Highly active antiretroviral therapy, Traditional health, Cultural practices, Adherence, Drug interaction, Non-adherence, South Africa.

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1. INTRODUCTION

Non- adherence to Highly Active Antiretroviral Therapy (HAART) poses a challenge to HIV and AIDS patients because of the health risks associated with it [1]. Lack of adherence to antiretroviral drugs could be influenced by patients' cultural beliefs, the social situations of the patients, the drugs' side effects, the state of health at the moment of taking the treatment, prescribed regimen and interpersonal relationships; and the attitudes of healthcare professionals providing such treatment [2]. Factors influencing adherence to HAART are divided into treatment regimen related, social and psychological factors, healthcare institution and personal factors [3].

* Address correspondence to this author at Department of Public Health, University of Fort Hare, East London, South Africa; Tel: 0799741929; E-mail: dgoon@ufh.ac.za

Highly active antiretroviral therapy is monitored through modified Directly Observed Therapy (DOT), Contingency Management (CM) to avoid the anticipated problems, such as social support [4]. Additionally, Simoni, Amico, Pearson and Malow (2008) indicated that adherence to therapy is measured by four basic techniques which have been developed for quantifying adherence: patient self-report, viral load suppression, self-report pill count and decrease in the cluster of differentiation (CD4) [5].

When culture and traditional beliefs oppose the existence and management of HIV and AIDS, it becomes difficult for people who are on HAART to comply with their treatment [6]. Without adequate adherence to treatment, antiretroviral agents are not maintained at sufficient concentration to suppress HIV replication in infected cells and to lower the plasma viral load, which accelerates the development of drug-resistance [7].

Although studies conducted in Africa have reported good HAART adherence rates of more than 70% [8, 9], some studies have reported contrasting findings of poor adherence to HAART in South Africa [10 - 13]. There are some traditional healers who provide health-related services, and do not believe in the existence of HIV and AIDS. Unempirical reports indicate when they are being consulted by their clients for help, they would encourage people on HAART to discontinue their treatment. Therefore, it is important to monitor the use of traditional medicines among HAART patients in order to prevent drug interaction or resistance to ART [14]. For this reason, identifying the cultural factors that affect HAART adherence is important to prevent unsuppressed viral load associated with the use of traditional medicine.

In South Africa, 70% of people with HIV and AIDS are believed to be accessing traditional and spiritual health services [15]. Adherence to antiretroviral treatment of 95% is expected to suppress the viral load in order to achieve the desired immunity against opportunistic infections [8]. Despite the availability of free drugs in every government healthcare institution in South Africa, some significant challenges abound concerning HAART adherence. Patients have reported that poor service delivery, socio-economic status and family factors impact on adherence to treatment [16]. Additionally, even though HIV and AIDS advocacy on the importance of adherence to treatment is being widely circulated in the media in South Africa, there is an unscientific, false notion and belief among some people that HIV and AIDS can be cured traditionally by traditional health practitioners. Witchcraft has often been blamed as the leading cause of HIV and AIDS. Witchcraft has been a common interpretation of the symptoms of HIV and AIDS in Limpopo province. There is connection between society and culture, therefore, creating awareness on the need and importance of HAART adherence to traditional healers will contribute to their understanding and importance, especially as it pertains to drug interaction or resistance link to non-adherence to treatment. The history of drug development has proved that many drugs have been derived because of inspiration from traditional medicine [17]. Therefore, some communities still believe in traditional medicine for treatment and visit THPs for help, because they are aware of the ancient practices by their families. Traditional medicine, otherwise termed as complementary and alternative, or ethnic medicine, still plays a key role in many countries today. This paper explores and describes the cultural practices affecting HIV positive patients' adherence to HAART in the Mopani district in Limpopo Province, South Africa.

1.1. Definition of Terms

Traditional medicines services - "The sum total of all knowledge and practices, whether explicable or not, used in diagnosis, prevention and elimination of physical, mental, or societal imbalance, and relying exclusively on practical experience and observation were transferred from generation to generation, whether verbally or in writing".

Witchcraft - the practice of magic, especially black magic; the use of spells

2. METHODS

2.1. Design

A qualitative, explorative, descriptive, contextual research method was used to explore and describe cultural practices that affect HIV positive patients' adherence to HAART in the Mopani district. In exploratory research, the researchers seek to find clarity and understanding of the problem studied by asking relevant questions to the participants in order to elicit information [18].

2.2. Population and Sampling

The population includes all HIV positive adults on HAART at the clinic. There are 284 adults on HAART in the health clinic. Purposive sampling was used to select 18 participants who were interviewed until data saturation. All patients who were HIV positive and on HAART with an unsuppressed viral load and a decrease in CD4 cells were included in the interview sessions.

2.3. Data Collection Method

Data were collected through semi-structured one-to-one interviews. The central question posed to the participants was, "**Could you kindly explain what lead you to default treatment?**" This was followed by probing questions in order to gain more clarity on cultural practices that could affect HIV positive patients' adherence to HAART. A voice recorder was used to capture all the interview sessions and field notes were made. The interview sessions were conducted with 18 participants until data saturation was reached. The interview sessions lasted for approximately 40 minutes.

2.4. Data Analysis

The Tesch`s open code qualitative data technique was applied for data analysis, following the steps outlined by in a study [19]. The data was organised, transcribed verbatim and coded. Categories, themes and sub-themes were generated.

3. RESULTS

Demographics of the participants: The participants of this study were all adults who were HIV positive, on HAART and

have unsuppressed viral load with low CD4 cell count. The themes and sub-themes pertaining to the cultural practices influencing results of the data analysis are summarised and presented in Table **1**.

Table 1. Themes and sub-themes reflecting cultural practices which affect HIV positive patients' adherence to HAART

Theme	Sub-theme
Reasons for lack of adherence to HAART	• Side effects of HAART blame on the use of cultural practices in curing the disease • Ancestral beliefs • Existing faith that THPs can treat HIV and AIDS • Existence of stigma towards patients on HAART
Cultural factors influencing non- adherence to HAART	• Existing beliefs that HIV is caused by witchcraft and demons • Existing family pressure

3.1. Reasons for Lack of Adherence

3.1.1. Side Effects of HAART

The study reveals that patients on HAART consult THPs when they realise that they have intolerable side effects from the treatment. However, even after consulting the THPs they don't get better in fact experience additional problems. This was confirmed by the participant who said: "*I visited a traditional healer because I felt I wasn't getting any better by using ARVs. I thought the ARVs were making me feel worse. The traditional healer that I visited gave me some medication. I vomited, had diarrhoea and I was eventually hospitalized at Nkhensani Hospital because of all these complications. But I still don't know what can help my headaches.*"

Another participant with the same experience indicated that his health was good until he started taking the ARVs. He became scared and thought he had been bewitched and so consulted a THP for help. Yet another participant explained that: "*I was sick and was having constant diarrhoea that never stopped, so I went to the clinic and I was diagnosed HIV positive and since my CD4 was less than 350, I qualified to be initiated with ARV drugs. Within 8 days, I couldn't stand on my own, I started coughing and my chest was painful, vomited nonstop. I went to a private doctor and as if HIV is not enough he told me that because now I am starting ARV, all the conditions that were sleeping in my body are now waking up. I had to be screened for TB, Pneumonia and others. It was too much for me so I stopped taking the drugs and went to the THP so that she can assist me.*"

3.1.2. Ancestral Beliefs

The study reveals that some of the participants believe their HIV positive status is associated with ancestral dissatisfaction. This was confirmed by the participant who said: "*I am so confused. The traditional healer tells me I am sick because my ancestors are calling me to become a traditional healer. The traditional healer does not advise me to come to the clinic and not to take my medicines. Instead, he advises me to brew a Tsonga beer, slaughter goats and cows in order to make rituals and talk to my ancestors so that I can be cured.*"

Another participant stated that: "*When you consult THP, the healer throws the bones and tell you the causes of your illness and what can be done to prevent it. In most of the cases the THPs you are told that your blood is dirty or ancestors are calling you to become a Sangoma. Then sometimes you feel that it is true and you follow their advice*".

Yet another participant held the similar notion that: "*My relatives made me realise that all these symptoms I am experiencing are because my ancestors are angry with me; and also, that I am using the treatment from the clinic, therefore, they advised me not to continue taking the treatment but to obey ancestors' instructions and do all they want and I will be cured"*

3.1.3. Existing Faith that THPs can Treat HIV and AIDS

The findings of this study revealed that HIV positive patients on HAART believe that THPs have healing powers to cure HIV, can clean blood and can make a very sick HIV positive patient feel strong with their strong herbs. This view was confirmed by the participant who said: "*I consulted a THP and after that I felt better. And also, the THP during consultation told me that he can make me feel better. Therefore, I believe that the bottle of traditional medicine that the traditional healer has given me, assisted me to feel much better."*

Another participant with the same view claimed: "*This ARVs causes a lot of confusion to us at this village because the nurses at the clinic indicate that the ARV would not destroy the HIV completely but weakens it whilst most THPs in the community tells us that HIV is curable and they are able to cure it, therefore, it is better to go to the person who can cure the disease than the one who tells you that it is not curable but they just control the disease."*

3.1.4. Prevailing Stigma towards Patients on HAART

The findings revealed that patients on HAART visiting clinic are stigmatised by community members, when visiting the clinic several times. This was confirmed by the participant who claimed that: "*Once you are seen entering the clinic or getting out of the clinic all the times the community members just assume that you are HIV positive.*" Another participant expressed the view that: "*The system and queue at the clinic also encourage stigma, because when HIV patients on HAART arrived at the clinic they are called to a different room from the ones which are used by other patients. This means the clinic also gives HIV positive patients a label that they are treated differently and this always makes a person feel bad when going to the clinic".*

Another participant maintained: "*When you are an HIV patient on HAART the clinic nurses gives you a file and you are moved away from other patients and treated differently from other patients which make other patient to realize that when you are an HIV positive, it means that you have a dangerous virus and they talk about you behind your back in the community and that makes you reluctant to visit the clinic."*

4. CULTURAL PRACTICES INFLUENCING NON-ADHERENCE TO HAART BY PATIENTS

4.1. Existing Beliefs that HIV is Caused by Witchcraft and Demons

The participants believed that if someone has HIV positive, it means the person has been bewitched. This was told to patients by a THP during consultation sessions. This was confirmed by the participant who stated that: "*Traditional healers still believe that HIV is caused by witchcraft and they will always treat it traditionally. This sometimes makes us not to come to the clinic to receive any treatment"*.

Another participant asserted: "*I went to the clinic and they told me I was positive, I couldn't believe that it was because of my wife as we both are very faithful to one another and we stayed together. So, I went to the THP to find out what was causing the illness. The THP told me that my ex-wife was bewitching me because she was jealous of my relationship with my present wife. I was told to buy a goat so that we can use the blood of the goat to call my ancestors to come and fight with the person responsible. Then, I followed what I was advised to do and didn't take the treatment."*

Another participant expressed the same view: "*I went to a prophet who told me that I was being attacked by a demon, according to the prophet HIV is a spiritual disease that possesses people when they are not protecting themselves. I was staying at his house; we were many we prayed day and night. The prophet told us that demons like this are very stubborn so we had to fast for more than 10 days drinking only water without taking treatment*".

4.2. Family Pressure

The findings revealed that many people in the community still believe in cultural ways of solving problems and curing diseases. Because of this, THPs are consulted before doctors or clinics, which indicate that cultural practices receive priority in seeking health care. This suggests that if one grows up in a family who believes in cultural ways of healing, then one is likely to embrace the prevailing cultural ways of doing things. This was confirmed by a participant who expressed that: "*I was forced to quit ARV drugs and drink herbs from the THP because that's how it is done in the family. The THP is trusted in a manner where everything that happens in the family they make sure he is consulted before they can do anything therefore I had to listen to my family and follow the THP's instructions*".

Another participant confirmed: "*If the family THP tells you that ARV drugs are bad for you, in most cases you are to quit and only take what the THP prescribes for you. THP claims that they have a connection with ancestors or people in the family that have passed long time ago, and because they have that connection with your great grandparents, it means they know what is good for you and you just stop taking the drug and start with the herbs you are given*.

5. DISCUSSION

Several reasons for non-adherence to HAART by patients include the unbearable side effects of HAART and attendance of THPs. It is thought that being HIV positive means that the person is bewitched; therefore, patients visit the THPs to get traditional treatment. One study confirms that the adherence to ARVs is problematic as the patients stop taking treatment because of the side effects which are noticed immediately after the initiation of the treatment [20]. The participants in this present study confirm to stop taking their ARVs because of cultural influences by the THPs and seemingly unsupportive family members whose views HIV/AIDS are also shaped by the cultural stereotypes in the society. Culture plays an important role in the practices of HIV positive patients as they do not adhere to treatment because of cultural convictions [21].The scientific basis of HIV cure with traditional treatment seems an absolute fallacy; and this conviction portends a serious danger and complications in the management of HIV/AIDS among individuals with such conviction. Therefore, cultural THPs should be integrated in public health framework for the benefit of the client who believes and uses the traditional medicine. There is also a general perception and understanding by the community that herbal medicines are safe to use in any illness. However, reports of toxicity in traditional medicines have been a matter of grave concern because they have not been scientifically tested in the laboratory [22].

The participants live in the fallacy or belief that the THPs could treat their HIV status and cure them of AIDs. In support of this finding [23] maintained that Western medicine is perceived as not taking care of all dimensions in treating illnesses. This highlights the fact that patients still consult THPs to supply them with traditional medicines to supplement ART.

Stigmatisation of the clients on ART by the community when visiting the health clinic is still felt. Stigma is blamed for lack of adherence to ART because the community members assume that they are HIV positive when they are seen attending the clinics [24]. The community members need to be educated on stigma and its effects on the health of their relatives, who are HIV positive.

The participants in this current study believe that HIV is caused by witchcraft, therefore, they preferred to visit THPs for protection against witchcraft. Leistner (2014) confirms that patients, traditional healers and faith healers believe that some causes of existing diseases, including HIV and AIDS are witchcraft [25].

Family, discourage their relatives to take ART, instead of providing the needed support of adhering to the HAART as a requirement. Contrastingly, the findings of a study conducted by Eyassu, Mothiba and Mbambo-Kekana (2016) report that 88.3% of HIV patients on HAART were supported by family and friends to adhere to the treatment [8]. Therefore, there is a dire need to take into consideration the use of traditional medicine by clients especially those who believe in the efficacy of traditional medicine for health care.

6. LIMITATIONS

The study was conducted in one health facility in the Mopani district of Limpopo Province, South Africa, and the findings cannot be generalised to other HAART patients in

other districts of the province or other provinces in South Africa. Further studies should endeavour to involve other facilities and larger samples, as well as seeking the views of THPs concerning the concurrent use of ARVs and traditional herbs or medicine with regard to drug interaction or resistance. Notwithstanding these limitations, the finding of this qualitative study provided valuable information about HIV positive clients who are on HAART, but consulting traditional healers for further management. Future studies using quantitative design endeavour to examine the cultural practices affecting HIV patients' adherence to HAART and its correlates. This will aid understanding of the relationship of cultural practices affecting HIV patients' adherence to HAART and other associated factors, among this cohort studied in this setting.

CONCLUSION

Clearly, HIV positive patients on HAART visit THPs for help. This practice affects their level of adherence to HAART, therefore, traditional medicine services in relation to modern medicine need to be addressed for the benefit of the client who believes and uses traditional medicine. Patients need to be educated about the implications of non-adherence to HAART and the concurrent use of ARVs and traditional herbs or medicine with regard to drug interaction or resistance. The use of traditional medicine is increasing among HIV positive who are on HAART, therefore, there should be an exploration of integration of traditional health services into public health. Therefore, multi-disciplinary collaboration is needed for the benefit of the community at large.

ETHICAL APPROVAL AND CONSENT TO PARTICIPATE

Ethical approval was obtained from the University of Limpopo Research Ethics Committee. The permission to conduct the study was also granted by the Limpopo Province Department of Health Research Ethics Committee.

HUMAN AND ANIMAL RIGHTS

No animals/ humans were used for the studies that are the basis of this research.

CONSENT FOR PUBLICATION

Informed consent was obtained from the participants prior to data collection.

AVAILABILITY OF DATA AND MATERIAL

The data from this study will be made available by the author on request.

FUNDING

None.

CONFLICT OF INTEREST

The authors declare that they have no coflicts of interest, financial or otherwise.

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REFERENCES

[1] Moratioa G. Psychosocial Factors that Affect Adherence to Anti-Retroviral Therapy amongst HIV/AIDS Patients at Kalafong Hospital. (Doctoral dissertation, University of Pretoria). 2008.

[2] Ketema AK, Shewangizaw Weret Z. Assessment of adherence to highly active antiretroviral therapy and associated factors among people living with HIV at Debrebrihan Referral Hospital and Health Center, Northeast Ethiopia: A cross-sectional study. HIV AIDS (Auckl) 2015; 7: 75-81. [http://dx.doi.org/10.214/HIV.S79328] [PMID: 25792856]

[3] Schneider J, Kaplan SH, Greenfield S, Li W, Wilson IB. Better physician-patient relationships are associated with higher reported adherence to antiretroviral therapy in patients with HIV infection. J Gen Intern Med 2004; 19(11): 1096-103. [http://dx.doi.org/10.1111/j.1525-1497.2004.30418.x] [PMID: 15566438]

[4] Heyer A, Ogunbanjo GA. Adherence to HIV antiretroviral therapy Part 1: A review of factors that influence adherence. S Afr Fam Pract 2006; 48(8): 5-9. [http://dx.doi.org/10.1080/20786204.2006.10873433]

[5] Simoni JM, Amico KR, Pearson CR, Malow R. Strategies for promoting adherence to antiretroviral therapy: A review of the literature. Curr Infect Dis Rep 2008; 10(6): 515-21. [http://dx.doi.org/10.1007/s11908-008-0083-y] [PMID: 18945394]

[6] Kagee A, Remien RH, Berkman A, Hoffman S, Campos L, Swartz L. Structural barriers to ART adherence in Southern Africa: Challenges and potential ways forward. J Global Public Health 2011; 6(1): 83-97.http://doi.org/10

[7] Cihlar T, Fordyce M. Current status and prospects of HIV treatment. Curr Opin Virol 2016; 18: 50-6. [http://dx.doi.org/10.1016/j.coviro.2016.03.004] [PMID: 27023283]

[8] Eyassu MA, Mothiba TM, Mbambo-Kekana NP. Adherence to antiretroviral therapy among HIV and AIDS patients at the Kwa-Thema clinic in Gauteng Province, South Africa. Afr J Prim Health Care Fam Med 2016; 8(2): e1-7. [http://dx.doi.org/10.4102/phcfm.v8i2.924] [PMID: 27380858]

[9] Heestermans T, Browne JL, Aitken SC, Vervoort SC, Klipstein-Grobusch K. Determinants of adherence to antiretroviral therapy among HIV-positive adults in sub-Saharan Africa: A systematic review. BMJ Glob Health 2016; 1(4)e000125 [http://dx.doi.org/10.1136/bmjgh-2016-000125] [PMID: 28588979]

[10] Gill C, Hamer DH, Simon JL, Thea DM, Sabin LL. No Room for complacency about adherence to antiretroviral therapy in Sub-Saharan Africa. AIDS 2005; 19(12): 1243-9. [http://dx.doi.org/10.1097/01.aids.0000180094.04652.3b]

[11] Petse S, Goon DT, Okafor UB, Yako EM. Antiretroviral treatment adherence among patients in selected health facilities in East London, South Africa: A cross-sectional study. Online J Health Allied Sci 2018; 17(2): 1. https://www. ojhas.org/issue66/2018-2-1.html

[12] Cheng Y, Nickman NA, Jamjian C, *et al.* Predicting poor adherence to antiretroviral therapy among treatment-naïve veterans infected with human immunodeficiency virus. Medicine (Baltimore) 2018; 97(2)e9495https://dx.doi.org/10.1097%2FMD.0000000000009495 [http://dx.doi.org/10.1097/MD.0000000000009495] [PMID: 29480838]

[13] Azia IN, Mukumbang FC, Van Wyk B. Barriers to adherence to antiretroviral treatment in a regional hospital in Vredenburg, Western Cape, South Africa. South Afr J HIV Med 2016; 17(1): a476. [http://dx.doi.org/http://dx.doi.org/10.4102/sajhivmed.v17i1.476]

[14] Namuddu B, Kalyango JN, Karamagi C, *et al.* Prevalence and factors associated with traditional herbal medicine use among patients on highly active antiretroviral therapy in Uganda. BMC Public Health 2011; 11(1): 855. [http://dx.doi.org/10.1186/1471-2458-11-855] [PMID: 22074367]

[15] Wreford JT. Ukusebenza neThongo (Working with Spirit) The role of Sangoma in contemporary South Africa. (Doctoral dissertation, University of Cape Town). 2005.

[16] Makua T. Reduced adherence to antiretroviral therapy in Polokwane, Limpopo province, South Africa. Afr J Phy, Health Edu. Recreation

and Dance 2015; 21(Suppl. 1): 107-14.
[17] Qi FH, Wang ZX, Cai PP, *et al.* Traditional Chinese medicine and related active compounds: A review of their role on hepatitis B virus infection. Drug Discov Ther 2013; 7(6): 212-24. [http://dx.doi.org/10.5582/ddt.2013.v7.6.212] [PMID: 24423652]
[18] Babbie E, Mouton J. The practice of social research. Cape Town: Wadsworth Publishing Company 2001; pp. 871-90.
[19] Creswell JW. A concise introduction to mixed methods research. California, USA: Sage Publications 2014.
[20] Shedlin MG, Decena CU, Beltran O. Geopolitical and cultural factors affecting ARV adherence on the US-Mexico border. J Immigr Minor Health 2013; 15(5): 969-74. [http://dx.doi.org/10.1007/s10903-012-9681-8] [PMID: 22797951]
[21] Wasti SP, Randall J, Simkhada P, van Teijlingen E. In what way do Napalese cultural factors affect adherence to antiretroviral treatment in Nepal? Health Sci J 2011; 5(1): 37-47.
[22] Ung CY, Li H, Kong CY, Wang JF, Chen YZ. Usefulness of traditionally defined herbal properties for distinguishing prescriptions of traditional Chinese medicine from non-prescription recipes. J Ethnopharmacol 2007; 109(1): 21-8. [http://dx.doi.org/10.1016/j.jep.2006.06.007] [PMID: 16884871]
[23] Merten S, Kenter E, McKenzie O, Musheke M, Ntalasha H, Martin-Hilber A. Patient-reported barriers and drivers of adherence to antiretrovirals in sub-Saharan Africa: A meta-ethnography. Trop Med Int Health 2010; 15(Suppl. 1): 16-33. [http://dx.doi.org/10.1111/j.1365-3156.2010.02510.x] [PMID: 20586957]
[24] Mahajan AP, Sayles JN, Patel VA, *et al.* Stigma in the HIV/AIDS epidemic: A review of the literature and recommendations for the way forward. AIDS 2008; 22(Suppl. 2): S67-79. [http://dx.doi.org/10.1097/01.aids.0000327438.13291.62] [PMID: 18641472]
[25] Leistner E. Witchcraft and African development. Afr Secur Rev 2014; 23(1): 53-77. [http://dx.doi.org/10.1080/10246029.2013.875048]