

Ecopsychosocial Strategies for Eradication of Hiv/Aids in Covid-19 Pandemic Era

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Abstract

The rate of HIV/AIDS new infection seems to be very alarming even in the covid-19 pandemic era when restriction of movement and lockdown was imposed by the government across the globe. Those living with HIV/AIDS were faced with challenges of trying to manage their health but new infections were still being recorded. In an attempt to ascertain the possible factors that promote the spread and possible ways to curtail it in our society, this study investigated ecopsychosocial strategies for its eradication. A total of 564 participants with age range of 19 and 66 years comprised 307 males and 257 females were used for the study. Out of 564, 298 were single; 166 married and 100 divorced. These were drawn from the population of people living with HIV/AIDS that visit University of Nigeria Teaching Hospital Ituku Ozalla and General Hospital, Udi in Udi Local Government Area, all in Enugu State for their anti-retroviral drugs using purposive sampling technique. A 13-item and a 10-item questionnaire designed by the researchers were used. A Cross sectional survey design was adopted while descriptive statistics was used to analyze the data using SPSS version 23. The results showed that all the participants agreed that promiscuity contributed hundred percent (100%) to the spread of HIV/AIDS, having unprotected sex also attracted a hundred percent (100%), (100%) of the participants agreed that excessive use of hard drugs and alcohol contribute to the spread of the virus, ninety-seven percent (97.3%) of the participants agreed that poverty can also contribute to the spread of the virus, sixty-four percent (64.6%) agreed that lack of maternal services can contribute to the spread of HIV/AIDS, more than seventy percent (78.3%) disagreed that tribal wars and conflict can contribute to the spread of HIV/AIDS while about seventeen percent (17.6%) agreed that wars and conflict can aid in the spread of the virus. Sixty (60%) disagreed that cultural factors can contribute to the spread of HIV. The results also showed that multiple sexual partners should be discouraged and condom use during sex have the highest affinity with 100% responses, 70-84% of the participants agreed that education on how HIV/AIDS spread should be encouraged, screening of blood before transfuse and promulgation enforcement of laws against the use of drugs/alcohol can help in the prevention of the spread of HIV/AIDS, while control of interstate movement of people and avoidance of conflict/war would prevent the spread of HIV/AIDS attracted more than 50% participants disagreeing with the statement on factors that can prevent or control the spread of HIV/AIDS. Other statement got average percentage less than 50%. The researchers therefore recommended that for the spread of HIV/AIDS to be controlled, effort should be made to adopt the above measures as identified in the study.

Introduction

Human Immunodeficiency Virus (HIV) is a retrovirus that attacks and damages the immune system. When somebody is infected with the HIV, the immune system is damaged by the virus (Pietrangelo &Cherney, 2022) reducing CD4 count to below 200 against 500-1500 normal range. The CD4 or Helper T cell index determines the potency of our immune system to fight infections. According to World Health Organization (2022), HIV targets the immune system and weakens people's defense against many infections and some types of cancers that healthy people ordinarily would fight off. Wilkie et al (2000) noted that major neurological complication of HIV-1 is cognitive impairment which as the disease progresses, it manifests in attention deficit, slow information processing ability, poor memory among others. HIV has deleterious effect on human physical,emotional, interpersonal relationship, welfare and criminal justice system and it cuts across every race, socio-economic status and it is considered a disease of global concern. (Awoyemi & Olusegun, 2016). HIV infection presents with fever, headache, muscle aches and pains, rashes, sore throat, swollen lymph gland mainly on the neck, diarrhea, weight loss, cough and night sweats which severity depends on the viral load (Mayo Clinic 2022). The threat of HIV continues to be one of the deadly health challenges in the world since 1980s (Whiteside, 2001).HIV if care is not taken to boost the CD4count degenerates to Acquired Immune Deficiency Syndrome (AIDS)hence the acronym HIV/AIDS.HIV/AIDS deplete human immune system which kills the white blood cells resulting to death of its victims (Robert, Ronseberg, Donenberg and Devieux, 2006).

AIDS is a term that has been used to describe the most advanced stages of HIV, defined as the occurrence of any of the more than 20 life threatening cancers or opportunistic infections (WHO,2022). HIV/AIDS affect both the old and the young in the society, as well as the productivity of every nation.. Sub-Sahara Africa is home to only 12% of the global population, yet accounts for 71% of the global burden of HIV infection (Joint United Nations Programme on HIV/AIDS (UNAIDS), 2014). Akodu (2014) reported that the prevalence in Nigeria is 4.1%. It is no longer only a health issue but a substantial threat to economic growth, imposing a heavy burden, first on families, communities and eventually on economy (Maikama and Mohammed, 2013). It has been noted that as at 2021, HIV/AIDS has killed about 40.1 million people globally; about 38.4 million people are living with the virus and 1.5 million accounts for new infections yearly (Globally HIV/AIDS Statistics- Fact Sheet, 2022). Statistics also reveals that HIV is most serious in Sub-Saharan Africa with roughly 25 million people living with it (Sub-Saharan Statistics, 2012).

In Nigeria, the first case was recorded and diagnosed in 1985 in Lagos. It was a case of 13 year old female that came from a neighbouring West African country (Nasidi & Starry, 2006). According to UNAIDS (2014), 9 % of total people living with HIV reside in Nigeria. Statistics showed that 1.9 million people in Nigeria are living with HIV with women being the most affected and children up to 14 years as victims also.(Statistica 2021), Federal Ministry of Health (2013) noted that approximately 220,000 new infectors are recorded yearly. UNAIDS (2022) reported that 4000 people including 1100 young people aged between 15 to 24 years become infected everyday and it cuts across Eastern Europe, Central Asia, Middle East. North Africa, Latin America among others.

In Enugu State according to a Health Care officer who pleaded anonymous, new cases are recorded on weekly basis. Nikolopoulos et al (2008) noted that the prevalence of HIV disease will increase while the future rate of new infections is uncertain. The Federal Government of Nigeria has lamented over the rate of new infections tasking the National Agency for the

Control Aids to do the needful in order to tame the tide in line with WHO target of ending the menace of AIDS by the year 2030 (Muanya & Onyedika 2021).

The impact of HIV seems to be more devastating in this era of Covid-19 pandemic. Covid-19 has more destructive effect on people with compromised immunity with other comorbidities such as diabetes, cancer etc. Global funds to tune of 4 billion US dollars had been invested yearly to fight HIV, tuberculosis and malaria in more than 100 countries. (The Global Funds nd) The outbreak of Covid-19 pandemic seems to threaten to reverse the many gains made so far (Gavi.org.nd). People living with HIV and AIDS (PLWHA) are more vulnerable to Covid-19 and according to Gavi.org (.nd) United Nations Development Programme in 2021 noted that Covid-19 has come as a blow to those living with HIV/AIDS. Those people are at a high risk of becoming seriously ill and those that are not on Antiretroviral Therapy (ART) are at higher than the rest of the people. To make the matter more complex, Covid-19 threatened access to medicare and ART due to restrictions and insecurity. Moreover, many social determinants of health and illness recovery changed for the worse during Covid-19 pandemic. The issue of isolation and stigmatization helped to worsen the condition thereby affecting recovery rate.

People living with HIV/AIDS were also more prone to severe respiratory syndrome. Corona Virus -2 (SARS-Cov-2) infection evidence also confirming the risk of SARS-Cov-2 transmission and Covid 2 deaths is higher among immune-compromised persons (CDC. gov.2020). According to Whyte and Zubaik (2020) based on data from Center for Disease Control and Prevention (CDC), 16.7 % of Covid patients in intensive care are immune-compromised with underlying conditions and chances of recovery are much more lower than for others. People living with HIV/AIDS also face increased social burden from stress and are prone to mental health challenges such as depression, anxiety, schizophrenia among others (Shiau, Krause, Velera, Swaminattan & Harkitis, 2020). The negative impact of Covid-19 seems to jeopardize the United Nations Goal of eradicating HIV/AIDS by 2030 which is a major health dimension of Sustainable Development Goals. According to Global HIV/AIDS statistics (nd)covid-19 lockdown in 2020 led to reduction of HIV testingby 41% and referrals for diagnosis and treatment by 37% compared to data in 2019. HIV/AIDS provides a fertile physiological environment for Covid-19 devastating effect and cases of new infections are recorded. It could be expected that efforts should be made to forestall its spread.

HIV/AIDS mode of transmission/spread is a human behavior and it is expected that people should be conversant with it in order to adhere to it. Mode of transmission revolves around blood contact with the person living with HIV. This is possible through blood transfusion, unsterilized needles, sharp objects like clippers, sexual intercourse with the person living with the virus and any other channel through which there is blood/fluid contact with the person living with the virus. The question is, how come people are not adhering to these preventive measures to forestall the spread/new infections?

Adherence refers to the extent patients are able to follow treatment regimen to enhance the efficacy of the drugs or to prevent infection or spread of disease. For people living with HIV/AIDS adherence includes starting with treatment, taking HIV medicine as prescribed and keeping appointments. Adherence to treatment regimen has been found to be critical in treatment outcome (Omeje & Nebo 2011, Ramadhani & Fitriana 2022).Adherence is a critical factor in health care system both as preventive or curative action and as a human behavior, many theories have proposed to explain it. Among the theories that have been proposed to explain this human behavior and for this research is protection motivation.

Protection motivation theory of adherence by Rogers (1975) holds that individuals are motivated to react in a self-protection manner towards a perceived health threat. It involves two processes namely: Primary protection which involves taking measure to combat the risk of developing a health problem, and secondary protection which involves taking steps to prevent the condition from becoming worse. Thus, protection motivation theory contends that fear is at the center of motivation to protect or not to protect oneself. People usually perceive disease condition, assess their vulnerability, the severity of the disease and its threat to wellbeing. It holds that if one feels vulnerable to the disease and perceives the disease as a serious threat to health, the level of fear increases and the person is motivated to adopt protective measures. The individual develops adaptive coping strategies to prevent contacting the disease and where the person has already contacted the disease, the person engages in goal-directed behaviours to tame the tide and prevent its severity. If on the other hand, the level of fear is minimal and perceived vulnerability and seriousness of the disease is appraised to be less life threatening, the motivation to protect oneself is reduced or nonexistent. Thus, the spate of new infections of HIV could be explained using protection motivation theory. It could be deduced that people appear to be insensitive to its deadly effect and are not conscious of their vulnerability resulting from compromised immune system hence are not motivated to adopt protective measures against contacting the virus, leading to the spread of the virus. Thus, to eliminate the scourge of HIV, it becomes imperative to explore the factors that exacerbate the spread of HIV and measures to control it especially during the COVID-19 era.

Some factors been have linked with the spread during pre-covid-19 era; substance abuse, unprotected sex, financial gain, (Seloilive,2005), multiple sex partners, male-male sex high viral load (CDC 2013) Since covi-19 came with changes affecting people living with HIV adversely as well as occurrence of new infections, it is important to find out those factors responsible and measures to tame the spread especially in Enugu where the researchers noted that new infections are recorded on daily basis.

Objectives of the study

To explore the factors that exacerbate the spread of HIV/AIDS in Enugu

To find out effective measures for the eradication of HIV/AIDS

Method

Participants:

A total of 564 participants with age range of 19 and 66 years comprised 307 males and 257 females were used for the study. Out of 564, 298 were single; 166 married and 100 divorced. These were drawn from the population of people living with HIV/AIDS that visit University of Nigeria Teaching Hospital Ituku Ozalla and General Hospital, Udi in Udi Local Government Area, all in Enugu State for their anti-retroviral drugs using purposive sampling technique since the population has a defined characteristic.

Instruments

Two sets of questionnaire were used for the study. They included a 13-item and a 10-item questionnaire designed by the researchers. The items were generated through literature review and focus group discussion to explore possible factors that promote the spread and how to control HIV/AIDS respectively. It was rated in the 3 point likert type response format ranging from Not true 1, Slightly true 2, and Very true 3.

Design/Statistics

A Cross sectional survey design was adopted while descriptive statistics was used to analyze the data obtained by the participants using SPSS version 23.

Results

Table I: FACTORS THAT CONTRIBUTE TO THE SPREAD OF HIV/AIDS

Variables	NO	percent	YES	percent	Mean	S.D	Total
PROMISCUITY	-	-	564	100%	4.61	.487	564
IGNORANCE	129	22.9%	435	77.1%	3.178	.845	564
ILLITERACY	289	51.2%	275	48.8%	2.52	.741	564
POVERTY	15	2.7%	549	97.3%	3.67	.685	564
EXCESSIVE USE OF HARD DRUGS /ALCOHOL	-	-	564	100%	4.18	.555	564
TRIBAL WARS /CONFLICTS	442	78.3%	122	17.6%	2.09	.709	564
CULTURAL FACTORS	350	62%	214	38%	2.39	1.04	564
LACK OF MATERNAL SERVICES	200	35.5%	364	64.6%	2.77	.709	564
HAVING.UNPROTECTED.SEX	-	-	564	100%	4.78	.415	564
SHARING CONTAMINATED NEEDLE AND RAZORS	92	16.3%	472	83.7%	4.78	.415	564
INTERSTATE MOVEMENT OF PEOPLE	288	51.1	276	49%	3.14	.670	564
POOR ALLOCATION OF RESOURCES	263	46.6%	301	53.3%	2.51	.681	564
LACK OF ANTERETROVIRAL DRUGS	177	31.4	387	68.6%	2.64	.666	564

Table I above shows that all the participants agreed that promiscuity contributed hundred percent (100%) to the spread of HIV/AIDS. Having unprotected sex also attracted a hundred percent (100%) agreement from the participants. They believe that getting involved in an unprotected sex can expose the individual or contribute to the spread of HIV/AIDS. Hundred percent (100%) of the participants agreed that excessive use of hard drugs and alcohol contribute to the spread of the virus, because substance is capable of altering one's judgement process when intoxicated which might lead to poor judgement of involving in an unprotected sex or get involved with material that the virus can be contacted from virus, this is because the taker might loose conscience of the happening after taking of the substance. About ninety percent (97.3%) of the participants agreed that poverty can also contribute to the spread of the

virus while less than three percent (2.7%) disagreed that poverty contribute to the spread of HIV/AIDS. Also, about sixty percent (64.6%) agreed that lack of maternal services can contribute to the spread of HIV/AIDS.

More than seventy percent (78.3%) disagreed that tribal wars and conflict can contribute to the spread of HIV/AIDS while about seventeen percent (17.6%) agreed that wars and conflict can aid in the spread of the virus. Sixty (60%) disagreed that cultural factors can contribute to the spread of HIV.

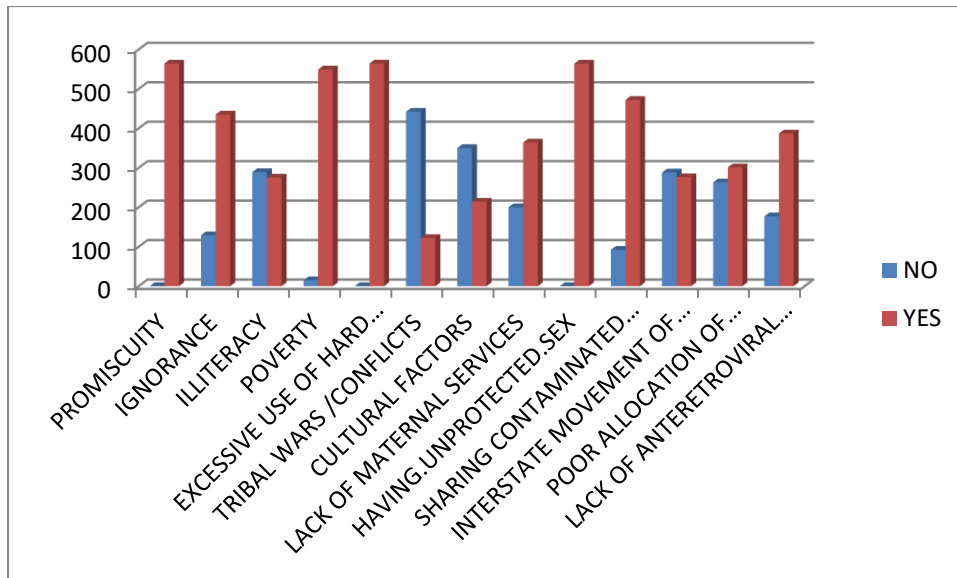


Fig I: bar chart

The diagram above indicated that more than five hundred of the participants agreed that promiscuity, having unprotected sex, poverty and excessive use of hard drugs /alcohol contribute greatly to the spread of HIV/AIDS. Again, about three hundred and fifty to four hundred (350-400) of the participants agreed that ignorance, sharing contaminated needle/razor and lack of antiviral drugs contribute to the spread of HIV/AIDS. About more than three hundred of the participants disagreed that tribal/conflict and cultural factors can lead to the spread of HIV/AIDS. About two hundred and fifty (250) participants also disagreed that illiteracy, interstate movement of people and poor allocation of resources can lead to the spread of HIV/AIDS.

While AMOS statistical was used to carry out structural equation model (SEM) on the items, of which only two indicated level of significant which are poverty and excessive use of drugs/alcohol. NFI, IFI and CFI came out to be greater than one (>1) which was more than threshold of at > .9, the RMSEA= < .035 was lesser than the benchmark of < .05, and chi-sq = .000 which is lesser than the value of p< .001. This shows that these two items were able to measure the factors that can contribute to the spread of HIV/AIDS.



Table II: Factors That Control the Spread of HIV/AIDS

Variables	N O	perc ent	YE S	perc ent	Me an	S. D	Tot al
EDUCATION ON HOW HIV/AIDS SPREAD SHOULD BE ENCOURAGED	1 0 5	18. 6%	45 9	83. 2%	3.1 6	.7 17	56 4
MULTIPLE SEXUAL PARTNERS SHOULD BE DISCOURAGED	-	-	56 4	100 %	4.5 7	.5 09	56 4
GOVERNMENT INTRODUCTION OF POVERTY REDUCTION PROGRAMME	1 7 2	30. 5%	39 2	69. 5%	2.9 3	.7 32	56 4
MAINTENANCE OF PERSONAL HYGIENE	2 1 5	38. 1%	34 9	61. 9%	3.0 0	.8 7	56 4
CONDOM USE DURING SEX	-	-	56 4	100 %	4.2 8	.6 26	56 4
ACCESIBILITY OF MATERNAL SERVICES	2 0 3	36. 0%	36 1	64. 0%	2.8 3	.8 08	56 4
SCREENING OF BLOOD BEFORE TRANSFUSION	1 2 1	21. 5%	44 3	78. 5%	3.4 8	3. 48	56 4
PROMULGATION ENFORCEMENT OF LAWS AGAINST THE USE OF DRUGS/ALCOHOL	6 6	11. 7%	49 8	88. 3%	3.2 7	.6 62	56 4
CONTROL OF INTERSTATE MOVEMENT OF PEOPLE	3 2 8	58. 2%	23 6	41. 9%	.66 2	.6 54	56 4
AVOIDANCE OF CONFLICT/WAR WOULD PREVENT THE SPREAD OF HIV/AIDS	3 5 8	65. 5%	20 6	36. 5%	2.3 6	.4 85	56 4

Table II shows that multiple sexual partners should be discouraged and condom use during sex have the highest affinity with 100% responses, with nobody saying no to the listed items. About 70-84% of the participants agreed that education on how HIV/AIDS spread should be encouraged, screening of blood before transfusing and promulgation enforcement of laws against the use of drugs/alcohol control the spread of HIV/AIDS, and 21% and less disagreed to the statement on factors. Control of interstate movement of people and avoidance of conflict/war control the spread of HIV/AIDS and attracted more than 50% participants disagreed with the statement on factors that can prevent or control the spread of HIV/AIDS. Other statement got average percentage less than 50%.

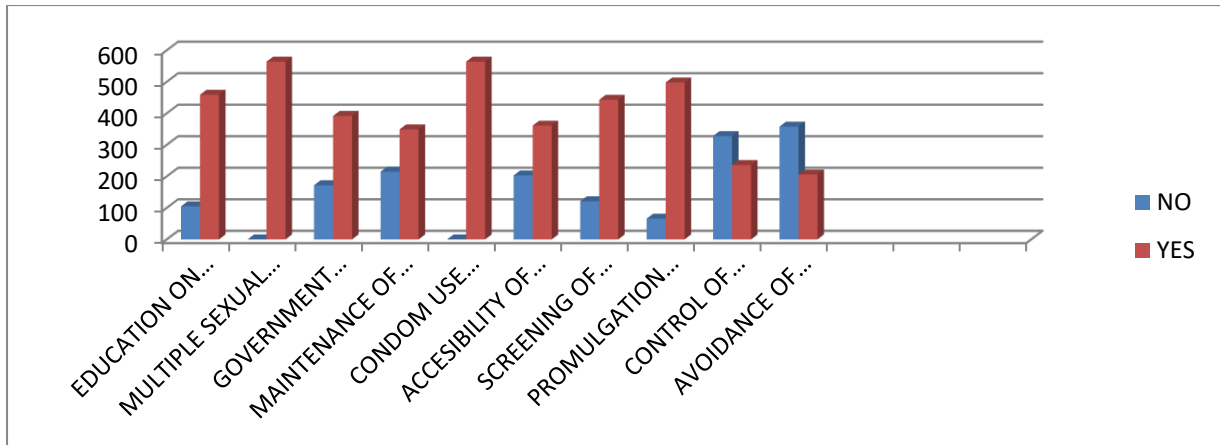
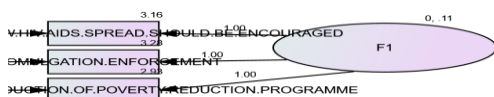


Fig II: bar chart on factors that can prevent/control the spread of HIV/AIDS

The bar chart above indicated that multiple sexual partners should be discouraged and condom use during sex on factors that can prevent/control the spread of HIV/AIDS carries the highest affinity of yes with more than 500 participants agreeing to the two statements. This implies that the participants believe that these two items are major contributors to the spread of HIV/AIDS, regulating or controlling will help to prevent the spread of the virus. While more than 300 participants agreed that education on how HIV/AIDS spread should be encouraged, screening of blood before transfusing and promulgation enforcement of laws against the use of drugs/alcohol can help in the prevention of the spread of HIV/AIDS. More than three hundred (300) participants disagreed with the statements on control of interstate movement of people and avoidance of conflict/war can prevent the spread of HIV/AIDS, as factors that can prevent/control the spread of HIV/AIDS. Other statements attracted less than two hundred and fifty (250) responses from the participants.

Also, AMOS statistical was used to carry out structural equation model (SEM) on the items, of which only three indicated level of significant, which are government introduction of poverty reduction programme, promulgation enforcement and education on how HIV/AIDS spread should be encouraged. NFI, IFI and CFI came out to be greater than one (>.9) which was equal to the threshold of at > .9, the RMSEA= < .035 was lesser than the benchmark of < .05, and chi-sq = .000 which is lesser than the value of $p < .001$. This shows that these three items were able to measure the factors that can prevent/control to the spread of HIV/AIDS.



Discussion

From the results above, all the participants agreed that promiscuity contributed hundred percent (100%) to the spread of HIV/AIDS. Having unprotected sex also attracted a hundred percent (100%) agreement from the participants. They believe that getting involved in an unprotected sex can expose the individual or contribute to the spread of HIV/AIDS. Hundred percent (100%) of the participants agreed that excessive use of hard drugs and alcohol contribute to the spread of the virus, because substance is capable of altering one's judgement process when intoxicated which might lead to poor judgement of involving in an unprotected sex or get involved with material that the virus can be contacted from virus, this is because the taker might loose conscience of the happening after taking of the substance. About ninety percent (97.3%) of the participants agreed that poverty can also contribute to the spread of the virus while less than three percent (2.7%) disagreed that poverty contribute to the spread of HIV/AIDS. Also, about sixty percent (64.6%) agreed that lack of maternal services can contribute to the spread of HIV/AIDS.

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Also, from the results above, multiple sexual partners should be discouraged and condom use during sex have the highest affinity with 100% responses, with nobody saying no to the listed items. About 70-84% of the participants agreed that education on how HIV/AIDS spread should be encouraged, screening of blood before transfusing and promulgation enforcement of laws against the use of drugs/alcohol control the spread of HIV/AIDS, and 21% and less disagreed to the statement on factors. Control of interstate movement of people and avoidance of conflict/war control the spread of HIV/AIDS and attracted more than 50% participants disagreed with the statement on factors that can prevent or control the spread of HIV/AIDS. Other statement got average percentage less than 50%.

Recommendations

The researchers hereby recommended the following to curb the menace and spread of HIV/AIDS:

- Avoidance of promiscuous behaviours
- HIV/AIDS testing
- Use of protection during sex
- Diagnosis and treatment of Sexually Transmitted Diseases STDs/ Sexually Transmitted Infections STIs
- Create more awareness about the menace of HIV/AIDS
- Those living with HIV/AIDS should be encouraged to go for antiretroviral therapy
- Provision of better health care to the people living with HIV/AIDS
- Anti- stigma measures should be adopted on those castigating on people living with HIV/AIDS
- Creating of legal reform on environment supportive of HIV/AIDS preventive.

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