

Evaluating prevention and treatment programmes in mitigating HIV prevalence in Zimbabwe's prisons.

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Abstract

HIV is a serious health threat to over 10.3 million people in prison across the world. Studies have highlighted that globally, levels of HIV prevalence among prisons population are far higher than in the population outside prisons. In Zimbabwe, the HIV prevalence in prisons is at 28% and in the general communities is at 13.5%. As means of managing HIV prevalence in prisons, the international, regional and national organisations came up with HIV policies for people prisons. With the introduction of these HIV policies in Zimbabwe prisons, there is very limited data which has evaluated the effectiveness of implementing the HIV policies in mitigating the HIV prevalence. The paper has two objectives which and these objectives were to evaluate the implementation of IEC programme in mitigating the HIV prevalence in Zimbabwe's prisons and the paper was also evaluating the implementation of ART programme in mitigating the HIV prevalence in Zimbabwe's prisons. In meeting these objectives, the study made use of the mixed research design in collecting data. 200 questionnaires were distributed to prisoners of Matabeleland region. Interviews were also conducted with 10 key stakeholders who work on HIV in prisons. For the first objective, the study revealed that the IEC programme is being implemented effectively in prisons. This is mainly because the stakeholders are involved in implementing IEC programme to prisoners and the findings revealed that their behaviours have changed positively. The second objective also revealed that ART is being made available all the times in prisons. Prisoners adhere to ART which has led to decrease of AIDS-related deaths and OI. The study therefore recommended that the Zimbabwean government should ensure that all prison clinics initiate ART, they also introduce peer educators and the staff has to be capacitated in the implementation of IEC and ART programme in prisons.

Key words: **Implementation, HIV programmes, HIV prevalence and prisons.**

1.1 Introduction

Public policies are brought forth by governments and stakeholders as means of solving a problem that a group, community or a country is facing. Therefore a policy contain the intentions which are made up of statements or objectives brought forth by the governments and those statements need to be implemented to produce desired outcomes to the people faced with the problem. In prisons globally, over 10.3 million prisoners are faced with the problem of Human Immunodeficiency Virus (HIV) (Hammett, Harmon, & Maruschak, 1999). Reports have highlighted that globally, levels of HIV prevalence in prisons population are far higher than in the population outside prisons (Maruschak, 2002). The estimations from studies pinpointed that in prisons, the HIV prevalence is mostly up to a hundred times higher than in the general community (UNODC, 2012).

In developed countries, the HIV prevalence in Australia and in the US prisons ranges from 0.2% 2% to over 10%. In Europe and Central Asia the HIV prevalence in prisons is at (19%), South Asia (3%), East Asia and the Pacific (9%), Caribbean (3%), Latin America (11%), North Africa and Middle East (10%) (Maruschak, 2002). In Brazil, the HIV prevalence was at more than 20% and from 4% to 10% in Argentina (Jürgens et.al, 2007). According to (UNODC, 2007, UNAIDS, 2007, and the World Bank, 2007) available data on HIV among West and Central African prisons indicate

that the prisons are greatly affected by the high HIV prevalence. Dolan (2016) argued that the HIV prevalence rates among prisoners of East and Southern Africa is at 15.6% and among the West and Central Africa is at 8.2%.

In West Africa, the HIV prevalence varies from double to nine times higher than what is observed among the general population. In Nigeria prisons, the HIV prevalence was estimated to be at 9% in 2004, with Ghana having 19% in 2006, and Togo 7.6% in 2008 (UNAIDS and World Bank, 2007). In recent years, for example, the estimation of HIV prevalence among people in prisons was between 6 and 50 times higher than outside prisons (Human Rights Watch, 2011). In most Southern African countries, the exact HIV prevalence rates are unknown, preliminary results of HIV and AIDS Situation and Needs Assessments done by some SADC member States also pointed high HIV prevalence inside prisons especially among women prisoners in comparison to the general communities (SADC, 2009).

HIV in Zimbabwe prisons is also a problem as the HIV prevalence rate is at 28% in prisons and 13.5% in the general population of people in communities (Extended Zimbabwe National HIV and AIDS Strategic Plan, 2015-2020). Due to this HIV prevalence crisis in Zimbabwe, the government launched various HIV policies which were meant to address the problem at hand. Zimbabwe had its first HIV policy in 1999 which ended in 2005. After that period there was the Zimbabwe National HIV and AIDS Strategic Plan (ZNASP) 2006-2010. After that period there was Zimbabwe National HIV and AIDS Strategic Plan (ZNASP II) 2011 to 2015. The last Zimbabwe National HIV and AIDS Strategic Plan (ZNASP III) which was from 2015 -2018. Currently, there is an extended Zimbabwe National HIV and AIDS Strategic Plan (ZNASP) 2015-2020. However with the introduction of these policies, the gaps still lack as they have not been a study carried out highlighting the effectiveness of implementing these policies on HIV prevalence and how the various stakeholders involved in the implementation have assisted in addressing the HIV prevalence, That is why the researcher is making use of the elite theory and group theory in revealing the roles of actors in the implementation of HIV prevention and treatment programmes. The prevention and treatment programmes being evaluated is information, education and communication (IEC) programme and antiretroviral treatment (ART) programme.

1.2 Literature review

The paper first discussed the two public policy theories which are elite theory and group theory. The paper further discussed the empirical literature on IEC and ART programmes in mitigating the HIV prevalence.

1.2.1 Theoretical review

The study made use of the two public policy theories to highlight how there are applicable in the implementation of HIV programmes and how these theories shape the implementation of HIV programmes. These theories include power elite theory and group theory. This work is making use of Thomas Dye view of power elite theory. Dye (1978) argued that power in public policy making is concentrated more among the elites than to the masses.

Dye (2000) asserted that the United States public policy originated from the elite classes who were at Washington D.C not from the citizens of the US. The elite groups which Dye (2000) referred to include the non-profit foundations think tanks, special-interest groups, and prominent lobbyists, law firms and the government. The power elite theory, in short, suggests that the elite groups in a country have powers and influence in making important decisions that can either build or destroy the nation, leaving relatively minor decision-making matters to the middle level and the common persons have no power in making decisions. The power elite establishes the basic policy agenda in

such areas as national security and economics (Dye, 2000). Therefore the power elite theory claimed that all decisions that affect the country and ultimate power belong to the elite (Dye, 2000). He defined the elites as few individuals who hold key positions in the economic, political and military institutions in any society. The public policies reflect the values of the elites in governing the masses who are ill-informed and have no power in policy processes (Dye, 1978, Henry 1975). Dye and Zeigler (1990) posited that the elites believe that they are the ones responsible for making policies and implement them as a way of promoting the wellbeing of the masses.

The group theory on the other hand argued that various interest groups in the society exert pressure on the legislature to adopt and implement public policies which are favoured by groups in the society and not by elites only (Henry, 1975). Henry (1975) further noted that a public policy is the product of the group struggle. The group theory lays its emphasis upon having different groups who are involved in policy formulation, policy implementation and evaluation rather than upon the government (Anderson, 1997). He further argued that different groups are important in the policy process as they share their views and assist greatly in the policy implementation process. Hill & Hupe (2014) noted that policy implementation needs the collaboration of multiple actors at different levels of government and Non-State actors.

The power elite theory and the group theory posits that the elites and various groups are involved in the policy process. Their roles are seen from the beginning of the policy process to the end. The policy process according to (Dye, 2000) has six stages. These stages include identification of the problem, agenda setting, policy formulation, policy legitimization, policy implementation and policy evaluation. Underneath is a figure showing the policy cycle by (Dye, 2000). Each stage of the policy process is explained below highlighting the role of the elites and various groups in the policy process.

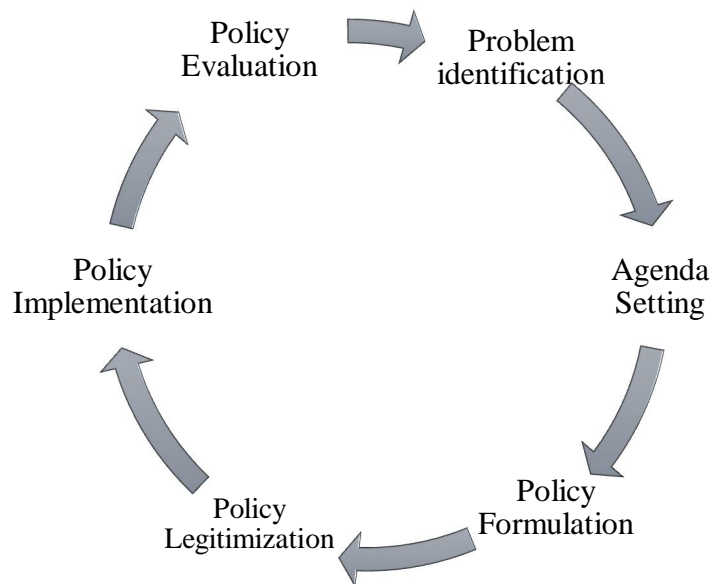


Figure 4: The policy Cycle

Source: (Dye, 2000)

Identification of the problem

The Policy cycle begins with the problem that needs to be addressed through policy. There are various ways in which a problems can be identified, but mostly it is through highlighting data on the subject which will show that it is problem. A problem is defined as an unrealised value, need, or

opportunity which, however identified, and has to be solved by attaining public attention (Theodoulou, & Cahn, 1995). Wildavsky (1984) clearly posited that a problem is a difficulty and that difficulty can be changed if something can be done about it.

Agenda setting

Agenda setting means the problem is being formalized by getting the problem on the formal policy agenda of issues that has to be addressed the government and their departments and other relevant stakeholders who include presidents, cabinet members, Parliament, Congress, or ministers of health, finance, education, or other relevant ministries (Theodoulou and Cahn, 1995). Non-State actors are also involved in agenda setting by stating what issues to be addressed in tackling the problem at hand and the policymakers from the government are the most who are engaged in this process because they are the one who formally addresses the problem through a policy (Dye, 2000). However, for a problem to be formalised it has to be competitively selected by stakeholders and the government, during agenda setting not all problems will be addressed and some will be neglected and denied (Dye, 2000). Most problems that are selected during agenda setting are holdovers from the last time period or a re-examination of policies already implemented which may be failing (Hayes, 1992). In agenda setting, the stakeholders who have the power is the government that is the elites in comparison to other stakeholders.

Formulating policy proposals

Policy formulation is part of the process where stakeholders and government departments involved articulate, debate, and draft proposed actions into language for a law or policy (Theodoulou and Cahn, 1995). Different groups of people are involved in policy formulation and they include interest groups, government bureaucracies, state legislatures, and the president and Congress. Policy formulation includes setting goals and outcomes of the policy or policies. The goals and objectives that have been put forth may be general or narrow but however those objectives should capture the relevant activities, inventions and indicators which can be achieved and measured (Theodoulou and Cahn, 1995).

Legitimizing public policy

Policy is legitimized as a result of the public statements or actions of government officials, both elected and appointed in all branches and at all levels (Theodoulou and Cahn, 1995). For a policy to be legalized, executive orders, budgets, laws and appropriations, rules and regulations, and decisions and interpretations have the effect of setting policy directions (Dye, 2000).

Implementing public policy

This stage is very important in the study as this is the stage that the researcher is evaluating. Dye, & Zeigler (1990) defined implementation as the carrying out the objectives or decision made by the government and other organisations and the resources used to carry out these objectives are public expenditures. The study highlighted the stakeholders who are involved in the implementation of the HIV policies in prisons. The study exposed the roles and activities that were done by the elites or various groups in mitigating the HIV prevalence in prisons of Zimbabwe. The study further went on and revealed the stakeholders who have power in stating the intents of the specific HIV policies for people in prisons and further state which programmes are to be implemented and which one are not to be implemented in correctional facilities. The study highlighted the level of involvement of these actors in the policy implementation and further noted the challenges faced by these groups as they

implement policies in prisons. The study further highlighted whether the policies being implemented are the reflection of the values of the interested groups or elites

Evaluating public policy

This stage was of great importance in this study as the researcher evaluated the implementation of the HIV policies in mitigating the HIV prevalence in Zimbabwe's prisons. Evaluation is the final stage of the policy process. In the evaluation of a public policy set by the government and by other stakeholders, the aim is to see whether the policy has met its desired goal. The process of evaluating the policy involves the government agencies, outside consultants, the press, and the public and they do this by collecting information, testing, and analysing the information about the implementation and see if the policy has been effective (Majone, 1989). The policies are therefore evaluated against intended objectives or set goals and impacts of the policy.

The study evaluated the level of involvement of the elites and groups in implementing the HIV policies and how their involvement have affected the HIV prevalence in Zimbabwe's prisons. The study further evaluated how these stakeholders have used their powers in highlighting which programmes to be implemented and which one not to be implemented. The HIV policies that were evaluated by the elites or groups, whose values did the policies reflect in governing the prisoners, was it the values of the elites or of the groups.

1.2.2 The implementation of information, education and communication (IEC) programme

IEC is one of the most important programme that has assisted greatly prisoners about the HIV. This programme has impacted knowledge to the prisoners on how HIV is transmitted and how they can prevent themselves from transmitting HIV while in prisons.

According to UNAIDS (2000), the Suriname National AIDS Programme developed an HIV programme in Suriname prison where they taught the prisoners, the prison staff and organisations on HIV education and the programme also covered HIV support programmes. The programme trained male prisoners and prison warders to be peer educators. As a result of the programme, the male prisoners disclosed their HIV status by creating the Boma AIDS Education Collective (BAEC). The female prisoners were excluded from the training programme because they served short sentences but however they were taught about HIV and mostly their sessions had mainly concentrated on the teachings of mother-to-child transmission and sexually transmitted infections (UNAIDS, 2000). The Suriname prisoners who formed the BAEC group produced an HIV educational leaflets which was mainly designed for prisoners who were new and the prisoners who were being discharged from the prisons. The leaflets were written in three languages. The leaflets were then pre-tested and modified based on comments from 17 prisoners. The Programme was officially introduced when BAEC organised an AIDS/STD week. The HIV services which were offered during the AIDS/STD week included HIV educational sessions, video shows, discussions, and HIV testing. They produced a manual for peer educators, and the training curriculum for prison wardens also included AIDS/STD education (World Bank, 2009). Several HIV activities were conducted with other organisations as a means of revealing that the prisoners are part of a wider community concerned about HIV.

In Cook County jail, HIV education programme was offered to the prisoners of eighteen days. Conolly, (1989) stated that these HIV education sessions increased the levels of knowledge among the prisoners. At New South Wales prison, HIV education was offered to the prisoners. The evaluations made from this programme revealed the majority of prisoners acknowledged that they received HIV education more when they were inside prisons than when there were in the

communities (Conolly, 1989). The evaluations also pinpointed out that the New South Wales prison inmates who participated in these programmes either by going to talks about HIV/AIDS or by reading pamphlets had a significantly higher average knowledge score about HIV/AIDS than those who did not (Conolly, 1989). However, Conolly (1989) noted that HIV education did not change the prisoners' attitude or their behaviour on the transmission of HIV.

WHO (2007) noted that various stakeholders who included the BBC World Service Trust London, the Foundation for Independent Radio Moscow; Eurasia Media Centre Yekaterinburg, Helping Hand and Chelyabinsk partnered together and they established a fixed-line radio network in six selected prisons of Sverdlovskaya and Chelyabinskaya. The radios disseminated information to prisoners about health issues and HIV. On HIV education, they were taught about the risk factors, HIV prevention, HIV treatment and the radios also disseminated information on the rehabilitation process. These programmes were broadcast in the six targeted prisons and further disseminated to other prisons across the region

At Bedford Hills Correctional Facility at the New York State, there was an HIV and AIDS Counselling and Education programme (ACE) which targeted female prisoners. As a result of the programme, the female prisoners noted that the programme increased their levels of knowledge about HIV. The services that were offered from the programme included individual HIV testing and counselling, outreach services, support groups especially towards the people living with HIV, annual events, professional training, discharge planning/case management, and effective follow up services when the women were released. At the end of the year, the programme had reached to approximately 6,000 women inmates (Collica 2002).

Studies by (Lurigio, Petraitis, & Johnson, 1992) displayed that at US prisons, the inmates preferred the HIV teachings from their peers than from stakeholders. Studies further highlighted that peer education produced more positive results as positive changes among US prisoners behaviour on issues related to HIV transmission and prevention was witnessed. More so, in peer-led HIV session, inmates attended in numbers and they pay attention as they were taught (Lurigio, Petraitis, & Johnson, 1992). They further claimed that peer education in prisons resulted in positive changes as prisoners reduced high-risk activities like unprotected sexual activity and needle use because this programme provides additional benefits on HIV knowledge. After the peer educators had served their sentences, many were offered paid positions in the field of HIV (Collica, 2006). Reports from prisoners noted that their levels of knowledge about HIV and self-esteem had improved because of being taught by their peers (Hammett et al., 1999). HIV education proved to be of great help to both prisoners and peer educators because they both gained heightened insight into their lives and they had been empowered to move beyond their criminal lifestyles (Hammett et al., 1999).

Wolitski (2006) pinpointed that an HIV education for people in correctional facilities has to be evidence-based. He noted an example of an evidence-based programme which was of great benefit to the prisoners and it was project START. This project focused on preventive interventions from an individual level. The programme was designed mainly for prisoners being released from prison. As a result of this project, positive results showed among individual inmates because there was a significant decrease on unprotected sex compared to those receiving a single-session educational intervention as a group (Wolitski, 2006).

According to Inciardi et al (2007) at New York State prisons, a protocol which covered race, gender-sensitive and peer-facilitated was developed to address HIV risk reduction and prevention for the prisoners who are entering again in prisons. As a result of the protocol, services which

include HIV prevention education and group counselling were offered to 70,000 inmates housed in 69 correctional facilities across New York State (Klein et al. 2002). A prison-based HIV intervention was most successful because the beliefs of the inmates were transformed positively about HIV and also successful at influencing beliefs and intentions related to condom use (Bryan et al. 2006).

A Pennsylvania prison, the prison staff educated the prisoners, the communities, legal authorities and prison staff about HIV and because of the HIV education, all these groups of people agreed that the HIV positive inmates also have a right to a good and decent life where they are not discriminated but instead treated just like other inmates who are HIV negative (CDC, 2006). They further pointed out in Pennsylvania prison, the education sessions that were delivered to them were of great importance and proved to be effective to the inmates and the prison staff as the sessions were live, interactive and the stakeholders who delivered the sessions on HIV delivered accurate information which reduced risk perceptions.

According to Carelse (1994), at Westville Medium B Prison South Africa, mass HIV education programmes were not proven effective in changing the behaviour of prisoners because the programme was not presented in the way the prisoners liked it or in line with their lifestyle. The prisoners perceive them as irrelevant and will not relate the information to their own lives (Carelse, 1994). Additionally, the HIV education which was offered to the prisoners were mostly in English and most prisoners did not fully understand English well because most of them had low levels of formal education (Carelse, 1994). Therefore the education and the educational materials that were offered to them did not affect them as they did not fully understand the teachings.

A study on knowledge, attitude, and preventive practices among prison inmates in Ogbomoso prison at Oyo State, South-West Nigerian revealed high knowledge about HIV/AIDS among inmates (UNODC, 2012). However, some prisoners still had the wrong information about HIV because they displayed negative attitudes that were likely to encourage stigmatisation and discrimination against the people living with HIV.

The implementation of antiretroviral treatment programme

ART has been relatively available and accessible to prisoners who are HIV positive both in developed and developing countries (Altice, Mostashari, & Friedland, 2001). Those who test HIV positive in prisons treatment is initiated to them in prison. In Connecticut prison of United States, reports noted that about 67% of the prisoners who tested HIV positive received their first ART treatment in prison (Altice, Mostashari, & Friedland, 2001). As a result of the availability of ART treatment in prisons, the number of AIDS-related deaths has significantly fallen in prisons (Centers for Disease Control and Prevention, 1999 and Maruschak, 2002). Pontali (2005) noted that prisoners who are on treatment if they are not fully monitored they tend to discontinue their treatment either by short or long periods. Pontali (2005) further explains that the periods that prisoners miss or discontinue with their medications happen upon arrest, detention in police cells, within the prison system when prisoners are transferred to other facilities or have to appear in court, and upon release. Upon their release, there is need for an effective discharge plan for inmates as means of preserving the health care advances made in prison (Spaulding et al., 2004, Springer et al., 2004).

At Rikers Island in New York City prison, inmates who were on ART treatment their CD4 counts rose in a pattern almost identical to that found in clinical trials (Culbert, Bazazi, Waluyo, et al., 2016). Among 170 prisoners at Wisconsin who were on ART treatment, positive improvements in

CD4 count and viral load measures were similar to those found in community patients (Frank, 1999). A 1996 survey conducted to US prisoners who were on ART treatment revealed that 84% of the prisoners were found that they adhere to ART treatment and the ones who were under directly observed therapy (DOT) had their adherence levels at 82% and those who self-administered medications had their adherence levels at 85% (Altice et al., 2001).

According to WHO and UNODC (2009), in 2007, about 54.6% of prisoners who were HIV positive started treatment while in prisons. According to self-reported data, 53% of prisoners living with HIV received antiretroviral therapy in prison and 60% of the prisoners reported that they had treatment interruptions while in prisons (Correctional Service Canada (2007). The reason for the treatment interruptions is mainly because of temporary unavailability of medication at the institution, prisoner transfer between institutions and prisoners' own decisions to discontinue with medications (Zakaria et al., 2010). The other reason highlighted by prisoners on why they discontinue their medications was because some prison facilities distributed medication in front of other prisoners (Draine, et al., 2011). The lack of confidentiality may keep prisoners from revealing their HIV status and receiving care. Other factors which contribute towards discontinuity of medications among inmates include logistical issues such as difficulties for a correctional facility to access or retrieve an inmate medical history, delays in receiving laboratory testing results and scarce access to HIV-specific services (Draine et.al, 2011).

Antiretroviral therapy (ART) has significantly reduced HIV/AIDS-associated disease and deaths (Palella et.al, 1998). In US prisons from 1995 to 1999, HIV deaths drastically decreased by 57% because ART treatment was available and accessible to prisoners (Maruschak, 2006). Moreover, in 2009, in USA prisons, the death rates of AIDS in state prisons dropped less in comparison to the death rates of AIDS for the US general population (Maruschak, 2012). These findings pinpointed that when ART is made available and is accessible to prisoners, the levels of AIDS deaths decrease leading to substantial improvements in their HIV disease status (Maruschak, 2012). Between 1990 and 1998 in New York City prisons, AIDS-related deaths also reduced from 41 to 6 deaths/10 000 inmates due to increased availability of ART in prisons. As a result of ART, TB incidences reduced also in prisons and TB-associated mortality (Middelkoop et.al, 2011).

A Spanish study showed that prisoners receiving ART presented a higher rate of viral load failure in conjunction with an unexpected lower rate of drug resistance. This was mainly because they did not adhere to ART (UNODC, 2006). 16% of prisoners reported that the reason why they did not adhere to ART treatment is that they did not want to stand in the medication line (Draine et.al, 2011). This is mainly because when they are seen standing in the line, they will be labelled as HIV positive prisoner by other HIV- prisoners (Spaulding et al., 2009). Many prisoners reported keeping their HIV status hidden from the other prisoners (Altice et al., 2001). UNODC (2009) stated that some prisoners reported that they preferred taking the treatment on their own rather than to be given by medical staff and this would boost their adherence levels. UNODC (2009) stated that in Namibian prisons, six barriers to ART adherence among prisoners were noted and these include insufficient privacy within a stigmatized setting, the lack of simple supports for adherence, insufficient nutritional intake, the market value of ARVs to exchange for money or other benefits, the brutality of the prison setting and the lack of good information about HIV treatment and care.

1.3 Methodology

Data was collected from the five prisons in the Matabeleland prisons. These prisons are Bulawayo main prisons, Gwanda main prisons, Hwange main prison, Lupane satellite prison and Kezi satellite prison. These prisons in the Matabeleland region were purposively sampled because there was a

good representative of the total population as both main and satellite prisons are presented well in their strata or groups. These three provinces have main prisons and satellite prisons that have bigger prison populations in their provinces. For the main prisons, the researcher purposively chose the main provincial prisons as these prisons are inclusive in terms of having different types of prisoners. Questionnaires were distributed to 200 prisoners who are at Matabeleland North, Matabeleland South and Bulawayo provinces of Zimbabwe. In distributing the questionnaires to prisoners, the researcher used simple random sampling. The purpose of using simple random sampling was for the researcher to have a wide variety of prisoners' perceptions and to have different types of prisoners as some are HIV positive, others HIV negative, some prisoners have stayed for a long period and others for a short period.

Interviews were conducted with 10 key stakeholders who were purposively sampled. The Key stakeholders include the Zimbabwe Prison and Correctional Services (5 respondents), Ministry of Health and Child Care (MOHCC) (2 respondents), National AIDS Council (NAC) (2 respondents) and HIV and AIDS institutions managers or officers (1 respondents). The reason why the researcher used purposive sampling to select the key informants is that the key informants being selected are those who are working in the departments of HIV interventions for people in prisons. In analysing the data, the researcher made use of mean for the quantitative data and for the interviews, content analysis was used.

1.4 Presentation and discussion of results

The results presented and which are discussed are the results of the IEC programme and ART programme on how there have mitigated the HIV prevalence in Zimbabwe's prisons.

1.4.1 IEC programme in tackling HIV prevalence

Table 1 highlights the questions which are used to measure the effectiveness of HIV Information, Education and Communication (IEC) programme in affecting the HIV prevalence.

Table 1

Measuring the effectiveness of IEC on HIV prevalence

HIV Information, Education and Communication (IEC) effectiveness

IEC	Mean	Average
IEC assisted with knowledge on HIV prevention	4.1	
IEC respond to youth needs	4.1	
IEC respond to female needs	4.2	4.1
Provision of IEC package of HIV upon admission	3.9	
IEC contains information on eMTCT	3.8	
IEC sessions are interactive through the use of material resources	3.1	

Note. The measurement scale is out of 5

Source. Field survey, 2019. Values are based on the author's calculations using SPSS 21

The findings unveiled how IEC has tackled HIV prevalence in prisons as demonstrated by the above results from Table 1. Findings indicate that the questions asked to prisoners were measured using the scale of 1 to 5. The highest score of the scale is 5 and the lowest is 1. Majority of the prisoners pointed out that IEC responds to female needs question as it had the highest mean which was 4.2. It was followed by the question of IEC respond to youth needs which had a mean of 4.1. IEC assisted with knowledge on HIV prevention question followed with the mean of 4.1 and the question of the provision of IEC package of HIV upon admission followed with a mean of 3.9. IEC contains

information on PMTCT question followed with the mean of 3.8. IEC sessions are interactive through the use of material resources was the question which had the lowest mean of 3.1. The IEC programme is effectively implemented as the total mean of the programme is 4.1 out a mean of 5. The findings revealed that IEC is taught to all groups in prison that is the youth and females. Information on HIV is provided upon entry of every prisoners. IEC session being interactive had a lower mean in comparison to other services being provided under IEC programme.

HIV Information, Education and Communication (IEC) is one of the prevention programmes that is implemented in Zimbabwe's prisons. During an interview with ZPCS officers, they pointed out that:

This is an important programme for prisoners as it equips them with the knowledge they need to prevent HIV in prisons. This programme has various stakeholders who come and inform prisoners on HIV prevention and they include MOHCC, NAC, ZPCS and NGOs. The teaching that prisoners have received from the stakeholders have led to the change in their behaviours and also affecting the prevalence of HIV positive as it has limited the number of new HIV case.

Looking at the first question which was asked to inmates of IEC assisted with knowledge on HIV prevention, it was among the highest with the mean of 4.1. During an interview with the District AIDS Coordinator of Lupane district, he highlighted that IEC which is being offered to inmates in prisons have assisted and equipped inmates with knowledge on HIV prevention. These findings are in line with the findings of (Dolan et al., 2016) who claimed that a great number of inmates reported increased knowledge on how HIV can and cannot be transmitted. More still, findings by (Hammett, Harmon & Maruschak, 1999) pointed out that HIV education made significant changes among prisoners who were being released from prisoners as they knew ways of HIV transmission and prisoners behaviours changed as they had improvements in self-esteem, knowledge, and commitment to the community based on their experiences in these programmes.

Prisoners also noted that IEC responds to female needs and on issues of PMTCT. In an interview with the District AIDS Coordinator of Hwange district and with ZPCS nurse in charge for Hwange main prison they pointed out that female inmates are also taught on issues which include PMTCT and sexual reproductive health. The Hwange nurse in charge further noted that in cases where they have pregnant female prisoners, they inform them on HIV services being offered and ensure that they prevent mother to child infections. These findings are in line with findings from (UNODC, 2007) which noted that the majority of female prisoners saved short sentences and they were taught about HIV specifically about mother to child transmission and sexually transmitted infections.

The question of IEC sessions are interactive through the use of material resources had a lower mean of 3.1 out of 5 in comparison to other questions. The reasons for a lower mean was explained by the key stakeholders during interviews conducted with them. In an interview with the ZPCS nurses in charge of Hwange, Lupane, Gwanda and Bulawayo prisons, they pointed out that:

Materials for IEC usually we get them from stakeholders who include MOHCC and NAC. Therefore the supply of HIV IEC materials like pamphlets, videos and posters is not consistent. More still during an interview with ZPSC security officers from Bulawayo prisons, they pointed out that posters are not placed in prison walls instead those posters are mostly placed in their clinics and this information on posters has assisted prisoners on HIV prevention. He noted that the IEC materials in prisons is very limited and the materials is only in the prisons clinics. This means that if the prisoner does not visit the clinic he or she cannot have access to the HIV materials. This has greatly affected the HIV prevalence negatively in prisons.

This finding is in line with the finding of (Guin, 2007) who noted that one of the HIV positive inmates in Indian prison mentioned about few posters on HIV and AIDS which were on display in the prison hospital ward and these were his sources of information. The nurse in charge of Hwange prisons even noted out that educational materials are important to the inmates as they will get more knowledge through reading and watching. These findings concur with the findings of (Dolan et al., 2016) who claimed that the provision of educational materials is an effective and inexpensive way of reaching out to prisoners. That is why from table 4, the IEC programme had a mean of 3.1 out of 5.

In an interview with MAC programmes officer of Lupane district she claimed that the few times they offered HIV services at Lupane prisons, they offered video screening activity about HIV. She further noted that the sessions would be very interactive as prisoners would participate. These findings are consistent with the findings of (UNODC, 2008) who stated that prisoners participate well if the HIV education is streamed with a video about HIV and they often react well to oral presentations. Experience shows that education sessions are much more effective if they are interactive.

In an interview with ZPCS officers of Bulawayo main prison and Kezi satellite prison, they pointed out that IEC is one programme which involves a lot of stakeholders who come and teach inmates on HIV related issues. A nurse from Lupane satellite prison also posited that IEC is very beneficial for inmates and it has assisted them greatly with knowledge on HIV. The findings were in line with the findings from (Lurigio, Petraitis, & Johnson, 1992) who stated that prisoners, staff, community groups, and legal authorities believe the quality of life for inmates was most influenced by HIV education.

From the interviews with ZPCS officers, they pointed out that the challenges they are facing on IEC programme is lack material resources which include HIV pamphlets, videos and posters and lack of evidence-based programmes. The ZPCS officers and stakeholders noted that they are the one who offers HIV education to the inmates and this has made the HIV prevalence to be at a constant rate for many years. The ZPCS nurse in charge of Lupane satellite prison and Kezi ZPCS officer stated that they are no peer-led HIV education, instead, HIV education is offered by the ZPCS officers and stakeholders. (Hammett, 1999 & Altice, 2001) also asserted that many prisons facilities still do not initiate evidence-based HIV prevention programs, such as peer-led HIV education programme. The ZPCS officers further claimed that:

Most HIV education programmes that are being offered to people in correctional facilities are adapted from the community HIV education programmes. In as much as stakeholders offer HIV education to prisoners, peer educators are needed as the peers would be having great knowledge about the lifestyle in prisons and the risks associated with HIV transmission in prisons.

The Bulawayo main prison nurse in charge stressed out that:

HIV education is one of the important HIV programmes that we implement because as a result of this programme, prisoners are taught on the importance of HIV testing and ART. This programme has greatly led to the high uptake of other HIV services that are offered in prisons and it has positively affected the HIV prevalence because HIV prevention, treatment and care services uptake is high among prisoners.

The findings from research match the findings of (Collica, 2002) who claimed that a study found that HIV education programme participation improved HIV test rates for participants in prisons as many prisoners were motivated to test for HIV.

1.4.2 Anti-Retroviral Treatment in tackling HIV prevalence

The researcher evaluated how ART programme has tackled the HIV prevalence in prisons. Table 2 highlight the findings.

Table 2

Measuring the effectiveness of ART on HIV prevalence

Anti-Retroviral Treatment (ART) effectiveness	Mean	Average
Those tested HIV positive are referred for ART	4.3	
ART is available in prisons	4.4	4.1
Prisoners are taught on the importance of ART	4.0	

Note. The measurement scale is out of 5

Source. Field survey, 2019. Values are based on the author's calculations using SPSS 21

The findings from Table 2 portrayed how ART has tackled HIV prevalence in prisons. The highest mean was 4.4 on the question of ART availability in prisons, being followed by a mean of 4.3 on the question of referring ART for those who tested HIV+ and the lowest mean was 4.0 on the question of inmates being taught on the importance of ART. The average of this programme was 4.1. The findings reveal that any prisoner who test HIV positive while in prison is referred for ART. Data also highlighted that ART is available in prison and prisoners are also taught on the importance of ART.

During interviews with MOHCC officers and ZPCS nurses in charge, they all claimed that ART is available in prisons. These findings are in line with the findings of (UNODC, 2006) who posited that in developing countries, ART is being made available to prisoners and it is administered by trained health personnel to prisoners. The ZPCS nurse officers asserted that:

We are the ones who administer ART to the HIV positive inmates or MOHCC officers also administers especially when the prisoner is being initiated to ART. The ZPCS Hwange and Bulawayo prisons claimed that when we administer ART to inmates, it is easy for us to monitor the inmates and ensure that they adhere to the treatment.

These views are also being shared by (Springer et.al., 2004) who posited that in prisons, adherence to antiretroviral therapy among prison inmates has proved to be very effective and studies have documented that, when provided with care and access to medications, prisoners respond well to antiretroviral treatment.

However, all the ZPSC officers in all 6 prisons noted during interviews that:

For the inmates serving short sentences, they are difficult to monitor their adherence to treatment levels because most prisoners that they have save short sentences (see Figure 8). When they are outside prisons or they are transferred to another prison it is difficult to monitor them as some prisoners tend giving wrong personal details about themselves especially on issues like home addresses and names of hospitals close by where they can access ART when they are out. So when they are out of prison, following up on them is difficult.

These findings are in line with findings of (Pontali, 2005) who pointed that ART treatment is usually disrupted for short or long periods for prisoners and this may happen at upon arrest and detention in police cells, within the prison system when prisoners are transferred to other facilities or have to appear in court, and upon release. (Wood & Lawn, 2011) also share the same views by stating that transition of prisoners when they are being released from prisons to the community is

often associated with interruptions in care and treatment and this tends to affect the prisoner's virological and immunological outcomes.

In an interview with the District AIDS coordinators of NAC, MOHCC officers and NGO officers, they noted that Zimbabwe is implementing the test and treat programme even in prisons. According to the extended ZNASP 2 for 2015 to 2020, it stated that the Government of Zimbabwe is committed to implementing the "Treat All" and the intention is to meet the 90-90-90 targets by 2020 and end AIDS by 2030. Every prisoner in Zimbabwe who is HIV+ receive ART in prison, however, these findings contradicts the findings of the (Human Rights Watch Uganda, 2011) who asserted that in Uganda, prisoners who were on ART were sometimes transferred away from the one prison-based facility where they received their ART treatment and care to ease congestion or provide labour on farms.

The Lupane and Bulawayo nurses in charge postulated that:

ART is offered to every inmate who is HIV positive and the HIV+ prisoners who do not get ART treatment in prisons is because he or she did not reveal his or her status to them. We monitor the prisoners who are on ART treatment for adherence and this has assisted in preventing the HIV prevalence to go over 28%, thus positively affecting the HIV prevalence. The prisoners adhere to the treatment.

(CDC, 1999) also had the same findings as they pointed out that studies have documented that when prisoners are provided with care and access to medications, they respond positively to the ART treatment. Adherence rates in prisons can be as high as or higher than among patients in the community, however, the health gains that were made for those inmates on treatment while in prisons should be preserved as they may be lost unless effective discharge planning and linkage to community care are undertaken. The MAC programmes officer for Lupane district noted that in educating the prisoners, they taught them on the importance of adherence which result in affecting positively the viral load of HIV positive prisoners.

1.5 Conclusion

Studies have highlighted the importance of HIV education to prisoners and one of the greatest benefits of HIV knowledge is that it has increased the levels of knowledge about HIV among prisoners. However, most studies have concluded that the effectiveness of current education about HIV in prisons remains largely unknown as most studies have not evaluated the behaviour of prisoners and also to see if these teachings have assisted in reducing HIV transmission among prisoners. Simply providing information on HIV and the harms associated with risk behaviours is not enough. In particular, some studies have elucidated that it is not enough to teach prisoners about HIV if they do not have the means such as condoms or clean injecting equipment to act on the information provided while they are in prison. There is therefore need for the Zimbabwe prisons to fully implement the HIV IEC programme effectively and introduce peer educators in every Zimbabwean prison.

When prisoners provided with proper treatment, Anti-Retroviral Treatment (ART) has shown huge benefits to the prisoners if they adhere to it. Treating HIV in prisons is of great benefit not only to the prisoners but to their partners, prison staff, families and it benefits the public health of the communities where the inmates come from because they will return to their communities. Prisons have an obligation under international law to provide the community standard of care for the treatment of disease. Within the context of HIV care, all inmates who are HIV+ are to be provided with ART therapy during their stay in prisons.

Recommendations

- The study findings revealed that some prison nurses do not initiate ART in their clinics because of a lack of training in ART treatment. Capacity building of prison administrators and staff is critical to the effective implementation of HIV policies in prisons. Ways of capacitating the prisons staff on the implementation of HIV policies is to send them abroad to countries (regionally and internationally) to observe how other prisons implement HIV programmes and be trained. The prisons staff can also be trained internally within the country where effective HIV prison policies are being implemented and observe and learn how this is being done. Also, external experts can be brought in Zimbabwe to train the staff in implementing HIV programmes. Also, prison staff training must include various modules on HIV.
- Due to ineffective discharge plan for inmates, there is no aftercare agency in the community to follow up with the cases of HIV-positive inmates once they are released. The Government should start post-release programmes for inmates as a means of continuing with care when they are in their communities. The Zimbabwe Prison Services should consult with communities that eventually receive ex-prisoners as well as agencies that provide services and education to people with HIV/AIDS in an attempt to provide a comprehensive aftercare strategy. These agencies and groups should be allowed access to provide such services in prison so that a link can be established for the inmate before release into the community.
- However, despite appreciable efforts made by the government in Zimbabwean prisons to ensure that inmates are well exposed to HIV/AIDS information, not all inmates are adequately exposed to HIV/AIDS information. The study, therefore, recommends that HIV/AIDS education be made compulsory for all inmates and all staff providing services for the incarcerated inmates. More so, the government should assist in ensuring that the prisons department have IEC materials which are up to date and in language that the prisoners will understand. The government through the prison department should create incentives to encourage the inmates to undergo HIV/AIDS testing and counselling. Similarly, enough awareness activities regarding ways of transmission as well as effective preventive measures should be regularly provided to inmates in Zimbabwean prisons.
- A majority of prisoners are still unaware of HIV, the ways of HIV transmission, ways of preventing, treating HIV and how to stay healthy if one has tested HIV positive. Every prisoner needs to gain knowledge about the disease, its various causes and consequences. Stakeholders should, therefore, take the responsibility of raising awareness and sensitising prisoners on HIV and counsel those living with HIV and AIDS. Such kind of counselling should happen on a regular and consistent basis.

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