

CORRELATION BETWEEN FREE SCREENING SERVICES AWARENESS PROMOTION AND REDUCTION OF HIV/AIDS INFECTION IN NORTH EAST NIGERIA

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ABSTRACT

Background of the study: HIV (Human Immunodeficiency virus). HIV is a virus that attacks and destroys cells in the immune system HIV is the virus that causes AIDS Most people with HIV don't have AIDS. HIV early medicines may prevent you from having AIDS People with AIDS have an extremely low number of immune cells and are at risk for life-threatening contagious disease. Free screening services this intervention enables people to know their HIV status and provides counseling support to help them cope with the outcome. **Objective:** To determine if there is a correlation between free screening services awareness program and reduction in reduction of HIV/AIDS infection in North-East Nigeria. **Methodology:** Data collected were collated and analyzed SPSS version 25. The data were analyzed using Descriptive Statistics and correlation. **Results:** That there is a significant relationship between free screening services and reduction of HIV/AIDS infection in North-East Nigeria ($r = 0.74$; $\rho = .000$). **Conclusion:** free screening services awareness play positively contributes to the reduction of HIV/AIDS infection in North-East Nigeria. And also most of the population known there HIV status through free HIV screening services especially in the rural areas.

INTRODUCTION

Background to the study

HIV (Human Immunodeficiency virus). HIV is a virus that attacks and destroys cells in the immune system HIV is the virus that causes AIDS Most people with HIV don't have AIDS. HIV early medicines may prevent you from getting AIDS People with AIDS have an extremely low number of immune cells and are at risk for life-threatening illnesses, including dangerous infections. Free screening services this intervention enables people to know their HIV status and provides counseling support to help them cope with the outcome. Knowledge of sero status may lead individuals to avoid engaging in risky behaviors. Cook (2004) also noted that psychological support and counseling has a positive effect on the quality of life of the people living with HIV/AIDS. **HIV/AIDS screening and treatment:** In most developing countries, the greatest benefits from treating STIs almost certainly accrue from averting the morbidity and mortality caused directly by STIs rather than indirectly because of reduced HIV transmission. Free screening services awareness program through the distribution of available HIVST Kits and antiretroviral

drug influenced the reduction of HIV/AIDS infection in North east Nigeria. Zhang et al. (2020) reported that that providing free HIVST kits significantly for wider knowledge of HIV status and greatly increased awareness to prevention and treatment of HIV infection.

Specific

To determine if there is a correlation between free screening services awareness program and reduction in reduction of HIV/AIDS infection in North-East Nigeria.

Objectives of the study

1. To determine if there is a correlation between free screening services and reduction of HIV/AIDS infection in North-East Nigeria.
 - a) If awareness program through free distribution of condom is correlated with the reduction of HIV/AIDS infection in North east Nigeria
 - b) If awareness program through free distribution of pre-exposure prophylaxis (PrEP) is correlated with the reduction of HIV/AIDS infection in North east Nigeria

- c) If awareness program through counseling of pregnant women on mother to child transmission is correlated with the reduction of HIV/AIDS infection in North east Nigeria
- d) If awareness program through the distribution of available antiretroviral drug is correlated with the reduction of HIV/AIDS infection in North east Nigeria
- e) If awareness program through free HIV education to Homosexuality/sex work/drug addicts is correlated with the reduction of HIV/AIDS infection in North east Nigeria

RESEARCH QUESTIONS

1. What is the relationship between free screening services and reduction of HIV/AIDS infection in North-East Nigeria?
 - a) To what extent has awareness program through free distribution of condom influenced the reduction of HIV/AIDS infection in North east Nigeria?
 - b) To what extent has awareness program through free distribution of pre-exposure prophylaxis (PrEP) influenced the reduction of HIV/AIDS infection in North east Nigeria?
 - c) To what extent has awareness program through counseling of pregnant women on mother to child transmission influenced the reduction of HIV/AIDS infection in North east Nigeria?
 - d) To what extent has awareness program through the distribution of available antiretroviral drug influenced the reduction of HIV/AIDS infection in North east Nigeria?
 - e) To what extent has awareness program through free HIV education to Homosexuality/sex work/drug addicts influenced the reduction of HIV/AIDS infection in North east Nigeria?

REVIEW OF LITERATURE

Introduction

The Centers for Disease Control and Prevention (CDC) recommends that everyone between the ages of 13 and 64 get tested for HIV at least once as part of routine health care. You may also need an HIV test if you are at higher risk for infection.

Most free screening services awareness program focuses on the different preventive measure of HIV. These program are done on community basis, through radio and television programs, through health Talks in the hospital especially for pregnant women. Others are targeted at brothel and commercial sex houses as well as drug addict. Also, campaigns are targeted towards the culture of the people (Female genital mutilation, widowhood rites, multiple sexual partners and young marriage) (Avert, 2020). Free Antiretroviral drugs to people living with HIV have also been a means of campaigning against HIV/AIDS. It is therefore necessary to study the correlation between these awareness promotions and the reduction in HIV/AIDS in Northeast Nigeria. Rizza et al

(2012) in the MAYO Clinic proceedings stated that HIV screening is critical to the prevention of HIV/AIDS. They stated that testing for HIV plays a prominent role in the National HIV/AIDS Strategy. They stated that to prevent further HIV transmission, improve the quality of life of persons with HIV, and reduce disparities associated with HIV infection, intensified effort is needed to increase the percentage of persons at each stage of this continuum of care. Increasing HIV diagnoses is the first step in this critical process. CDC (2011) stated that HIV testing is a critical component of prevention efforts because when people learn they are infected, research have shows that they take steps to protect their own health and prevent HIV transmission to others. Also Linkage to care helps ensure people living with HIV receive life-saving medical care and treatment, and helps reduce their risk of transmitting HIV. Zang et al (2020) found in their study that providing free HIVST kits significantly increased testing frequency for Chinese MSM and effectively enlarged HIV testing coverage by enhancing PHT through the distribution of HIVST kits within their sexual networks. The intervention effect satisfied the requirement for HIV testing frequency recommended by China CDC.

RESEARCH METHODOLOGY

This chapter describes the procedure in carrying out the study. It was discussed under the following sub-headings

- Study design
- Study Area
- Population of the study
- Sample size and sampling techniques
- Research Instrument
- Validity of the Research Instrument
- Reliability of Research Instrument
- Method of Data Collection
- Method of Data Analyses.

Study Design

The design used for this study was the correlation research design. The correlation study is a study that seeks to establish the relationship between two variables and in the case of this study, the awareness promotion and the reduction in HIV/AIDS infection.

Study Area

The Study area is the Northeast Geopolitical Zone of Nigeria. This zone comprise of six states namely Adamawa, Bauchi, Borno, Gombe, Taraba and Yobe. The region was formerly known as the North-Eastern States in 1960s, and in the late 70s, it was divided into Bauchi, Borno and Gongola State. Gombe was later split out of Bauchi, Yobe State from Borno and Gongola was split into Taraba and Adamawa States (North East Nigeria, 2020; North-Eastern State. 2019).It occupies slightly less than one-third of Nigeria's total area and had a projected population for 2020 of 26,263,866 or 13.5% of the country's population. The inhabitants are mainly Fulani and Kanuri people with more than 100 minority ethnic

groups. The major occupation of the inhabitant is Agriculture.

Population of the Study

The study population involves the Health workers in Governmental and Non-Governmental Organization saddled with the responsibility of monitoring HIV/AIDS such as NACA, SACA, civil society organizations, primary health care workers in Northeast region of the country.

Sample size and sampling techniques

The sample size used for this study are the representative of each of the organization in each of the Local Government or public health centers in communities to be selected for this study. There are a total of 114 local government areas in the Northeast region of Nigeria. At least a questionnaire was randomly distributed to bodies responsible for monitoring HIV/AIDS in these Local Government areas (if accessible) was used.

Research Instrument

The research used for this study was a self-developed research questionnaire. It is sub divided into three

sections. The first part which is section A is the socio-demographic variable of the respondents. Section B is on the responsibilities of the organization, section C of the questionnaire is on the different awareness program carried out by the Organization and their view on the decline in the prevalence of HIV/AIDS.

Validity of the Research Instrument

The validity of the instrument was done using face validity, done by experts in the Department of Public and Community Health, Novena University.

Reliability of Research Instrument

The reliability of the instrument was done using Cronbach alpha, the value obtained stood at 0.50.

Method of Data Collection

The questionnaire was handed to the respondents directly and collected at a given date by the respondents

Method of Data Analyses

Data collected were collated and analyzed SPSS version 25. The data were analyzed using Descriptive Statistics and correlation.

RESULT PRESENTATION

Table 4.1: Demographic Representation of Respondents.

Variable	Sub	Frequency	Percentage
Gender	Male	789	67.8%
	Female	374	32.2%
State	Adamawa	160	13.8%
	Bauchi	207	17.8%
	Borno	212	18.2%
	Gombe	194	16.7%
	Taraba	203	17.5%
	Yobe	187	16.1%
Affiliation	NASA	178	15.3%
	SACA	489	42.0%
	PHC	273	23.5%
	CSO	101	8.7%
	WHO	7	0.6%
	OTHERS	115	9.9%

Table 4.1 shows the demographic characteristics of the participants, the data presented in the table shows that, there are more males, 789(67.8%) than females, 374(32.2%). The states of the participants shows that, Borno had the highest number, 212(18.2%); followed by Bauchi, 207(17.8%), followed by Taraba, 203(17.5%); Gombe, 194(16.7%); Yobe, 187(16.1%); and Adamawa, 160(13.8%). The affiliations of the respondents shows that majority are affiliated with SACA, 489(42.0%); followed by PHC, 273(23.5%); NASA, 178(15.3%); others, 115(9.9%); CSO, 101(8.7%), and lastly WHO, 7(0.6%).

Research Question 1

What is the relationship between free screening services and reduction of HIV/AIDS infection in North-East Nigeria?.

Table 19: relationship between free screening services and reduction of HIV/AIDS infection in North-East Nigeria.

State	Mean	SD	R	r ²	P
Adamawa	37.3750	9.22790	0.999	0.99	0.000
Bauchi	42.0435	6.07662	0.917	0.84	0.000
Borno	31.4245	20.10279	0.683	0.47	0.000
Gombe	55.7526	15.55371	0.751	0.56	0.000
Taraba	50.7685	8.05677	0.950	0.90	0.000
Yobe	37.4492	31.88321	0.875	0.77	0.000
*Total	42.5365	19.42072	0.742	0.55	0.000

*Significance: $p < 0.05$

Table 19 shows that there is a significant relationship between free HIV screening services and reduction of HIV/AIDS infection in North-East Nigeria ($r = 0.74$; $\rho = 0.00$).

4a To what extent has awareness program through free distribution of condom influenced the reduction of HIV/AIDS infection in North east Nigeria?

Table 20: Influence of free distribution of condom on the reduction of HIV/AIDS infection in North east Nigeria.

State	Mean	SD	R	r ²	P
Adamawa	8.5250	1.93592	1.000	1.00	0.000
Bauchi	9.1449	1.41362	0.917	0.84	0.000
Borno	6.6321	4.68905	0.630	0.40	0.000
Gombe	13.0052	3.99546	0.871	0.76	0.000
Taraba	11.0837	1.55681	0.878	0.77	0.000
Yobe	8.4332	8.05222	0.904	0.82	0.000
*Total	9.4695	4.75779	0.768	0.59	0.000

*Significance: $p < 0.05$

The result in Table 20 shows that awareness program through free distribution of condom influenced the reduction of HIV/AIDS infection in North east Nigeria by 59%

4b To what extent has awareness program through free distribution of pre-exposure prophylaxis (PrEP) influenced the reduction of HIV/AIDS infection in North east Nigeria?

Table 21: Influence of free distribution of pre-exposure prophylaxis (PrEP) on the reduction of HIV/AIDS infection in North east Nigeria.

State	Mean	SD	R	r ²	P
Adamawa	6.6563	1.78761	0.987	0.97	0.000
Bauchi	7.3140	1.09409	0.911	0.83	0.000
Borno	5.2453	3.81022	0.621	0.39	0.000
Gombe	9.6701	3.62553	0.403	0.16	0.000
Taraba	9.4581	1.70671	0.887	0.79	0.000
Yobe	5.6845	6.36624	0.761	0.58	0.000
*Total	7.3517	3.93177	0.609	0.37	0.000

*Significance: $p < 0.05$

The result in Table 21 shows that awareness program through free distribution of pre-exposure prophylaxis (PrEP) influenced the reduction of HIV/AIDS infection in North east Nigeria by 37%.

4c To what extent has awareness program through counseling of pregnant women on mother to child transmission influenced the reduction of HIV/AIDS infection in North east Nigeria?

Table 22: Influence of counseling of pregnant women on mother to child transmission on the reduction of HIV/AIDS infection in North east Nigeria.

State	Mean	SD	R	r ²	P
Adamawa	6.5250	1.93592	1.000	1.00	0.000
Bauchi	6.7681	1.23239	0.957	0.92	0.000
Borno	6.5094	2.93450	0.874	0.76	0.000
Gombe	10.6649	2.84416	0.868	0.75	0.000
Taraba	8.4631	.77865	0.915	0.84	0.000
Yobe	9.6096	5.49413	0.764	0.58	0.000
*Total	8.0903	3.35167	0.846	0.72	0.000

*Significance: $p < 0.05$

The result in Table 22 shows that awareness program through counseling of pregnant women on mother to child transmission influenced the reduction of HIV/AIDS infection in North east Nigeria by 72%.

4d To what extent has awareness program through the distribution of available antiretroviral drug influenced the reduction of HIV/AIDS infection in North east Nigeria?

Table 23: Influence of distribution of available antiretroviral drug on the reduction of HIV/AIDS infection in North east Nigeria.

State	Mean	SD	R	r ²	P
Adamawa	8.4063	2.64051	0.989	0.98	0.000
Bauchi	9.2415	1.55470	0.858	0.74	0.000
Borno	6.5566	4.76277	0.621	0.39	0.000
Gombe	11.7320	4.39150	0.390	0.15	0.000
Taraba	12.4631	2.49204	0.960	0.92	0.000
Yobe	6.4920	7.76286	0.777	0.60	0.000
Total	9.1728	4.99020	0.594	0.35	0.000

*Significance: $p < 0.05$

The result in Table 23 shows that awareness program through the distribution of available antiretroviral drug influenced the reduction of HIV/AIDS infection in North east Nigeria by 35%

4e To what extent has awareness program through free HIV education to Homosexuality/sex work/drug addicts influenced the reduction of HIV/AIDS infection in North east Nigeria?

Table 24: Influence of Free HIV education to Homosexuality/sex work/drug addicts on the reduction of HIV/AIDS infection in North east Nigeria.

State	Mean	SD	R	r ²	P
Adamawa	7.2625	.96796	1.000	1.00	0.000
Bauchi	9.5749	.96690	0.794	0.63	0.000
Borno	6.4811	4.86545	0.595	0.35	0.000
Gombe	10.6804	3.35791	0.764	0.58	0.000
Taraba	9.3005	1.78369	0.936	0.88	0.000
Yobe	7.2299	6.55625	0.847	0.72	0.000
*Total	8.4523	4.02767	0.636	0.40	0.000

*Significance: $p < 0.05$

The result in Table 24 shows that awareness free HIV education to Homosexuality/sex work/drug addicts influenced the reduction of HIV/AIDS infection in North east Nigeria by 40%.

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

Discussion

Based on the findings in this study, in relation to literatures consulted, the following discussions were made:

The advent of the human immunodeficiency virus (HIV) in the last few decades has presented considerable

challenges to health systems throughout the world. Many countries developed measures to combat the spread of the virus and the trends are improving, mostly due to the introduction of potent new combinations of medications, the development of effective prevention strategies and increased free screening services awareness. These improvements would not have been possible without the mobilization of free screening services around the world, who, recognizing their vulnerability, have taken collective action to curb the propagation of HIV.

The study revealed a positive relationship between free screening services and reduction of HIV/AIDS infection in North-East Nigeria; it also revealed that awareness program through free distribution of condom influenced the reduction of HIV/AIDS infection in North east Nigeria. It also revealed that awareness program through free distribution of pre-exposure prophylaxis (PrEP) influenced the reduction of HIV/AIDS infection in North east Nigeria; that awareness program through counseling of pregnant women on mother to child transmission influenced the reduction of HIV/AIDS infection in North east Nigeria; awareness program through the distribution of available antiretroviral drug influenced the reduction of HIV/AIDS infection in North east Nigeria. Zhang et al. (2020) reported that that providing free HIVST kits significantly increased testing frequency among Chinese homosexuals and effectively enlarged HIV testing coverage by enhancing partner HIV testing through distribution of kits within their sexual networks.

The study revealed that awareness program through free HIV education to Homosexuality/sex work/drug addicts influenced the reduction of HIV/AIDS infection in North east Nigeria. It is assumed that some traditional practices promote HIV transmission; specific studies have not often been conducted to establish the linkage. Such practices may be so rooted in the culture that it seems impossible to stop them. However, we do know it is possible to change behaviour but because of cultural differences, accepted norms by societies in different settings, this may be difficult in practice. For example, safer sex practices have not been accepted by all throughout the world, but evidence shows it is possible to change the attitude and behaviour of the society through intensive sustained education and empowerment of vulnerable communities (Loosli, 2004). The study revealed a positive relationship between free screening services and reduction of HIV/AIDS infection in North-East Nigeria; it also revealed that awareness program through free distribution of condom influenced the reduction of HIV/AIDS infection in North east Nigeria. It also revealed that awareness program through free distribution of pre-exposure prophylaxis (PrEP) influenced the reduction of HIV/AIDS infection in North east Nigeria; that awareness program through counseling of pregnant women on mother to child transmission influenced the reduction of HIV/AIDS infection in North east Nigeria; awareness program through the distribution of available antiretroviral drug influenced the reduction

of HIV/AIDS infection in North east Nigeria. Zhang et al. (2020) reported that that providing free HIVST kits significantly.

Summary of findings

1. There was a significant relationship between free screening services awareness program and reduction of HIV/AIDS infection in North-East Nigeria.
2. The relationship between free screening services awareness and reduction in HIV is a positive relationship.
3. There was a significant relationship between free screening services and reduction of HIV/AIDS infection in North-East Nigeria.

CONCLUSION

In conclusion, free screening services awareness program on the use of condom, pre-exposure prophylaxis, prevention of mother to child transmission, and free screening services awareness program against Homosexuality/sex work/drug addiction, positively role contributes to the reduction of HIV/AIDS infection in North-East Nigeria. And Also most of population known there HIV status through free screening services.

Recommendations

Based on the discussion and conclusions drawn, the following recommendations are made;

1. Since there was significant relationship between free screening services awareness program and reduction of HIV/AIDS infection in North-East Nigeria, the Government and non-governmental organizations should put in more efforts into free screening services awareness, particularly with the aid of mass media, as well as social media so as to further enhance the reduction in HIV/ AIDS. This will also help reduce mother to child transmission of HIV/AIDS.
2. Primary Health Care. The Alma Ata Declaration in 1978 later named primary health care (PHC). The principles of PHC which include inter-sectorial approach, community participation, promotion and prevention as well as therapeutic and rehabilitation interventions. In the North-east Nigeria primary health care there seeking fund from government and NGOs to provide free HIV/AIDS service. The integration improves access of population for free HIV services. And also play a key role in reducing high-risk sexual behavior, mother to child HIV transmission in the HIV program.
3. All HIV screening must be free services ,confidential, and undertaken with the patient consent
4. All HIV testing must be appropriate with prevention, treatment, care and support services

Recommendation: Since there was significant relationship between free HIV screening services awareness program and reduction of HIV/AIDS infection in North-East Nigeria, the Government and non-

governmental organizations should put in more funds into free screening services awareness, both in urban and rural areas particularly with the aid of mass media, as well as social media so as to further enhance the reduction in HIV/ AIDS. This will also help reduce mother to child transmission of HIV/ AIDS.

Contribution to Knowledge

This study has added to the existing body of knowledge on the effectiveness of free screening services awareness programmes on HIV/AIDS in reducing the of HIV/AIDS infection, and in particular with reference to North-East of Nigeria. The study has also reiterated that intervention programmes aimed at making the populace aware of the prevention of the transmission of this disease are powerful tools to achieving the eradication of HIV/AIDS.

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