

**STUDY THE EFFECT OF INFORMATION, EDUCATION AND COMMUNICATION ON RISKY BEHAVIOURS AMONG PEOPLE LIVING WITH HIV/AIDS IN KHARTOUM STATE, SUDAN- 2013.**

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**ABSTRACT**

Human Immunodeficiency Virus remains one of the most significant public health challenges, particularly in low and middle income countries. Sudan has the highest number of people living with HIV/AIDS in the region. The Information Education and Communication Strategy (IEC) is aiming to change and reinforce the health-related behaviors in the target audience that concern with this problem. The study aimed to evaluate the effects of (IEC) in risky behaviors among people living with HIV/AIDS. A quasi-experimental study was conducted in Khartoum State, Sudan targeted people living with the disease. Twenty five out of 250 registered members were selected randomly. An intensive intervention was carried out for six months, including; a series of lectures, home visiting, focus group discussions, distribution of pamphlets, posters and video show. The intervention has successfully changed risky behaviors that might lead to infection; there was a significant increase in using condoms, making relationship with uninfected persons, change in isolation from the community, decrease in blood donation to community and significant increase in the disclosing HIV status in health settings. The study concludes that the (IEC) has a strong effect in changing risky behaviors concerning people living with HIV/AIDS. The study recommended that Sudan National Acquired Immunodeficiency Syndrome Control Program and Federal Ministry of Health have to prepare intensified, comprehensive Information, Education and Communication messages, materials for (PLWAIDS/HIV) concentrating on equipping life skills and practices.

**KEYWORDS:** AIDS, Information, Education and Communication.

**INTRODUCTION**

Acquired Immunodeficiency syndrome (AIDS) is a disease caused by a virus called Human Immunodeficiency Virus (HIV). The illness alters the immune system, making people much more vulnerable to infections and diseases. This susceptibility worsens as the disease progresses. (HIV) is a sexually transmitted infection. It can also be spread by contact with infected blood, or from mother to child during pregnancy, childbirth or breastfeeding. It can take years before (HIV) weakens the immune system to the point of having (AIDS).<sup>[1]</sup> The operational definition of "IEC" refers to a public health approach aiming at changing or reinforcing health-related behaviors in a target audience, concerning a specific problem and within a pre-defined period of time, through communication methods and principles.<sup>[2]</sup> (HIV/AIDS) is a global pandemic, in 2013 approximately 35 million people have (HIV) worldwide, 18 million of these are approximately men, 17 million are women. The newly infected persons were 2.1 million,

there were about 1.5 million deaths from (AIDS) in that year. Regional, Sub-Saharan Africa is the region most affected, in 2010, an estimated 68% (22.9 million) of all (HIV) cases and 66% of all deaths (1.2 million) occurred in this region. Locally lack of awareness on (HIV/AIDS) has the capacity to reverse development processes in Sudan. Sudan is generally characterized by low income countries with (HIV/AIDS) prevalence rate of 1.6%. The overall (HIV) prevalence is estimated at 0.24% after the referendum of 2011, this means it has been transformed to a concentrated epidemic among high risk groups. Khartoum state contains the highest number of cases in the country, thus more efforts are needed to work among infected and high risk groups, especially in the capital and highly affected areas, late 2014 prevalence estimated to be at 0.24%.<sup>[3]</sup> (HIV/AIDS) cases in Sudan increase gradually from one case in 1986 to 10444 in 2009, and this reported cases underestimate. (IEC) methods, materials, considered as important factors lead to (AIDS) control when directed to (PLWHIV).

This study aimed to evaluate the effect of information, education and communication (IEC) in changing risky behaviors and practices of people living with (HIV/AIDS), Khartoum State, Sudan.

### METHODS AND MATERIALS

Khartoum locality is situated in the Center of Khartoum State. It has a population approximately 945.938 inhabitants. Khartoum locality has 11 hospitals and 9 health centers. There are 15 societies for people living with (HIV) in the country (one per state), each one represents the infected people in their state, the Khartoum state society is located in an Alamarat area in the Khartoum locality with 250 registered members, the study population was the People living with (HIV) registered in the (PLWHIV) Association in Khartoum state (Alamarat area, Khartoum locality).

**Study design:** This quasi experimental study was conducted to evaluate the effect of information, education and communication (IEC) in changing risky behaviors and practices, targeting People Living With (AIDS/HIV) through an intervention program using pre-post –test.

**Sample:** 25 members were selected from the total population 250, by using the systematic random sampling technique.

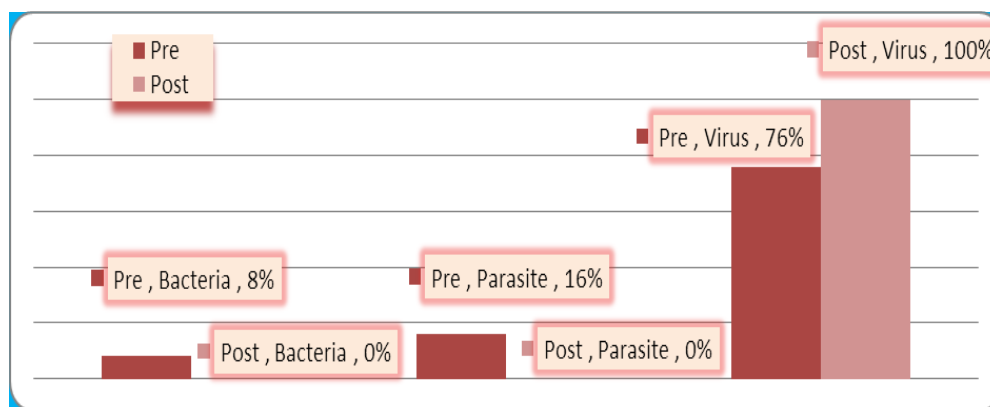
**Ethical consideration:** Informed consent has been prepared and distributed to the participated (PLWHIV) before the start of the study, the consent keeps the participant right to quit from the study at any time before the end of the study.

**The intervention:** Data was collected before the intervention using self-administered questionnaire, interview targeting the General Secretariat of the society, reports targeting the general public and the people living with (HIV) in the country and the state from (SNAP) and personal observation focused on behaviors, daily activities of the society. Preparation for the intervention includes; one day orientation workshop, training courses in (IEC) targeting co-researchers. The intervention was

conducted for six months from July to December and contains; a series of lectures, home visits, video shows, focus group discussions, printed materials. The data were statistically analyzed, using Statistical Package for Social Sciences (SPSS) program, and Chi Square test.

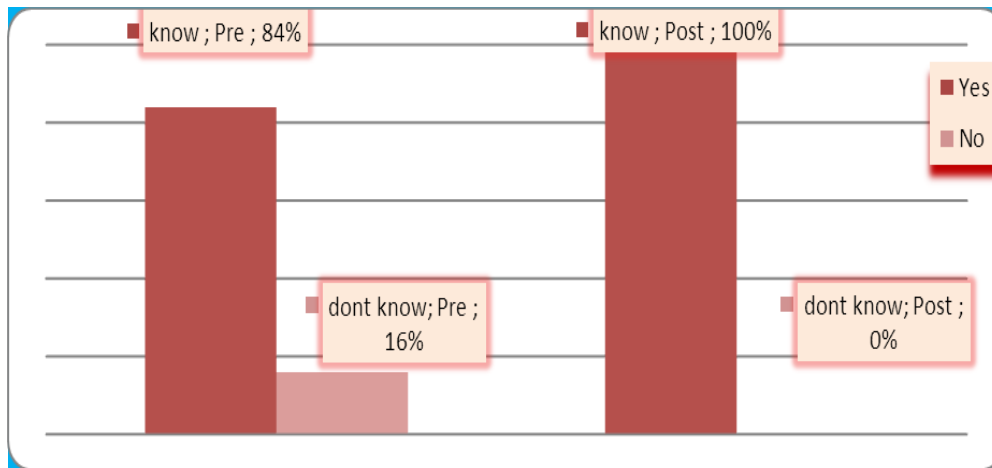
### RESULTS

The study revealed the following results; nearly half of the participants (44%) are females, most of the participants (72%) are less than 40 years old, most of the participants have less than 400 SDG per month, approximately one third of participants are illiterates, half of the participants (52%) are married and most of them (92%) have no private homes. The results revealed that there is a significant increase in knowledge after the intervention concerning the agent of (HIV) infection from 76% to 100%, P Value = 0.032, see figure 1, a significant increase of knowledge concerning the mode of transmission from 84% to 100%, P Value = 0.037, see figure 2, a significant increase in the knowledge concerning protection from (HIV) by abstaining from sexual intercourse from 92% to 100%, P Value = 0.0149, see figure 3, a significant increase in the Knowledge of the participants concerning the magnitude of the problem from 80% to 100%, P Value = 0.018, see figure 4, a significant change in making relationship with uninfected persons from 64% to 88% P Value = 0.016, see figure 5, a significant change in the feeling of discrimination from the community from 100% to 84%,  $X^2 = 4.348$ ,  $df = 1$ , P Value = 0.037. See figure 6. a significant change in the feeling of isolation from the community from 84% to 60%,  $X^2 = 3.571$ ,  $df = 1$ , P Value = 0.005, See figure 7, a significant change in using condoms correctly every time they have sex from 68% to 96%,  $X^2 = 1.087$ ,  $df = 1$ , P Value = 0.027, See figure 8. a significant increase in the disclosing HIV status in health settings from 64% to 88%,  $X^2 = 3.947$ ,  $df = 1$ , P Value = 0.047, See figure 9, an insignificant change of practicing blood donation to the community from 20% to 10%,  $X^2 = 0.136$ ,  $df = 1$ , P Value = 0.017. See figure 10.



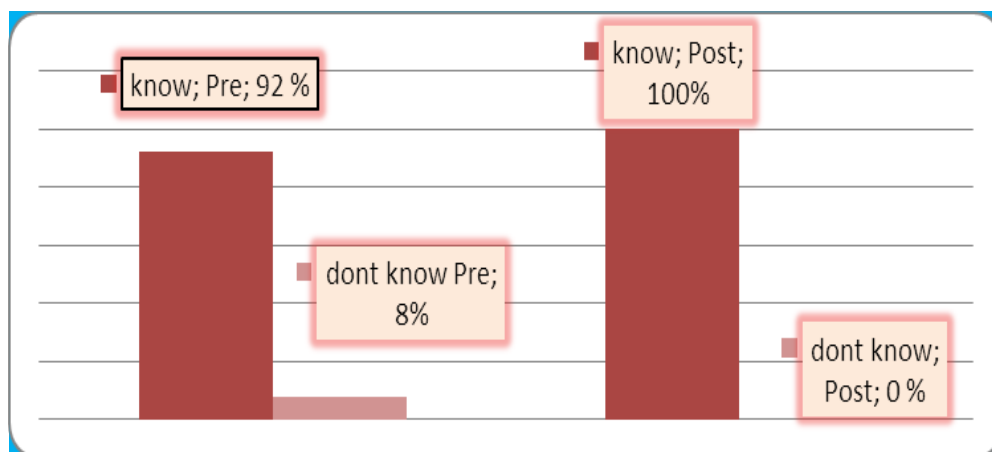
**Figure (1): Knowledge of the participants about agent of (HIV) infection**

There is a significant increase in the knowledge of participant about agent of HIV infection after the intervention from 76% to 100%,  $X^2 = 6.818$ , P Value = 0.032,  $df = 2$ .



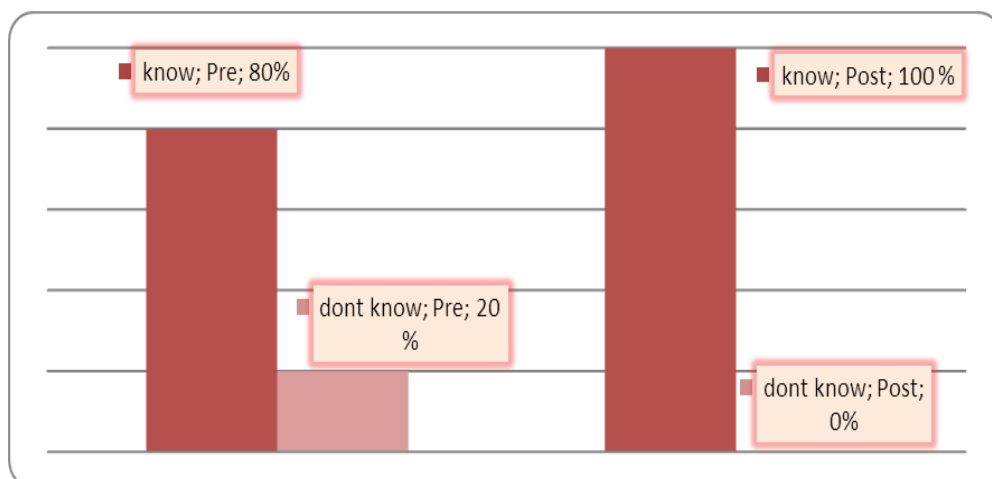
**Figure (2): Knowledge concerning the mode of transmission**

There is a significant increase of knowledge concerning the mode of transmission after the intervention from 84% to 100%,  $\chi^2 = 4.348$ ,  $P$  Value = 0.037,  $df = 1$ .



**Figure (3): Knowledge concerning protection from (HIV) by abstaining from sexual intercourse**

There is a significant increase in the knowledge concerning protection from (HIV) by abstaining from sexual intercourse from 92% to 100% after that intervention,  $\chi^2 = 2.083$ ,  $df = 1$ ,  $P$  Value = 0.0149.



**Figure (4): Knowledge of the participants concerning the magnitude of the problem**

There is a significant increase in the Knowledge of the participants concerning the magnitude of the problem after the intervention from 80% to 100%,  $\chi^2 = 5.556$ ,  $df = 1$ ,  $P$  Value = 0.018

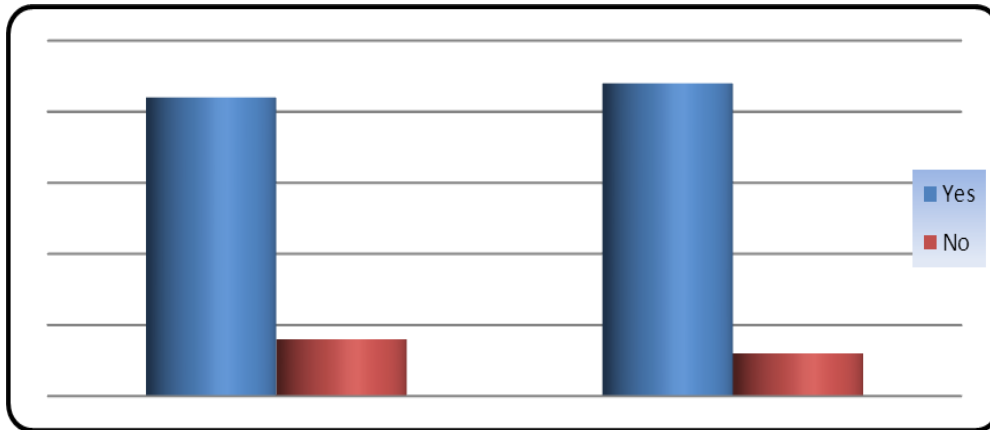


Figure (5): Relations status with uninfected persons

There is a significant change in making relationship with uninfected 64% to 88% after the intervention,  $\chi^2 = 0.166$ ,  $df = 1$ ,  $P$  Value = 0.016.

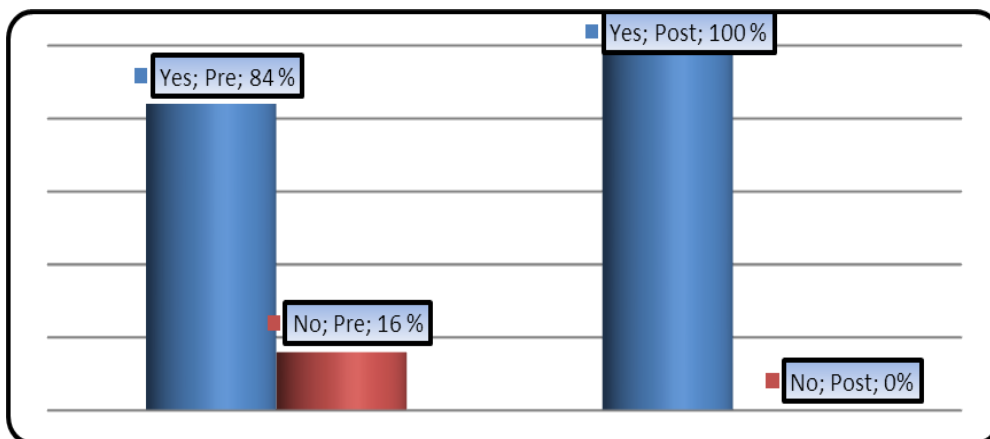


Figure (6): Discrimination feelings of participants between infected and uninfected people with the community

There is a significant change in the feeling of the participants concerning the feeling of discrimination from the community from 100% to 84%,  $\chi^2 = 4.348$ ,  $df = 1$ ,  $P$  Value = 0.037.

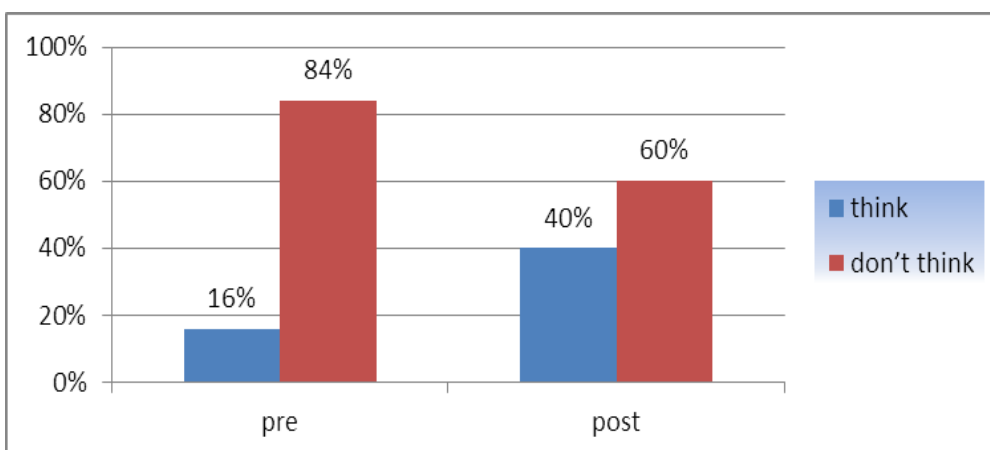
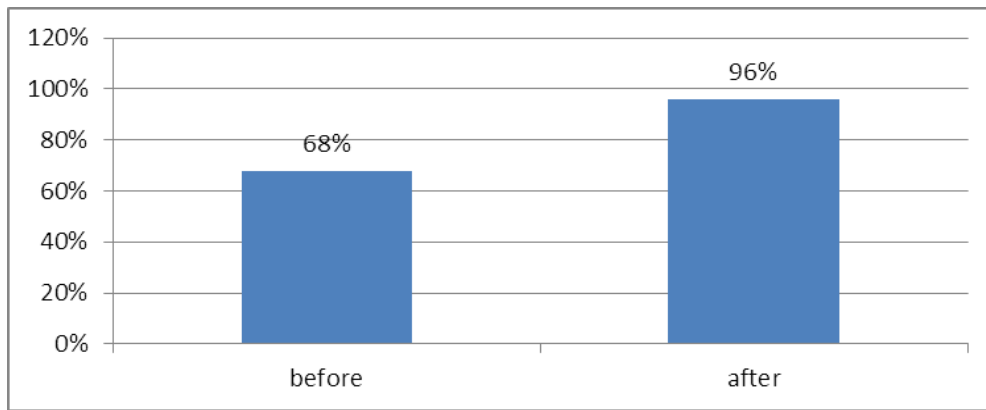


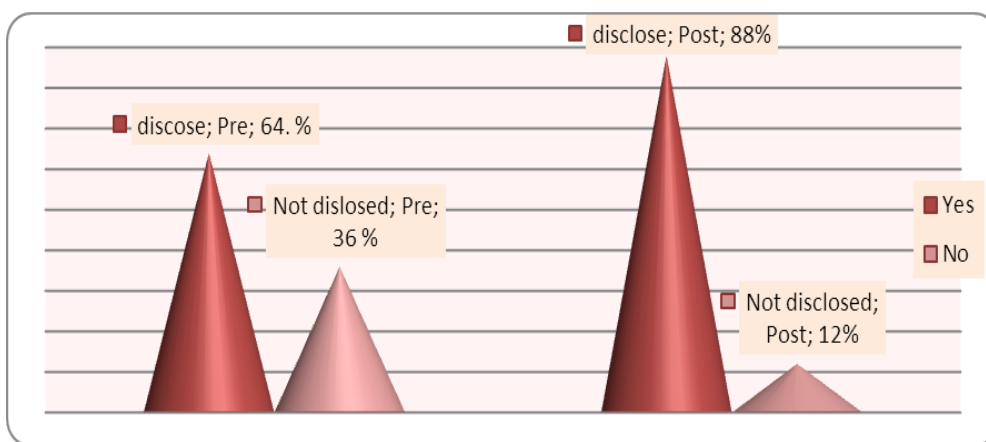
Figure (7): Participants' views if the infected person should isolate himself from other people

There is a significant change in the view of the participants concerning the feeling of isolation from the community from 84% to 60%,  $\chi^2 = 3.571$ ,  $df = 1$ ,  $P$  Value = 0.005, See figure 7



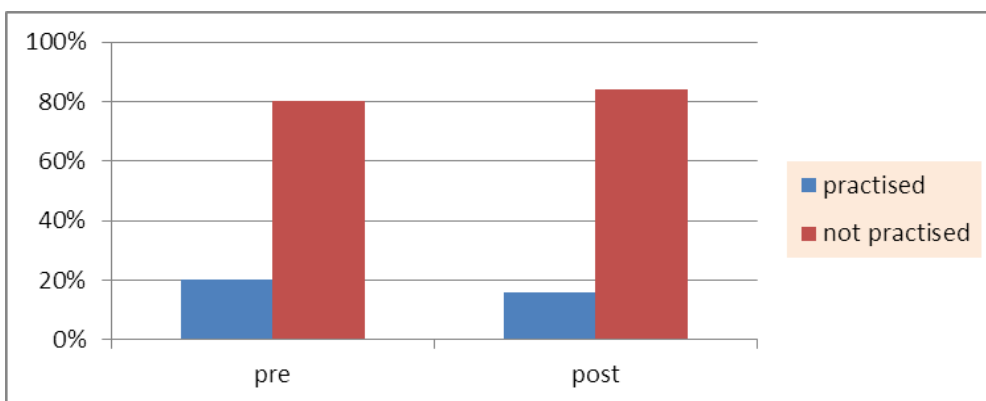
**Figure (8): Practices of using condom correctly every time they have sex**

There is a significant change in using condoms correctly every time they have sex from 68% to 96% after the intervention,  $\chi^2 = 1.087$ ,  $df=1$ ,  $P$  Value = 0.027



**Figure (9): Disclosing HIV status in health settings**

There is a significant increase in the disclosing (HIV) status in health settings after the intervention from 64% to 88%,  $\chi^2 = 3.947$ ,  $df=1$ ,  $P$  Value = 0.047.



**Figure (10): Blood or product donation by participants to others**

There is a significant change of practicing blood donation to the community from 20% to 10% after the intervention,  $\chi^2 = 0.136$ ,  $df=1$ ,  $P$  Value = 0.017.

**DISCUSSION**

This quasi experimental study aims at evaluating the effect of the (IEC) in the risky practices of people living with (HIV/AIDS) in Khartoum State, Sudan. The results indicate that two thirds (68%) of the participants are

between 20-40 years, this because the age group is the most effective sexually in the community, this finding agrees with the results of the study of Current and Future Dimensions of the (HIV/AIDS) Pandemic in Women and Children of J. Chin, 2002, which mentioned

that the majority of the cases worldwide are within the age group 20-40 years.<sup>[4]</sup> The socioeconomic situation of the participants is generally low referring to the international standards of poverty, monthly income of 68% of the participants are less than 400SDG per month, which is less than 50 US\$ per month, this is showing the strong relationship between (HIV/AIDS) and poverty. These findings disagree with the study that conducted by R.K. Obi, C. Okangba in Nigeria, 2007 which aimed to determine the relationship between (HIV/AIDS) and poverty in two urban cities in Abia State in Nigeria. The study illustrated that (HIV/AIDS) is not caused directly by extreme poverty, it is associated with multiple socioeconomic factors.<sup>[5]</sup> Approximately one third (32%) of the participants are illiterate, which will hinder the access to the (IEC) messages, decreasing its benefits since there are some illiterate persons who are infected with the virus, they must be educated to avoid transmitting the virus to new persons, otherwise the risk of higher incidence rate of (HIV) will be expected. In the study of Ovbiebo, MO, 2011 Illiteracy and vulnerability to (HIV/AIDS) among women in Nigeria, the study sought to explore the relationship between illiteracy and the spread of (HIV) infection among rural women, the case of Igueban women in Nigeria, it had been concluded that illiteracy means one lacks power, their illiteracy increases their vulnerability to (HIV/AIDS).<sup>[6]</sup> Only 8% of participants have their private home, this gives another indication of the socioeconomic status of the participants. This finding agrees with the study that carried out in India by Jason Williams, Hanoku Bathula 2012, the study concern the socioeconomic status of people living with (HIV/AIDS) in Hyderabad City of India. The study concluded that (HIV) infected people are usually poor people – lower end of the strata in the society; less educated, most profitable / income earning years of their life is adversely affected, Job opportunities are severely limited – mostly daily workers.<sup>[7]</sup> The findings also agree with a study carried out in India by International Labor office in Delhi and four associations of people living with (HIV/AIDS) in four Indian states Delhi, Maharashtra, Manipur and Tamil Nadu through the networks of people living with (HIV/AIDS). The Study ‘Socioeconomic Impact of (HIV/AIDS) on people living with (HIV/AIDS) (PLWHIV) and their Families. The study concluded that the socioeconomic situation of (PLWHIV) had been deteriorating from the time of infection.<sup>[8]</sup>

According to the behavior, knowledge, opinions and attitudes towards (HIV/AIDS), there is a significant increase in knowledge after the intervention concerning the agent of (HIV) infection, a significant increase of knowledge concerning the mode of transmission, a significant increase in the knowledge concerning protection from (HIV) by abstaining from sexual intercourse, a significant increase in the Knowledge of the participants concerning the magnitude of the problem, a significant change in making relationship with uninfected persons, a significant change in the

feeling of discrimination from the community, a significant change in the feeling of isolation from the community, a significant change in using condom correctly every time they have sex, a significant increase in the disclosing (HIV) status in health settings, an insignificant change of practicing blood donation to the community, see figures from 1 to 10. All the increasing in knowledge is due to the effective intervention, The intervention also changes participants' perception and the risky behaviors that can lead to infection.

Infection control measures in health facilities must be applied for all patients so as to protect other patients and the health staff from infections, in the case of (HIV) patients when they seek medical care for any other medical service they should inform the health staff about their status, so that the medical staff will undertake infection control measures carefully, before the intervention only 64% inform the health worker that he, she is (HIV) positive compared to 88% after the intervention.

## CONCLUSION

This study was conducted among people living with (AIDS), it found that (PLWHIV) society members have good information concerning the disease, they gain this information from the society but this doesn't influence their behavior or attitudes. The majority of participants heard of (HIV/AIDS) before their infection, but the (IEC) was able to equip them with required life skills required to avoid getting infected with (HIV). The intervention has successfully raised the awareness of (PLWHIV) towards the magnitude of the problem; there was a significant increase in knowledge, remarkable improvement in the attitude concerning the disease and the attitudes towards the community. There was an improved in the participants' practices, especially their sexual practices. Still, there was a problem concerning the stigma and discrimination which requires more efforts. the study recommended that; (SNAP) has to prepare intensified, comprehensive (IEC) messages, materials for (PLWHIV) concentrating on equipping life skills and practices and Further studies are needed among (PLWHIV) and the general community to understand stigma reduction and health education needs of (HIV/AIDS) among the whole community so as to design appropriate (IEC) messages and materials.

## ACKNOWLEDGEMENTS

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