

Health Seeking Behavior for HIV/AIDS among Public College Community, Ethiopia; A Qualitative Study Using Behavioral Models

Doyore F^{1*}, Chafo K² and Moges B¹

¹Faculty of Medicine and Health Science, Department of Public Health, Wachemo University

²Hadiya Zone Health Department, Misha District, Disease Prevention and Health Promotion

Corresponding author: Doyore F, Faculty of Medicine and Health Science, Department of Public Health, Wachemo University, Hossana, Ethiopia, Tel: +251916291489, 0932685424; E-mail: feledoag@yahoo.com

Received date: May 22, 2015; **Accepted date:** August 26, 2015; **Published date:** August 31, 2015

Copyright: © 2015, Doyore F et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Abstract

Background: Producing quality data for decision at all levels of the health communication is a global imperative. Following that, recently, many organizations are evaluating various prevention communications; however, adequate data has not been obtained. This study is aimed to explore factors that have impact on health seeking behavior for HIV/AIDS among public college community.

Methods: Focus group discussions and in-depth interviews were conducted from March 1-30, 2012 with students, teachers and HIV mainstreaming heads in the three colleges of Hadiya Zone, Ethiopia. Data was captured using voice recorders, and field notes were transcribed verbatim from the local language into English. Key constructs and thematic frameworks were developed using the Extended Parallel Process Model (EPPM) and health belief model (HBM), and presented in narratives using the respondents own words.

Results: Participants had very low self-susceptibility to HIV/AIDS but they claimed others as highly susceptible. Self-efficacy (confidence in performing the behaviour), and response efficacy (the belief of efficacious of the message) regarding acceptance of recommended preventive message were the most important correlates of the perception.

Conclusion: Lack of awareness of self-susceptibility is a critical problem for adaptation of behavior. All the participants' agree seriousness of the problem which is not attached with using recommended methods. Selecting one recommended response hampered the others prevalence. For instance, low self-efficacy and response efficacy were the critical problems in condom use. Accesses to services for social marketing were poor for a variety of psycho-social and cultural reasons. Prior to the promotion of prevention programs, health service related factors that influence health seeking behaviour must be addressed through appropriate behaviour change communications.

Keywords: Meaning; Health seeking behavior; Methods; Qualitative data; Ethiopia

Introduction

Producing quality data for decision at all levels of the health communication is a global imperative. Talking to HIV/AIDS is also today's issue since its emergence killed millions of people and still its epidemics continued to grow [1,2]. Though, recently, many organizations are imparting many prevention communications by using different methods, desired level of decline has not been attained [3,4,5].

In Ethiopia, involvement of multiple methods was the current strategy to impart behavioral change communications through information, education and communication to protect youths from the epidemic in the absence of effective medical care [6]. However, behavioral change was not yet attained in a level that reverses the epidemics [7].

Knowledge may be necessary but not sufficient to reduce high-risk activities [8]. Youths, who have knowledge of how to protect themselves, still do not consider that they are at risk of getting HIV

infection. The perception of own risk is very less than the perception of others as at risk. BSS of Ethiopia 2010 found that significant proportion of the population, particularly youth, are at risk of HIV infection despite the high level of knowledge about HIV/ AIDS [6].

In the era of HIV/AIDS, several evidences showed that people want to know more about HIV/AIDS transmission, severity, prevention and treatment from friends, family, mass media and health professionals [9]. But, a study done in Addis Ababa among school youths on the perceived sufficiency of the IEC materials 58% of students thought that the information was insufficient to give them knowledge they need and to help them develop the desired attitudes and behaviors on the HIV/AIDS [10]. According to the information, education, and communication (IEC) model, "clear information presented in an appropriate format and language would persuade those at risk to protect them from the virus" [11,12].

Regardless of the enormous resources and strengthened interventions the behavioural change was not yet attained and desired declines in HIV and AIDS infections has not been achieved [13,14]. Theories and models help to explain the process that individuals how people exchange information and as they interpret and react to different messages.

In this study, Extended Parallel Process Model (EPPM) and Health Belief Model (HBM) attempts to explain when and why the recommended message work or fail. Since the EPPM restores the concept of fear as a central variable in investigating fear appeal. According to the initial tenets of the EPPM, when an individual is exposed to a fear appeal, two cognitive appraisals of the message will occur: first, the “appraisal of the threat” and second, the “appraisal of the efficacy” of the messages of recommended response as a problem (threat) and solution (efficacy information). EPPM assumes that if the perceived threat is perceived to be high (for instance, “AIDS takes life”) and the level of efficacy appraised, individuals will be appraised to follow one of two separate pathways: the intended response process and unintended response [8,14,15].

The Health Belief Model (HBM) addresses the individual’s perceptions of the threat posed by a health problem (susceptibility, severity), the benefits of avoiding the threat, and factors influencing the decision to act (barriers, cues to action, and self-efficacy). It states, in which perceptions general health values, specific health beliefs related with the health problem and recommended health actions influence likelihood of taking recommended health action [16,17].

These two models are primarily designed for campaign message evaluation and perception health seeking behavior to see category of individuals whether they are using the recommended response or not by Witte [8,14,16] which is truly analogous with this research which is aimed to explore the factors hindering to use HIV/AIDS prevention message that can show the category of respondents. *Therefore*, study is aimed to explore important factors that have impact on perception among public college community and the response they experience on messages using EPPM and HBM. Furthermore, *the findings of this study will enable colleges, health educators, message developers, researchers and policy makers used as baseline data to design appropriate and effective messages.*

Methods

Study sites

This study was conducted in Hosanna town among the three public colleges: namely Health Science College, Poly Technical College and Teachers Training College for over a period of 30 days. In 2012, a total of 7211 students were enrolled in all programs in the three colleges from different areas of the zones of the region for a maximum of three years training residing outside of the colleges’ compound. A total of 296 instructors and one mainstreaming heads for each campus are there in the colleges.

Study design

A qualitative study design was used to explore the factors hindering to use HIV/AIDS prevention methods in the three public colleges of Hosanna town, Ethiopia. This study was primarily designed to assess the perception of the colleges’ community about different prevention methods and strategies. A qualitative research method was chosen to allow exploration of the meanings and perceptions of participants regarding averting the threat of HIV/AIDS, including their awareness and health seeking behaviour, and to understand the factors affecting decision making to respond for that message.

Sample Method

All three public colleges of Hadiya zone were involved in twelve focus group discussions (seven with males and five with females). From each of the selected schools, a list of girls and boys was obtained and were purposively selected to participate in the study to explore the factors which hinder the acceptability HIV/AIDS prevention messages. To limit group size, FGD participants were selected from club member students who came to the school on the day of the FGD, by picking names randomly from the record list. Each group consists of 7-12 individuals (a total of 111 participants). Nine in-depth interviews were conducted with teachers and mainstreaming heads by employing criterion related sampling method. The criteria were year of experiences, being representative of the club, shares they have in message preparation and/or involvement in HIV/AIDS mainstreaming as they have more concern for issue and rich information on the area. Homogeneity for FGD was made based on sex and class year to reduce sensitivity.

Data Collection Instruments and Procedures

Most of the published researches were quantitative research on message responses mainly by foreigners. This previously published study provided a conceptual framework to undertake formative research, summarized experience and challenges, and outlined best practices for formative research to undertake in developing countries prior to different methods endorsement [8,14,15]. This published researches guide us to prepare the guidelines for interview and group discussions to see the perception and meanings of the respondents. A semi-structured questionnaire, designed to inform institution level message delivery strategies influences in developing countries, was adapted for use in this study [14,15]. In addition, EPPM and HBM constructs were incorporated into the framework and a general discussion guide was developed and adapted to the theoretical framework of the models [17]. The topics included were: the perceived susceptibility to and severity of the disease, and perceived benefits barriers of using recommended method, self-efficacy, response efficacy, past sexual behaviour and cues to actions. The conceptual framework was reviewed by experts in the field and translated into two local languages (Amharic (Ethiopian working official language)). The instruments were pretested among a similar target population before applying to the actual study. The purpose and objectives of the study were explained to the participants prior to the FGD, and confidentiality of their identities was ensured. Each FGD was conducted by principal investigators, who were fluent in local languages. We used the general discussion guide to prompt discussion and elicit further details through probes. Each FGD was audio taped with each participant’s permission. Each session lasted approximately 60-90 minutes and closed after the saturation of ideas (redundancy of information). The FGDs were conducted at Colleges far from teaching classes, not to be disturbed from the rest students and there were no other attendees apart from the participants and facilitators during the discussions. Detailed hand written notes of each session were taken at the time of the discussion. Participants were encouraged to express their ideas freely and describe their experience with open talks.

Data Analysis

Data from the FGDs and in-depth interview were captured using voice recorders, and each day field notes were transcribed verbatim into the English language by FGD field facilitators. The transcripts

were read and checked independently by the local investigators for verification. The data were analyzed through thematic analysis. Major themes were derived from the theoretical framework of the two models. However, subthemes were induced from the text itself through repeated reading. After reading the transcripts, the investigators identified emergent themes, and then coded each theme to delineate individual topics identified during the discussions. Statements were grouped by code to the corresponding theme. Once themes were established, the transcripts were re-read to ensure the themes appropriately reflected the content of the data. Themes were then compared by sub-group: students, teachers, mainstreaming heads to identify groups' similarities and differences. The findings were presented in narratives by thematic areas using the EPPM and HBM as the theoretical framework. The quotes included in the results were typical views expressed in each FGD and in-depth interview to exemplify emergent themes.

Ethics Considerations and Approval

Ethical approval was obtained from the Ethical Review Board of Jimma University. All study participants were given detailed information about the study using script approved by the ethics committees, provided written consent before participation, and was willing to participate in the study. Participants were provided with refreshments during the FGD and in-depth interview.

Results

Twelve FGDs (Seven FGDs with males and Five FGDs with females) and nine in-depth interviews (six with teachers and three with mainstreaming heads) were conducted. For the FGDs with students, participants were purposely selected. A total of 111 participants (69 males and 42 females) were included. The age of the participants for FGD ranged from 15 to 17 years. For in-depth interview, six teachers and three mainstreaming heads were involved.

All participants engaged well with the topic and responded enthusiastically to the questions.

The findings are presented in seven thematic groups: awareness of HIV/AIDS and its prevention methods, perceived etiology, perceived threat, perceived efficacy, perceived benefit, perceived barriers, cues to actions and past sexual behaviours. Across the data there emerged a strong interplay between the knowledge and other health seeking behaviors. The findings by sub-group have therefore been integrated within each theme, and presented as a whole. However, any specific differences identified between these sub-groups are highlighted in each theme, as appropriate.

Awareness of HIV/AIDS and its Prevention Methods

All of the participants had heard of HIV/AIDS and its prevention methods. Less commonly, rural comers' awareness about condom use and purchasing places was almost not known. Majority of the discussants of rural comers give a name for HIV/AIDS as "God's Curse" and urban comers "samba". Although most of the participants from Hossana Teachers Training College & Hossana Poly Technic College had heard of the diseases, they often did not know its symptoms and treatment options. Some participants had better awareness of how to use condom, to have tested faithful partner and to abstain until marriage because of sexual orientation from teachers and this was mainly evident from Hossana Teachers Training College.

Perceived Etiology of HIV/AIDS

The participants believed HIV/AIDS was due to individual and religious behaviors including a violation of normal sexual behaviors (frequent sexual intercourse, multiple sexual partners, early sexual intercourse), the devils can use the disease to kill the person "*setan sewun lemegdel yemetekembet*" failure to carry out proper rituals. However, most of the discussants from poly technic college believed HIV as not virus but as a curse. In parallel speaking, significant numbers of participants are believed AIDS is caused by HIV virus. In explaining the association between AIDS and God's curse a mainstreaming head stated:

"...yayena yetemegna isu amenzroal, meaning, even the feeling of sex and having sex before marriage may cause HIV since that deviates God's/Allah's law." This is an explanation from religious book.

Amazingly, this study found that the belief of having sex with blood relatives causes the virus. One female mainstreaming head reported:

"... Some people from remote areas belief that cheating to have sex with his/her neighbours wife/husband may cause AIDS if that person go to magician.

Perceived Threat from HIV/AIDS (Susceptibility to and Severity of HIV/AIDS)

Participants had very low self-susceptibility to HIV/AIDS but they claimed others as highly susceptible. Even teachers claim others as susceptible ignoring their own. They believed that AIDS is a serious, incurable and often fatal disease. Less commonly, a few participants, regardless of marital status, claimed themselves as susceptible referring HIV is caused not only unsafe sex but also blood transfusion during treatment. One participant said, *"... I prefer dying gunshot rather than suffering from HIV/AIDS..."*

Perceived Efficacy of Recommended Method (Self-Efficacy and Response Efficacy)

Most of the participants' self-efficacy and response efficacy towards abstinence is very high. All rural areas commonly thought that once someone abstains in his life, he/she never be exposed to HIV/AIDS. A participant from Hossana Poly Technic College said,

"...Personally I reject both condom use and having even one sexual partner before marriage but I accept abstinence and VCT use. I think most of them do that...you know condom can transmit 5% of the virus...don't you think that 5% is not enough?how can I believe my sexual partner is not going to others.....?... I witnessed for myself not to be with others but whatever the situation will be I don't believe my friend since I saw some guys who were wives for two individuals."

Having sexual partner is majorities' intention but belief of that sexual partner is very low. A teacher from Hossana College of health sciences said,

"...Customer based commercial market is beneficial, meaning the message focuses on condom use and being faithfulness is expected to be delivered; however we are wasting time on abstinence which is mostly rejected particular in this age bracket since majority of students are engaged in sexual intercourse....am not saying...don't promote abstinence rather let us reverse our message from ABC to CBA."

The idea from the different religious categories of both male and female participants about the issue was summarized and quoted as:

"...with regard to message acceptance.....no matter how much we are committed to our religion, we are almost in line with the adoption and practice of different preventive methods even though it is not promoted in worship time. This is mainly because of the influence of teaching from different organization in general and religious involvement in governmental affairs in particular ..."

Perceived Benefits of Using Prevention Methods

The majority of participants believed that once you exposed to HIV/AIDS, the only option patients have is death since the cause of the disease was due to supernatural powers punishment for violating normal sexual behaviours. In parallel speaking, a part of the participants mainly those from urban settings believe using either of the recommended option is preventable. For example, a participant from Hossana Health Sciences College stated:

"...this disease is not curable although people visit different treatment areas such as hospital. As to me it is better to promote prevention methods even in religious places including condom use since they are effective in preventing HIV/AIDS..."

Another participant said,

"... Being faithfulness is the best method because someone is satisfied with sexual intercourse as well as he/she will be prevented from diseases."

In contrast, very few participants from the three Colleges believed that early stage of knowing the couple status very to either of prevention. For example, one informant said,

"...students as well as teachers may still perceive stigma and fear of condom use....but because of presence of cultural taboos in condom use... the weight they give for stigma and fear of purchasing is lesser as compared to the benefit they get from condom use...but it used to be, not currently as of condom existed"

Similarly, nearly half of the participants from Hossana health Sciences College stated that the disease could be prevented if all the required methods are used.

Perceived Barriers to Use Recommended Methods

Various factors including cultural, socio-economic, and beliefs about the disease and the health care system were found to affect the health seeking behaviour for HIV/AIDS. Some of the barriers included: stigma associated with the condom use, limited access to health services, the lack of awareness, and the asymptomatic nature of the disease. A major barrier to health seeking behaviour is the stigma and discrimination resulted from condom purchasing by their family and the community. As the community commonly believes the cause of HIV/AIDS is due to unacceptable social behaviours, patient are, therefore, reluctant to disclose their condition due to the social consequences. One of the most pivotal finding is one recommended response hampered the others prevalence (i.e. abstainers hate condom use regardless of the reality condom prevents HIV virus).

A teacher from Poly Technic College said,

"... For frankly speaking, I myself would not go to treatment if I were positive as I do not like to disclose the disease to the community

owing to its perceived association of the diseases with frequent sexual intercourse and multiple sexual partners."

Stigma against the condom use also plays a significant role in practicing health seeking behaviour for the disease from the health institutions. A mainstreaming head from Hossana teachers training College stated:

"...People keep their disease secret, naming as gastritis, Tuberculosis and so on."

In addition, some participants from the three colleges explained that HIV/AIDS is cause of divorce as husbands do not want to live with a wife who has HIV/AIDS and vice versa. A teacher from the same college stated,

"...men ignore their wives if they have symptoms of HIV/AIDS and the victim women themselves feel self-enacted stigma & feel themselves as less important person and divorce will happen and Vice versa...and sometimes suicide follows in both sexes...as a result VCT is endorsed as HIV prevention strategy before a couple is engaged for marriage."

Common barriers in using condom in small town dwellers were those who supply the condom are known by users which in turn leads individual not to purchase from those places. Low awareness amongst the participants about the existing services that are available exacerbated the perceived barriers.

Past Sexual Behaviour and Future Health Seeking Behaviours

Participants' sexual behaviour varies from urban to rural areas. Urban dwellers more exposed to early sexual intercourse than rural ones. In support of this view one informant with age 23 said,

"...you know forbidden things are sweetest for human being. If you teach this generation by imposing them not to have sex, they practice."

Majority of respondents are thought to abstain in their life and/or in class by promising not to practice sex. A participant from Hossana Health Sciences College said,

"... in our community there is a habit of advising girls when she reached adolescent age, not to have even boyfriend but her friends claimed to have boyfriend and to have sex and then she did it. As to me it is better to have every sexual transmitted disease prevention options before it reaches a stage where they are unable to tolerate the unhealthy behaviour."

In this study, each college follows different prevention strategies. For instance, Hosanna college of teachers' education, unlike to other colleges, showed highly strong HIV mainstreaming programs on account of having motivated staff members and highly committed NGO's like OSSA in contributing their share on prevention activities by providing health learning materials on promotion of abstinence, condoms, being faithfulness, VCT..., and participating on coffee ceremony which opens door for discussion how to be abstained and other important issues related to HIV. From the same college one of the female informants whose position was coordination in HIV mainstreaming with age 23 said,

"... We have open discussion with students in a class, coffee ceremony and elsewhere when HIV issues are raised with the aim of suppressing its prevalence as well as encouraging students to engage in

prevention activities provided that those hidden behaviors were already manifested and clearly discussed....”

Unlike to this saying, almost all the discussants who came from Hossana Poly Technic College said,

“... we accept abstinence So whether you teach or not, it is not our business because we are abstaining.”

All the respondents' in-depth interview said that since the students are in education we teach them frequently to abstain, in second place to be faithfulness but condom use solely recommended as last option.

One respondent said,

“...currently all information is not hidden from students, so we have to promote condom use aggressively.”

At the end of discussion most participants were intended to healthy behavior by using the recommended response. However, in rural settings almost all participants need to be abstained and are less likely to use condom.

Cues to Actions

Majority of students are exemplary in abstaining. Almost all the participants knew persons who are exemplary for being faithfulness by sticking with one sexual partner. Rarely, condom users hold the condom at their pocket or even in their bags. A few participants reported they have seen patients who have been suffering from AIDS.

Discussion

According to Extended Parallel Process Model and Health Belief Model, individuals' perceived susceptibility to and severity of a disease/ill health condition gets the force to engage on healthy behavior but think over the best path to be healthier by choosing best action; i.e: weight of balance between perceived benefit and perceived barrier which in turn helps individuals to go through the effective method (perceived efficacy) provided that people are already aware in a particular health threat under basic assumption that people are motivated for their health [8,14,15,18].

This study found that there was a strong interplay between the perception and the resultant health seeking behaviours. The perceived susceptibility was low, but the general knowledge about HIV/AIDS is universal. The result is consistent with the findings of other studies conducted in Sub Saharan Africa [1,2] and the EDHS 2010 [19]. Similarly, other several studies also ascertained that although teenagers and college students are knowledgeable about AIDS and its prevention strategies, the majority do not see themselves at risk for HIV/AIDS.

In this study, participants believed that AIDS is a serious, incurable and often fatal disease. However, as compared to the findings of this study, the study conducted in Kenya at university students the results indicated that almost all the students perceived HIV and AIDS to be very serious resulting in lack of variance in the measure [20,21].

In this study, participants' self-efficacy to be able to live with HIV was unwanted question. Most of the participants' self-efficacy and response efficacy towards abstinence is very high and for being faithfulness is moderate; whereas, for condom use is very low. Similar to this study perceived self-efficacy is the variable significantly predicting whether or not university students in Kenya be abstaining to prevent HIV and AIDS infection [16]. This is congruent with the

assumption of HBM people will engage on healthy behavior if they are confident to successfully undertake and cope with it [17,18].

Despite this, there were substantial psycho-social, socio-cultural, and health system barriers to effective health seeking behaviour for participants. In this study, there was high level of perceived severity of HIV/AIDS in the community which could be attributed to both the high fatality rate of the disease never resulting in high self-susceptibility.

The concept of a communicable etiology was reported in our study which is similar to findings from a few studies. This misconception may also result in poor health seeking behaviour because of a false sense of not being vulnerable. According to the HBM, if individuals consider themselves as susceptible to a condition, believe that the condition would have potentially serious consequences and that a particular course of action (e.g., seeking early measure) would be beneficial in reducing either their susceptibility to or severity of the condition, and believe the anticipated benefits of taking action outweigh the barriers to action, they are likely to perform the recommended action. Hence, acknowledgement of susceptibility and severity provide the motivation to act. The perception of benefits (provided there are no barriers) provides a preferred course of action [17,18]. However, this is not surprising considering that knowledge level and literacy status in Ethiopia are extremely limited and concentrated in urban settings. Beliefs concerning the cause of the disease are a crucial determinant of subsequent health seeking behaviour.

In conclusion, this study revealed various insights into the knowledge, perception and future intentions of the community to prevent HIV/AIDS. Perception of self-susceptibility towards HIV/AIDS is a serious problem. Using one recommended response might hampered the others perceived usefulness i.e. those who are abstaining hate condom use. Despite the awareness of the severity of HIV/AIDS, the misconceptions related to its etiology have a negative impact on the health seeking behaviour. However, the pattern of health seeking behaviour alternated between natural (abstinence) and manmade methods (condom use, being faithfulness with tested partner) as participants presented for prevention at a late stage considering condom use as ineffective. Therefore, HIV/AIDS prevention programs must address psycho-social, cultural and religious barriers, and health service factors that influence appropriate health seeking behaviour through appropriate behavioural change communication strategies.

Competing Interests

We have no competing interest.

Authors' Contributions

FD wrote the proposal, participated in data collection, analyzed the data and drafted the paper. The research committee approved the proposal with some revisions, commented on the analysis and improved the first draft. KC, BM and FD edited the manuscript for submission. All authors revised subsequent drafts of the paper and approved this manuscript.

Acknowledgements

We acknowledge Hossana College of Health Sciences and Hadiya Zone Health Department for funding this study. We are also grateful to the study participants for their voluntary participation.

References:

1. Report on the Global AIDS epidemic (2009) UNAIDS.
2. World AIDS day report (2011) UNAIDS.
3. HAPCO F (2010) Report on Progress towards Implementation of the UN Declaration of Commitment on HIV/AIDS. AA: Federal ministry of health.
4. Focus on HIV/AIDS Communication and Evaluation (2001) Communication for Development Roundtable Report UNFPA.
5. Managua and Nicaragua (2001) Organized by UNFPA with the Rockefeller Foundation, UNESCO and the Panos Institute. UNFPA, New York.
6. Scalway T, Deane J (2002) Critical Challenges in HIV Communication: A Perspective Paper from the Panos London HIV/AIDS Program. Panos, London.
7. Piotrow PT, Rimon JG II, PayneMeritt A, Saffitz G (2003) Advancing Health Communication: The PCS Experience in the Field.
8. ORC Macro (2006) EDHS: Central statistical agency, Addis Ababa, Ethiopia.
9. Global AIDS Program: Strategies (2004) U.S. Centers for Disease Control and Prevention.
10. Julie P, Tiffany L (2006) ABC Messages for HIV Prevention in Kenya: Clarity and Confusion, Barriers and Facilitators. USAIDS: p.1-3.
11. Kloos H, Mariam HD, Lindtjorn B (2007) The AIDS Epidemic in a Low-Income Country: Ethiopia. *Human Ecology Review* 14: 39.
12. Patricia A, Emmanuel I (2010) Acceptability of voluntary counseling and testing among Medical Students in Jos, Nigeria. *Journal of Infection in Developing Countries* 4: 357-361.
13. Witte k, Girma B, Girgre A (2001) Ethiopian reproductive health project. Family planning and HIV/AIDS prevention formative and base line study Addis Ababa: John Hopkins University/ population communication service and national office of population.
14. Witte K, Meyer G, Martell D (2001) Effective Health Risk message a step-by-step Guide, Sage.
15. Witte k (1998) Fear as a motivator: using parallel process explain fear appeal the extended model to successes and failures. *Handbook of communication and emotion Research, Theory, Applications and Contexts*. 425-450
16. Muela HS (2003) Health-seeking behavior and the health system response. DCPD Working paper no: 14. Swiss tropical institute, Switzerland.
17. Irwin KL, Valdiserri RO, Holmberg SD (2009) Acceptability of voluntary HIV antibody testing: a decade of lessons learned as of 1985 to 1995. *AIDS Behav*. 15: 866-872.
18. Ikamba L, Ovedraogo B (2003) High risk sexual behavior, knowledge, attitudes and practice among youth at kichangan ward, tanga, Tanzania.
19. Glanz K, Rimer BK (2005) Theory at a glance. A guide to health promotion practices. U.S department of health and human services. 2nd edition.
20. Getenet M (2005) HIV/AIDS behavioral surveillance survey (BSS) Ethiopia round two; MOH/HAPCO.
21. Hellen K, Mberia E (2011) Persuasive communication factors that influence University students in their responses to HIV/AIDS prevention campaign message. *International Journal of Humanities and Social Science*. 1: 254-260.
22. Witte K, Cameron K (2006) Predicting risk behaviors: Development and validation of a Diagnostic scale. *J Health Commun* 1: 317-341.