Abstract: The objective of this research is to investigate the effects of media health campaigns on the people of Punjab province in terms of knowledge, attitude and practice regarding HIV/AIDS. Data was collected through convenient sampling procedure from 500 respondents of age 18 to 57 of 35 different districts of Punjab province. The results confirmed that TV particularly and media, generally is the main source for health information in both urban and rural areas. It is also proved people had more accurate knowledge about HIV/AIDS who got information from media other than who used other sources. To some extent, change in attitude was observed regarding HIV/AIDS. The findings discovered that people had lesser practice ratio other than knowledge and attitude change. Education and income of respondent do not make any difference regarding media health campaigns on their knowledge, on change of attitude and their practices.

Key Words: Health campaign, KAP study, HIV/AIDS, Punjab, Pakistan, Survey, Demography, UBP

Introduction

“Health communication, in its several practices, proposes a potentially important move towards a better informed and most likely healthier population by focusing on the behavioral areas of risk factors, such as diet, smoking, alcohol use, inactive lifestyle, and sexual behavior” (McGinnis & Foege, 1993). Media is the main source of health awareness campaigns as it is capable of targeting masses in large numbers.

Citation: Sultana, I., Iftikhar, I., & Hussain, Q. A. (2020). Media Health Campaigns in Pakistan: KAP Study of HIV/AIDS in Punjab. Global Mass Communication Review, V(IV), 45-56. https://doi.org/10.31703/gmcr.2020(V-IV).04
Media is a very efficient source of broadcasting information and thus has a dominant impact on behavioral norms of the society. (Encyclopedia of public health/ communication theory, answer.com, 2009).

Scholars and academics argue that media is very effective when it comes to influencing the attitude of people towards health practices. This change can be positive and encourage better health practices, or it can even discourage healthy activities and attitude.

‘Public health experts have positively argued on the evidence of the effectiveness of mass media campaigns in changing health attitudes and behaviours’. (Kaliyaperuma, 2004).

Health awareness campaigns are known for their efficient capabilities to transmit and communicate positive health information to the audience. Moreover, when it comes to informing people in large numbers, the media is a very reliable source. These media health campaigns can range from informing the public on tips for avoiding the disease to changing their behavior or changing the policies of the authorities.

Therefore, keeping in view the importance of media health campaign, this research focuses and aims to study the effects of media campaigns regarding HIV/AIDS in the province of Punjab. These effects will be studied in the light of the impact on the information level, thoughts and how that knowledge put into practice by the people of Punjab Pakistan.

Background

In 1940s modern systematic studies on attitude, modification starts as an addition to the United States Army’s attempt in 2nd World War to recognize misinformation, arguments and Propaganda (e.g. Hovland, Lumsdaine, & Sheffield, 1949). Nearly everyone well-liked theory of persuasion at that time as it was the pedestal of knowledge for philosophy and watch theory of persuasion being used for the purpose of taking others consideration, grasp, the recognition that withholding of the influential communication (Hovland, Janis, and Kelley, 1953).

Initial stage research that was guided by the theory of persuasion and its relevant framework which acknowledge many new variables for investigators who continue to investigate, today, those variables are used as indicators of attitude change. Now a day’s focus of research is to study the features of the source of the message.

As the number of persuasive researches began to cultivate, many contradictions in their findings become visible. In addition to that, “attitude change theories” were developed frequently to explain a number of processes by which “point of view” takes place, but each theory merely seemed to calculate “persuasion” under some certain circumstances and set of conditions.

The “central route” direct to attitude change that is commonly a bit eternal opposition to argue against persuasion, and general analytical of behavior. The peripheral route (sideline) bring change in attitude that is ”vulnerable” to defy influence the change in attitude and less prognostic of behavior. When elaboration likelihood is high, the probability of a person's following the central route is increased. When the elaboration likelihood is low, the peripheral route becomes
more probable. In short, the elaboration likelihood moderates the route to persuasion (Petty & Cacioppo, 1986).

AIDS

Acquired immune deficiency syndrome (AIDS) is a transferable ailment originated by the failure of a person’s immune system (human immunodeficiency virus, HIV). Firstly, it was discovered in the United States in 1981. AIDS is a form of and caused by an advanced form of HIV virus, and an infected individual might be latent and show no symptoms for a long period of time. To date, there is no effective vaccine to prevent AIDS.

AIDS is deemed to be one of the most serious community health concerns of this century before COVID19. According to the Centers for Disease Control and Prevention (CDC) report in June 2000, 120,220 people were HIV-positive in the United States, and 311,700 were living with AIDS. Among these people, 44% were homosexual or bisexual men, 20% were heterosexual intravenous drug users, and 17% are women. Around 1,000-2,000 infants are born with HIV infection. WHO statistics dictate an estimated 33 million adults and 1.3 million children had HIV/AIDS infection until 1999 with 5.4 million new infections in the same year. Majority of these cases are active in the developing countries of Asia and Africa. Since HIV/AIDS was discovered, its spread has been exponential, and the rate of spread has increased has constantly been increasing after 1988. In 2017-18, 1.8 million populaces were recently contaminated with human immunodeficiency virus (HIV). In spite of that, the world has steadfast to end aids by 2030, Current rate of increase in infections and deaths are not declining fast enough to meet up the goals.

HIV/AIDS Scenario in Pakistan

According to the statics of UN, AIDS is estimated around 1, 65000 people are infected in Pakistan, which amounts to 0.1 % of the adult population of Pakistan, are HIV-positive (Ahmad, Khursheed, Majid.2019). This rate of increase is consistent during the last 25 years. However, the registered cases are always an understatement of the actual number of cases in the country. Pakistan recorded only 300 cases of AIDS and 2,300 cases of HIV infections in 2004. Afterwards, Injecting Drug Users (IDUs) became the beacon of transmissions as over 20% of IDU’s tested positive for the virus in Karachi. Pakistan is recorded as the uppermost tempo of increase amongst all countries in the area during 2019).

The Government of Pakistan has realized the need to do more regarding HIV. In 2001, a national HIV/AIDS Strategic Framework was formed, which made policies to control the HIV/AIDS epidemic. Furthermore, private groups and NGOs have worked to educate people on prevention, especially high-risk groups. However, the prevention activities of NGOs have been called out to be insufficient as they have only been able to reach 5% of the vulnerable population.
At the moment, Pakistan is deemed to be in the low-prevalence category regarding HIV/AIDS. However, Pakistan is at high risk of facing a rapid spread of the disease if precautionary measures are not taken in time.

Budget for Health Campaigns in Pakistan

Record of budget allocation for media campaigns showed that from 2004 to 2008, 2.1 percent of the Polio’s budget allocation was spent on funding media health campaigns. It is noted that a huge budget spent by the government of the country on media campaigns to aware the masses as 24.1 percent of the HIV/AIDS budget was spent on its media health campaigns. The largest finical budgets for campaigns of health communication in Pakistan were for the diseases of Hepatitis C, HIV/AIDS and Polio. Only Health awareness campaign of HIV/AIDS was allocated 58 million, 69 million, 80 million, 85 million and 34 million rupees were spent in years 2004, 2005, 2006, 2007, 2008 respectively. Despite the spending of millions of rupees on health awareness campaigns on media by the government of Pakistan, there has been no scientific research to measure the impact of these campaigns on the public at large, and thus we cannot rule on the successfulness of these campaigns or the reasons of failure too.

The aim of this paper is to study the changes in knowledge, attitude and practices of the public regarding the disease of HIV/AIDS. Furthermore, it will also discuss other precautionary measures in place to control the spread.

Literature Review

Keating, (2006) has studied media health awareness campaigns and its role in spreading useful information regarding HIV/AIDS. He found that TV is the least used source with only 24% share while radio campaigns are the most used source with a share of 59%. Print media advertisement had a greater share than TV but lesser than radio. The impact of health campaigns regarding information about HIV/AIDS and the insistence on the use of condoms was different. People who have had some kind of interaction with the campaign were found to be open and less shy to talk about HIV/AIDS; however, it had little impact on the people regarding their practice of using condoms during intercourse.

Susan L et al (1991) say that in 1989, the Public Health Service (PHS) established a section to assess the effectiveness of AIDS impediment programs of the CDC (Centers for Disease Control). The established team was called the panel on the assessment of AIDS and brought its first of two reports in 1989. The first report, Evaluating AIDS Prevention Programs, suggested that randomized experiments would be the best strategy to analyze the effectiveness of the program. Furthermore, the panel proposed to discuss non-experimental techniques in the next report. It also held that the assessment programs for health awareness campaigns were as important as the campaign itself. The final part is to assess the program’s results against its goals. For this purpose, it is important to have clearly defined goals and objectives. Historically, campaigns could not be assessed properly because of having not clearly defined goals. For this reason, the panel proposed
that all intervention programs must have clear-cut objectives predetermined in terms of quantifiable behavioral, biological or psychological outcomes. Furthermore, suggested the behavioral measure should be used as the basic variable to measure the effectiveness of AIDS health awareness campaigns. For the purpose of evaluation of the impact of media health campaigns, randomized experiments of substitute viewpoints are advised.

A.A.J. Hesse et al, 2006, in their Knowledge, Attitude & Practice study argued that Acquired immune deficiency syndrome (AIDS), human immunodeficiency virus (HIV) is currently active in almost all nation-states in the world. The active number of infections is deemed to be 33.3 million globally. Health experts have said that, along with transmission through semen, blood and blood products, HIV infection can also be transmitted through other body fluids such as Cerebral Spinal Fluid (CSF) pericardial/pleural fluids and amniotic fluids. Hospitals should thus act using the UBP (Universal Basic Precautionary measures) which assume that any person who is in a hospital, particularly patients, has more chance is a transporter of blood bear pathogens; then, all are thought about in a similar manner so even if they are contaminated. To follow these precautions, protective materials are demanded in greater supply, and more training is required for health care professionals, and greater care is required, considering the need to sterilize equipment. Health workers are also at high risk of catching the virus. Purpose of this study was the assessment of the awareness, understanding and put into practice the knowledge of medical workers of universal basic safety measures.

Vlahov and Polk (1987) argue that the likelihood of getting hepatitis B virus in the course of pine needle was more than the likelihood of an HIV virus. The likelihood of receiving an HIV virus in the course of pricks was 1% while the threat of hepatitis virus through prick was 6-30%. Despite the low probability of HIV transmission through needles, serious care needs to be taken as many medical practitioners have been infected through needle stick injury.

Holtzman et al, (2003) argue that only 3% of people know about the universal precautions and the risk posed by HIV. The seriousness of the danger of HIV infection is thus very opinionated by the personal deductions of people as research or studies do not predict a high infection spread-threat rate. The important task now is to improve the precautions that the doctors take when caring for HIV infected patients, and they also have to act as a role model for their colleague.

Objectives of The Study

1. To find out the People exposure regarding media health campaigns.
2. To explore the audience’s knowledge accuracy about HIV/AIDS.
3. To investigate the attitude changes regarding HIV/AIDS.
4. To determine the level of practice change regarding HIV/AIDS.

Hypotheses

H-1: TV as an effective source of information for females about health regarding HIV/AIDS.
H-2: People have more accurate knowledge and practice about HIV/AIDS that get information from media.

H-3: The KAP (knowledge, attitude and practice) towards media campaigns for HIV/AIDS is depending upon the economic status of the respondent.

H-4: Qualification level of public influence in the KAP regarding Media Health Campaigns.

Theoretical Framework

The following communication model was used as a base for the current study;

To study the attitude change of the masses Elaboration Likelihood Model (ELM) is used. It is a model of persuasion that explains how attitude is changed and formed. It mentions two probable methods of persuasion or attitude change; central and peripheral. The central route of persuasion advertises and advocates the merits of a message. People with a need for cognition are likely to be persuaded using the ‘central route’ as they judge a message based on its merits. On the other hand, the peripheral route of persuasion does not rely on advocating the merits of the message but rather with peripheral information to attract and persuade people. i.e., one who judges a message based solely on the attractiveness of the person giving the message is deemed to be in the ‘peripheral route’. (Petty and Cocioppo 1986)

Using the Elaboration Likelihood Model (ELM) to understand health communication Efficacy:

In the last 20 years, researchers have heavily used ELM to develop and promote health awareness campaigns for AIDS, and the use of a condom (Bakker 1999) and have changed the perception of smoking risks through specialized messages. (Irvin, 2003). Elaboration Likelihood Model is a useful method for understanding and predicting the effect of health awareness campaigns on behavior and attitude. Furthermore, this model suggests that attitudes are a construct of several types of processes.

Methodology

As a quantitative methodology, the researchers used a survey technique for the current study. By a well-developed questionnaire consisted, 40 questions were distributed among the respondents. The data was collected through convenient sampling procedure from 500 adults respondents in rural and urban areas of 36 districts of Punjab province. To make impartiality and objectivity in the results, the researchers use SPSS for the data analysis.

Data Analysis and interpretation

Table 1. Respondent’s knowledge about Disease Understudy

| Options                                      | n   | %   | $\chi^2$ |
|----------------------------------------------|-----|-----|----------|
| Responses on Information about HIV or AIDS   | 161.04*** | | |
Options | n | % | $\chi^2$
--- | --- | --- | ---
Yes | 271 | 54.2 | 
to some extent | 187 | 37.4 | 
No | 42 | 8.4 | 
Total | 500 | 100.0 | 
Information source |  |  | 63.33***
Media | 201 | 74.2 | 
Other Sources of information (Excluding media) | 70 | 25.8 | 
Total | 271 | 100.0 | 
Media type used |  |  | 203.46***
T.V | 107 | 53.2 | 
Newspapers | 63 | 31.3 | 
FM/Radio | 9 | 4.4 | 
Internet | 8 | 3.9 | 
Movies/Documentries | 7 | 3.4 | 
Banners/ Bill Boards/Sign Boards | 7 | 3.4 | 
Total | 201 | 100.0 | 

***p<.001

Table 2. Knowledge Accuracy Regarding Disease among Media Users

| HIV/AIDS | Yes | % | No | % | Don’t Know | % |
--- | --- | --- | --- | --- | --- | ---
prevail in males only | 38 | 18.9 | 151 | 75.2 | 12 | 5.9 |
prevail in females only | 16 | 8.0 | 161 | 80.1 | 24 | 11.9 |
Both gender’s disease | 155 | 77.2 | 22 | 10.9 | 24 | 11.9 |
No one’s disease | 9 | 4.5 | 159 | 79.1 | 33 | 16.4 |
Precautionary Measures |  |  |  |  |  |  |
Injections & Medicines | 43 | 21.4 | 97 | 48.2 | 61 | 30.3 |
Precautionary measures are given | 77 | 38.3 | 86 | 42.8 | 38 | 18.9 |
Both ways are introduced | 77 | 38.3 | 48 | 23.8 | 76 | 37.9 |
Any other | 3 | 1.5 | 194 | 96.5 | 4 | 2.0 |

Table 3. Knowledge of HIV/AIDS from Respondents’ users of the Sources of Information (n=70)

| | n | % | $\chi^2$ (2) |
--- | --- | --- | --- |
Teams of health workers | 2 | 2.8 | 72.13*** |
Relatives/Neighbors/ Friends | 59 | 84.4 | 
Miscellaneous source | 9 | 12.8 | 
Total | 70 | 100.0 | 

***p<.001
Table 4. Accuracy of Information of Respondents from the Other Sources of Information (n=70)

| Options                                      | Yes  | No  | Do not know |
|----------------------------------------------|------|-----|-------------|
| Disease prevail in females only             | N    | %   | n           | %   | n          | %   |
| 10                                           | 14.3 | 56  | 80.0        | 4   | 5.7        |
| Both gender’s disease                        | 6    | 8.5 | 61          | 87.2| 3          | 4.3 |
| No one’s disease                             | 56   | 80.0| 11          | 15.7| 3          | 4.3 |
| Precautionary Measures                       | 0    | 0   | 58          | 82.8| 12         | 17.2|
| Injections & Medicines                       |      |     |             |     |            |     |
| Preventional measures are given              | 21   | 30.0| 24          | 34.3| 25         | 35.7|
| Both ways are introduced                     | 36   | 51.4| 20          | 28.5| 14         | 20.1|
| Any other                                    | 37   | 52.8| 18          | 25.7| 15         | 21.5|
|                                              | 1    | 1.5 | 65          | 92.8| 4          | 5.7 |

Table 5. Respondent’s Attitude before exposure to Media Health Campaign (n=271)

| Levels       | Media     | Sources other than Media | Sum          | χ²(2) |
|--------------|-----------|--------------------------|--------------|-------|
|              | n         | %age                     | N            | %age  | n    | %age |
| -ve          | 91        | 45.3                     | 17           | 24.3  | 108  | 39.8 |
| Neutral      | 96        | 47.8                     | 48           | 68.5  | 144  | 53.2 |
| +ve          | 14        | 6.9                      | 5            | 7.2   | 19   | 7.0  |
| Total        | 201       | 100.0                    | 70           | 100.0 | 271  | 100.0|

***p<.001

Table 6. Attitude change after exposure to Media Health Campaign (n=271)

| Options                     | Media     | Sources other than Media | Sum          | χ²(2) |
|-----------------------------|-----------|--------------------------|--------------|-------|
|                             | n         | %age                     | N            | %age  | n    | %age |
| Yes                         | 69        | 34.3                     | 28           | 40.0  | 97   | 35.8 |
| Up to some extent           | 127       | 63.2                     | 36           | 51.4  | 163  | 60.1 |
| No                          | 5         | 2.5                      | 6            | 8.6   | 11   | 4.1  |
| Total                       | 201       | 100.0                    | 70           | 100.0 | 271  | 100.0|

**p<.005

Table 7. Use of Safety Measure to Avoid Disease (n=271)

| Options                  | Media     | Sources other than Media | Sum          | χ²(2) |
|--------------------------|-----------|--------------------------|--------------|-------|
|                           | n         | %age                     | N            | %age  | N    | %age |
| Yes                      | 95        | 47.3                     | 38           | 54.3  | 133  | 49.1 |
| No                       | 62        | 30.8                     | 21           | 30.6  | 83   | 30.6 |
| Not required              | 44        | 21.9                     | 11           | 15.7  | 55   | 20.3 |
| Total                    | 201       | 100.0                    | 70           | 100.0 | 271  | 100.0|
### Table 8. Information Sharing with others about Disease

| Options          | Media N | %age | Media Sources other than Media N | %age | Sum N | %age | χ²(2)  |
|------------------|---------|------|---------------------------------|------|-------|------|--------|
| Yes              | 39      | 19.4 | 20                              | 28.6 | 59    | 21.8 | 10.25**|
| To some extent   | 98      | 48.8 | 38                              | 54.3 | 136   | 50.2 |        |
| No               | 64      | 31.8 | 12                              | 17.1 | 76    | 28.0 |        |
| Total            | 201     | 100.0| 70                              | 100.0| 271   | 100.0|        |

**p<.01

### Table 9. Gender wise use of Media to get knowledge about HIV/AIDS

| Type of Media used                  | Male | %age | Female | %age | χ²(1) |
|-------------------------------------|------|------|--------|------|-------|
| Newspaper                           | 51   | 41.4 | 12     | 15.4 | 29.64***|
| Television                          | 53   | 43.1 | 54     | 69.2 |       |
| FM Radio                            | 7    | 5.7  | 2      | 2.6  |       |
| Internet                            | 3    | 4.1  | 3      | 3.8  |       |
| Movies/Documentary                  | 4    | 2.4  | 4      | 5.2  |       |
| Banners/Billboards/Signboards       | 123  | 3.3  | 3      | 3.8  |       |
| Total                               | 100.0|      | 78     |      | 100.0 |

***P<.001

### Table 10. Knowledge of Respondents about the Disease and their Qualification.

| Qualification level                | HIV/AIDS | χ²(1) |
|------------------------------------|----------|-------|
| Low Qualification                  | 59       | 21.9  | 2.751 |
| Average Qualification              | 154      | 56.9  |      |
| High Qualification                 | 57       | 21.2  |      |
| Total                              | 271      | 100.0 |      |

### Conclusion

The findings of the study showed that the objective of the study was achievable. Audiences are well informed about the disease of HIV/AIDS. In the current study, researchers tried to investigate sources of knowledge about the disease; it is also explored that what are the societal factors that effects the knowledge of respondents regarding HIV/AIDS. Females audience is more inclined to the information from media about disease HIV/AIDS (see table no.9). A statistical test to prove or disprove hypothesis the Chi-square was applied to check the distribution of respondent’s gender-wise on media types as they use. The chi-square value is shown very significantly. This proved the hypothetical statement that female participant understudy was extra exposed to television as a...
media of information about disease Acquired Immune Deficiency Syndrome (AIDS), Human Immunodeficiency Virus (HIV). In the light of the literature review and theoretical frame of Elaboration Likelihood Model (ELM) of Attitude change and persuasion, as the results of the current study we can conclude that if we want to educate women folk of the province about HIV/AIDS, television is the best medium. To study the relationship of the variables, qualification of the respondent and its impact on the knowledge gain through campaigns of media on HIV/AIDS media, a chi-square statistical test was again applied to measure the relationship of the qualification level of respondents and the knowledge of respondents regarding HIV/AIDS. Chi-square value showed no significant association between qualification level and knowledge of the audience about three diseases understudy (See table.10). When researchers tried to know the habit of knowledge sharing among respondents of Media user and non-users for getting knowledge of HIV/AIDS, they come to the conclusion that media users are used to sharing knowledge about HIV/AIDS as compare to those who got knowledge of disease other than media sources. During measuring the attitude change in media users and other sources of information users regarding HIV/AIDS, the chi-square statistical test was useful to find out the association of attitude change with media as a source of information and respondents of users of other sources for information. The $\chi^2 (2, N=271) = 10.788$ the value high that showed a very noteworthy relationship at $\alpha = .001$. The %age of attitude change in people understudy after the experience to health campaign and their exposure to HIV/AIDS on media was powerfully linked with sources of information they use. So of the study that all the basic information about HIV/AIDS knew the residents of the Punjab, Pakistan. Most of the people exposed to media for getting the information for the disease as well as the respondents have accurate knowledge about HIV/AIDS. It is also confirmed that the media health campaign changed the attitude towards HIV/AIDS and did practice after media exposure.

The results of the study also proved the hypothesis of the study that TV is an effective source of information for the rural and urban areas of the Punjab province for the dissemination of the health concern information. It is also discovered that after the exposure to media, the public has accurate knowledge about HIV/AIDS(See table no.4). The results of the study denied the assumption that income hasn’t affected the change of practice other than knowledge, attitude towards HIV/AIDS but it is also confirmed that the level of formal education influence the KAP to some extent.

It is concluded that media health campaign is playing a vital role in the change of knowledge, attitude and practice (KAP) regarding HIV/AIDS. Media create the concept of sharing of knowledge about disease HIV/AIDS by the accuracy of knowledge as it is proven that knowledge and accuracy of knowledge(Bandura, A. and Jourden, F. J.1991) both encourage the public to share the ideas with others.
References

Ahmed, A., Hashmi, F. K., & Khan, G. M. (2019). HIV Out Break in Pakistan, The Lancet Correspondence 6(7), e418, July 01, 2019. https://www.thelancet.com/journals/lanhiv/article/PIIS2352-3018(19)30179-1/fulltext#seccestitle10.

Auerbach, J. D., Wypijewska C, & Keith, H. Brodie, H. (Ed). (1994). AIDS and Behavior An Integrated Approach review Mental Health Issues in AIDS Research, Institute of Medicine AIDS and Behavior: on 1-6-09 http://books.nap.edu/catalog/4770.html

Bandura, A. & Jourden, F. J. (1991). Self-regulatory mechanisms governing the impact of social comparison on complex decision making. Journal of Personality and Social Psychology, 60: 941–951. [Crossref], [Web of Science ®], [Google Scholar]

Danchaivijitr, S. Tantiwatanapaiboon Y, et al. (1995). Universal precautions: knowledge, compliance and attitudes of doctors and nurses in Thailand. J Med Assoc Thai. 78 (2), S112–S117.

Gerbner, G. (1985). "Field Definitions: Communication Theory." In 1984–85 U.S. Directory of Graduate Programs.

Hesse, A., Adu-Aryee, N., Entsua-Mensah, K., & Wu, L. (2006). Knowledge, Attitude and Practice Universal Basic Precautions by Medical Personnel in a Teaching Hospital. Ghana Med J. June; 40(2): 61–64.

Holtzmann, D. & Chen, S. (Eds). (2003). Current HIV/AIDS-related knowledge, attitudes and practices among the general population in China: Implications for action. AID SciPrev and VaccRes, 3(1)

Hovland, C. I., Lumsdaine, A. A., & Sheffield, F. D. (1949). Experiments on mass communication. Princeton, NJ: Princeton University Press.

Irvin, J. E. (2003) Construction of smoking-relevant health risk perceptions among college students: The influence of need for cognition and message content. Pro-Quest Digital Dissertations database. (Publication No.AAT 3151228).

Kaliyaperuma, K. (2004). Guideline for conducting a knowledge, attitude and practice (KAP) study. Community Opthalmology, IV (1).

Kamau J.K. (2004). Attitu de and Practice on HIV/AIDS: A Case Study of High School Students in Kenya. IntConf AIDS Jul 11-16; 15: abstract no. C11290.

Keating, J. Meekers, D. & Adewuyi A. (2006). Assessing effects of a media campaign on HIV/AIDS awareness and prevention in Nigeria: results from the VISION Project. BMC Public Health; 6:123.

Knight, V. (1998). Perceptions and practice of universal blood and body fluid precautions by registered nurses at a major Sydney Teaching Hospital. J of Advan Nurs, 27(4) Pp 746–751.

McGinnis, J.M., Foege, W. H. (1993). Actual causes of death in the United States. Journal of the American Medical Association 270:2207-2212.
Petty, R. E., & Cacioppo, J. T. (1986). The Elaboration Likelihood Model of persuasion. In L. Berkowitz (ed.), Advances in experimental social psychology 19, pp. 123–205. New York: Academic Press.

Susan, L. Coyle, Robert F. Boruch, & Charles F. Turner, (Eds). (1991). Evaluating AIDS Prevention Programs. National Research Council http://www.nap.edu/catalog/1535.html.

Vlahov, D. & Polk, DF. (1987). Transmission of human immunodeficiency virus within the health care setting. Occup Med. 2(3), Pp 429–450.

Wypijewska, C. (Ed). (1994). AIDS and Behavior an Integrated Approach review Mental Health Issues in AIDS Research, Institute of Medicine AIDS and Behavior: on 1-6-09 http://books.nap.edu/catalog/4770.html