ORIGINAL ARTICLE

HIV/AIDS AWARENESS AND ELECTRONIC MEDIA

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ABSTRACT

Objective: To investigate effects of education, ethnicity and electronic media on HIV/AIDS awareness among men and women.

Material and Methods: PDHS 2012-13 data was used for the study. From selected occupied 12,943 households, 3,134 men and 13,558 women of 15 to 49 years of age, were interviewed. HIV/AIDS awareness was retrieved and analysed with information on education, ethnicity and electronic media exposure.

Result: Overall all educated men and women had more HIV awareness than men and women who had no education. Every ethnic group had no clear information about HIV/AIDS and its spread. Men and women exposed to radio and TV had overall more awareness about HIV/AIDS than men and women who had no exposure at all. Education and ethnicity have statistical significance and association with HIV/AIDS awareness. Frequency of watching TV is more statistical significant and associated with awareness about HIV/AIDS than frequency of listening to radio.

Conclusion: Education and increase in education levels enhance awareness about HIV/AIDS. Electronic media has an imperative role in creating awareness and educating people about HIV/AIDS, its spread, control and prevention. All ethnic groups need education about HIV/AIDS through radio and TV programmes.

Key words: HIV, AIDS, Electronic Media, Education, Ethnicity

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INTRODUCTION

Human Immunodeficiency Virus (HIV) can lead, if not treated, to Acquired Immunodeficiency Syndrome (AIDS). Once a person gets HIV, it remains in the body for life and can't get rid of it completely even with treatment[1]. There are two types of HIV, HIV-1 which is main cause of infection globally and HIV-2 which has lower infectivity and poor capacity of transmission. In West Africa, after more than four cross species transmissions of simian immunodeficiency viruses (SIVs), from chimpanzees and gorillas, HIV-1 was transferred to humans. While HIV-2 was resulted after more than eight transmissions of the SIVs infecting an Old-World monkey, sooty mangabeys [2]. Tracing the genetic changes, it was identified that SIVs crossed from monkeys to apes and from apes to humans, which also warns future zoonotic risk[3].

At the end of 2016, worldwide, there were approximately 36.7 million people with HIV, 1.8 million people were newly infected, and 1.0 million people died from HIV-related causes during the year. There is no cure for HIV infection but effective antiretroviral (ARV) drugs can decrease the virus transmission[4]. To control HIV/AIDS spread, WHO launched Special Programme in 1986. New Global Health Sector Strategy on HIV for 2016-2021 will contribute to decrease new HIV infections and HIV related deaths, provide antiretroviral therapy for HIV treatment and long-term care to all people living with HIV/AIDS[5]. To prevent the country from HIV/AIDS, government of Pakistan started National AIDS Prevention and Control Programme in 1987[6]. In Pakistan, estimated HIV prevalence is about 0.1 per cent of the adult population. At the end of March 2018, Pakistan's National AIDS Control Programme (NACP) has 23,783 HIV registered cases. Among these HIV infected persons, 13,384 were on ARV[7].

Education may decrease HIV infection risks and rates[8]. It was found that populations through more education, over time, got more knowledge about HIV, spread and risks[9]. Higher levels of parents' education can protect children from HIV/AIDS[10]. Ethnicity is also related to perceptions, believes, risks and prevalences of diseases so it is also considered in scientific studies. Blacks Americans experience the most severe HIV load,

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followed by Hispanics/Latinos[11], while non-Hispanic black and Hispanic people have a higher risk of HIV mortality than others[12]. The transmission of HIV is preventable, and electronic media can educate and create awareness. Educational content about HIV/AIDS on television can create public awareness about HIV spread, prevention, treatment and care[13]. Public information sources, TV and radio, can help to understand HIV/AIDS[14]. Media exposure, television, radio, newspaper, is very important and is associated with awareness and knowledge about HIV and AIDS[15,16]. The objective of the study is to investigate effects of education, ethnicity and electronic media on HIV/AIDS awareness among men and women.

MATERIAL AND METHODS

This study is based on data of Pakistan Demographic and Health Survey (PDHS) 2012-2013. In the survey, nationally representative sample from four provinces, Islamabad capital territory and Gilgit Baltistan of Pakistan was taken. During the survey 3,134 men and 13,558 women of 15 to 49 years of age, from selected 12,943 households, were interviewed. Statistical Package for the Social Sciences (SPSS) version 21 (IBM, NY, USA) was used. Multinomial Linear Regression analysis was done for statistical significance and association of dependant variables with electronic media exposure, ethnicity and education. A p-value of <0.05 was considered statistically significant.

Dependant variables

For awareness about HIV/AIDS, included questions were: (1) Heard of HIV/AIDS (2) Can get HIV by mosquito bite (3) Can get HIV by sharing food with person who has AIDS (4) Reduce risk of getting HIV: always use condoms during sex (5) HIV can be transmitted during pregnancy (6) HIV can be transmitted by breast feeding (7) Know a place to get HIV test. There were two alternatives to all answers (1) No (2) Yes.

Independent variables

Education

Highest education level was categorised into: (1) No education (2) Primary (3) Secondary (4) Higher. No education means no formal education in a school. Primary refers to school classes from1-5, Secondary means school classes from 9-10 and Higher demonstrates classes from11-16. Every class means study year in school/college/university.

Electronic media exposure

Categories of electronic media exposure were; (1) Frequency of listening to radio (2) Frequency of watching television (TV). The answers for both categories were: (1) Not at all (2) Occasionally (3) Daily.

Ethnicity

Based on language spoken at home, ethnicity was defined. Included ethnic groups were: (1) Urdu (2) Punjabi (3) Sindhi (4) Pushto (5) Balochi (6) Barauhi (7) Saraiki (8) Hindko (9) Kashmiri (10) Shina (11) Chitrali (12) Potowari (13) others

RESULTS

Education level effect on HIV/AIDS awareness

Table 1 is about education levels and awareness about HIV/AIDS among men and women. It reveals that with increase in education level among men, awareness about HIV/AIDS spread and place of test also increased. Almost all educated women had more awareness about HIV/AIDS than women who had no education.

Electronic media influence on awareness about HIV/AIDS

Table 2 shows HIV/AIDS awareness by electronic media exposure. It illustrates that men who had exposure to radio and TV had overall more awareness about HIV/AIDS and test place than men who had no exposure at all to radio and TV. Overall, women who listened radio and watched TV, occasionally and daily, had more awareness about HIV/AIDS than women who did not listen radio and watch TV at all.

Ethnicity and HIV/AIDS awareness

HIV/AIDS awareness among different ethnic groups is shown in Table 3. It shows that the least percentage of Barauhi men heard about HIV/AIDS, and Potowari men had better understanding about HIV/AIDS spread by mosquito bite and sharing food with HIV infected person. Barauhi women had the lowest awareness about HIV/AIDS spread by mosquito bite but the best understanding about the spread by breastfeeding.

Statistical significance and association between variables

Table 4 has Likelihood Ratio Tests results and shows statistical significance and association between dependant and independent variables. It demonstrates that ethnicity and education levels have statistically significance and relationship with awareness about HIV/AIDS and its test place. Frequency of watching TV has more statistically significance and association with HIV/AIDS awareness than frequency of listening to radio.

Table 1: Awareness about HIV/AIDS and its spread related to education level among men and women.

HIV/AIDS awareness among men (N=3134)	Yes responses related to education level in %			
	No Education	Primary	Secondary	Higher
Ever heard of AIDS	36.0	65.9	81.6	97.6
Can get HIV by mosquito bite	24.2	23.8	17.4	13.4
Can get HIV by sharing food with person who has AIDS	33.3	32.0	33.3	17.4
Reduce risk of getting HIV: always use condoms during sex	39.2	50.0	57.8	70.9
HIV can be transmitted during pregnancy	52.9	54.1	63.1	74.8
HIV can be transmitted by breastfeeding	42.5	50.4	52.3	52.1
Know a place to get HIV test	37.8	43.6	50.1	69.0
Among women (N=13543)				
Ever heard of AIDS	19.5	51.9	77.9	94.9
Can get HIV by mosquito bite	34.8	30.3	23.7	14.1
Can get HIV by sharing food with person who has AIDS	37.0	39.4	30.4	17.1
Reduce risk of getting HIV: always use condoms during sex	44.9	47.4	55.1	66.7
HIV can be transmitted during pregnancy	62.2	67.3	68.7	77.4
HIV can be transmitted by breastfeeding	60.7	62.8	62.8	62.5
Know a place to get HIV test	23.0	25.9	26.7	39.4

Table 2: Awareness about HIV/AIDS among men and women having electronic media exposure.

HIV/AIDS awareness Responses of men (N=3134)	Yes responses based on frequency of listening radio and watching TV in %					
	Frequency of listening to radio			Frequency of watching TV		
	Not at all	Occasionally	Daily	Not at all	Occasion-ally	Dai-ly
Ever heard of AIDS	68.3	73.7	75.0	39.3	64.1	85.6
Can get HIV by mosquito bite	18.1	17.1	24.8	23.8	21.6	15.9
Can get HIV by sharing food with person who has AIDS	28.9	25.8	29.6	31.7	37.7	22.4
Reduce risk of getting HIV: always use condoms during sex	57.4	60.0	56.0	50.2	53.8	62.0
HIV can be transmitted during pregnancy	62.5	67.5	60.8	27.3	21.1	15.6
HIV can be transmitted by breastfeeding	52.4	47.8	44.0	47.6	51.7	19.7
Know a place to get HIV test	51.4	58.1	58.9	46.7	44.8	59.4
Responses of women (N = 13537)						
Ever heard of AIDS	40.9	55.0	64.5	15.1	40.1	64.4
Can get HIV by mosquito bite	24.5	26.7	24.9	33.2	28.5	22.4
Can get HIV by sharing food with person who has AIDS	31.1	26.0	25.8	39.5	35.4	26.8
Reduce risk of getting HIV: always use condoms during sex	53.3	59.2	56.7	44.3	49.7	57.6
HIV can be transmitted during pregnancy	68.2	72.4	75.9	65.3	65.3	70.9
HIV can be transmitted by breastfeeding	61.6	63.8	69.9	60.5	60.2	63.4
Know a place to get HIV test	28.7	29.6	31.5	22.7	26.7	30.7

Table 3: Ethnicity, based on language spoken at home, and HIV/AIDS awareness.

Ethnicity	Awareness about HIV/AIDS Yes responses in %						
Men(N=3134)	Ever Heard AIDS	Can get HIV by mosquito bite	Can get HIV by sharing food with person who has AIDS	Reduce risk of getting HIV: always use condoms during sex	HIV can be transmitted during pregnancy	HIV can be transmitted by breast-feeding	Know a place to get HIV test
Urdu	88.6	16.0	19.8	58.4	81.3	66.1	46.9
Punjabi	75.8	21.4	31.1	57.4	66.3	54.0	49.8
Sindhi	50.8	22.0	34.8	70.1	62.2	62.8	57.9
Pushto	81.9	14.1	25.2	60.3	54.5	40.7	64.5
Balochi	63.7	13.1	19.6	49.5	51.4	36.4	49.1
Barauhi	43.8	12.7	15.5	50.7	33.8	36.6	28.2
Saraiki	63.0	22.1	42.7	56.1	64.8	55.9	57.6
Hindko	81.6	31.3	26.3	62.5	66.3	45.0	66.3
Kashmiri	69.2	22.2	44.4	66.7	100	66.7	77.8
Shina	55.8	11.1	20.6	49.2	64.8	52.4	41.3
Chitrali	62.4	31.0	34.5	58.6	75.9	31.0	51.7
Potowari	86.8	9.1	12.1	45.5	90.9	54.5	48.5
others	68.8	13.6	24.2	60.6	75.8	47.0	42.4
Women (N=13558)							
Urdu	87.0	16.7	19.9	57.8	71.9	60.3	32.4
Punjabi	57.0	27.6	34.9	57.1	69.5	62.7	28.4
Sindhi	27.9	17.2	30.3	48.0	67.7	64.0	35.4
Pushto	32.0	28.8	28.2	48.6	62.2	54.7	29.3
Balochi	39.2	20.5	14.1	59.4	68.8	67.5	10.7
Barauhi	21.4	50.8	19.7	50.8	76.2	86.1	30.3
Saraiki	34.2	31.5	47.2	48.9	74.2	69.2	30.3
Hindko	61.2	27.4	29.6	49.1	70.5	65.5	31.3
Kashmiri	77.4	29.2	29.2	70.8	79.2	66.7	20.8
Shina	20.2	22.9	36.2	64.9	59.5	53.4	32.1
Balti	17.9	14.5	30.4	69.6	76.8	66.7	17.4
Potowari	65.1	21.7	43.5	53.6	72.5	68.1	27.5
Others	46.8	18.2	25.4	51.1	66.3	55.8	17.1

Table 4: Impact of exposure to electronic media, ethnicity and education on awareness about HIV/AIDS.

HIV/AIDS Awareness (DVs) (questions asked from men and women)	Electronic Media Exposure, Education and Ethnicity (IVs)							
	Frequency of listening to radio		Frequency of watching TV		Education level		Ethnicity	
	Chi Square	p-value	Chi Square	p-value	Chi Square	p-value	Chi Square	p-value
Can get HIV by mosquito bite	15.921	0.014	53.943	<0.001	309.136	<0.001	115.674	<0.001
Can get HIV by sharing food with person who has AIDS	7.609	0.268	39.347	<0.001	408.711	<0.001	224.602	<0.001
Reduce risk of getting HIV: always use condoms during sex	38.549	<0.001	22.430	0.001	157.362	<0.001	101.208	<0.001
HIV can be transmitted during pregnancy	10.585	0.102	8.980	0.175	84.526	<0.001	69.041	0.002
HIV can be transmitted by breastfeeding	15.129	0.019	17.727	0.007	47.665	<0.001	116.461	<0.001
Know a place to get HIV test	6.557	0.087	5.707	0.127	88.698	<0.001	91.062	<0.001

DISCUSSION

The results of this study show that education levels among men and women are directly related to awareness about HIV/AIDS and place of test. Men and women who had TV and radio exposure, had overall more awareness about HIV/AIDS and test place than men and women who had no exposure to radio and TV at all. Ethnic groups have interesting variations in HIV/AIDS awareness. Education levels and ethnicity

are statistically significant and have relationship with HIV/AIDS awareness. Watching TV frequency is more statistically significant and associated with awareness about HIV/AIDS than listening to radio frequency. A recent study highlighted possibility of HIV epidemic, it's terrible consequences in Pakistan and threat of HIV-1 high prevalence, in future, in the country. Decreasing and getting to zero new HIV-1 infections in Pakistan, HIV/AIDS awareness and control programmes must be sufficiently resourced with special focus on high-risk populations[17].

This study shows that education and education levels are important for HIV/AIDS awareness. Long time is required to build/upgrade education institutions and enhance education levels. Latest registered HIV/AIDS cases in Pakistan are alarming and require strategies to create awareness about HIV/AIDS in minimum time to save population. A study in Pakistan found that roadside barbers shops had inadequate awareness and knowledge of HIV infection and its transmission[18]. There is perceptive threat of HIV/AIDS spread due to lack of awareness among barbers, quacks, non-registered practitioners etc. They are mostly uneducated or least educated people. It is important to educate them with some special programmes/ways.

Our study shows that education has direct link with HIV/AIDS awareness. A study in Pakistan found that uneducated adults had lesser knowledge and awareness about HIV/AIDS and its spread than educated adults[19]. Another study shows that education has strong association with awareness and knowledge of HIV/AIDS transmission and prevention. The association is decreased with the use of mass media [20]. This indicates mass media importance in awareness and education. A study revealed that the knowledge gaps between individuals with high and low education about HIV/AIDS were decreased due to information on media. Lesser information about HIV/AIDS among rural residents and wrong perceptions can be increased through media[21]. Pakistani population mainly resides in rural areas and electronic media would be helpful in educating them about HIV/AIDS. Our study about ethnicity has noteworthy finding that ethnic groups in remote areas of the country were also well aware of HIV/AIDS spread. Urdu speaking community is considered highly educated ethnic group in the country, but they had not the highest level of HIV/AIDS awareness.

The PDHS 2012-13 shows that Balochi and Barauhi women had the lowest education among all ethnic groups, and 70.9% Pushto speaking women had no education but this study findings show that they have good awareness about HIV/AIDS spread. Almost all ethnic groups need proper awareness and knowledge about HIV/AIDS. A study describes that ethnicity and exposure to TV and newspapers are associated with HIV awareness[22].

This study shows that men and women who had exposure to radio and TV had overall more awareness about HIV/AIDS than non-exposed men and women. A study found that persons who had exposure to mass media (television and radio) had more HIV/AIDS awareness and lesser tendency to stigmatize towards persons living with HIV/AIDS[23]. Another study found that exposure to radio and TV was associated with HIV testing[24].

This study found that electronic media, especially TV, is very important in awareness about HIV/AIDS. A study showed that electronic media created awareness and educated about HIV/AIDS and its routes of transmission among 84% adolescents[25,26]. There should also be an education, by media, to have HIV screening before child birth. A study in Pakistan suggested that in hospitals, the screening for HIV antibodies should also be included in the routine pre-operative patients[27]. All pregnant woman should be offered a blood test for HIV as part of routine antenatal screening. HIV can be transferred to baby during pregnancy, birth or breast-feeding[28]. A study noticed important role of electronic media for awareness and education of HIV/AIDS, its testing and counseling. The role of electronic media was found 38.8% followed by churches 22.8% and print media 15.0% for HIV/AIDS awareness, education and testing[29]. This study found better and important role of TV than radio for HIV/AIDS awareness. A study in Pakistan found reasonable knowledge about HIV/AIDS among university students due to electronic media which was major source of awareness and education[30].

Electronic media has a major role in HIV/AIDS awareness. A research found meaningful increase in knowledge about HIV and its cure after viewing the informative video 31. Informative TV advertisements increase knowledge and produce more recall with any visual aid (pie chart, bar chart, table, or pictograph)[32]. There is an association between HIV/AIDS knowledge and the number of information sources like television, radio, newspapers, discussions with neighbours and friends[33]. An electronic media can create awareness, educate persons of all ethnic groups about HIV/AIDS, its spread and prevention in less time than increase in education levels.

LIMITATIONS

According to preliminary results of Pakistan's 2017 census, its population is 207,774,550. In PDHS 2012-13, although the sample size was very small, but the data provided information about education, ethnicity

and electronic media effects on HIV/AIDS awareness.

CONCLUSION

Education and increase in education levels enhance awareness about HIV/AIDS. Electronic media has an imperative role in creating awareness and educating people about HIV/AIDS, its spread, control and prevention. All ethnic groups need education about HIV/AIDS through radio and TV programmes.

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Recommendations

There is also need of education about HIV/AIDS and its treatment at certain places. In Pakistan, federal and provincial governments should form HIV/AIDS control centers in each district to provide free treatment with privacy and confidentiality. There should be free behaviour change therapy, education about HIV/AIDS and rehabilitation in these centers.

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CONFLICT OF INTEREST: Authors declare no conflict of interest

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