



Original Article

Prevalence and Correlates of Comprehensive HIV/AIDS Knowledge among Women Aged 15–49 Years in Pakistan

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ABSTRACT

Pakistan is ranked second among the countries in pacific Asia where the AIDS epidemic is spreading rapidly. **Objectives:** This study examines the comprehensive HIV/AIDS knowledge and measures the relationship between knowledge and socio-demographic characteristics of women aged 15–49 in Pakistan. **Methods:** It is based on secondary data analysis of the Pakistan Demographic and Health Survey 2017–2018. Data were collected from 50,495 married women aged 15–49 through the questionnaire. Descriptive statistics were applied to summarize the data while bivariate analysis was conducted to find out the correlations. **Results:** The study found that Pakistani women have a low level of knowledge regarding HIV/AIDS. Moreover, a significant relationship was found between comprehensive HIV/AIDS knowledge and wealth index as well as with the level of access to information. It shows that women from the richest households with moderate access to information had a high level of HIV/AIDS knowledge. **Conclusions:** Social stigmas regarding HIV/AIDS are rooted in Pakistani traditional society which is consequently the cause of the lack of knowledge regarding this epidemic among people in Pakistan.

INTRODUCTION

Acquired immunodeficiency syndrome (AIDS) emerged in the world as a global pandemic [1]. Until today, HIV/AIDS is an increasing concern in developing countries as a major public health issue [2]. Pakistan is ranked 2nd among the countries in pacific Asia where the AIDS epidemic is spreading rapidly, with an increase of 20,000 new infections in 2017 [3]. This increased transmission of HIV is witnessed among vulnerable populations, such as injecting drug users (IDUs), individual who is already HIV infected, people who receive a blood transmission, and eventually, in certain rural and urban sections of developing nations [4]. HIV/AIDS is considered one of the major causes of mortality in third-world countries [5], where almost all people are heterosexual [6]. Pakistan, as a Muslim country, has different misconceptions and misinformation regarding

HIV/AIDS's knowledge. Having multiple sexual partners is the most commonly perceived cause of AIDS in Pakistani society, which stigmatizes the victims [7,8]. However, Lack of education, low contraceptive prevalence, and high fertility are the primary causes of the rapid proliferation of AIDS in developing countries. In Pakistan, HIV is transmitted mainly through contaminated blood and blood products. In addition, inadequate nutrition, low access to health facilities, etc. make the pandemic of HIV/AIDS even worst [9]. Previous literature revealed that women have low knowledge regarding HIV/AIDS than males, and therefore, are at higher risk of getting infected with HIV due to epidemiological factors, physiological vulnerabilities, low socioeconomic status, and men's increased indulgence in sexual practices. Furthermore, males are

reported to have a high transmission rate of HIV than females [10]. According to the Pakistan Demographic and health survey (PDHS) 2012–13, nearly 42% and 50% of women have heard about and are aware of HIV/AIDS respectively. The literature suggests that women who belong to the richest households, have high education levels, have greater access to information, and live in urban settings have an increased awareness of HIV/AIDS [11]. Moreover, an average knowledge score of HIV/AIDS (62.7%) was observed in the university students and the knowledge of females was better than males in Rawalpindi [12]. The present research aimed to examine the level of comprehensive knowledge of HIV/AIDS among women aged 15–49 in Pakistan. Moreover, it also measures the relationship of different socio-demographic characteristics i.e. wealth index, education, age, access to information, etc. with the comprehensive knowledge of HIV/AIDS.

METHODS

This study used data from PDHS 2017–2018, a cross-sectional household survey, that provides data on human resources, health, and nutrition. The study population, which was selected using a two-stage stratified sampling, consisted of 50,495 married women. The dependent variable was comprehensive knowledge about HIV. The covariates for the present study were the age of women in the 15–49 age strata, region of residence, area of residence, qualification level, wealth index, husband/partner's educational level, and having ever been tested for HIV. After organizing and double cleaning the data, descriptive statistics were applied via SPSS version 21.0 to all the included variables of this study. To evaluate the prevalence and correlates of knowledge regarding HIV/AIDS with the socio-demographic characteristics, chi-square tests were applied among the independent variables with comprehensive knowledge. Further, binary logistics were applied to those variables that found a significant association in chi-square analysis to identify the relationship between independent variables with comprehensive knowledge of HIV/AIDS. Necessary measures were taken during the data collection phase to uphold ethical standards. Formal permission from PDHS and informed consent from the participants were taken and their confidentiality was ensured by the survey team of the DHS program.

RESULTS

Different socio-demographic characteristics and questions measuring knowledge regarding HIV/AIDS are explained and analyzed while seeking relationships among variables in the present study. The percent (%) and frequencies of the socio-demographic characteristics of

the respondents. The majority of the respondents (43.3%) resided in the age group of 35–39 years and the residents of Punjab, Pakistan (21.4%). 54.3% of respondents resided in the rural areas of Pakistan, and 60.8% are illiterate. Moreover, 77.1% of the respondents had low access to the information and 23.4% of people were from poorer households. The majority of the females' husbands had education at the secondary level (34.6%). A vast majority of the respondents (98.2%) had never been tested for HIV/AIDS as shown in table 1.

Variables	Frequency (%)
Age (n=50495)	
15-29	10816(21.4%)
30-39	21893(43.3%)
40-49	17786(35.2%)
Region (n=50495)	
Punjab	10825(21.4%)
Sindh	9052(17.9%)
KPK	8185(16.2%)
Baluchistan	6363(12.6%)
GB	3734(7.4%)
ICT	3195(6.3%)
AJK	5324(10.5%)
FATA	3817(7.6%)
Type of place of residence (n=50495)	
Urban	23059(45.7%)
Rural	27436(54.3%)
Highest education level (n=50495)	
No education	30697(60.8%)
Primary	6848(13.6%)
Secondary	8270(16.4%)
Higher	4680(9.3%)
Wealth index combined (n=50495)	
Poorest	11483(22.7%)
Poorer	11803(23.4%)
Middle	10140(20.1%)
Richer	8709(17.2%)
Richest	8360(16.6%)
Husband/partners' education level (n=3334)	
No education	896(26.9%)
Primary	455(13.6%)
Secondary and higher	1981(59.4%)
Don't know	2(1.1%)
Access to information (n=29879)	
Low access to information	23022(77.1%)
Moderate access to information	6286(21.0%)
High access to information	571(1.9%)
Ever been tested for HIV (n=3334)	
No	3274(98.2%)
Yes	60(1.8%)

Table 1: Sociodemographic characteristics of respondents (N=50495)

Demonstrates that 61.2% of women never heard about sexually transmitted infection (STI) and 68.1% never heard

of AIDS in their lives. Furthermore, 73.9% and 62.5% of women didn't know about the fact that HIV/AIDS can be transmitted through a mosquito bite and sharing a meal with a person who had AIDS respectively. However, 69.9% of women had awareness that healthy-looking people can have HIV as shown in table 2.

Variables measuring comprehensive knowledge of HIV/AIDS	Frequency (%)
Ever heard of a Sexually Transmitted Infection (STI) (n=3333)	
No	204(61.2%)
Yes	1292(38.8%)
Ever heard of AIDS (n=3334)	
No	2269(68.1%)
Yes	1065(31.9%)
Can get HIV from mosquito bites (n=1065)	
No	787(73.9%)
Yes	278(26.1%)
Can get HIV by sharing food with a person who has AIDS (n=1064)	
No	665(62.5%)
Yes	399(37.5%)
A healthy-looking person can have HIV (n=1064)	
No	320(30.1%)
Yes	744(69.9%)

Table 2: Comprehensive knowledge of HIV/AIDS

The relation of covariates i.e. age, type of place of residence (rural, urban), education level, wealth index, husband's/partner's education, access to information, and ever been tested for HIV with the comprehensive knowledge of HIV/AIDS. The significant relationship between the wealth index (poorest, poorer, middle, richer, and richest) and access to information (low, moderate, and high) was observed with comprehensive knowledge of HIV/AIDS ($p < 0.05$) as shown in table 3

Socio-demographic variables	Comprehensive knowledge of HIV/AIDS		p-value
	Low level of knowledge f (%)	High level of knowledge f (%)	
Age			
15-29	46 (23.7%)	197 (22.7%)	0.92
30-39	82 (42.3%)	380 (43.7%)	
40-49	66 (34.0%)	292 (33.6%)	
Type of place of residence			
Urban	49 (25.3%)	258 (29.7%)	0.21
Rural	145 (74.7%)	611 (70.3%)	
Education level			
No education	135 (69.6%)	580 (66.7%)	0.55
Primary	25 (12.9%)	113 (13.0%)	
Secondary	26 (13.4%)	116 (13.3%)	
Higher	8 (4.1%)	60 (6.9%)	
Husband's/partner's education level			
No education	22 (11.3%)	66 (7.6%)	0.22
Primary	14 (7.2%)	89 (10.2%)	
Secondary and higher	158 (81.4%)	713 (82.0%)	
Don't know	0 (0.0%)	1 (0.1%)	
Wealth index			
Poorest	63 (32.5%)	202 (23.2%)	<0.01*
Poorer	46 (23.7%)	229 (26.4%)	
Middle	42 (21.6%)	173 (19.9%)	

Richer	30 (15.5%)	147 (16.9%)	
Richest	13 (6.7%)	118 (13.6%)	
Access to information			
Low access to information	57 (91.9%)	200 (73.5%)	<0.00*
Moderate access to information	4 (6.5%)	66 (24.3%)	
High access to information	1 (1.6%)	6 (2.2%)	
Ever been tested for AIDS			
No	185 (95.4%)	818 (94.1%)	0.50
Yes	9 (4.6%)	51 (5.9%)	

Table 3: Socio-demographic Characteristic Correlates with the Comprehensive Knowledge of HIV/AIDS among Women of Age Group 15–49 Years

The binary regression relationship of independent variables i.e. wealth index and access to information with the comprehensive knowledge of HIV/AIDS. It presents that poorer households (OR=1.55, 95% CI, 1.01–2.37) were 1.55 times more likely to have a higher level of knowledge about HIV/AIDS than the poorest households. Similarly, the richest households (OR=2.83, 95% CI, 1.49–5.36) were 2.83 times more likely to have a higher level of knowledge of HIV/AIDS than the poorest households. Table 4 also highlights that people having moderate access to information (OR=4.70, 95% CI, 1.64–13.45) were 4.70 times more likely to have a higher level of knowledge than people having low access to information as shown in table 4

Comprehensive knowledge of HIV/AIDS		
Variables	OR	p-value
Wealth index		
Poorest	(1)	–
Poorer	1.553	<.042
Middle	1.285	.265
Richer	1.528	.086
Richest	2.831	<.001
Access to information		
Low access to information	(1)	–
Moderate access to information	4.70	<.00
High access to information	1.71	.62

Table 4: Binary logistic regression of wealth index and access to information with comprehensive knowledge of HIV/AIDS

DISCUSSION

Low-level of knowledge regarding HIV/AIDS is considered one of the key determinants of the high prevalence rate of HIV/AIDS in developing countries since comprehensive knowledge related to HIV/AIDS has proved to be significant in combating this deadly pandemic [13,14]. Our current study revealed that, despite the prevailing risks of HIV, comprehensive HIV/AIDS knowledge in women is significantly low. A research conducted in Malawi asserted the same results [15]. As far as the practices and prevention on the subject of HIV/AIDS are concerned, one cannot rely solely on knowledge about HIV/AIDS because knowledge itself varies with the socioeconomic status,

educational level, and access to information [16]. Contrary to that, in recent research conducted in Malawi, there is very little evidence found on the correlation between socio-demographic factors and comprehensive HIV/AIDS knowledge [15]. The present study proves that the percentage of comprehensive knowledge remains less than 50%. Similar results have been found in literature from different developing countries such as Sub-Saharan Africa [17,18] and Bangladesh [19]. Socio-demographic variables have a direct link with the comprehensive knowledge about HIV/AIDS. The present research indicates a significant relationship between comprehensive knowledge with access to information and wealth index. Similarly, The Center for Disease Control (2011a) reported that people living below the poverty line are more likely to get infected with HIV. Furthermore, people having low socioeconomic status, and low education levels are more prone to get infected with HIV. Moreover, in Bangladesh, males were found to be more aware regarding HIV/AIDS than females according to the Bangladesh Rural Advancement Committee [20]. The present study found that only 31.9% of women know about HIV/AIDS and less than 40% of women know about sexually transmitted diseases. A study conducted in Bangladesh and Tanzania showed inconsistent results with the present research study where nearly all respondents reported that they have heard about HIV/AIDS [21,22]. Following the results of the present study, exposure to mass media was significantly related to having HIV/AIDS knowledge among adolescents in Bangladesh. Media exposure can impart knowledge regarding HIV/AIDS through advertisements, news channels, documentaries, and dramas, which can greatly influence the attitudes and behavior of people (Khan, 2002). Radio and TV were reported as major medium of knowledge regarding HIV/AIDS [23]. Overall, education is needed to inculcate awareness in women regarding HIV/AIDS. Contrary to the results in Ethiopia [24], East African countries [17], and Bangladesh [19,25]; the present study shows no association between educational level and comprehensive HIV/AIDS knowledge. However, education positively contributed to the awareness of HIV/AIDS in Bangladesh [21,23]. On the other hand, the number of HIV/AIDS cases are higher among people with a low level of education and who are unemployed [6,26,27]. Moreover, there is no significant relationship between the area of residence (rural/urban) and comprehensive knowledge, hence, representing the need to educate women of both areas equally. These findings as a whole target a need to run HIV/AIDS awareness campaigns for rural as well as urban areas, providing all the women with basic education because education is the key to removing prevailing misconceptions and helping those in need to rise above

this HIV pandemic [28]. Therefore, the results of this study can be utilized to improve public health strategies for imparting effective and comprehensive HIV/AIDS knowledge among women in Pakistan.

CONCLUSIONS

Our Results found that women aged 15–49 are less aware of HIV/AIDS. However, the women who have high socioeconomic status and access to information have more knowledge regarding HIV/AIDS. While keeping this scenario in mind, it is a dire need to enhance the knowledge level of women to prevent them from the dreadful disease. Therefore, this requires taking some innovative measures through different awareness programs in their native language considering their cultural context. In addition to this, the advertisements and programs on television and social media should be increased to enhance the awareness among the women of Pakistan to control this pandemic and target the vulnerable groups of the country to enhance their knowledge.

Conflicts of Interest

The authors declare no conflict of interest.

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