SOCIO-DEMOGRAPHIC FACTORS AND KNOWLEDGE OF HIV/AIDS AMONG WOMEN IN REPRODUCTIVE AGE OF SINDH-PAKISTAN

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Abstract

Background: HIV/AIDS pandemic continues its deadly assault with more than 20 million deaths all around world since first identified case of AIDS in United States. The main purpose of present study is to determine the prevalence of HIV/AIDS knowledge as well as its association with socio demographic factors among women in reproductive age from Sindh, Pakistan.

Methods: Multiple indicator cluster survey (MICS-5) data were obtained from UNICEF. Total 7,863 women (who heard about HIV/AIDS) were included in study. Women with at least 70% correct answers were considered as adequate knowledge. Statistical analysis was done by using SPSS version 21. Bivariate analysis was done by Pearson's chi square test while univariate and multivariate analysis was done by using binary logistic regression.

Results: We found significant association of HIV/AIDS knowledge with age, marital status, education, area and wealth quintile index. Women with age 15-25 and 26-35 years are less likely to have HIV/AIDS knowledge in comparison of women with age>35 years. Currently married women had 1.71 times more likely to have knowledge as compared to women who never married. Formerly married women were 1.162 times more likely to have HIV/AIDS knowledge. Women from urban areas are more likely to have HIV/AIDS knowledge as compared to females from rural areas. Prevalence of HIV/AIDS knowledge was found 44.5% among women in reproductive age from Sindh.

Conclusion: Women from urban areas were found with more adequate and comprehensive knowledge. Educated women were also found with good comprehensive knowledge.

Keywords: HIV/AIDS, reproductive age, socio demographic factors, adequate knowledge, MICS

Introduction

HIV/AIDS pandemic continues its deadly assault with more than 20 million deaths all over world since first identified case of AIDS in United States.¹ It becomes global health challenge due to its effects in many countries over the years. It affects millions of people irrespective of age or sex. 35 million (33.2-37.2 million) peoples were estimated who will live with HIV while 1.5 million deaths were recorded due to HIV/AIDS all over the world.² HIV/AIDS had a formidable impact on women health and survival with global public health consequences.³

Joint United Nations’ committee estimated more than 15 million women to live with HIV/AIDS worldwide.⁴ It also becomes as one of the leading cause for mortality and morbidity among women of reproductive age 3-5. HIV/AIDS Knowledge was reported 2% in Yemen, 3% in Egypt and Iraq, 5% in Palestine, 6% in Syria and Jordan while 8.5% in Sudan.⁶ Study conducted in Bangladesh by ATM Hasibul hasan reported 76.9% participants with poor, 12.5% with 12.5% and 10.6% with good knowledge of HIV/AIDS⁷ while study conducted in rural south Carolina reported 76% participants with low HIV knowledge and 24% with high HIV knowledge.⁸ HIV/AIDS also becomes a serious threat to Pakistan. Pakistan has categorized as low prevalence high-risk country for HIV/AIDS infection. It is estimated that 85,000 persons around 0.1% of the adult population are infected by HIV/AIDS.⁹ In Pakistan, Heterosexual transmission (52.55%) and contaminated blood or blood products (11.73%) were reported as most common modes of transmission for HIV/AIDS. 3073 HIV/AIDS cases were officially reported as cumulative total by Pakistani authorities.¹⁰ However, a large number of cases go unreported. In Pakistani societies, a large part of population is still unaware about presence of HIV/AIDS which increases the calamity many fold.¹¹ Comprehensive knowledge about HIV/AIDS is an indicator which is commonly used to measure knowledge regarding essential facts about HIV/AIDS transmission and prevention. Comprehensive and correct knowledge on prevention and transmission is
important to avoid HIV/AIDS infection. Best to our knowledge, very few studies have been conducted regarding the knowledge of HIV/AIDS among women in Sindh, Pakistan and we are not aware about any study done on large data set so this study is planned to determine the HIV/AIDS knowledge as well its association with socio demographic factors among women in reproductive age from Sindh. Results of present study will be helpful for concerned authorities for taking preventive action for improvement and increasing HIV/AIDS knowledge.

Methodology
The MICS-512 was conducted across Sindh by the Sindh Bureau of statistics, government of Sindh with collaboration of the United Nations children’s fund (UNICEF) from January 2014 to august 2014. Complete data were collected for 17,014 households. MICS Sindh data set for women with age 15-49 years was obtained from UNICEF. Total 29,898 women with age 15-49 years were found in survey in selected sample households. Out of 29,898 women, 26,647 were found with complete response from which 7,863 were heard about HIV/AIDS and were included in present study. Women with at least 70% correct answers were considered as adequate knowledge. Statistical analysis were done by using SPSS version 21. variables were defined based on MICS-5. Bivariate analysis was done using Pearson’s chi square test while univariate and multivariate analysis was done using binary logistic regression. Variables with significant association were included in multivariate analysis. P-value <0.05 considered as significant.

Results
Mean women age was 29.74±8.95 years with range 15-49 years. Out of 7,863 women, 36.9% were from age group 15-25 years, 36.3% were from 26-35 years, and 26.7% were from 36-49 years. 5,144(65.4%) women were currently married while most of women, 1,751(22.3%) were found with secondary education. Out of 7,863 women, 5,897(75%) were from urban and 1,966(25%) were from rural areas. Only 4.3% women found with media exposure (read a newspaper/magazine, listen to the radio and watch television at least once in a week) as presented in Table-1.

In present study, 3,500(44.5%) women were found with adequate HIV/AIDS knowledge as presented in Figure-1. HIV/AIDS Knowledge was found significant with age, marital status, education status, area and wealth quintile index as presented in Table-1.

Figure-1: HIV/AIDS knowledge among study population
Adequate knowledge about HIV/AIDS were accessed by questioning various questions about accepting attitudes towards those living with HIV/AIDS, HIV/AIDS prevention methods, route of transmission and incorrect beliefs about HIV/AIDS to accessed adequate knowledge. Table 2 shows each HIV knowledge survey item and the prevalence of correct responses by the participants.
Women with age 15-25 and 26-35 years are less likely to have HIV/AIDS knowledge as compared to women with age more than 35 years. Currently married women found 1.71 times more likely to have knowledge in comparison of women never married while formerly married women were also 1.162 times more likely to have HIV/AIDS knowledge. Women from urban areas are more likely to have HIV/AIDS knowledge of HIV/AIDS as compared to women from rural areas. Detailed results of univariate and multivariate binary logistics are presented in Table-3

Table-3: Univariate and Multivariate analysis of knowledge of HIV/AIDS with socio-demographic factors

| Socio-demographic Factors And Knowledge | odds ratio (95% CI) | P Value | Adjusted Odds Ratio | P-Value |
|----------------------------------------|--------------------|---------|---------------------|---------|
| Age Group                              |                    |         |                     |         |
| 15-25 years                            | 0.624 (0.557-0.700) | <0.01   | 0.705 (0.609-0.811)  | <0.01   |
| 26-35 years                            | 1.003 (0.895-1.122) | 0.970   | 0.956 (0.857-1.069)  | 0.573   |
| >35 years                              | 1                   |         | 1                   |         |
| Marital Status                         |                    |         |                     |         |
| Currently Married                      | 1.637 (1.483-1.806) | <0.01   | 1.719 (1.517-1.949)  | <0.01   |
| Formerly Married                       | 1.075 (0.827-1.398) | 0.588   | 1.162 (0.872-1.549)  | 0.306   |
| Never Married                          | 1                   |         | 1                   |         |
| Education                              |                    |         |                     |         |
| None                                   | 0.274 (0.239-0.322) | <0.01   | 0.242 (0.201-0.290)  | <0.01   |
| Primary                                | 0.400 (0.341-0.470) | <0.01   | 0.369 (0.309-0.440)  | <0.01   |
| Middle                                 | 0.417 (0.348-0.499) | <0.01   | 0.405 (0.335-0.489)  | <0.01   |
| Secondary                              | 0.441 (0.379-0.512) | <0.01   | 0.443 (0.379-0.517)  | <0.01   |
| Higher Secondary                       | 0.640 (0.549-0.753) | <0.01   | 0.684 (0.582-0.804)  | <0.01   |
| Higher*                                | 1                   | 1       | 1                   |         |
| Area                                   |                    |         |                     |         |
| Urban                                  | 1.449 (1.305-1.609) | <0.01   | 1.098 (0.964-1.250)  | 0.158   |
| Rural*                                 | 1                   | 1       | 1                   |         |
| Wealth Quintile Index                  |                    |         |                     |         |
| Poorest                                | 0.341 (0.241-0.482) | <0.01   | 0.645 (0.444-0.941)  | <0.05   |
| Second                                 | 0.487 (0.411-0.577) | <0.01   | 0.854 (0.697-1.055)  | 0.147   |
| Middle                                 | 0.656 (0.577-0.731) | <0.01   | 0.966 (0.840-1.110)  | 0.622   |
| Fourth                                 | 0.734 (0.657-0.821) | <0.01   | 0.860 (0.764-0.967)  | <0.05   |
| Richest*                               | 1                   | 1       | 1                   |         |

Discussion

Approximately 30% of young women were found with comprehensive knowledge about HIV/AIDS worldwide.13,14 The awareness for attitudes and behaviors of female population is one of the major determinants for the battle against HIV/AIDS infection.13 Study conducted in Bangladesh reported 76.9% participants with poor,12.5% with 10.6% with good knowledge of HIV/AIDS7 while another study conducted in Rural south Carolina reported 76% with low HIV knowledge and 24% with high HIV knowledge.8 Prevalence of adequate HIV/AIDS knowledge was 48.9% in Burundi, 46.3% in Kenya and 19.3% in Ethiopia (19.3%). Similarly, a study in Bolivia (Sucre) reported 31% female with adequate HIV/AIDS knowledge.15 In our study, 44.5% women have adequate knowledge of HIV/AIDS which was similar to study conducted in Bangladesh (DHS, 2007) which reported 45.4% adequate knowledge about transmission and prevention of HIV/AIDS.14,16 Knowledge on HIV/AIDS transmission, prevention, control and accepting attitudes towards those living with HIV/AIDS were assessed by various questions. 66.5% of participants in our study think that people can reduce their chance of getting the HIV/AIDS virus by having just one uninfected sex partner who has no other sex partners while in recent study 63% of participants responds positively on same question.8 Present study shows 74.4 %, 68.8% and 68.3% women think that virus causes AIDS be transmitted from a...
mother to her baby during pregnancy, during pregnancy and by breastfeeding respectively while the response for the same question was 65%, 56% and 40% in a recent study.

In present study we are interested to know socio demographic factors that have potential influence towards HIV/AIDS knowledge among reproductive age women. Bivariate and binary logistic regression analyses were used to evaluate the significant socio demographic factors. Age, education and media exposure is directly proportional with the knowledge of HIV/AIDS in several studies.17, 8, 9

In our study, media is also positively connected regarding HIV/AIDS awareness for ever women in both bivariate and binary logistic regression. Wealth index yet another important indicator regarding HIV/AIDS awareness and positively associated.17, 18 HIV/AIDS knowledge is vary by urban rural and region.17, 19 both the models revealed in our finding that the urban has more HIV/AIDS awareness regarding than rural areas.17

Present study showed that women from urban areas were more comprehensive HIV/AIDS knowledge in comparison of rural areas women. Same were reported in studies done in east african countries, sub-sahara africa and other regions of world.7, 8, 14-16, 20-22 It may be due to access to mass media, education and campaigns related to HIV/AIDS information in urban areas. Veinot et al. reported that rural-urban gap in HIV/AIDS knowledge is due to the difference in social networks and different degrees of pressure residents feel to uphold community norms.14, 22

Education plays major role in determining person's social status, access to information and income.23 Present study shows that educated women have more comprehensive level of HIV/AIDS knowledge in comparison of uneducated women. Increase in educational level of women, increases level of HIV/AIDS knowledge. Similar Findings were also reported in different regions of world.7, 8, 14, 15, 16, 18, 20, 20, 24

Significant association of wealth quantile with HIV/AIDS knowledge was found in present study. Same were reported by study conducted in east african countries.14, 25 Wealthier people have vast opportunities for education access as well as mass media which might be the reasons of getting higher level of HIV/AIDS comprehensive knowledge in comparison to people for lower wealth quantile.

Conclusion
Prevalence of HIV/AIDS knowledge was found 44.5% among women in reproductive age from sindh. Women from urban areas were found with more adequate and comprehensive knowledge. Educated women were also found with good comprehensive knowledge.

Recommendation
On the basis of results of present study, it is recommended to arrange awareness programs in rural areas in local languages and also to provide them opportunities for education and media access which will be helpful for prevention of HIV/AIDS as well as in rejection of misconception regarding HIV/AIDS in society.

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Ethical approval
Ethical approval for the analyses presented in this was not sought as the paper is based on de-identified data provided by UNICEF or the purposes of secondary analysis research.

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