

# Knowledge, Attitude and Practices (KAP) of Non Medical Staff regarding HIV/AIDS in Teaching Hospital, Dera Ghazi Khan, Pakistan

ROZINA SHAHADAT KHAN<sup>1</sup>, TEHREEM TARIQ<sup>1</sup>, FATAWAL TAHIR<sup>1</sup>, ALTAF AHMAD<sup>1</sup>

<sup>1</sup>Department of Community Medicine DG KHAN Medical Collage, DG Khan

Correspondence to Rozina Shahadat Khan, Assistant Professor, Email: dr.rozinakhan@live.com, Cell: 03371429776

## ABSTRACT

**Background:** Hospital staff is most vulnerable to infection like HIV/AIDS. Knowledge, Attitude and practices (KAP) are one of the corner stone's in combating this disease. Thus evaluating their KAP will help us to develop appropriate preventive strategy for them.

**Study Design:** Cross sectional comparative.

**Place and duration of study:** Teaching Hospital Dera Ghazi Khan from August 2019 to March 2020.

**Methods:** A total of 163 respondents participated in this study. The data was collected by pre-tested questionnaire, tabulated and analyzed using SPSS version 22. Chi-square test of significance applied to comparison groups with a P value of  $\leq 0.05$ .

**Results:** Out of total 127 respondents who heard about HIV/AIDS only 32(25.19%) had High ( $\geq 75\%$ ) and 66(51.96%) had Moderate (51%-74%) level of Knowledge about this disease. According to 124/127(97.64%) the disease is transmissible and is caused by virus 66(51.96%), can be transmitted by sexual contact 114 (89.76%). From mother to child during delivery 96 (75.59%) through blood transfusions 111(87.40%), only 23(18.11%) stated that disease is not transmitted by contaminated water and utensils. Only 12(9.45%) had positive attitude towards HIV/AIDS patients in spite of good practices for self and any family members. Level of KAP of 127 respondents who heard about HIV/AIDS only 30(23.62%) had High ( $\geq 75\%$ ) and 68(53.54%) had Moderate (51%-74%) levels. Significant association found between age groups, marital status and level of KAP.

**Conclusion:** This study provided basic information HIV /AIDS knowledge attitude and Practices of non-medical staff's showing various misconceptions and inadequate information regarding the disease. The results are suggestive that there is ultimate need for developing awareness programs and proper training for high risk non-medical staff working in hospital. To have successful HIV control programs, negative attitude of people towards HIV patients should be minimized by existing and proposed health education systems.

**Keywords:** Knowledge, attitude, practice, HIV/AIDS

---

## INTRODUCTION

The human immunodeficiency virus (HIV) infects cells of immune system, destroying or impairing their function. Infection with virus results in progressive deterioration of the immune system, leading to "immune deficiency". Acquired immunodeficiency syndrome (AIDS) is the most advanced stage of HIV infection & occurrence of any of more than 20 opportunistic infections or HIV-related cancer<sup>1</sup>. HIV is classified in 3 stages: acute HIV infection, clinical latency, AIDS. The virus effects immune system by attacking on CD4 cells and cause their count to fall rapidly that cause severe effects on immune system. At latency phase, HIV patients experience no symptoms or only mild ones. AIDS phase start when immune system is damaged badly making the patient vulnerable to opportunistic infections including bacterial infections, lymphoma or Kaposi sarcoma<sup>2</sup>. Clinically apparent human immunodeficiency virus (HIV) infection was first recognized in 1981 in homosexual men in New York City who presented with evidence of a profound acquired immune deficiency syndrome (AIDS)<sup>3</sup>. HIV/AIDS become a global health challenge for many years as virus is widely spread to many countries. The disease affects millions of people regardless of age, sex, and ethnicity. An estimate shows 35 million people (33.2-37.2 million) were living with HIV at the end of 2013<sup>4</sup>. In 2017, almost 0.150 million people of all ages were living with AIDS. Almost 20,000 new cases were PLWHIV and numbers of deaths were about 6200 in 2017. HIV remains a global health problem affecting more than 70 million & about 35 million people have

died of HIV people around the world. Globally, almost 36.7 million people were living with HIV in 2017. Epidemic continues to vary among different regions of the world but highest in Africa where prevalence was 4.1% and 0.1% in eastern Mediterranean region in 2017. AIDS emerged as one of the most important public health concerns in late twentieth and early twenty- first centuries. It is now considered as one of the leading causes of global morbidity and mortality. The virus spreads widely all over the nations of World<sup>5</sup>. Around the globe, over 40% of new infections are among young people of age 15–25<sup>6</sup>. Mostly reported cases of HIV were males between age of 20-40<sup>7</sup>. Many years have been passed since HIV/AIDS become emerging threat to the mankind. The burden of HIV is not evenly distributed within cities & provinces of a country. HIV was first detected in Pakistan in 1987<sup>8</sup>. Till March 1998, there were 1308 HIV & 149 AIDS cases were reported in Pakistan<sup>9</sup>. The number of HIV infected individuals are increasing day by day. Various programs are working for treatment of HIV infected individual. National AIDS control program (NACP) since 1987 focusing on diagnosis & treatment of HIV cases & almost 25220 cases are registered. The Punjab AIDS control program is leading the provincial AIDS response in Punjab. The preliminary report of round 4 of HIV/AIDS surveillance project (HASP) 2015 reported that the prevalence in IDU's is 37.8%, male sex workers 3.1% & female sex workers is 0.6%<sup>10</sup>. In Punjab, various programs are working for the counseling, testing, treatment & prevention of HIV. Adult HIV treatment centre (special clinic) was founded in October 2010 in Dera ghazi Khan. About 1620 patients were registered & 74 were expired in 2016. Recent data shows the no. of registered patients increased from 1620 to 2782 & 184 HIV patients are expired<sup>11</sup>. Many people suffering from HIV/AIDS

Received on 11-09-2020

Accepted on 07-01-2021

do not know source of their infection with the human immunodeficiency virus (HIV) ranges from asymptomatic sero-conversion to a severe symptomatic illness which can result in hospitalization<sup>12</sup>. HIV and AIDS are considered as one of the occupational health hazards. The risk of transmission among healthcare professionals is high especially among medical students<sup>13</sup>. Commonest risk factor identified was history of blood transfusion in 48(92.3%) patients followed by intravenous drug addiction in 19(36.5%) patients<sup>14</sup>. Though some countries are on track to meet the targets but still HIV epidemic is not over yet and increasing day by day in Pakistan. New infections among young people (15-24 years) increased by 29% in Pakistan. Though in other countries rate of mother to child transmission is decreasing but comparatively high in Asia and Pacific 17% in 2017<sup>15</sup>. Modes of transmission of this disease include sexual transmission, HIV infected blood, use of contaminated syringes and needles but the most common is sexual transmission<sup>16</sup>. According to AIDS Asia HIV wide spread is contributed by intravenous drug users (IDU's) (2.02%), male-to-male or homosexual relations (4.55%), mother-to-child transmission (2.2%) and transmission due to undetermined origin (26.9%) along with other factors<sup>7</sup>. Commonest risk identified in transmission of HIV was blood transfusion history<sup>14</sup>. HIV spread is more common in homosexual individuals than in heterosexuals<sup>17</sup>. Significant progress has been made to develop strategies for preventing HIV beyond the interventions available before (e.g., proper blood screening, clean syringes, use of condoms and behavioral interventions. A clinical trial has proved the concept of treatment as prevention as an effective HIV prevention strategy<sup>18</sup>. Theoretically, the goal to abolish HIV/AIDS pandemic is achievable but requires sustained resources to make advances at the global level. One of the essential components in achieving this goal would be the development of an effective vaccine along with the implementation of already existing treatment modalities<sup>19</sup>. Treatment coverage among adolescents is equally worrisome. Among 40 countries with available data, about 43 per cent of adolescents aged 10-19 living with HIV received ART in 2017<sup>20</sup>.

The objective of the study was to assess knowledge, attitude and practice regarding HIV/AIDS in non-medical staff of teaching hospital Dera ghazi khan.

**MATERIALS & METHODS**

This cross sectional comparative was conducted in Teaching hospital Dera Ghazi Khan from August 2019 to March 2020. Study population was non-medical staff of teaching hospital Dera ghazi khan. The non-medical staff both sexes who gave consent to participate in the study. The nonmedical staffs that were trained for dealing with HIV patients were excluded.. **Study tools:** A pre designed pre tested structured KAP questionnaire designed by research team. Close-ended questions were designed to investigate knowledge, attitude & practices while open-ended questions were designed to explore people's opinion towards the reasons for their answer selection with four main parts. The first part-socio-demographic data, the second part was concerned about participant's knowledge (23 items with a total score of 23), HIV/AIDS knowledge further divided into 3-sections (general, transmission and treatment knowledge). Third and fourth parts were Attitude and practices towards PLWHA's. The questionnaire was piloted among 20 randomly selected participants to assess its clarity, reliability & validity. The questionnaire was translated in their local language to remove bias and misinterpretation. The internal consistency reliability

coefficients of questionnaire yielded Cronbach's alpha (0.89) that was higher enough to meet the study criteria.

**Statistical Analysis:** The data was entered Into Microsoft excel 2010 and analyzed using the SPSS version 22. The descriptive analysis was carried out; results were being expressed as frequencies, percentages using tables and charts. While scoring the KAP, all correct answers were scored as "1" and wrong answer as "0". All scores were then summed up to generate an overall score of each respondent. Level of knowledge was further categorized as "Low" (≤51% score), "Moderate" (51-74%score) and "High" (≥75% score). Attitude was assessed using five point likert scale, ranging from 1(strongly disagree) to 5 (strongly agree). Hence Score of "1-3" representing negative attitude and "4-5" representing Positive attitude. Practices assessed using five point likert scale, ranging from 1(very poor with 0 score) to 5 (Very Good with Score 4). Hence Score of "1-3" representing Bad Practices and "4-5" representing Good Practices. Level of KAP was categorized as "Low" (≤51% score), "Moderate" (51-74% score) and "High" (≥75%score). Chi-square test of significance applied to comparison groups with a P value of ≤ 0.05.

**RESULTS**

**Demographic characteristics:** Out of 163 participants 137(84%) were males and 26(16%) females with mean age of 30 years (18-58 years). Participants with >25 years of age were 101(62%). Majority of the respondents 126(77.3%) were married. Only 127/163 (77.91%) ever heard about HIV/AIDS (Fig. 1). Out of 124(76.1%) who knew HIV/AIDS as Transmissible disease 112(90.3%) knew HIV/AIDS is transmissible through Sexual contact, from mother to child during delivery 96 (77.41%) and 109 (87.90%) through blood transfusions (Table 2). Responder's say on various modes of transmission who consider HIV/AIDS is a transmittable disease (n=124)?

**Attitude and practices:** Only 22(13.5%) out of 127 did not agree with isolation from HIV/AIDS patients (Table 4). only 12/127 (09.45%) had shown positive Attitude Score 4-5) for HIV/AIDS patients

**Knowledge:** Out of 127 (77.91%) who ever heard of HIV/AIDS 124(97.63%) knew that it is a transmissible disease and 66(51.96%), knew the spread is by virus (Table 1).

Fig.1: Age distribution of cases who ever heard of HIV/AIDS?

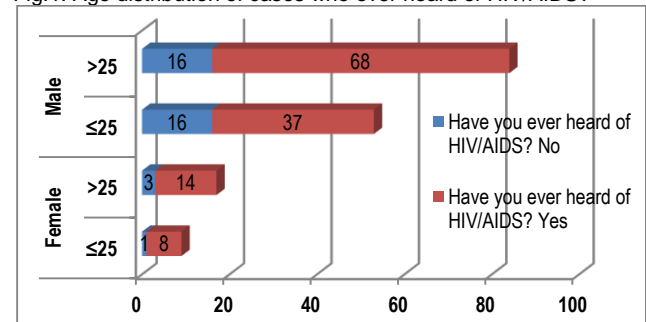


Table 1: Knowledge of 127 respondent about HIV/AIDS

	Yes	No	Don't know
Is it a transmittable disease?	124	01	02
Is HIV/AIDS caused by virus?	66	14	47
Is it a genetic disease?	46	61	20
Is red ribbon its symbol?	20	39	68
Is HIV/AIDS curable?	49	66	12
Is there any treatment available?	96	23	08
Is there any vaccine available?	52	50	25

Table 2: Various Modes of transmission

	Yes		No		Don't know	
	n	%	n	%	n	%
Is HIV/AIDS a sexually transmittable disease?	112	90.3	06	4.8	6	4.8
From husband to wife?	110	88.7	05	4.0	9	7.3
From men to other men?	74	59.7	35	28.2	15	12.1
From mother to child during delivery?	96	77.4	16	12.9	12	9.7
From mother to child during breastfeed?	69	55.6	36	29.0	19	15.3
By blood transfusions?	109	87.9	07	5.6	8	6.5
By sharing razors?	107	86.3	03	2.4	14	11.3
By using contaminated syringes & surgical tools?	105	84.7	02	1.6	17	13.7
By tattoos?	53	42.7	19	15.3	52	41.9
By contaminated water, food & utensils?	97	78.2	22	17.7	05	4.0
By hugging & dry kissing?	78	62.9	40	32.3	06	4.8
By mosquito bite?	43	34.7	72	58.1	09	7.3
By coughing & sneezing?	83	66.9	36	29.0	05	4.0
By sweating?	72	58.1	47	37.9	05	4.0
Public toilet usage is a reason for infection	74	59.7	39	31.5	11	8.9

Table 3: Level of Knowledge of 127 respondents

	Frequency	Percent
High (≥75%)	32	25%
Moderate (51-74%)	66	52%
Low (≤50%)	29	23%

Table 4: Attitude of 127 responders towards HIV/AIDS

	Yes	No	Total
Do you agree with isolation of HIV Positive person?	105	22	127
Would you interact with HIV Positive person?	30	97	127
If you have HIV Positive patient in your home would u separate all utensils from them?	28	99	127
Would you like to eat or drink with HIV Positive Patient?	28	99	127

## DISCUSSION

Only 70(55.11%) got themselves tested for HIV and 115 (90.55%) agreed for proper screening of blood. 114(89.76%) were not having any Hesitation of asking questions about sexual Practices and HIV/AIDS. Majority 107/127 (84.25%) had shown good Practices (scores 4-5) level. Level of KAP of 127 respondents who heard about HIV/AIDS only 30(23.62%) had High (≥75%) and 68(53.54%) had Moderate (51%-74%) levels. No significant association found between Sex and Level of KAP but significant association found between Age groups, Marital Status and Level of KAP. Discussion: HIV/AIDS is mostly acquired in high risks such as staff working in hospital. In absence of vaccine, prevention remains the only measure to apprehend transmission of this disease. Educational awareness programs promote the knowledge and healthy behavior in general public hence proved as one of the key measures in controlling the epidemic<sup>22</sup>. Out of 163 only 127(77.9%) respondents heard about HIV/AIDS. In another study, all the participants (117) have heard about HIV/AIDS which shows the gap in knowledge among our study participants<sup>23</sup>. In our study 66/127(51.96%) knew it is caused by virus. A similar study shows 54% of the participants knew that HIV/AIDS is caused by virus<sup>24</sup>. The knowledge about transmission of HIV infection through sexual contact

112/127(90.3%), by blood or its products 109/127 (87.9%) and by contaminated needle and syringes 105/127(84.7%). Another study showed the transmission by sexual contacts, blood transfusion or contaminated syringes as 63.8%, 7.8% and 10.8% respectively<sup>25</sup>. It shows more measures to be taken for needle stick injuries while working in high risk place. This involves proper guidance of non-medical staff regarding needle stick injuries to wash hands properly and taking prophylactic antiretroviral therapy after injury<sup>26</sup>. Most of the respondent's stated unprotected sex (79.7%) and unsafe blood transfusion (64.2%) as common ways of HIV transmission in another study<sup>27</sup>. Our study reveals that people are having misconceptions regarding the disease for example 43/127(34.7)% of the participants think disease can be transmitted by mosquito bite while in another study its 33.2% which shows the ultimate need of awareness campaigns in our study population<sup>28</sup>. Among all respondents, 66(51.96%) said the disease is not curable while in another study 88(75.21%) of the participants believed it is not a curable disease<sup>23</sup>. HIV/AIDS is neither vaccine preventable disease nor curable. The best possible way to prevent this disease by strategies and health education as observed by other studies across the world<sup>29,30</sup>.

Among all participants 70(55.11%) were willing to get themselves tested for HIV while in another study 62% of the participants were willing to go for HIV test<sup>24</sup>. Willingness of respondents to opt for HIV testing could be due to their negative attitude towards HIV/AIDS patients. It was observed that 105/127(82.68%) of the respondents agreed with isolation from HIV +ve person but some of them 18.4% still agreed to interact with them. In a similar study 28.21% have said that if they know their friend is tested positive for HIV, they would end friendship with them and wont interact<sup>23</sup>. This shows the stigma of our hospital staff towards HIV +ve patients. Several studies showing the unethical behavior of health workers towards PLWHIV and this would definitely interfere with establishing preventing strategies and management of HIV/AIDS<sup>31</sup>. In the present study, only 32/127(25% have high level of knowledge which is not acceptable for people working in high risk place like hospital. In comparative to present study, another study shows a better knowledge (63.03%) among respondents<sup>32</sup>. There is immediate need of awareness programs and strategies to increase their knowledge regarding the disease. Our studies show alarming results regarding attitude of people towards patients. This is due to stigma and negative perceptions regarding the disease. Only 12/127 (09.45%) had shown positive Attitude Score 4-5) for HIV/AIDS patients. Another study shows similar results of attitude towards patients<sup>23</sup>. Therefore, it should be emphasized in awareness programs and seminars that HIV/AIDS is not transmitted by interacting or eating with patients<sup>33</sup>. Many studies reported the positive impact of knowledge about the disease on attitude towards patient. It is reported that people with more knowledge show more positive attitude towards patient<sup>28,34</sup>.

## CONCLUSION

The study was commenced to assess knowledge, attitude and practices towards HIV/AIDS among non-medical staff of teaching hospital Dera ghazi khan who are in exposure to the patients hence at high risk. It is concluded from our study that non-medical staff have a deficit in knowledge regarding some crucial aspects of disease. Therefore need for development and implementation of health education strategies for them. The broadcasting of adequate knowledge among non-medical staff contributes vastly to spread awareness among general

public and it will help in changing their attitude towards patient living with HIV/AIDS. To have successful HIV control programs, negative attitude of people towards HIV patients should be minimized by existing and proposed health education systems.

## REFERENCES

- World Health Organization [www.who.int/](http://www.who.int/) last assessed on 15th august 2019.
- Conner, R.F. and L.P. Villarreal, AIDS: science and society. 2014: Jones & Bartlett Publishers.
- Dubin J. HIV Infection and AIDS. *emedicine* [updated 2008 July 10; cited 2009 March 31]. Available from: [URL:http://emedicine.medscape.com/article/783434-overview](http://emedicine.medscape.com/article/783434-overview).
- World Health Organization. Global Health Observatory Data. HIV/AIDS. [www.who.int/gho/hiv/en](http://www.who.int/gho/hiv/en). last Accessed 20th august 2019.
- World Bank Report [<http://siteresources.worldbank.org/Resources/HIV-AIDS2017/> last assessed 19th august 2019.
- Joint United Nations Program on HIV/AIDS. At the Crossroads: Accelerating Youth Access to HIV/AIDS Interventions. [www.un.org/esa/socdev/unyin/documents/aidsunfpa.pdf](http://www.un.org/esa/socdev/unyin/documents/aidsunfpa.pdf) last Accessed on 17th august 2019.
- Ilyas, M., et al., A situational analysis of HIV and AIDS in Pakistan. *Virology journal*, 2011. 8(1): p. 191.
- Abdul, M.S. and M. Hashmi, A study of HIV-antibody in sera of blood donors and people at risk. *JPMA. The Journal of the Pakistan Medical Association*, 1988. 38(8): p. 221.
- [www.UNAIDS.com/HIVreport1998/](http://www.UNAIDS.com/HIVreport1998/) last assessed 19th august 2019.
- [www.pacp.gov.pk/](http://www.pacp.gov.pk/) last assessed on 19th august 2019.
- Adult HIV treatment (special clinic) dera ghazi khan pakistan: 2019, Dr. ali asghar.
- Tindall, B., et al., Characterization of the acute clinical illness associated with human immunodeficiency virus infection. *Archives of internal medicine*, 1988. 148(4): p. 945-949.
- Oberoi, S.S., et al., Knowledge and attitude of faculty members working in dental institutions towards the dental treatment of patients with HIV/AIDS. *International scholarly research notices*, 2014. 2014.
- Siddiqui, M.H., J.A. Siddiqui, and I. Ahmed, Demographic profile and clinical features of admitted HIV patients in a tertiary care teaching hospital of Karachi, Pakistan. *Pak J Med Sci*, 2009. 25(5): p. 861-64.
- UNAIDS: Global AIDS Update. 2018. <https://samumfsf.org/en/resources/hiv/hiv-response/unaidsglobal-aids-update-2018>.
- Lamprey, P., et al., Facing the HIV/AIDS pandemic. 2002: Population Reference Bureau.
- Sued, O., et al., Primary human immunodeficiency virus type 1 infection: clinical, virological and immunological characteristics of 75 patients (1997-2003). *Enfermedades Infecciosas y Microbiología Clínica*, 2006. 24(4): p. 238-244.
- Cohen, M.S., et al., Prevention of HIV-1 infection with early antiretroviral therapy. *New England journal of medicine*, 2011. 365(6): p. 493-505.
- Fauci, A.S., An HIV vaccine is essential for ending the HIV/AIDS pandemic. *Jama*, 2017. 318(16): p. 1535-1536.
- [www.unicef.org/hiv/](http://www.unicef.org/hiv/) last assessed on 25th august 2019.
- Sallar, A.M., Correlates of misperceptions in HIV knowledge and attitude towards People Living With HIV/AIDS (PLWHAs) among in-school and out-of-school adolescents in Ghana. *African health sciences*, 2009. 9(2).
- Hasani, L., et al., KNOWLEDGE OF IRANIAN NURSES ABOUT HIV/AIDS: A CROSS SECTIONAL STUDY FROM BANDAR ABBAS (BRIEF REPORT). 2010.
- Sannathimmappa, M.B. and V. Nambiar, HIV/AIDS and Its Prevention: A Cross-sectional Study to Evaluate Knowledge, Awareness, and Attitude among Medical Students. *Health Sciences*, 2019. 8(8): p. 110-116.
- Meundi, A.D., et al., "Cross-Sectional Population-Based Study of Knowledge, Attitudes, and Practices Regarding HIV/AIDS in Dakshina Kannada District of Karnataka, India." *Journal of the International Association of Physicians in AIDS Care*, vol. 7, no. 1, Jan. 2008, pp. 27-34, doi:10.1177/1545109707302088.
- Meena, L.P., et al., Knowledge, Attitude, and Practices (KAP) study on HIV/AIDS among HIV patients, care givers and general population in north-eastern part of India. 2013.
- Bowden FJ. "Needle-stick injuries in primary care". *Australian Prescriber*, Vol. 24, 2001, pp. 98-99.
- Negash, Y., et al., Community based study on knowledge, attitude and practice (KAP) on HIV/AIDS in Gambella town, Western Ethiopia. *Ethiopian J Health Dev*, 2003. 17.
- Nur, N., Turkish school teachers' knowledge and attitudes toward HIV/AIDS. *Croatian medical journal*, 2012. 53(3): p. 271-277.
- Samant, Y., et al., HIV-Related Knowledge and Attitudes among First Year Medical Students in Mumbai, India Adolescents. *International Electronic Journal of Health Education*, 2006. 9: p. 13-24.
- Azodo, C., et al., A survey of HIV-related knowledge and attitude among dental nursing students in South Western Nigeria. *Benin Journal of Postgraduate Medicine*, 2007. 9(1).
- Rotimi, O. and O. Oluwafemi, Knowledge and attitudes of students in a Caribbean medical school towards HIV/AIDS. *African Journal of Biomedical Research*, 2008. 11(2).
- Janahi, E.M., et al., Public knowledge, perceptions, and attitudes towards HIV/AIDS in Bahrain: a cross-sectional study. *The Journal of Infection in Developing Countries*, 2016. 10(09): p. 1003-1011.
- Parcaoglu, F. and H. Gedik, HIV Knowledge and awareness status of the medical faculty students in Romania: an awareness study. *J Infect Dis Med*, 2017. 2(111): p. 2.
- Montazeri, A., AIDS knowledge and attitudes in Iran: results from a population-based survey in Tehran. *Patient education and counseling*, 2005. 57(2): p. 199-203.