

Awareness about Human Immunodeficiency Virus/ Acquired Immunodeficiency Syndrome (HIV/AIDS) among Paramedical Personnel in a Tertiary Care Hospital in Ranga Reddy District, Telangana

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Abstract

Original Research Article

Background: HIV continues to be a major global public health issue, having claimed almost 33 million lives so far. However, with increasing access to effective HIV prevention, diagnosis, treatment and care, including for opportunistic infections, HIV infection has become a manageable chronic health condition, enabling people living with HIV to lead long and healthy lives. There were an estimated 38.0 million people living with HIV at the end of 2019. **Aims & Objectives:** To assess the knowledge of HIV/AIDS among para medical staff. **Materials & Methods:** The study was a hospital based cross-sectional study which was conducted in Malla Reddy Hospital, Suraram, Hyderabad. A total number of 109 subjects (nurses and lab technicians) were included in the study. All the participants were given a questionnaire and the filled questionnaires were collected on site. **Results:** Out of 109 participants, majority of the study participants had good awareness about different modes of transmission of HIV. About 77% said it is through sexual route, 79.81% said it could be due to blood borne, 86% said from mother to child transmission and 87.15% said it is due to needle stick injury. Only 26% were aware that vaccine against HIV/AIDS is in the developmental stages. **Conclusion:** Transmission of blood borne infections through needle stick injury is a harsh reality involving health care personnel. There is an urgent need to teach basic knowledge about HIV infection and service availability. **Keywords:** HIV, Misconceptions, HIV, Transmission.

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INTRODUCTION

Acquired Immune Deficiency Syndrome (AIDS) is a fatal illness caused by a retro virus known as the Human Immunodeficiency Virus which breaks down the body's immune system, leaving the victim vulnerable to a host of life threatening opportunistic infection, neurological disorders, or unusual malignancies.¹ Health care providers are the key components of any health care system. Patients take them as angels and consider them as redeemer for their health and life [1].

Medical professionals and other health care workers, by virtue of their profession, can get infection from patients, a contaminated environment and patient specimens either by direct contact or indirect contact. The risk of being infected with HIV through a needle stick or prick with inoculation to infected blood is approximately 0.25 to 0.3%, and is 0.05-0.3% following mucus membrane exposure. The hospital staff of nurses, technicians and the para medical support staff are

directly involved in handling, transportation and disposal of biomedical waste [2].

The government of India is scaling up the care given to people living with HIV (PLHIV) in India rapidly with the progress in anti retroviral therapy and management of opportunistic infections [3]. Maintaining the highest level quality of life of PLHIV is possible mainly through the supportive care from the health care workers. But at the same time provision of care to the PLHIV raises the occupational concerns for all level of health care providers [4]. The accidental transmission of HIV infection to health workers during occupational exposure is the real danger today [5]. HIV was isolated from different body fluids like urine, semen, cerebrospinal fluid, blood, tears, amniotic fluid, saliva, breast milk, and vaginal secretions [6, 7]. It has been proved that blood is the major and the strongest source of infection of not only HIV but also other pathogens and is the major route of transmission in health care employees [8].

More than 90% of these infections are occurring in low-income countries. Needlestick injuries, the cause of 95% of the HIV occupational seroconversions, are preventable with practical, low-cost measures [9]. As para medical staff who are always in close contact in handling blood and blood products therefore to assess their knowledge about HIV/AIDS is must. Considering all the factors the present study was conducted with following objectives.

OBJECTIVES

1. To assess knowledge regarding modes of transmission, service availability and modes of prevention of HIV/AIDS among the paramedical staff (nurses and lab technicians) working in a tertiary care hospital.
2. To assess the relationship between years of experience and awareness.

MATERIALS AND METHODS

A cross-sectional study was conducted at Malla Reddy Hospital, Suraram, Hyderabad which is a tertiary health-care institution in Telangana (India), among two groups of paramedical staff (109) comprising laboratory technicians, and nursing staff. Anonymity was maintained within the study groups.

OBSERVATIONS AND RESULTS

Table-1: Age & Sex Wise Distribution of Study Participants

Age(Years)	Males	Females	Total
<20yrs	1(0.91)	2(1.83)	3(2.74)
20-30yrs	22(20.18)	64(58.71)	86(78.89)
>30yrs	14(12.8)	6(5.50)	20(18.3)
Total	37	72	109

Table-1 shows majority of the study participants were females accounting for 66% and males 34%. Majority of study participants were in the

Ethical Consideration

Approval of the Hospital research Ethics committee was taken before initiating the study.

The respondents were informed about the purpose of the study and were assured that their responses would be treated confidentially. Respondents were also informed that their participation was entirely voluntary and that they were free to decline to answer any question that made them feel uncomfortable. Written informed consent was obtained from all of the participants.

The questions were arranged in no specific order and included both positively and negatively framed questions to assess the knowledge, as well as their misperceptions, about HIV/AIDS. All the participants were given a questionnaire which was filled and returned on site.

Statistical Analysis

The questionnaires were reviewed and analysed by using MS EXCEL. Analysis was done using simple proportions and chi-square test was applied to assess the strength of association.

age group of 20-30years (78.89%), followed by 18.3% in >30 years.

Table-2: Residence Wise Distribution of Study Participants

Residence	Frequency	Percentage
Urban	97	88.99
Rural	12	11
Total	109	100

Table-2 shows that majority of the study participants were from urban area (88.99%) and 11% were from rural area respectively.

Table-3: Distribution of Study Participants with years of experience

Work Experience	Frequency	Percentage
<1 Year	13	11.92
1-5years	64	58.73
>5 Years	32	29.35
Total	109	100

Table-3 shows that 58.71% were having work experience from 1-5 years. About 29.35% were having

work experience of >5 years. Less than one year experience was seen in 11.92% of study participants.

Table-4: Distribution of Study Participants with awareness regarding modes of transmission of HIV/AIDS

Modes of transmission	Yes	No	Total
Sexual route	84(77)	25(22.9)	109
Blood borne	87(79.82)	22(20.18)	109
Mother to child	94(86.24)	15(13.76)	109
Needle stick injury	95(87.15)	14(12.85)	109

Table-4 shows majority of the study participants had good awareness about different modes of transmission of HIV. About 77% said it is through

sexual route, 79.81% said it could be due to blood borne, 86% said from mother to child transmission and 87.15% said it is due to needle stick injury.

Table-5: Distribution of Study Participants Awareness Regarding Misconceptions of Transmission of HIV/AIDS

Misconceptions	Yes	No	Total
Transmission through mosquitoes	14(12.84)	95(87.15)	109
Sharing same public facilities	99(90.82)	10(9.17)	109
Sharing same tooth brushes	44(40.36)	65(59.63)	109
Sharing razors in case of intact skin	59(54.12)	50(45.87)	109

Table-5 shows misconceptions about transmission of HIV among study participants which shows that 12.84 % told it could be due to mosquitoes bite, 90.82% said could be because of Sharing same

public facilities, 40.36% told it could be due to Sharing same tooth brushes and 54.12 % said it could be due to Sharing razors in case of intact skin.

Table-6: Association Between Work Experience And Modes Of Transmission Regarding HIV/AIDS

Modes of transmission	Work experience		Chi-square value	P value
	<5 years	>5 years		
Sexual route	69	26	1.411	0.1177
Blood borne	61	26	0.057	0.40
Mother to child	69	25	1.63	0.100
Needle stick injury	68	27	4.95	0.012

Table-6 shows there was statistical significant difference was observed in relationship with needle

stick injury as one of the mode of transmission of HIV/AIDS.

Table-7: Association Between Work Experience And Misconceptions About HIV/AIDS Transmission

Misconceptions regarding transmission	Work experience		Chi-square value	p- value
	<5 years(n=77)	>5 years(n=32)		
Transmission through mosquitoes	67	28	1.63	0.100
Transmission through sharing same public facilities	49	29	6.81	0.004
Sharing same toothbrushes	70	15	23.03	0.0001
Sharing razors in case of intact skin	35	15	0.018	0.446

Table-7 shows their was a strong statistical significant difference was observed between years of experience and misconception about transmission of HIV/AIDS through Sharing same toothbrushes with p – value as 0.0001.

Strong statistical significant difference was observed between years of experience and misconception about transmission of HIV/AIDS through sharing same public facilities with p –value 0.004.

Table-8: Awareness Regarding Service Centre Availability for HIV/AIDS Among Paramedical Staff

Heard about ICTC/PPTCT	Frequency	Percentage
Yes	67	61.46
No	27	24.77
Don't Know	15	13.76
Total	109	100

Table-8 shows awareness about service centre availability For HIV/AIDS study participants was good, near about 61.46% were knowing about the centre.

DISCUSSION

In the present study it was observed that majority of the study participants were females

accounting for 66% and males 34%. Majority of study participants were in the age group of 20-30 years (78.89%), followed by 18.3% in >30 years. In another study done by Aswin Kumar *et al.*, 58.3% were in the age group of >20 years [10]. Majority of the study participants were females (96.3%) which is similar to present study [10].

The findings of the present study shows that majority of the study participants were from urban area (88.99%) and 11% were from rural area respectively.

Present study findings revealed that that 58.71% were having work experience from 1-5 years. About 29.35% were having work experience of >5 years. Less than one year experience was seen in 11.92% of study participants.

Majority of the study participants had good awareness about different modes of transmission of HIV. About 77% said it is through sexual route, 79.81% said it could be due to blood borne, 86% said from mother to child transmission and 87.15% said it is due to needle stick injury. In another study done by Aswin Kumar *et al.*, it was observed that 20.3% were aware that needle stick injury is one of the mode of transmission of HIV/AIDS [10].

Mother to child transmission awareness was observed in 50% of the participants [10], while in other studies, it was from of 65% to 95% [11, 12]. In one study awareness regarding sexual mode of transmission was observed in 45% of study participants which is less than the present study [13].

In present study misconceptions about transmission of HIV among study participants shows that 12.84 % told it could be due to mosquitoes bite, 90.82% said could be because of Sharing same public facilities, 40.36% told it could be due to Sharing same tooth brushes and 54.12 % said it could be due to Sharing razors in case of intact skin. In another study 90% of the study participants said sharing things and places can transmit HIV/AIDS [10].

In the present study only 26% were aware that vaccine against HIV/AIDS is in the developmental stages while in another study awareness about HIV vaccine in developmental stage was good (51%) [10].

CONCLUSION

Transmission of blood borne infections through needle stick injury is a harsh reality involving health care personnel. There is an urgent need to teach basic knowledge about HIV infection and service availability. Therefore regular training sessions should be conducted by the hospital authorities regarding HIV/AIDS modes of transmissions, regarding precautions to be taken and also on latest updates

regarding HIV/AIDS. Training sessions should also be conducted on Post Exposure Prophylaxis too.

REFERENCES

1. Geneva: UNAIDS and WHO; 2009. AIDS epidemic update. ISBN 9789291738328.
2. Cheng FK, Ford WL, Cheng SY, Weber MD, Kerndt PR. Occupational risk of acquiring HIV infection through needlestick injuries. *Clinical performance and quality health care.* 1995;3(3):147-50.
3. National AIDS control organization (NACO) Annual Report 2016-17. 2017. Available at: <http://naco.gov.in/sites/default/files/NACO%20ANNUAL%20REPORT%202016-17.pdf> Accessed on 27 Sept 2020.
4. Chendake MB, Mohite VR. Assess the knowledge and attitude of nursing students towards HIV/AIDS. *Indian J Sci Res.* 2013;4(1):69-74.
5. Goel NK, Bansal R, Pathak R, Sharma HK, Aggarwal M, Luthra SC. Knowledge and awareness of nursing students about HIV/AIDS. *Health and Population: Perspectives and Issues.* 2010;33(1):55- 60.
6. Mason JO. Recommendations for Prevention of HIV Transmission in Health-Care Settings. Vol. 36. Centers for Disease Control and Prevention; 1987.
7. Wyżgowski P, Rosiek A, Grzela T, Leksowski K. Occupational HIV risk for health care workers: risk factor and the risk of infection in the course of professional activities. *Therap Clin Risk Management.* 2016;12:989-94.
8. World Health Organization. Quantifying selected major risks to health In: *The World Health Report.* Geneva: WHO, 2002: 47–98.
9. Health worker occupational health. 2018. Available at: http://www.who.int/occupational_health/topics/hcworkers/en/ Accessed on 30 Sept 2020.
10. Kumar A, Ratnaprabha GK. Awareness about HIV and post exposure prophylaxis among students of a nursing college from central Karnataka: a cross sectional study. *International Journal of Community Medicine and Public Health.* 2019 Jan;6(1):303-307.
11. Chendake MB, Mohite VR. Assess the knowledge and attitude of nursing students towards HIV/AIDS. *Indian J Sci Res.* 2013;4(1):69-74.
12. Goel NK, Bansal R, Pathak R, Sharma HK, Aggarwal M, Luthra SC. Knowledge and awareness of nursing students about HIV/AIDS. *Health and Population: Perspectives and Issues.* 2010; 33(1):55- 60.
13. Najmi RS. Awareness of health care personnel about preventive aspects of HIV infection/AIDS and their practices and attitudes concerning such patients. *JPMA.* 1998;48(367):345-51.