

Original Research Article

Knowledge, attitude and behavior study on HIV awareness among continuous rotatory residential interns and postgraduates

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ABSTRACT

Background: Human immunodeficiency virus (HIV) that leads to Acquired immunodeficiency syndrome (AIDS) is transmitted mainly by sexual contact and exposure to infected blood. Healthcare workers (HCWs) such as Continuous rotatory residential interns (CRRIs) and postgraduates are at risk of acquiring HIV infection, primarily due to exposure to infected blood. The chances of infection depend on occupation, procedures performed, and use of preventive measures. The aim of the study was to access and compare knowledge, attitude and behavior about HIV awareness among CRRIs and Postgraduates.

Methods: A cross sectional survey of 80 CRRIs and 80 postgraduates from Sree Balaji Medical College and Hospital was taken. A self-administered questionnaire was made and information regarding age, gender, knowledge about HIV, attitude and behavior towards HIV positive individual was gathered and compared between CRRIs and postgraduates. The data was compared and analyzed.

Results: The results of the study revealed that postgraduates had better knowledge about routes of transmission of HIV compared to CRRIs. However, knowledge about preventive guidelines, vaccines and prophylaxis have to be improved by both postgraduates and CRRIs. Attitude towards HIV affected individual was positive. Behavior and practices followed to prevent HIV transmission have to be improved.

Conclusions: HIV is an occupational hazard among HCWs. Appropriate knowledge about HIV is important. Attitude towards HIV infected individual plays an important role as it determines the care of the patient. Practicing standard guidelines while phlebotomy prevents the infection.

Keywords: Human immunodeficiency virus, Needle stick injury, CRRIs, Postgraduates, Transmission, Prophylaxis

INTRODUCTION

Human immunodeficiency virus (HIV) that leads to Acquired immunodeficiency syndrome (AIDS) is transmitted mainly by sexual contact and exposure to infected blood. Healthcare workers (HCWs) such as CRRIs and postgraduates are at risk of acquiring HIV infection, primarily due to exposure to infected blood.¹ The chances of infection depend on occupation, procedures performed, and use of preventive measures.² In India, like many other countries, people with HIV often

face discrimination while seeking health care services, which affects their physical and psychosocial well-being.³

The knowledge and attitudes of HCWs about HIV infection is important as it plays a major role in the care of the people with HIV infection.

The objective of this study was to access the knowledge about HIV, attitude towards HIV infected individual and behaviors and practices followed in preventing HIV infection.

METHODS

A cross sectional survey of 80 CRRIs and 80 postgraduates from Sree Balaji Medical College and Hospital was taken. All medical CRRIs and post graduates who gave consent for the study were included and those who didn't give consent were excluded. A self-administered questionnaire was made and information regarding age, gender, knowledge about HIV, attitude and behavior and practices towards HIV positive individual was gathered and compared between CRRIs and Postgraduates. Duration of the study was from March 2021 to May 2021. The study was conducted after obtaining Ethical Clearance from the ethical committee. Descriptive analysis was done. Data entry was done on MS excel and data analysis was done in SPSS 20 version.

RESULTS

Knowledge about HIV

Out of 80 CRRIs and 80 postgraduates, 68.4% of CRRIs and 66.3% of postgraduates were of the opinion that health care workers are at risk of contracting HIV infection more than other viral diseases in the work place. Regarding modes of transmission, almost everyone answered for blood transfusion, mother to child transmission, sexual contact, needle stick injury and Breastfeeding whereas few answered that saliva/tears, coughing and kissing also transmits HIV.

72.2% of the CRRIs were of the opinion that mother to child transmission mainly occurs at the time of birth while 21.5% responded for in utero transmission. Whereas 87.5% of the postgraduates were of the opinion that transmission occurs mainly at the time of birth. 73.4% of the CRRIs knew that there is no vaccine available for HIV currently but 10.1% answered that vaccine is available and 16.5% did not know about the availability of vaccine. While 92.4% of the postgraduates were of the opinion that there is no vaccine currently for HIV.

There were mixed responses from both CRRIs and postgraduates regarding the effectiveness of oral pre-exposure prophylaxis in preventing acquisition of HIV infections among IV drug users, where 40.8% the of CRRIs believed that it is effective while 43.8% of the postgraduates were against it. 61% of the CRRIs and 73.8% of the postgraduates know some details about the preventive guidelines and few had only heard about it. Full details were known to very less number of CRRIs (14.3%) compared to postgraduates (17.5%).

Attitude

86.25% of the CRRIs and 93.25% of the postgraduates were of the opinion that hospital should not refuse to care for an HIV positive individual. 96.25% of the CRRIs and 98.75% of the postgraduates strongly agreed that all HCWs have the right to know a patient's HIV status for their own safety. 92.5% of the CRRIs and 91.25% of the postgraduates disagreed the statement that they would not get tested for HIV because then everyone would know their status.

A similar study was conducted by Monalisa et al, among medical, dental and nursing interns and it showed all nursing interns wanted to get tested for HIV whereas the other group disagreed to it. 67.5% of the CRRIs and 68.75% of the postgraduates disagreed that they would try to treat themselves before going to a clinic in case of any problem with their genitals/private parts. 66.25% of the CRRIs agreed that they would buy food from a shop where a HIV positive person was working but 33.75% disagreed to it.

Whereas in case of postgraduates 43.75% disagreed to the above statement. Both the subject groups agreed that they would visit the house of a friend whose family member had HIV. 93.25% of the CRRIs and 88.75% postgraduates were of the opinion that they would inform the sexual partner of an HIV positive individual person even though she or he strongly disagrees with it.

Behavior

In case of any needle stick injury, post exposure prophylaxis that the majority of the CRRIs (58.9%) would be taking is to wash the wound immediately whereas 24.7% said that they would report the incident to their consultant while 11% would be notifying the infection to control office. Almost the same response was seen among the postgraduates.

Both the subject groups said that they will enquire about patient and his disease history after a needle stick injury. Very few CRRIs (12%) and postgraduates (10.3%) were not following the standard precautions while phlebotomy. There were mixed opinions regarding the reason for non-compliance to the correct practices of standard precautions among both CRRIs and postgraduates. Most of the CRRIs (80.3%) and postgraduates (72.2%) accepted that they bend /recap needle after use while very few were against it.

Table 1: Questions for assessing knowledge about HIV.

Questions	CRRIs		Postgraduates	
	Yes	No	Yes	No
Health care workers are at risk of contracting HIV infection more than other viral diseases in the work place	68.4	31.6	66.3	33.8

Continued.

Questions	CRRIs		Postgraduates	
	Yes	No	Yes	No
Modes of transmission				
Blood transfusion	100	0	100	0
Mother to child	96.25	3.75	98.75	1.25
Eating or drinking from same plate/cup	8.75	91.25	12.5	87.5
Kissing	13.75	86.25	23.75	76.25
Sexual contact	100	0	98.25	1.25
Breastfeeding	70	30	75	25
Saliva/tears	30.9	60.1	33.75	66.25
Coughing/sputum	23.1	76.9	18.75	81.25
Needle stick injury	100	0	100	0
Increased risk of mother to child transmission mainly				
In-utero	21.5		7.5	
At the time of birth	72.2		87.5	
Through breastfeeding	6.3		5	
Vaccine available for HIV currently				
Yes	10.1		1.3	
No	73.4		92.4	
Don't know	16.5		6.3	
Oral pre-exposure prophylaxis effective in preventing acquisition of HIV infections among IV drug users				
True	40.8		23.8	
False	25		43.8	
Don't know	34.2		32.5	
Awareness of any preventive guidelines				
Only heard about them but don't know details	24.7		8.8	
Know some details about them	61		73.8	
Know full details about them	14.3		17.5	
Have not heard about them at all	0		0	
Post exposure prophylaxis if taken immediately				
Reduces the risk of HIV transmission	84.4		88.8	
Does not reduce the risk of HIV transmission	15.6		11.3	
Aware about the drug regimen for basic post exposure prophylaxis				
Yes	77.6		78.8	
No	22.4		21.3	

Table 2: Questions for assessing attitude.

Questions	CRRIs		Postgraduates	
	Agree	Disagree	Agree	Disagree
Hospitals should not refuse to care for a patient just because they are HIV positive	86.25	13.75	93.25	6.75
All health care workers have the right to know a patient's HIV status for their own safety	96.25	3.75	98.75	1.25
I would not get tested for HIV because then everyone would know my status	7.5	92.5	8.75	91.25
I would rather not know my HIV status	18.75	81.25	10	90
If I had a problem with my genitals/private parts, I would try to treat the problem myself before going to a clinic	32.5	67.5	31.25	68.75
I would not refuse to buy food from a shop where a HIV positive person was working	66.25	33.75	56.25	43.75
I would visit friend's house even if they had a family member who had HIV	92.5	7.5	91.25	8.75
I would inform the sexual partner of an HIV positive person even though she or he strongly disagrees with it.	93.25	6.25	88.75	11.25

Table 3: Questions for assessing behavior.

Questions	CRRIs	Postgraduates
In case of any needle stick injury, post exposure prophylaxis that you would be taking		
Immediately wash the wound	58.9	68.4
Allow it to bleed	5.5	0
Notify the infection control office	11	13.9
Report the incident to your consultant	24.7	17.7
Apply an adhesive medicated plaster	0	0
Do you practice standard precautions while phlebotomy		
Yes	88	89.7
No	12	10.3
Reason for non-compliance to the correct practices of standard precautions		
Clumsiness in handling needles and sharps when wearing gloves	39.4	17.9
Lack of time	4.2	9
Lack of availability of PPE	5.6	15.4
Presumption that the patient was not infected with HIV	19.7	21.8
Poor knowledge on universal precautions	9.9	14.1
Poor adherence to guidelines	14.1	19.2
Others	7	2.6
Do you bend/recap needle after use?		
Yes	80.3	72.2
No	19.7	27.8

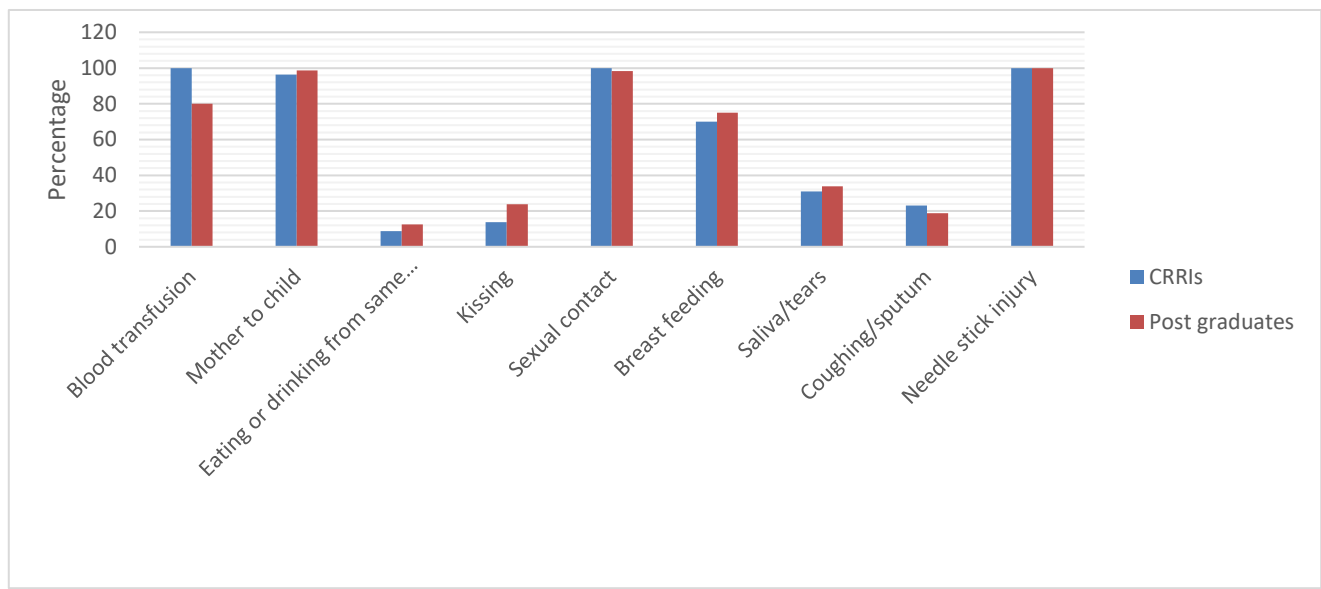


Figure 1: Modes of HIV transmission.

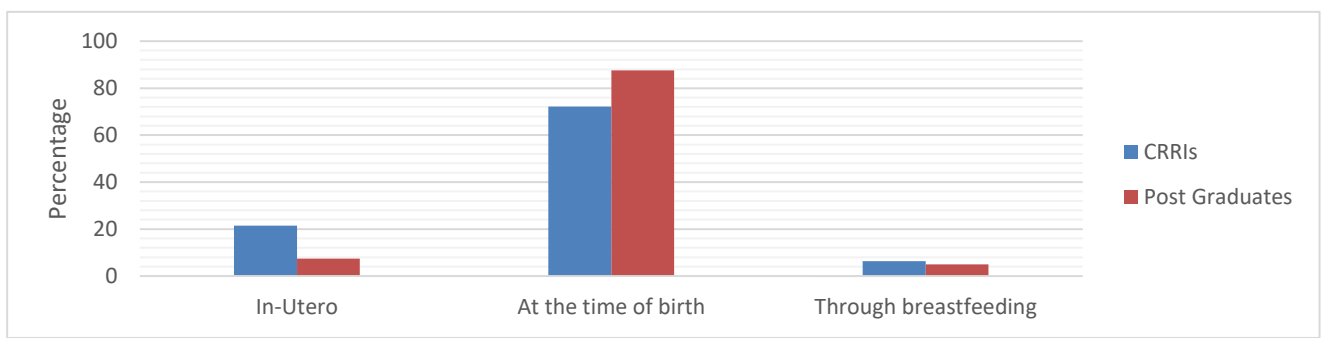


Figure 2: Increased risk of mother to child transmission mainly.

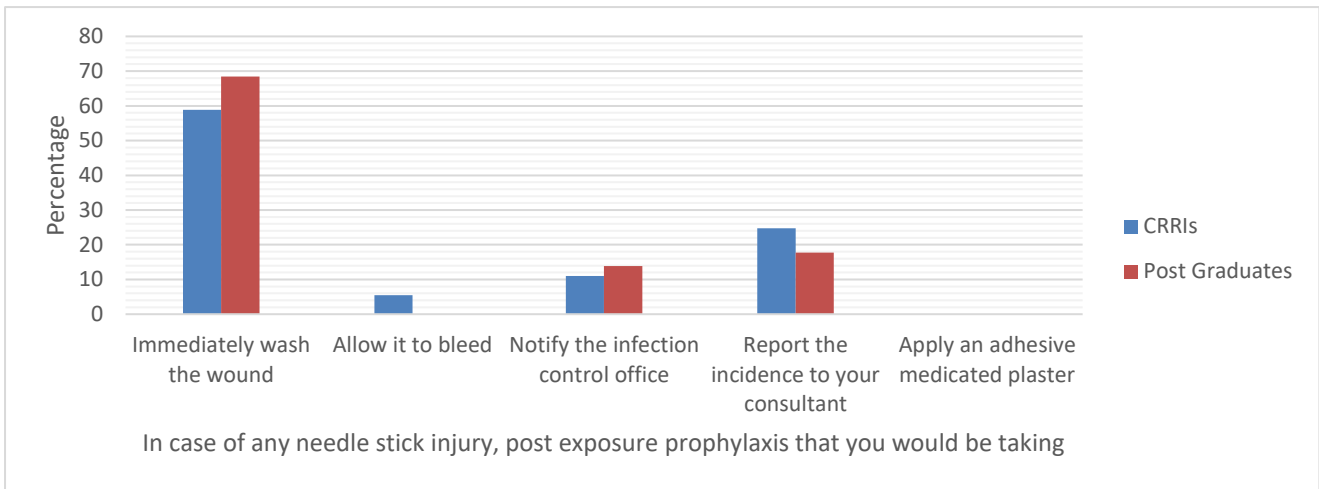


Figure 3: In case of any needle stick injury, post exposure prophylaxis that you would be taking.

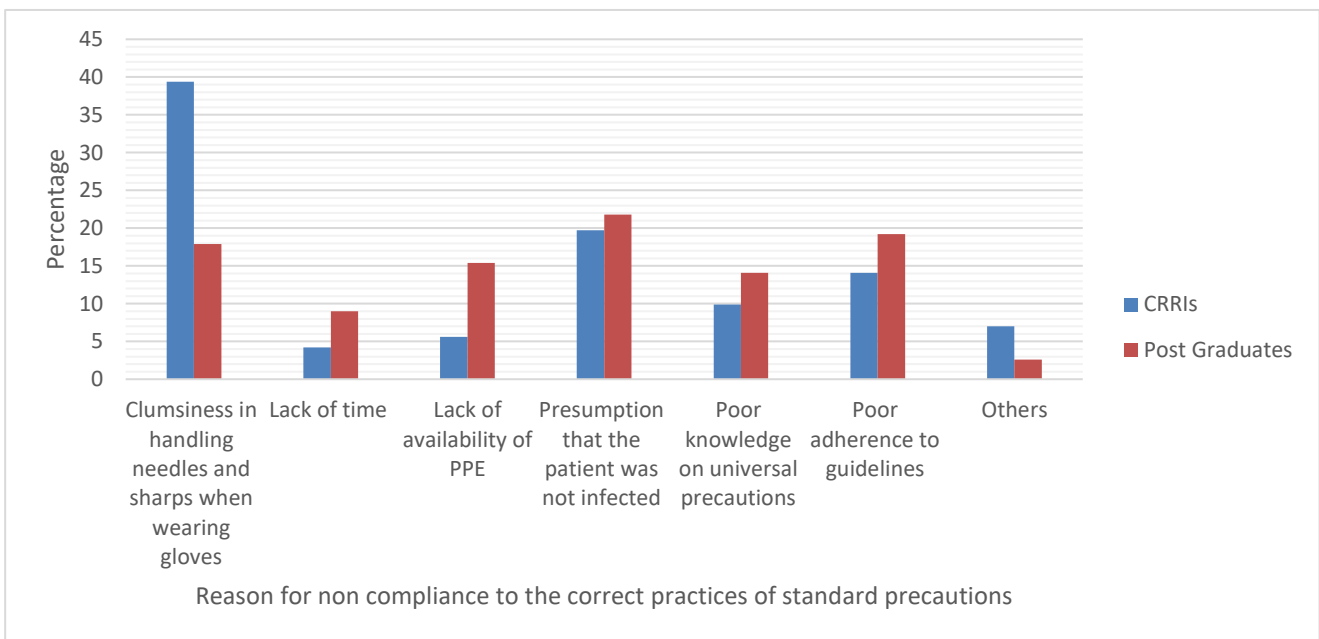


Figure 4: Reason for non-compliance to the correct practices of standard precautions.

DISCUSSION

HIV being an occupational hazard among HCWs, knowledge about its transmission and practices followed to prevent it is important among health care workers. This study was done to access and compare the knowledge, attitude and behavior about HIV awareness among CRRIs and postgraduates. 68.4% of CRRIs and 66.3% of postgraduates were of the opinion that health care workers are at risk of contracting HIV infection more than other viral diseases in the work place. A similar study was done by Monalisa et al among medical, dental and nursing interns of a private group of institute where all dental and nursing interns said risk for HIV infection is more common than other infection whereas medical interns had contradictory opinion.⁴ The same study showed that study

participants had good knowledge about the vertical transmission. Similar results were seen in our study.

92.5% of the CRRIs and 91.25% of the postgraduates disagreed the statement that they would not get tested for HIV because then everyone would know their status. A similar study conducted by Monalisa et al among medical, dental and nursing interns showed that all nursing interns wanted to get tested for HIV whereas the other group disagreed to it.

A study conducted by Kermode et al showed that 37.7% answered correctly regarding transmission of HIV on contact with saliva. Whereas in our study 30.9% of CRRIs and 33.75% of postgraduates answered that HIV can spread through saliva or tears. 13.75% of CRRIs and 6.75% of postgraduates agreed to the statement that

hospitals should not refuse to care for the HIV positive patients. In a study conducted by Kermode et al 15.2% agreed that HCWs should be allowed to refuse to care for people with HIV.

In our study, 77.6% of CRRIs and 78.8% of postgraduates were aware about the drug regimen for basic post exposure prophylaxis. Whereas in a study conducted by Kasat et al 48.4% of the interns and 43.7% of the postgraduates knew about the post exposure prophylaxis.⁵

Limitation

Less sample size was the limitation of the study.

CONCLUSION

HIV is an occupational hazard among HCWs. Hence, appropriate knowledge about its transmission and practices to be followed to prevent HIV is important. Attitude towards HIV infected individual by HCWs plays an important role as it determines the care of the patient. Implementing theoretical aspects learnt during academic years by CRRIs and postgraduates and practicing various standard guidelines during phlebotomy helps in preventing not only HIV but various other diseases transmitted through needle stick injuries and thus reduces occupational hazards. Awareness about post exposure guideless and following the guidelines on exposure can reduce the fear and stress among HCWs.

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Conflict of interest: None declared

Ethical approval: The study was approved by the institutional ethics committee

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