## **Scholars Journal of Applied Medical Sciences (SJAMS)**

Abbreviated Key Title: Sch. J. App. Med. Sci. ©Scholars Academic and Scientific Publisher A Unit of Scholars Academic and Scientific Society, India www.saspublishers.com ISSN 2320-6691 (Online) ISSN 2347-954X (Print)

Microbiology

# Stigma and Discrimination against Patients with HIV/AIDS in Health Care Settings in Anand District, Gujarat

## Rishi Shrivastav<sup>1</sup>, Patel Rupal M<sup>2\*</sup>, Trivedi Sunil S<sup>3</sup>

<sup>1</sup>First year Internal Medicine Resident, Mount Sinai St. Luke's and Mount Sinai West Hospital, 1111 Amsterdam Avenue, New York, NY 10019, United States

<sup>2</sup>Associate Professor, Department of Microbiology, Pramukhswami Medical College, Karamsad Gujarat, India

<sup>3</sup>Medical Technologist Microbiology, Formerly Professor (Microbiology) & Principal, LPPIMLT, Charutar Arogya Mandal, Karamsad Gujarat, India

## **Original Research Article**

\*Corresponding author Patel Rupal M

**Article History** *Received:* 13.04.2018 *Accepted:* 23.04.2018 *Published:* 30.04.2018

**DOI:** 10.36347/sjams.2018.v06i04.074



Abstract: Among all forms of HIV/AIDS-related stigma and discrimination manifestations; those happening in the health-care settings are probably the most shocking. With a sample size of 115, the study was conducted over a period of two months on the Doctors and Nurses of Government/Semi- government and Private hospitals / Clinics. It was a random-sample survey through an anonymous, unlinked and self-administered questionnaire to access health care workers' HIV/AIDS knowledge, attitudes toward HIV/AIDS patients and acts of discrimination by health care workers. The level of health care workers' HIV/AIDS knowledge was considerably good. However, the attitude towards issues like mandatory HIV testing, revealing of HIV status, not allowing working of sero-positive health care workers in areas requiring patient contact did have some stigmatizing response. In terms of practice, the most discriminatory response was seen on disclosing HIV status of patient to a colleague not involved in the management of the case and also to a friend. Older age was associated with less frequent stigmatization and discrimination. Training on HIV/AIDS did have some benefit on the responses of the participants; however, the response was not significant in terms of some selected questions on attitude and practice like mandatory HIV testing. Some stigmatizing response was present in health care workers' attitude. However, for their practice the discriminatory response was significantly less. Doctors and trained participants were less stigmatizing compared to nurses and untrained participants respectively. However the training programs still need to improve upon the attitude and practice. Keywords: HIV/AIDS, Stigma, Discrimination, health care workers.

#### INTRODUCTION

Since the eighties we have come to realize that stigma and discrimination for HIV/AIDS is as as the mutation of the Human cunning Immunodeficiency Virus and often leaves us with a sense of helplessness, anger, and frustration when we encounter it [1]. "Stigmatizing attitudes" means negative attitudes towards others who may be HIV infected. It is different from the term "Anticipated stigma" which means that how individuals feel they would be perceived by others if they were to be diagnosed HIV-positive [2]. This stigmatizing attitude has been part of the disease since its inception over the past 30 years UNAIDS, 2007. Herek defines HIV related stigmatization as prejudice, discounting, discrediting, and discrimination directed at people perceived to have AIDS [3]. AIDS shares many characteristics with other diseases that are highly stigmatized, such as its perception to be unalterable, degenerative, and fatal, its contagiousness and appearance of the afflicted in the advanced stages of the disease. This reaction is amplified by a tendency among a significant portion of the public to blame people living with HIV/AIDS (PLWHA) for their illness, since the acquisition is perceived to be as a result of immoral and voluntary actions [4]. In a study by MacPherson P et al. on stigmatizing attitudes, there was an interesting connection in the data between the blame that people associated with getting infected with HIV/AIDS and the othering, or social distancing, that they described between themselves and PLWHA in their communities [5]. Another study by Genberg BL et al measured negative attitudes and beliefs associated with PLWHA, including blame on PLWHA for their infection, and whether PLWHA should be ashamed and isolated. This subscale also included items regarding negative feelings about PLWHA (e.g., PLWHA are disgusting) [6]. HIV/AIDS-related

transmissibility, and the repellent, ugly, and upsetting

Stigma and discrimination is the result of interaction between diverse pre-existing sources of Stigma and discrimination and fear of contagion and disease [1, 4]. HIV/AIDS-related Stigma and discrimination take different forms and are manifested at different levels-societal, community and individual-and in different contexts [7]. Among all forms of HIV/AIDS-related stigma and discrimination manifestation; those happening in the health-care settings are probably the most shocking. There have been many reports from health care settings of HIV testing without consent, breaches of confidentiality, and denial of treatment and care. Failure to respect confidentiality by clearly identifying patients with HIV/AIDS, revealing sero-status to relatives without prior consent, or releasing information to the media or police appear to be problems in some health services [1, 4, 7].

HIV/AIDS-related stigma and discrimination can however be significantly reduced by education and training to Health-care workers. Although, National AIDS Control Organization and United Nations Development Programme have taken adequate measures and undertaken projects to discourage and control HIV/AIDS-related stigma and discrimination at health-care setting and to reduce HIV vulnerabilities of sexual minorities; it is still a matter of deep concern [8].

It was therefore decided to undertake a study on stigmatizing attitudes and acts of discrimination against patients with HIV/AIDS by the doctors and nurses employed in various government /semigovernment and private health care settings in the district of Anand, Gujarat and to determine the factors associated with such attitude.

#### MATERIALS AND METHODS

The study was conducted between August-September, 2011 as a random-sample survey through an anonymous, unlinked and self-administered questionnaire consisted of structured closed-ended questions. In the questionnaire, personal and professional characteristics and disease knowledge were treated as the explanatory variables. Stigmatizing attitudes and discriminatory acts were treated as the outcome variables.

Personal/hospital information included gender and age, type of hospital and size of hospital. Professional information included type (doctor or nurse) and level (graduate or post graduate) of profession, total professional experience, completion of any formal HIV/AIDS training and the number of known HIV/AIDS cases encountered.

The items assessing stigmatizing attitudes were ranked on five-point Likert-type scales. Responses to each statement ranged from 1 (strongly disagree) to 5 (strongly agree). The items assessing acts of discrimination were similarly ranked with responses to those statements ranging from 1 (never) to 5 (all of the time). A score of 1 was regarded as least stigmatizing or discriminatory and 5 being most stigmatizing or discriminatory with a higher score therefore indicating a more stigmatizing attitude or a higher frequency of committing a discriminatory act. Reverse coding was applied where ever necessary so that the direction of association was consistent.

The questionnaire was pre-tested and validated first on five doctors and five nurses to ensure that the questions were understandable and culturally acceptable. Questions were also translated in Gujarati – a local language- to make the questionnaire clear to the health care workers who wished to respond in local language. Eligible subjects in various hospitals were then contacted and requested for their entirely voluntary participation in the present study.

The data collected was sorted and analyzed with the help of Microsoft Excel 2010 and SPSS software. Frequencies, standard deviation, means, medians etc. were depicted for various input variables like age, study population etc. Graphs, charts etc. was used to depict all the results.

#### RESULTS

The questionnaires were distributed to a total of 185 eligible subjects; out of which, only 123 (66.49%) responded and participated in the study. Out of the123 forms received, six were excluded because they were incomplete. Hence, a total of 115 responses were considered in the final analysis (n = 115).

The mean age of participants was 35.85 (S.D, 10.49). Overall 60% of the participants had attended a formal training program for HIV/AIDS; however, number of nurses who attended the training program was higher (70.14%) than doctors (45.83%). Within various types of hospitals, maximum training in HIV/AIDS was seen in Government hospitals and the least was in Private hospitals (Table 1).

Response analysis of questions on knowledge on HIV/AIDS was as shown in Table 2. Within various age groups, the maximum mean correct response for all the six questions on knowledge were seen for the age group of 31-40 years (78.3% mean correct response). The level of knowledge was more in doctors as compared to nurses with the mean correct response for all the six questions in doctors being 79.5% while in nurses it was just 64.7% (Figure 1).

Table 4 showed response analysis of

Questions on Attitude. More than 70% of the participants expressed the opinion that HIV testing should be done for all patients admitted to hospital and almost 90% also felt that they should be tested for HIV before an invasive procedure or surgery. About 45.83% of doctors believed that all the patients admitted to hospitals must be tested for HIV while the 88% of the nurses expressed this opinion. About 47% of participants thought that sero-positive health care workers should not be working in any area of health care which required patient contact. About 29.2% of doctors thought that health care workers with HIV should not be working in any area of health care that required patient contact, while in nurses the figure was as high as about 60%. About 50.44% of participants had more sympathy for sero-positive patients who had acquired HIV through blood transfusion compared to the ones who had acquired it from intra venous drug abuse. However, 21.74% of participants agreed that they had little sympathy for sero positive patients who had acquired HIV through sexual promiscuity. There were 66.08% of participants who either disagreed or strongly disagreed to the fact that the mother was to be blamed if a newborn acquired HIV; 24%, however, agreed to this. Ninety five percent of participants were, however, comfortable providing their services to HIV/AIDS patients and 92.17% said that they were comfortable putting a drip in someone who was showing signs of AIDS.



participants were found more stigmatizing than trained; if not similar; except the question 1, where untrained health care workers have shown less stigmatizing attitude for the HIV testing of all patients on admission (Table 5).

As shown in Table 6, more than 95% of the participants have mentioned that they would mostly/always give all the patients the same amount of attention regardless of their HIV status. Seventy nine percent of the nurses however mentioned that they would always give the same amount of attention to patients regardless of their HIV status; while only 58.3% doctors said so. However, 24.34% of participants disclosed the HIV status of a patient some or the other time to a colleague who was not involved in the management of the patient. 93% of participants said they would never let another health care worker work on a patient just because they suspected him/her to have HIV. 20.86% of the respondents agreed that they had disclosed a patients HIV status to a friend some or the other time; the practice of disclosure of HIV status to a friend was found significantly higher amongst the nurses (25.4%) as compared to that amongst doctors (15%). 85.21% of the participants invariably took the informed consent from the patient before testing his/her blood for HIV.

Untrained participants have shown a slightly higher discriminating attitude than the trained ones (Table 7).

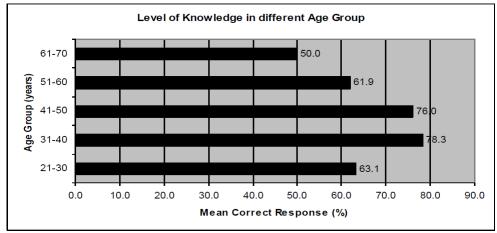


Fig-1: Level of Knowledge in different age groups (n=115)

le 1: Personal and Professional ch		
Parameter	Number	Frequency (%)
Age (years)	10	26.5
21-30	42	36.5
31-40	33	28.7
41-50	32	27.8
51-60	7	6.1
61-70	1	0.9
Gender		
Male	32	27.8
Female	83	72.2
Type Of Hospital		
Government	16	13.9
Semi-Government	19	16.5
Private	80	69.6
Size Of Hospital		
(beds)		
<50	14	12.2
50-100	1	0.9
100-250	18	15.7
>250	82	71.3
Profession		
Doctor	48	41.7
Nurses	67	58.3
Experience		
<2 years	21	18.3
2-5 years	13	11.3
>5 years	81	70.4
Received Training		
Programme on HIV/AIDS attended		
Yes	69	60
No	46	40
Seropositive patients seen		
<5	16	13.9
5-20	48	41.7
20-50	26	22.6
>50	25	21.7

## Rishi Shrivastav et al., Sch. J. App. Med. Sci., Apr 2018; 6(4): 1735-1743

Table-2: Response analysis of questions on knowledge on HIV/AIDS (n=115)

Sr.	Question on Knowledge	Correct
No		Responses (%)
1	One can contract HIV infection by sharing meals with an HIV-infected person.	91.3
2	Procedures for avoiding Hepatitis B and HIV infection are similar.	79.1
3	Most newborns born to HIV-positive women have HIV/AIDS infection at birth.	42.6
4	After needle stick injury with a needle from an HIV infected person, the chance of contracting HIV virus is less than 1%.	60.9
5	After needle stick injury with a needle from an HIV infected patient, immediately gently expressing blood form the puncture site reduces the risk of contracting HIV infection.	80.9
6	An HIV-seronegative report confirms that the person is not infected with HIV and is also not infectious to others.	70.4

## Rishi Shrivastav et al., Sch. J. App. Med. Sci., Apr 2018; 6(4): 1735-1743

Sl.No	Question on Knowledge	Correct Responses (%)	
		Trained	Untrained
		Participants	Participants
1	One can contract HIV infection by sharing	94.2	87.0
	meals with an HIV-infected person.		
2	Procedures for avoiding Hepatitis B and HIV infection are similar.	78.3	80.4
3	Most newborns born to HIV-positive women have HIV/AIDS infection at	47.8	34.8
	birth.		
4	After needle stick injury with a needle from an HIV-infected person, the	60.9	60.9
	chance of contracting HIV virus is less than 1%.		
5	After needle stick injury with a needle from an HIV-infected patient,	87.0	71.7
	immediately gently expressing blood form the puncture site reduces the risk		
	of contracting HIV infection.		
6	An HIV-seronegative report confirms that the person is not infected with	71.0	69.6
	HIV and is also not infectious to others.		

## Table-3: Association of level of knowledge with training program attended (n=115)

#### Table-4: Response analysis of Questions on Attitude (n=115)

Sr.	Questions Assessing Attitude	Strongly	Disagree	No	Agree	Strongly
No		Disagree N (%)	N (%)	Opinion N (%)	N (%)	Agree N (%)
1	All patients admitted to hospital should be HIV tested.	13(11.3)	19(16.52)	2(1.74)	35(30.43)	46(40.00)
2	All patients undergoing surgical or invasive procedure should be HIV tested.	4(3.48)	4(3.48)	0(0.00)	24(20.87)	83(72.17)
3	If patients HIV sero-positive status is known, hospital can take extra precaution to prevent its transmission to other patients as well as HEALTH CARE WORKERS.	2(1.74)	5(4.35)	1(0.87)	27(23.48)	80(69.57)
4	Relatives/sexual partners of patients with HIV/AIDS should be notified of the patient's status even without his/her consent.	35(30.43)	23(20.00)	5(4.35)	23(20.00)	29(25.22)
5	Patients with HIV/AIDS should be cared for and treated in their own hospitals and facilities away from other patients who do not have HIV/AIDS.	37(32.17)	39(33.91)	11(9.57)	17(14.78)	11(9.57)
6	A health professional with HIV/AIDS should not be working in any area of health care that requires patient contact.	15(13.04)	36(31.30)	10(8.70)	41(35.65)	13(11.30)
7	I feel more sympathetic toward people who get AIDS from blood transfusions than those who get it from intravenous drug abuse.	16(13.91)	19(16.52)	22(19.13)	29(25.22)	29(25.22)
8	I feel that if a child contracts the HIV/AIDS virus from its mother through mother-to-child or vertical transmission, the mother is to blame for the child's disease.	39(33.91)	37(32.17)	11(9.57)	14(12.17)	14(12.17)
9	I have little sympathy for people who get AIDS from sexual promiscuity.	35(30.43)	36(31.30)	19(16.52)	21(18.26)	4(3.48)
10	I am comfortable providing health services to clients who are HIV positive.	0(0.00)	3(2.61)	3(2.61)	44(38.26)	65(56.52)

## Rishi Shrivastav et al., Sch. J. App. Med. Sci., Apr 2018; 6(4): 1735-1743

	Table-5: Comparison of Attitude in Trained and Untra	ined Participants	(n=115)	
Sr.No	Questions On Attitude	Stigmatizing Reponses (%)		
		Trained	Untrained	
		Participants	Participants	
1	All patients admitted to hospital should be HIV tested.	75.4	63.0	
2	All patients undergoing surgical or invasive procedure should be HIV tested.	92.8	93.5	
3	If patients" HIV sero-positive status is known, hospital can take extra precaution to prevent its transmission to other patients as well as HEALTH CARE WORKERSs.	92.8	93.5	
4	Relatives/sexual partners of patients with HIV/AIDS should be notified of the patient's status even without his/her consent.	39.1	54.3	
5	Patients with HIV/AIDS should be cared for and treated in their own hospitals and facilities away from other patients who do not have HIV/AIDS.	17.4	34.8	
6	A health professional with HIV/AIDS should not be working in any area of health care that requires patient contact.	42.0	54.3	
7	I feel more sympathetic toward people who get AIDS from blood transfusions than those who get it from intravenous drug abuse.	44.9	58.7	
8	I feel that if a child contracts the HIV/AIDS virus from its mother through mother-to-child or vertical transmission, the mother is to blame for the child's disease.	23.2	26.1	

## Table-5: Comparison of Attitude in Trained and Untrained Participants (n=115)

#### Table-6: Response analysis of questions related to Practice (n=115)

	Table-0. Response analysis of questions related to Fractice (n=115)					
Sr.	Statement	Never	A Little of	Some of	Most of the	All the
No		N (%)	the time	the time	time	time
			N (%)	N (%)	N (%)	N (%)
1	I give the same amount of attention to	2(1.73)	0(0.00)	3(2.60)	29(25.21)	81(70.43)
	all my patients regardless of their HIV					
	status.					
2	Do you ever disclose a patient's HIV	87(75.65)	13(11.03)	7(6.08)	2(1.73)	6(5.21)
	status to a colleague who is not directly					
	involved in the management of that					
	case?					
3	Because I suspected a patient to be HIV-	107(93.04)	3(2.60)	4(3.47)	0(0.00)	1(0.86)
	positive, I let another health care worker					
	deal with that patient.					
4	Do you ever disclose a patient's HIV	91(79.13)	11(9.56)	7(6.08)	5(4.34)	1(0.86)
	status to a friend?					
5	I get informed consent from the patient	7(6.08)	1(0.86)	2(1.73)	7(6.08)	98(85.21)
	before testing his/her blood for HIV.					

## Table-7: Comparison of practice in Trained and Untrained Participants (n=115)

Sr.No	Question On Practice	Discriminating Reponses (%)	
		Trained	Untrained
		Participants	Participants
1	I give the same amount of attention to all my patients regardless	27.5	32.6
	of their HIV status.		
2	Do you ever disclose a patient's HIV status to a colleague who is	21.7	28.3
	not directly involved in the management of that case?		
3	Because I suspected a patient to be HIV-positive, I let another	7.2	6.5
	health care worker deal with that patient.		
4	Do you ever disclose a patient's HIV status to a friend?	20.3	21.7
5	I get informed consent from the patient before testing his/her	11.6	19.6
	blood for HIV.		

Available online at https://saspublishers.com/journal/sjams/home

#### DISCUSSION

Stigmatizing and discriminatory attitude for the people living with HIV/AIDS by the family members and society is not uncommon; however, it is most shocking when expressed by health care workers. Doctors and nurses have a greater responsibility of giving health care to symptomatic HIV/AIDS patients in a health care setting equitably. An attempt has been made in the present study to assess the magnitude of the problem of stigmatizing attitudes and acts of discrimination against patients with HIV/AIDS by the doctors and nurses employed in various government /semi-government and private health care settings in the district of Anand, Gujarat and to determine the factors associated with such attitude.

Out of 185 health care workers who were contacted and requested to participate in the study, almost 34% health care workers either straight away refused to participate or did not give the filled up questionnaire back. Reluctance and apprehension shown by a sizable proportion of health care workers to respond on such an issue itself speaks a lot. Nonetheless, accepting this limitation of possible sample-bias generated by this unresponsiveness; the present study is based entirely on the analysis of duly filled up questionnaire voluntarily submitted by a total number of 115 health care workers.

On the parameter of HIV/AIDS related knowledge, it was observed that those who have attended some kind of formal training program earlier could perform better than untrained; the overall level of knowledge among health care workers was however found quite satisfactory as 65-80% nurses and doctors could give all correct responses.

In spite of a satisfactory level of knowledge, the most striking finding of the present study has been the opinion expressed by more than 70% of the health care workers, more of trained health care workers, that HIV testing should be done for all patients admitted to hospital which was far more than the figure obtained in the study of Andrewin et al. [4] Almost 90% also felt that they should be tested for HIV before an invasive procedure or surgery. 85.21% of the participants were also keen on the informed consent from the patient before testing his/her blood for HIV. Although, majority of nurses have expressed this opinion as compared to only half of the doctors; they were also of the opinion that if patients HIV sero-positive status was known, hospital could take extra precaution to prevent its transmission to other patients as well as health care workers. In the light of the fact that the mandatory testing of patients at the time of admission or as a pre-surgical testing has been stated as counterproductive by National AIDS Control Organization, India and has strictly been discouraged as well as such testing can only give them a false sense of security and health care workers have to observe

standard precautions during the patients management irrespective of his/her sero-status; the opinion expressed by majority of participants is not only surprising but shocking too. The main concern involved with the pre-surgical or mandatory testing would be an increased discriminatory attitude shown by the participants after HIV status is known. The present study however indicated that almost 75% of participants believe that HIV-seropositive should not be isolated and treated away from other patients, 94.78% of participants were comfortable providing their services to HIV/AIDS patients and 92.17% said that they were comfortable putting a drip in someone who was showing signs of AIDS which was similar to the finding of Andrewin et al. [4] More than 93-95% of the participants, more nurses than doctors, have also mentioned that they would give all the patients the same amount of attention regardless of their HIV status and they would never let another health care worker work on a patient just because they suspected him/her to have HIV. It may also be noted that more such responses have come from the trained health care workers than untrained as well as more from Government/ Semi-government hospitals than private hospitals. The responses related to patients' management are quite positive and heartening; however, the risk of possible discrimination due to preand mandatory surgical testing cannot be underestimated and the wide misconception regarding the same needs to be specifically addressed.

Maintaining confidentiality of the sero-status of the patients is an important responsibility of health care workers. One's HIV sero-status can only be informed to the spouse after his/her consent and only to other health care workers who are involved in the management of the patient.

Participants responses related to maintaining confidentiality vary widely and were not very satisfactory. Opinions of participants were equally divided on the issue of notifying relatives and sexual partners of HIV/AIDS patients about their status without his/her consent. Fifty percent agreed to it, while 45.22% disagreed/strongly disagreed to the same. Although, 24.34% of participants disclosed the HIV status of a patient to a colleague who was not involved in the management of the patient; 20.86% of the respondents agreed that they had disclosed a patients HIV status to a friend some or the other time. The practice of disclosure of HIV status to a friend was found significantly higher amongst the nurses (25.4%) as compared to that amongst doctors (15%). The responses from trained as well as untrained health care workers were not significantly different on these issues.

Forty eight percent of the participants, more nurses than doctors, have expressed an opinion that a health professional with HIV/AIDS should not be working in any area of health care that requires patient contact. It is worrisome that almost a half of the health care workers, particularly nurses, believe in such a discriminatory act. 23-24% also feels more sympathetic toward people who get AIDS from blood transfusions than those who get it from intravenous drug abuse and have little sympathy for people who get AIDS from sexual promiscuity. Such attitudinal problems among health care workers should be addressed by specific interventions.

Recent literature confirms that stigma and discrimination does exist in the society in various forms. Paudel et al. in his systematic review of the literatures observed that women living with HIV/AIDS (WLHA) in a number of different countries were experiencing high levels of stigma and discrimination from friends, family, community and even health workers. One of the biggest concerns raised from the review was the discrimination faced by WLHA from health workers. It was suggested by the reviewers that health care workers must be educated about their responsibility so they do not perpetuate negative attitudes towards persons living with HIV. The review also highlighted the need of intensive training of health care personnel to treat WLHA without discrimination and provide them quality of care [9]. In his qualitative study Array et al confirmed the persistence of stigma and, consequently, discrimination in health care settings against Sub-Saharan African migrant women with HIV [10].

In the present study, it is quite contradictory that majority of the health care workers, found good at HIV- related knowledge and were not having discriminatory attitude; but many of them failed to maintain confidentiality. Therefore, the issue of confidentially has to be constantly emphasized to the health care workers by the hospital authority to bring out a change.

## CONCLUSION

The study targeting nurses and doctors of Anand district, Gujarat consisted of a questionnaire to assess the level of knowledge pertaining to HIV/AIDS, stigma and discrimination against HIV/AIDS patients by judging their attitude and practice. The level of knowledge was considerably good. However the attitude towards issues like mandatory HIV testing, revealing of HIV status, and not allowing working of sero-positive HCW in areas requiring patient contact did have varying levels of stigmatizing response. In terms of practice the most discriminatory response was seen for question on disclosing of HIV status of patient to a colleague who was not involved in the management of the case and also to a friend. This calls for strong regulation of healthcare information and its protection, in terms of some nationally or institutionally mandated guidelines or policies. It was seen that training on HIV/AIDS did have some benefit on the responses of the participants; however the response was not significant in terms of some selected questions on attitude and practice like mandatory HIV testing. This highlighted the need for framing a better training program which could not only improve the knowledge but also improve the attitude and practice of these HCWs since they have a significant role in fighting the pandemic of HIV/AIDS.

## ACKNOWLEDGEMENT

The study was undertaken under the Short Term Studentship (STS) project held by Indian Council of Medical Research (ICMR) but was not supported, financially or in any other way, by the ICMR.

## REFERENCES

- 1. Roseval W. HIV/AIDS stigma and discrimination among nurses in Suriname. Interamerican Journal of Psychology. 2007; 41(1).
- 2. MacPherson P, Webb EL, Choko AT, Desmond N, Chavula K, Mavedzenge SN, Makombe SD, Chunda T, Squire SB, and Corbett EL. Stigmatising attitudes among people offered home-based HIV testing and counselling in Blantyre, Malawi: construction and analysis of a stigma scale. PLoS One. 2011 Oct 26;6(10):e26814.
- 3. Nkansa-Kyeremateng B, Morgan Attua E. Stigmatizing Attitudes towards People Living With HIV/AIDS: A Comparative Analysis of Religious Adherents of Urban Sprawling and Industrial Communities of Ghana. International Journal of Academic Research in Business and Social Sciences. 2013, Vol. 3, No. 8.
- 4. Andrewin A, Chien LY. Stigmatization of patients with HIV/AIDS among doctors and nurses in Belize. AIDS patient care and STDs. 2008 Nov 1;22(11):897-906.
- Maman S, Abler L, Parker L, Lane T, Chirowodza A, Ntogwisangu J, Srirak N, Modiba P, Murima O, Fritz K. A comparison of HIV stigma and discrimination in five international sites: the influence of care and treatment resources in high prevalence settings. Social science & medicine. 2009 Jun 1;68(12):2271-8.
- Genberg BL, Hlavka Z, Konda KA, Maman S, Chariyalertsak S, Chingono A, Mbwambo J, Modiba P, Van Rooyen H, Celentano DD. A comparison of HIV/AIDS-related stigma in four countries: Negative attitudes and perceived acts of discrimination towards people living with HIV/AIDS. Social science & medicine. 2009 Jun 1;68(12):2279-87.
- 7. Mahendra VS, Gilborn L, George B, Samson L, Mudoi R. Reducing AIDS-related stigma and discrimination in Indian hospitals.
- 8. United Nations Development Programme Fact Sheet. Preparatory assistance for stigma reduction and HIV prevention among sexual minorities.

United Nations Development programme India, March 2009. Website:http://data.undp.org.in/factsheets/hiv/Stig ma-Reduction-HIV- Prevention.pdf as on January 18, 2011.

- 9. Paudel V, Baral KP. Women living with HIV/AIDS (WLHA), battling stigma, discrimination and denial and the role of support groups as a coping strategy: a review of literature. *Reproductive Health*. 2015;12:53.
- 10. Arrey AE, Bilsen J, Lacor P, Deschepper R. Perceptions of stigma and discrimination in health care settings towards sub-saharan african migrant women living with hiv/aids in belgium: a qualitative study. J Biosoc Sci. 2017;49:578-596.