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A study of knowledge and attitude of health care providers working at tertiary care hospitals of Lahore, Pakistan (having HIV/AIDS treatment facility) towards HIV/AIDS.

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ABSTRACT

A very few health care providers look after HIV/AIDS people because of their poor knowledge and either their lack of positive attitude or usually both. The rationale of this study was to evaluate the knowledge and attitudes of health care providers (tertiary care hospitals in Lahore, having HIV/AIDS Treatment Facility) towards patients with HIV/AIDS. In this cross sectional study, a random sample of 180 healthcare providers was assessed for their knowledge and attitudes. In the questionnaire of knowledge, items were measured in the form of dichotomous scale. Whereas in the five domains of attitudes, items were measured as a five-point likert scale ranging from strongly disagree to strongly agree. Results were discussed in the outlook of two variables which showed that the presence of negative attitude and lack of awareness increase the level of stigma and discrimination. HIV in our country needs positive attitude of rendering care and effective control measures by creating awareness in the community. The study reinforced the need for an ongoing education focused on experiential learning, and professional socialization.
Key words: Human Immunodeficiency Virus (HIV), Acquired Immune Deficiency Syndrome(AIDS), People Living with HIV/AIDS (PLHIV). Knowledge, Attitude

INTRODUCTION

Health care providers are the key components of any health care system. Patients take them as angles and consider them as redeemer for their health and life. Undoubtedly they perform a duty of rescuer but their attitude towards certain diseases like HIV/AIDS, is terribly stigmatizing and discriminatory that some time they strait refuse to treat HIV/AIDS infected patients. This kind of behavior is prevailing in developing countries, this may because of the stigma attached to the disease or lack of information about the disease. Research indicates that the knowledge and attitude of the medical health care providers is an important element of the primary health care of HIV/AIDS patients. Cultural norms can influence the attitudes of health care provider towards HIV/AIDS positive people. Beliefs can also interfere in providing health care and treatment to the HIV/AIDS patients. A study showed that the issues related to sexual behavior or practices, sense of guilt, responsibility, conditional care, discriminatory treatment and care should be assessed and sufficient education and knowledge of large-scale service, skill enhancement and support should be provided to the professional health care providers. But only persistent educational interventions and improved clinical practice is not always guaranteed for the better service provision.[1-2] Another study with doctors, medical students and assistants of nursing at Madagascar, identified gaps in the awareness of the participants and found that in the understanding of the transmissibility of HIV paramedics and doctors were different. Respondents show same negative attitudes toward HIV positive patients.[3] A Nigeria study was conducted on doctors, nurses and non-health care providers and a significant lake of knowledge in all groups was identified but the doctors were better than others in their level of knowledge. One

in three nurses were reluctant in treating and providing care to AIDS patients, whereas half of them do not become part of the delivery of birth of HIV positive patients.[4] Job satisfaction related factors including appropriate opportunities for training, social identification, and significant meaningful task. Factors related to job dissatisfaction included insufficient remuneration, lack of reinforcement and unsupported behavior of supervisors, stress related to the high work load, fear of carrying infection, and stigma of being associated with (PLWHA) lead to poor management of PLHIVs. On the basis of these results an adjusted Specter job satisfaction model was developed for workers in health services against HIV.[5] In Nigeria, HIV/AIDS related stigma was considered higher and low acceptance for people living with HIVs and AIDS was observed. The infected peoples believe that this was because of the fear of getting infection, low socio economic situation, unsympathetic behavior of others.[6] Another study of stigma and discrimination shows higher scores on stigma: 66.4 percent, with extra safety measures, 52.3%, fear of HIV transmission at work, was reported by the 49.4%of participant, 39.0% of the respondents of the study reported their concern for insufficient security, 34.4% feel uncomfortable the presence of PLHIV and 31.1 made unethical informal disclosure of HIV/AIDS. Without consent for test and disclosure of the results of testing, and refusal to treat the HIV/AIDS patients was identified even in the designating HIV treatment and care institution. A complete and comprehensive knowledge of HIV, sufficient support, appropriate practice on discrimination related stigma, degree or more, the availability of ART services in establishment of health care and non-dutiful were observed as negative predictors of stigma and discrimination.[7] A survey was conducted on doctors who got their graduation in 1984 or previously had encounter with fewer HIV/AIDS clients, were having little knowledge about the disease, most of them were practicing to test an individual for HIV/AIDS without taking consent and were less liable to take any training course continues on HIV/AIDS education. In general, knowledge about clinical indications of HIV/AIDS was reported as low, and 76 % were lacking in sufficient skills consultation and above 80 % of physicians were easy in the care HIV/AIDS patients. Whereas 95% of consultant were not agree bring out the HIV test results without the permission of a patient, about 33% were on to test without taking consent if the patient is critically ill, and 15% of the physician reported that if they come to know that the patient is form high risk population, in case of insidious procedure they would test the patients without taking . In service only 53% of physicians had attended any HIV / AIDS training program during 1995 and 1999.[8]

While providing care to patients with infectious diseases, previously nurses were considered to be on risk of getting infection. In providing care for patients nurses are required to have a higher level of knowledge and extraordinary skills. The only infectious nature of the virus human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) does not refrain from caring the HIV/AIDS patients, but there are other factors too, as fear, ignorance and homophobia. The study suggested that professional associations of nurses, administrators and educators should play an important role to help nurses in acquire the comprehensive knowledge and adequate skills required to provide care.[9] Prevention of HIV infection in developed countries has been achieved by changes in behavior among high-risk groups and ensures the safety of the blood supply. This requires proper guidance and appropriate training of health care workers who may in turn educate the public and train volunteers at the community level.[10] AIDS related studies carried on health workers in different parts of the world have revealed the presence of apparent discomfort or injury among health care workers who do not have a good knowledge of different aspects of infection HIV and AIDS. Denial of the existence of AIDS and the tendency to regard AIDS as other problems remain a problem for countries development. A twofold study, to determine the level and nature of AIDS-related health personnel and to identify areas of weakness among staff of health care (because of ignorance, predisposition negative attitudes and beliefs) so that appropriate measures could be taken to remedy the situation.[11] It is the main duty of nurses' professional associations, educational institutions and administrators to provide opportunities to acquire adequate knowledge and skills essential to give care, and to discover feelings about different lifestyles.[9] The training of Physician in Barbados should attend all the aspects related to HIV/AIDS care, as well as clinical and emotional aspects. For public sector physicians to attend such training on HIV/AIDS should be obligatory, and medical school should include the comprehensive and detailed content of HIV/AIDS in their curriculum.[8]

A study of knowledge and attitude of health care providers shows 30 % to 98 % participants were who have had prior contact with HIV / AIDS patients and the lowest in India, then Thailand and Canada, and the United States was on highest . uncomfortably on scene a physical examination of HIV/AIDS patient were 24 %, 25 %, 9% and 4%, respectively but lowest was observed in US. Average score on knowledge of HIV / AIDS was above 80 percent in all four countries but Canada and US was above 90 percents. The modes of transmission of HIV infection was correctly identified by almost all the respondents. Only 67% of Indian health care professional considered a serological screening test false negative, as compare to 98% of Canadian health care professional. A serological screening test false positives concept was included by Canada and the United States, only 78 % and 76% respectively. 32% of the Indians health care professional was having knowledge about asymptomatic stage of HIV infection whereas 74% Canadian health care professional were aware of asymptomatic stage. Despite of the concerns of becoming infected, health care professional of these countries with low prevalence of HIV infection reported a high ethical obligation in taking care of HIV/AIDS patients.[13] Despite the knowledge about disease doctors had biased attitude towards patients as they believed that their offices should be separated so they might not get this infectious disease.[13]

Researches indicate that the knowledge leads towards un-discriminatory attitude towards patients. The health care providers who do not get appropriate knowledge and training, they cannot satisfy patients' needs properly. HIV/AIDS is a discriminatory filed of work and health care providers do have their own stigmatizing attitude towards HIV/AIDS patients,

which makes them reluctant in providing even primary care to the patients.[5]

In Pakistan HIV statistics has increased; it was 0.07 % in 1995 and was 0.08 % in July 1997 (Personal communication). About 1.7 million individuals (Blood donors and High risk groups) to July 1997, there were 1,232 HIV and 132 AIDS cases. These figures show that HIV / AIDS have become practice outside of the hospital even if at the moment magnitude may appear insignificant. At this stage, prevention is the most crucial and important weapon against this deadly epidemic.[14] Najmi[10] conducted a study in a teaching hospital of Lahore Pakistan to assess the level of awareness of health care providers about various preventive measures of HIV/AIDS and to find out their attitudes and practices while dealing with HIV/AIDS patients. He found that most of the respondents were knowing about the preventive measures against sexual transmission, but most of them were not clear about that how the spread can be stopped through prenatal transmission, blood, syringes, and sterility of other instruments. 46.5 % of the respondents were not knowing about the precautionary measures that a health care provider should take while attending HIV/AIDS patients and 53.03 % given unsuitable responses about their everyday jobs and practices about HIV/ AIDS patients. As an effect of confusion and unawareness, 40.90 % responses of the respondents were wrong and unsuitable about their attitudes of HIV/AIDS.[10]

General practitioners in Pakistan have positive attitude towards prevention and management of this sexually transmitted disease but they have insufficient knowledge about it.[15]

Similar results were reported in another study that some of doctors and nurses have the knowledge about the causes of the AIDS but some of them were unaware of it. Furthermore the study revealed that half of the medical doctors have adverse and unfavorable attitude towards this disease.[16]

Review of the literature showed that the health care providers who have adequate knowledge about HIV/AIDS they are more attentive towards patients care. There has been a lot of research work has been done in the other European and Asian countries but there is not particular data available about the level of knowledge of health care providers about HIV/AIDS and their response towards it. Though very limited research data is available in this field but general observations are like; doctors and nurses in Pakistan have a little knowledge about HIV/AIDS and their attitude is biased and stigma inducing towards patients. The current study is aimed at to assess the level of knowledge and attitude of doctor and nurses (who work in tertiary care hospitals and which have HIV/AIDS treatment facility) towards HIV/AIDS patients so that evidence based recommendation would be proposed to increase the level of knowledge and better attitude towards HIV/AIDS patients.

AIMS

- To evaluate and find out the relationship between knowledge and attitude of health care providers among HIV/AIDS.
- To assess the level of expertise or does knowledge influences their attitude and comfort in rendering care.

OBJECTIVES

* To explore the factors that associated with knowledge and attitudes about HIV/AIDS among healthcare providers in tertiary care hospitals.

* Find out the causes that could influence Healthcare provider's attitude and global comfort.

METHOD

Research Design

A cross sectional study conducted with purposive sampling by interviewing 180 healthcare providers from different tertiary care hospitals of Lahore through a questionnaire based on level of knowledge and attitudes toward patients.

Development of Knowledge Scale of HIV/AIDS for Healthcare providers

An indigenous scale for measuring level of knowledge in healthcare providers was developed in the following steps.

Phase 1: Exploring Phenomenology

In the first step one to one interview was conducted with healthcare professionals and consultants regarding HIV/AIDS to explore phenomenology about the knowledge and awareness.15 participants through random were selected from HIV/AIDS consultants and healthcare provider. The participants were asked to provide information about basic knowledge of HIV/AIDS. The information was gathered with the help of unstructured interview with open-ended questions and acquired information was used to formulate the questionnaire of basic knowledge and awareness, which healthcare providers must have to deal with HIV/AIDS.

Empirical Validation

After exploring phenomenology, the next phase was of empirical validation. At this phase, 10 participants were randomly selected, five participants were healthcare provider and five were HIV/AIDS consultants. They were provided 28 items based questionnaire for scoring each items either it was appropriate to measuring the knowledge and awareness regarding HIV/AIDS and also to check the face validity of each item. The interview was conducted simultaneously

Table 1: Mean and Standard Deviation of job experience of the Participants (N=180)

Variables	M	SD
Experience	3.2	3.14

Table 2: Frequency and Percentage of Demographic Characteristics of Participants (N=180)

Demographic variables	Total f (%)
Gender	
Male	37(20.6)
Female	143 (79.4)
Ward	
Medical ward	101 (56)
Gynecological ward	79 (44)
Job title	
Doctors	134 (74.4)
Nurses	46 (25.6)
Exposure	
Yes	138 (76.7)
No	42 (23.3)

with all participants. The experts were instructed to mark each item in the light of their experience that to what extent these items fulfilled the criteria of knowledge and awareness regarding HIV/AIDS. The maximum score of each item was 5 and the minimum was 0. After the experts review, items rated on 0 were excluded. Finally 22 items were selected from 28 items. The list of these items was transformed into the self-report measure in a checklist form and given the name of Knowledge of HIV/AIDS among Healthcare Providers.

Pilot Study

A pilot study was carried out to ensure the comprehension level of the questions mention in the scale. Sample size for this phase was consisted of 12 healthcare providers. The participants were further divided into two groups, 6 participants were who have exposure to work with HIV/AIDS and 6 were general healthcare providers, who have no exposure of working with HIV/AIDS. The knowledge and awareness questionnaire was administered. Participants were informed about the purpose of administration of the questionnaire and no ambiguity was reported in the comprehension, so the scale was finalized for further administration.

Table 3: Inter-correlation of five items of Attitude toward HIV/AIDS scale and total of Knowledge and awareness toward HIV/AIDS among Healthcare Providers scale on (N=180)

Variable	Knowledge	Working	Emotions	Effectiveness of Care	Fear of Contamination	Readiness to Care	Attitude total
Knowledge	---	.13	.02	-.01	.65***	.12	.11
Working with HIV/AIDS	---	---	.12	.16	.13	-.07	.44***
Emotions toward HIV/AIDS	---	---	---	.14	.05	-.02	.58***
Effectiveness of care	---	---	---	---	-.02	.16	.36***
Fear of contamination	---	---	---	---	---	-.02	.06
Readiness to care	---	---	---	---	---	---	-.02
Attitude total	---	---	---	---	---	---	---
M	15.51	9.71	19.92	8.59	1.66	6.41	50.68
SD	3.24	2.34	4.18	1.35	.90	2.06	6.93

**p< .05, ***p< .01

Table 4: Mean, standard deviation, t and p values of doctors (N=134) and nurses (N=46) of factors of knowledge towards HIV/AIDS among healthcare providers

Variable	Job title	M	SD	T	p<
Knowledge	Doctors	16.08	3.21	4.22	.001 ***
	Nurses	13.85	2.75		

***p< .001

Table 5: Means, Standard Deviations, t and p Values of job tile of the Participants on Attitude Toward HIV/AIDS scale

Variable	Ward	M	SD	T	P
Attitude	Doctors	50.82	7.00	.45	.65 (ns)
	Nurses	50.28	6.82		

*p< .05, **p< .01

Table 6: Mean, standard deviation, t and p values of healthcare providers in medical wards (N=134) and gynecological ward (N=46) on total score of Knowledge and Awareness towards HIV/AIDS among healthcare providers scale

Variable	Ward	M	SD	T	P
Knowledge	Medical	15.1	2.68	15.6	.120 (ns)
	Gyne	15.9	3.81		

Adaptation Questionnaire to Assess Attitudes of Healthcare Providers towards HIV/AIDS

This questionnaire was used to assess attitudes of healthcare providers towards HIV/AIDS. This questionnaire was based on two sections: demographic items and statements on attitudes towards HIV-infected patients (20 items). The five subscales were as emotions towards HIV, working with HIV, effectiveness care, fear of contamination and willingness to care. All the items measured on a five point Likert scale ranging from strongly disagree to strongly agree and negative attitudes were scored reversely.

Main Study

Participants

Through purposive sampling Healthcare providers from different tertiary care hospitals of Lahore (Jinnah, Mayo and Services hospital), were included particularly from Gyne and Medical units.

Procedure

Three tertiary care hospitals were approached for data collection. The permission was taken from the authorities of each hospital by showing letter explaining the purpose of the study and its implications. The research protocols were also showed to authorities with reassurance of confidentially and ethical considerations. With the permission of Hospital authorities, the participants were being approached in medical and gynecological wards. The data was collected on one to one basis with brief introduction and purpose of the study. Participants were allowed to ask questions if they have any. Each participant was given the right to include or exclude from the study at any stage of study. It took almost 15 minutes to complete the questionnaires.

RESULTS

Sample Description

This section of the study describes the demographic characteristics of the participants of the main study (N=180) including the description of Means and Standard Deviations of demographic characteristic of the sample.

Main Hypotheses Testing

Hypotheses 1 & 2

It is hypothesized that there is a significant relationship between knowledge and attitude of healthcare providers towards HIV/AIDS.

It is hypothesized that the more knowledgeable the healthcare providers, the more they have positive attitude towards HIV/AIDS patients.

The result shows that there is significant positive relationship between knowledge and fear of contamination so level of knowledge has negative relation with effectiveness of care. Though working with HIV/AIDS and attitude towards HIV/AIDS are significantly positively correlated with each other. However readiness to care is negatively associated with working with HIV/AIDS, emotion and fear of contamination. Emotions towards HIV/AIDS and readiness to care are also positively correlated.

Hypothesis 3

It is hypothesized that doctors are more knowledgeable as compared to nurses.

Secondary Hypotheses Testing

Hypotheses 1

It is hypothesized that there is significant relationship in attitude of doctor and nurses.

The result shows that there is no significant relationship on attitude scale of doctors and nurses toward the HIV/AIDS.

Hypotheses 2

It is hypothesized that there will be a significant difference in the level of knowledge of healthcare providers in wards (Medical/Gyne) in hospitalshe results showed that there was no significant difference in the level of knowledge of healthcare providers (medical and gynecology)

Results show that there were no significant difference in the level of knowledge of healthcare providers of both units but only on a very few questions medical doctors have better understanding.

DISCUSSION

The study was aimed at to explore relationship of level of HIV/AIDS knowledge with the attitude of health care providers, including doctors and nurses, serving in medical and gynecological wards at tertiary care hospital which has HIV/AIDS treatment center. Their attitude toward HIV/AIDS patients was also tested in terms of working with HIV, their emotions toward HIV/AIDS patients, care and effectiveness,

Table 7: Mean, standard deviation, t and p values of healthcare providers in medical wards (N=134) and gynecological ward (N=46) on question wise score of Knowledge and Awareness towards HIV/AIDS among healthcare providers scale

Questions	Ward	M	SD	T	P
K_1	Medical	.98	.14	.73	.46
	Gyne	.96	.19		
K_2	Medical	.66	.47	.28	.77
	Gyne	.68	.46		
K_3	Medical	.90	.30	.83	.40
	Gyne	.86	.34		
K_4	Medical	.91	.28	1.7	.07
	Gyne	.97	.15		
K_5	Medical	.34	.47	.42	.67
	Gyne	.31	.46		
K_6	Medical	.93	.25	.90	.36
	Gyne	.96	.19		
K_7	Medical	.77	.42	.78	.99
	Gyne	.77	.42		
K_8	Medical	.92	.27	.84	.43
	Gyne	.88	.31		
K_9	Medical	.87	.33	.76	.39
	Gyne	.91	.28		
K_10	Medical	.47	.50	.94	.35
	Gyne	.40	.49		
K_11	Medical	.76	.42	-2.5	.44
	Gyne	.81	.39		
K_12	Medical	.82	.38	-2.0	.34
	Gyne	.87	.33		
K_13	Medical	.36	.48	.50	.01**
	Gyne	.55	.49		
K_14	Medical	.77	.42	.25	.04*
	Gyne	.63	.48		
K_15	Medical	.54	.50	2.0	.61
	Gyne	.50	.50		
K_16	Medical	.74	.43	.99	.79
	Gyne	.75	.43		
K_17	Medical	.31	.46	4.8	.03*
	Gyne	.46	.50		
K_18	Medical	.16	.37	.46	.31
	Gyne	.22	.42		
K_19	Medical	.75	.43	.66	.04*
	Gyne	1.0	1.4		
K_20	Medical	.48	.50	1.1	.43
	Gyne	.54	.50		
K_21	Medical	.64	.48	2.4	.01**
	Gyne	.81	.39		
K_22	Medical	1.0	.93	.83	.38
	Gyne	.93	.24		

*p< .05, **p< .01

fear of infectivity and readiness to care to patients. Overall, the results of this study showed that there is no significant relationship between knowledge and attitude of healthcare provider toward HIV/AIDS.

It was found that the knowledge of healthcare providers regarding the illness of HIV/AIDS was increased from the past years as Massiah[8] concluded that knowledge of the clinical indications of HIV/AIDS is low, but present study showed that they have adequate knowledge and awareness about HIV/AIDS. But their readiness to care is negatively associated with HIV/AIDS that may because of the fear of contamination as in developing countries like Pakistan appropriate safety measure are not available which also lead to lack of effectiveness of care. The knowledge of the doctors was better as compared to nurses, in the long-run it can be harmful as usually in the hospital setting, nurses deal the patients after the doctor and their lack of knowledge can lead poor management of HIV/AIDS patients and in return it can increase the risk of HIV/AIDS spread. Huerta[9] suggested that the mishandling of the nurses to HIV/AIDS can affect the lifestyles of other patients.

The attitude of the healthcare provider towards HIV/AIDS patients was found biased regardless of their knowledge as the same was concluded by[13] that the knowledge of the professional did not affect their biased attitude toward this illness. If this is the case that knowledge does not affect attitude then it may be the perception of the disease is causing stigma and decimation. The attitude scale was further divided into five items, i.e. working with HIV/AIDS, emotions toward HIV/AIDS, effectiveness of care, fear of contamination and willingness to care. The results on the first item showed that the healthcare provider have positive attitude of working with HIV/AIDS patients. On the second item, the results suggest that the healthcare provider had positive emotions toward these patients. Similarly, on third item, they have positive scores, while testing on fear of contamination, they showed negative findings. It was found that the nurses have more fear as compared to doctor as they have to deal with blood and testing. It may because nurses have limited precautionary measures due to limited or unavailability of proper care in government hospitals. Negative willingness of care was also found in both, who have and have not knowledge and emotionality towards HIV/AIDS, as they consciously do not want to provide care and management.

Knowledge and attitude has no significant relationship with each other. The research showed that the knowledge does not affect the attitude as doctors have high knowledge, but they have biased attitude mainly with contamination.[9] Hussain suggested that the general practitioner have attitudes in positive terms, but they have low knowledge of disease and these studies supported the findings of the current study.[16]

The presence of insufficiency of appropriate management might be due to the fact that most of our healthcare providers do not attend special training sessions regarding diagnoses and management of sexually transmitted diseases.

CONCLUSION

The prevalence of HIV/AIDS infection is surging and health care workers are increasingly involved in a range of its prevention and care activities. In order to minimize the discrimination experienced by people with the disease, it is important that the concerns of health workers should be addressed. Health care workers, including doctors, nurses and have a very important role to play in reducing HIV/AIDS-related stigma but negative attitudes and lack of understanding are real issues contributing to stigma from health workers. In their unique positions, health care providers have a responsibility to provide quality care and services without stigmatizing and without being judgmental.

It is therefore pertinent that all health care providers have access to up-to-date information on all aspects of HIV/AIDS, i.e. its modes of transmission, prevention, counseling and guidelines for safe practice. They should be competent to provide care and counseling to patients, know the universal precautions, protocols of providing health care to HIV/AIDS patients.

LIMITATIONS

The availability of HIV/AIDS specialists was limited so this study was focused on general healthcare provider.

Due to the sensitivity of the information regarding the knowledge and attitude, the hospital authorities did not allow the research to collect the data.

Due to the busy scheduled of healthcare provider and crowded environment of hospitals, healthcare providers were difficult to reach.

RECOMMENDATIONS

Refresher training courses should be conducted in order to enhance their knowledge and positive attitude. HIV/AIDS should be part of nursing courses.

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