

ASSESSMENT OF KNOWLEDGE ON POST EXPOSURE PROPHYLAXIS IN HIV AMONG DENTAL HEALTHCARE WORKERS

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ABSTARCT

HIV/AIDS is being considered as one of the major health problems and an occupational health hazard among healthcare professionals. Health care is associated with transmission of blood borne diseases like HIV, has always been an important public and medical concern worldwide. The present study was done to assess the knowledge among Dental Healthcare Workers regarding HIV and Post exposure Prophylaxis.

A purposive sampling survey was done among Dental Teachers, Students, Technicians, Nurses and Cleaning Workers at Government Dental College & Research Institute, Bangalore. Collected data were analyzed by using SPSS-16.50 version, Univariate analysis was employed to draw the significant inference.

The study shown, Dental Teachers & Dental students have satisfactory knowledge, but certain misconception is prevalent. But it was found that lack of PEP knowledge among Auxiliary Healthcare Workers like Nurses, Technicians, and Cleaning Workers.

Proper work practices, Continued Seminars and Workshops, Educational Display regarding HIV/AIDS & PEP is essential in preventing Accidental Needle Pricks and assure safe practicing methodology among dental health care workers.

KEYWORDS: PEP, HIV, CD4, HCWs, Dental

INTRODUCTION

Each day thousands of healthcare workers (HCWs), around the world, suffer accidental occupational exposures during the course of their role of caring for HIV infected patients. These injuries can result in a variety of serious and distressing consequences ranging from extreme anxiety to chronic illness and premature death for the individual involved. The most important response to this risk is to prevent as many of these injuries as possible, by constantly educating HCWs on the best methods for preventing injuries, by improving the safety of equipment and by working towards the optimal occupational health and safety environment. There is a wide range of blood borne infections that a HCW can be exposed to in the course of their work, including Hepatitis B and C (HBV and HBC), Cytomegalovirus, Epstein - Barr virus, malaria, and Human Immunodeficiency Virus (HIV). This latter infection is probably the most serious and causes the highest level of anxiety amongst HCWs. In many resource constrained settings, HCWs are managing an increasing number of HIV infected patients who come into the healthcare system for care and treatment. As integrated counseling and testing centre (ICTC) and antiretroviral therapies (ART) for HIV disease are expanding in resource constrained settings, the number of people who require invasive procedures is increasing, thus raising the potential risk of injury to HCWs and transmission of

HIV. In addition, as patients taking ART accrue the benefits of therapy and live longer, there will be an increasing patient load for HCWs, again increasing the potential for occupational exposure and transmission of HIV and other blood borne infections. The present study aims to find out the incidence of PEP, knowledge of PEP in Dental health care professionals in Bangalore city.

MATERIALS AND METHODS

A Purposive sampling of hundred respondents of health care workers viz., Dental doctors, Nurse and group-D employees were personally interviewed with written consent at Government Dental College and Research Institute, Bangalore, India during 2012. Primary data was obtained from open ended structured Questionnaire. Inclusion criterion rule was applied for the selection of individual respondent; each respondent double blinded procedure was framing for the collection of data. Direct interview and focus group interview was conducted. All respondent were ensured 100% confidentiality and met their Inclusion criteria. Collected data was analyzed by SPSS-16.50 Version. Univariate, Chi-square goodness of fit and one way ANOVA statistical method was used to draw the significant inference.

RESULTS

A total of 100 respondents out of which, Teaching faculty-20 Students -20 Technicians-20 Nurses and 20 - Group -D workers -20 were interviewed with written consent and primary data was obtained from structured questionnaires. Demographic profile and knowledge of PEP data were recorded. The mean age of the respondent was 36.63 ± 3.6 years, 85.21% were married, 95.21% literate and 35.21% lower income, 40.01% medium income, mean duration of serving of patients was 5012 ± 123.16 days. Sum of the total score of knowledge among PEP-HIV was 65.23 ± 25.10 in teachers, 51.63 ± 28.96 dental students and Nurse, 26.30 ± 5.60 in group D workers respectively. The associated risk factors of needle prick HIV infection were positively correlated with knowledge level ($r=0.76$) $P \leq 0.03$. Teachers, students and Nurse had satisfactory knowledge on PEP and statistically significant with Chi-squares goodness of fit -23.61 with 2df. The level of independence, psychosocial factors were negatively ($r=-0.056$) correlated with age, sex and knowledge level. The prevalence or incidence of needle prick was very less (0.23%) and statistically non significant ($P=0.089$)

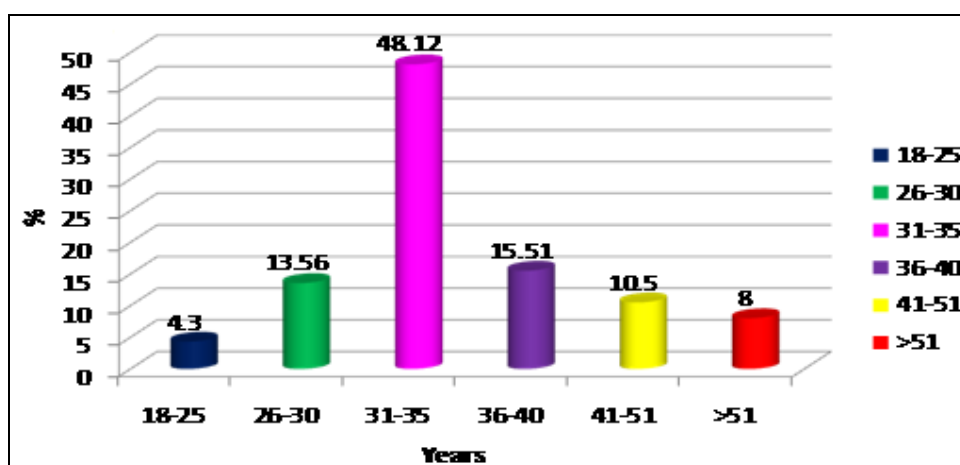


Figure 1: Age Group of the Respondent (N=100)

Different age group was documented shown in Figure 1, 18-25 years (4.30%) CI 95% 15-26, 26-30 years (13.56%) CI 95% 24-32 Yrs, 31-35 years (48.12%) CI 95% 29-38 Yrs, 36-40 years 15.51%, CI 95% 35-41 Yrs 41-51 years 10.50% CI 95 % 40.89-56 Yrs and >51 years 8.0% CI 95% 49-52 Yrs respectively. The age of the respondent was statistically significant $P < 0.05$ and positively correlated with knowledge of PEP.

Table 1: Descriptive Statistics on Indicator Variables of PEP-Knowledge Level

Variables	Health workers		P-Value
	Frequency	Percent	
Perceived cause of exposure to HIV risks :(n=100)			
Lack of protective barriers	58	33.3	P<0.05
Lack of Knowledge on standard precautions	31	17.8	P>0.05
Heavy work load	77	44.3	P<0.05
Others	8	4.6	P>0.05
Reasons for not using PEP: (n=100)			
Unaware of the existence of PEP service and protocol	48	33.8	P<0.05
Lack of understanding the value of reporting exposures	33	23.2	P<0.05
Fear of stigma and discrimination	46	32.4	P<0.05
Fear of judgement from colleagues	6	4.2	P>0.05
Uncertain about confidentiality	15	10.6	P>0.05
Lack of support and encouragement to report.	29	20.4	P<0.05
The PEP service is far	16	11.3	P>0.05
Negligence	1	0.7	P>0.05

As per the Tab(1) we ensured that, the knowledge level of PEP among HCW's ,highest percentile is recorded in heavy work load and burden 77(44.30%), Lack of protective barriers58(33.30%) P<0.05, Lack of Knowledge on standard precautions 31(17.18%) P>0.05, Unaware of the existence of PEP service and protocol 48(33.80%) P<0.05, Lack of understanding the value of reporting exposures 33(23.20%) P<0.05, fear of stigma and discrimination46 (32.40%) P>0.05, Uncertain about confidentiality 15 (10.60%) P<0.05, Lack of support and encouragement to report 29(20.40%) P>0.05, The PEP service is far better16 (11.30%) and negligence was very low and recorded only one respondent 0.70% P>0.05.

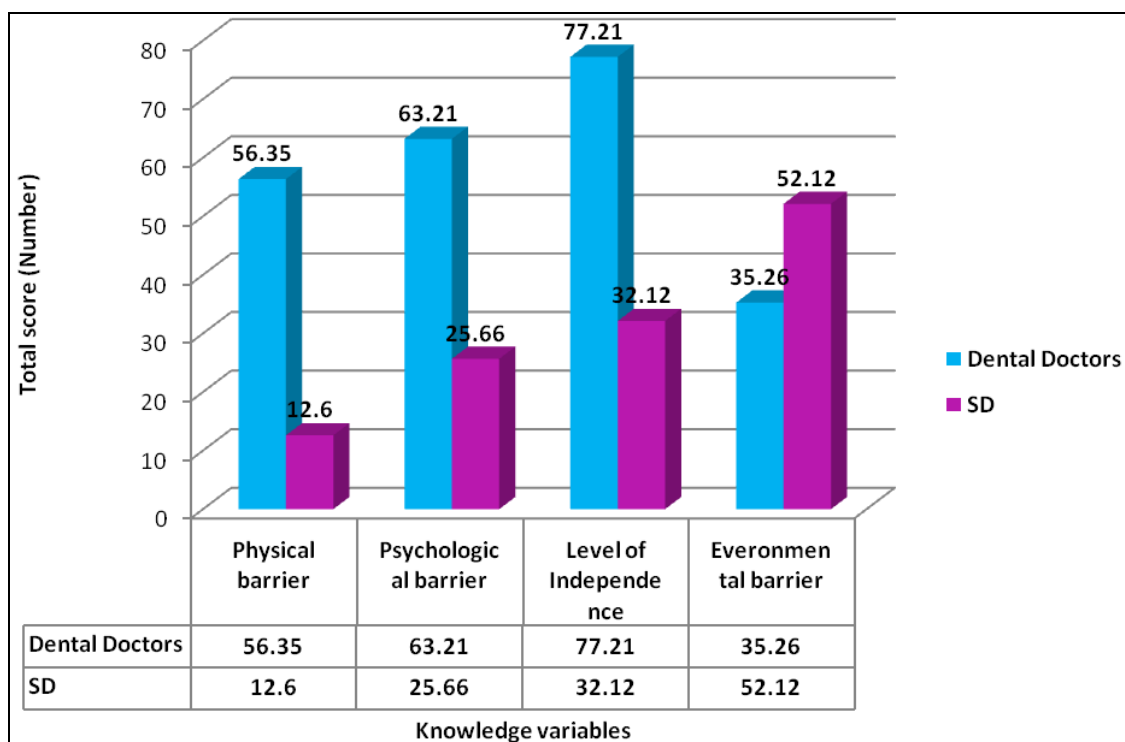


Figure 2: Status of Knowledge Level in Teaching Faculty/Dental Care Doctors

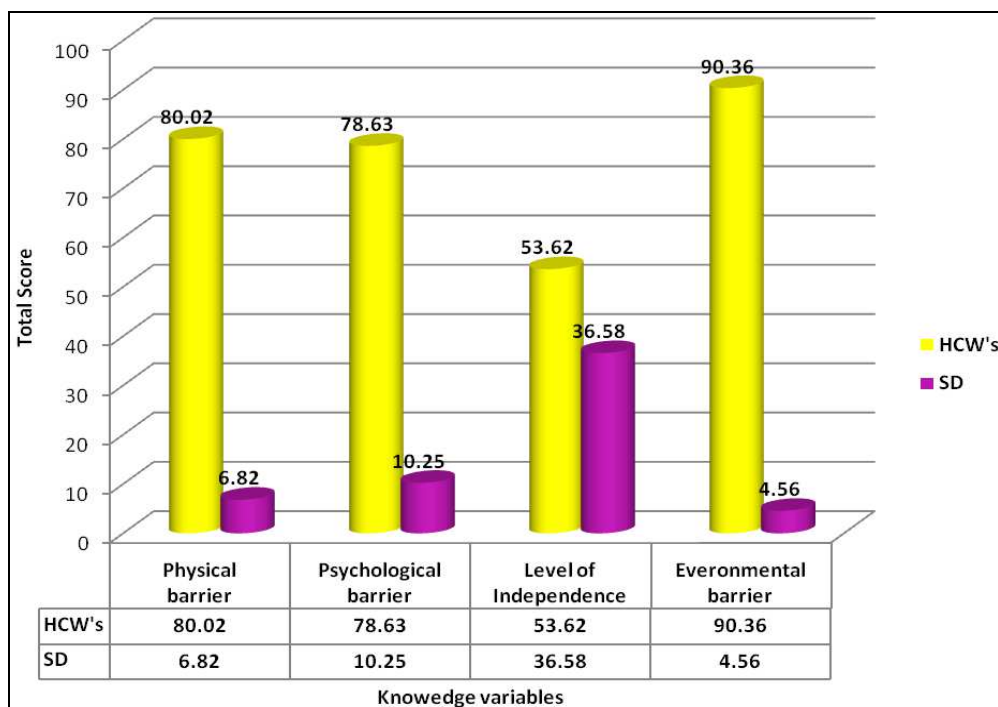


Figure 3: Status of Knowledge Level in Teaching Faculty/Dental Care Doctors

Different knowledge barriers was studied by using structured questionnaires, each variables of Knowledge level is included six sub type questions. Positive statement and negative statement has phrased and we have calculated the total scores of different categorical variables. Figure 2 and Figure 3 showed that, different barriers of PEP –knowledge of doctors and HCWs and it is documented Physical 56.35, 80.02 (SD-12.60,6.82), Psychological 63.21,78.63 (SD-25.66,10.25), level of independence 77.21,53.62 (SD 32.12,36.58) and environmental barrier 35.26,90.36 (SD-52.12,4.56) respectively. Post exposure prophylaxis was not associated with any of the workers’ socio-demographic and other variables ($P>0.05$) (Table 6). All discussants of the FGDs reported that PEP should be seen as a primary issue; otherwise the motivation and confidence of health workers could decrease. To the question about having information about PEP and source of information, some discussants responded that they had no information, some heard from friends informally and some other on training. One discussant said, “*we don’t know where to go and why should we report.*” The discussants also mentioned that lack of awareness of the existence of PEP, confidentiality problem, fear of stigma and discrimination, availability of provider initiated HIV counseling and test, that helps to determine the status of source patients and fear of ARV drug side effects as the causes for not to report/ resort for PEP. Needle prick injury and blood splash for the majority and amniotic fluid for some were among the incidents encountered. Almost all of the informants at different levels underlined the need to give ongoing training on HIV PEP, availing standard guidelines, referral linkages, and giving attention for the safety of health care pro-fessionals by the concerned authorities. Awareness creation, allocate separate fund, availing separate PEP center for confidentiality and convenience, proper documentation and reporting system and availing life insurance were also emphasized by the informants.

DISCUSSIONS

The Present study assessed the knowledge, factors associated with HIV PEP use among dental care doctors, teaching faculty and health care workers who are directly involved in the care of patients in the governmental Dental College and Research Institute, Bangalore-city. Considerably less proportions of each category of the health workers were

knowledgeable about PEP of HIV in this study area. The findings of this study are lower than the results of the study done in St Thomas's Hospitals, London indicated that only 8% of the doctors could name the drugs recommended in recent national guidelines and a significant proportion (43%) could not name any (7). Other literatures also supported that the knowledge about post-exposure prophylaxis among healthcare workers is poor (11, 12). This is an indicative of much work remained to be done to raise the awareness of health workers regarding PEP of HIV. The Indepth/FGDs of this study also substantiated the above issues. Large number of health workers reported as they have ever been exposed to HIV risk conditions ,the present study of needle prick prevalence was very less (0.023%) and statistically non significant (P=0.089). Staff still have the fear of stigmatization and afraid to know their HIV status, more so at the facility where they are working. All healthcare units should ensure to have adequate staff counselling and education about risk of infection after occupational exposure. Policies and procedures should be in place and the staff should be aware about the actions to be taken in the event of occupational exposure

CONCLUSIONS

Study revealed that the knowledge and practice/use of health workers about post-exposure prophylaxis against HIV was inadequate. Majority of health workers do have exposure to the risk of HIV predominantly to needle prick and considerable proportion of health workers exposed to blood and body fluid. However, only few of them used PEP. The need to establish and sensitize the HCWs .All-round the clock PEP should accessible and formal post-exposure prophylaxis centres is establish. The proper guideline along with raising awareness were underlined. Moreover availing adequate resources /protective materials, adhering to standard precautions, and availing health life insurance for health workers at all levels including, doing further study, which is stronger in determining cause and effect relationship of the variables, is also advisable.

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