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A study to assess the knowledge regarding using of personal protective equipment among house keeping workers at municipal corporation Vadapalani west zone

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Abstract

Solid waste management (MSWM) encompasses Planning, Engineering, Organization, Administration, Financial, and legal aspects associated with generation, storage collection, transfer and transport processing and disposal of Municipal solid waste which include household garbage and rubbish street sweepings sanitation residues, etc. Municipal solid waste also considered as chemical or biological refuse of domestic or consumer origin, considered potentially pathogenic to human and or the environment. Hence the study aimed to determine the knowledge regarding using of personal protective equipment among Municipal workers. Descriptive research design was employed with 50 samples matched the inclusion criteria and were selected by purposive sampling technique. Data collected from the samples on the level of knowledge was analyzed by descriptive and inferential statistics. The result drawn was mean and standard deviation of knowledge among using of personal protective equipment among municipal workers Mean= 9.4 Standard deviation =5.67. Hence the community health nurse plays a direct role in creating awareness on utilization of personal protective equipment among municipal workers.

Keywords: Assess, knowledge, personal protective equipment, municipal health workers

Introduction

The volume of healthcare waste (HCW) has dramatically increased over the last 30 years, with hospitals and medical centre across the world generating more waste than ever before [1]. In addition to the direct costs of HCW disposal, there are additional costs such as transporting BioHazardous Waste Material from Hospitals to sites where it can be safely disposed of, capital, maintenance, utility and management overhead costs [2]. The correct identification of HCW at source is important, as it must be deposited into specific containers that are then disposed of through incineration, sterilization, chemical disinfection or burial in a secured landfill site [3]. To reduce exposure to wood dust, the most effective control measures may not be present, or not work sufficiently. As a result, in many workplaces PPE is recommended as an immediate control measure, as the expense of providing PPE is relatively low and can quite easily be provided. The cost of face mask, coverall, glove, and other Personal Protective Equipments (PPE) is covered by the employer. Workers in the wood industry are recommended to wear appropriate face masks and eye protection in areas with high dust and formaldehyde exposure. Coveralls and industrial gloves are needed to protect the skin [4, 5]. The knowledge level of the participants on safety issues was affected by gender, safety training and work regulations [6]. Furthermore, use of PPE was affected by safety training, education, work regulation and their knowledge of safety information [6, 7]. In the textile industry, employment status was a determinant for PPE use, since permanent workers apply safe practice to a greater extent than temporary workers [6]. Furthermore, giving serious attention to the protection of waste handlers against personal injury and disease, through programmes that improve their fundamental understanding of the interactions between their work and health which is often overlooked at the workplace, will essentially ensure the maintenance of good health and well-being for all those at risk [8, 9]. It has also been observed that the increasing rate of fatalities among workers can be attributed to their lack of awareness of the potential sources of occupational diseases which are numerous and also due to the poor level of compliance to occupational health regulations; hence, poor work practices [10].

Hence the investigator chose this topic to assess the knowledge regarding use of personal protective equipments among municipal workers.

Methods and materials

The research approach adopted in the study was quantitative approach by using descriptive research design. A study was conducted after obtaining formal permission from the corporation sector. Samples who met the inclusion criteria were selected by using purposive sampling technique. Samples who do not understand Tamil or English, mentally and critically ill, were excluded from the study. Total number of samples was 50. The participants who consented for willing to participate were informed about the purpose of the study. Demographic variables were selected and knowledge assessed by collecting multiple choice questionnaires. The data were tabulated and analyzed by descriptive and inferential statistics.

Results

Regarding demographic variables, majority of them were between the age group of 20-30 years and majority belonged to primary education group and minority people belonged to the group of unmarried

Table 1: Level of knowledge regarding utilization of Personal Protective Equipment among municipal workers

Level of Knowledge	Frequency	Percentage
Inadequate knowledge	32	64%
Moderate knowledge	16	32%
Adequate knowledge	2	4%

Out of 50 samples frequency and percentage distribution of demographic variables on knowledge regarding using of Personal Protective Equipment among municipal workers. This study shows the level of knowledge regarding using of Personal Protective Equipment has percentage of Inadequate Knowledge – 32 (64%) Moderate Knowledge - 16 (32%) Adequate Knowledge - 2 (4%) respectively.

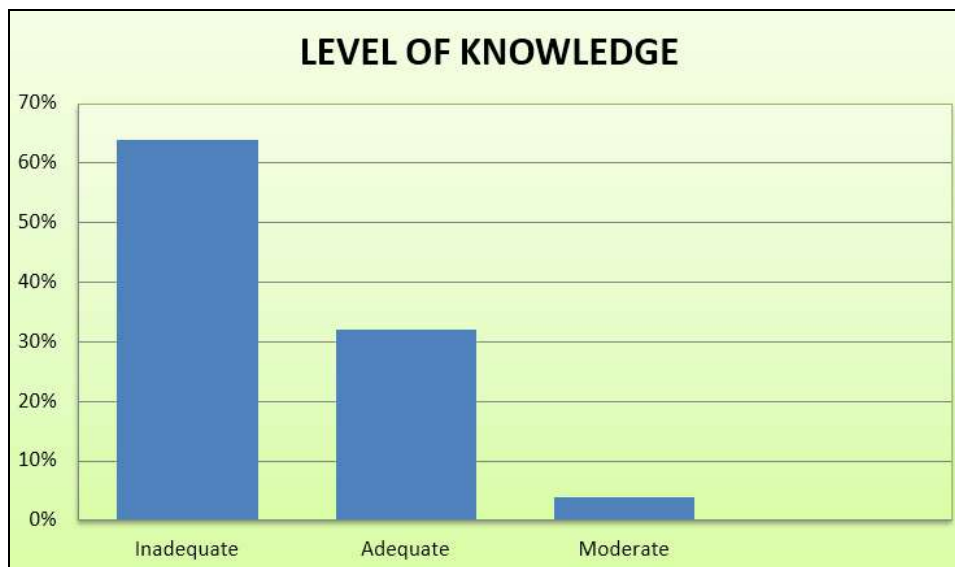


Fig 1.

Table 2: The mean and standard deviation for the level of knowledge regarding using of Personal Protective Equipment among municipal workers at vadapalani.

Mean of level of knowledge regarding using of personal protective equipment	Standard deviation regarding using of personal protective equipment
9.4	5.6

The above table reveals that mean and standard deviation of knowledge among using of personal protective equipment

among municipal workers Mean – 9.4 Standard deviation – 5.67.

Table 3: Association between knowledge and selected demographic variable on usage of personal protective equipments among multiple health workers.

Demographic variables	χ^2	Table value	Inference
Age	13.57	12.6 df =6, p<0.05	NS
Education	20.646	12.6 df =6, p<0.05	S
Occupation	0.607	15.5 df =8, p<0.05	S
Monthly income	4.875	12.6df =6, p<0.05	S
Availability of health care workers	8.649	12.6 df =6, p<0.05	S
Source of information	31.89	12.6 df =6, p<0.05	NS

Data present in table reveals that, chi-square analysis was done to find out the association between knowledge score with their demographic variables. The findings suggested

that there was a significant association between knowledge score with their selected demographic variables such as education, occupation, monthly income and availability of

health care workers at 0.05 levels for significance. There was no significant association between knowledge level scores with the selected demographic variables such as age, and source of information of workers.

Discussion

The aim of the present study was to assess the knowledge regarding using of personal protective equipment among house keeping workers at municipal corporation. Discussion of the findings was arranged based on the objectives of the study. The present study shows that among the 50 workers, 32(64%) had inadequate knowledge, 16 (32%) had moderate knowledge and 2(4%) had adequate knowledge.

This is supported by a study conducted in Saudi Arabia a study to assess the Personal Protective Equipment Knowledge and Practices among Nurses Working at Al-Baha King Fahad Hospital, Saudi Arabia conducted by Abuobaida E.E. Abukhelaif. The data analysis showed that the knowledge regarding PPE depicts that 70.00% of respondents had inadequate knowledge and 30.00% of respondents had moderate knowledge regarding infection control and use of personal protective equipment and none of them had adequate knowledge.

The present study findings revealed that, there was a significant association there was a significant association between knowledge score with their selected demographic variables such as education, occupation, monthly income and availability of health care workers at 0.05 levels for significance. There was no significant association between knowledge level scores with the selected demographic variables such as age, and source of information of workers. Hence the study "Effectiveness of video assisted teaching on knowledge and attitude regarding infection control and use of personal protective equipment among junior health assistants at selected PHC's, Bengaluru." By Ms. Joylene Lolita Soares reveals that the calculated χ^2 values of the variables such as total years of experience, marital status, monthly income, and in-service education programme were greater than the table value at $p \leq 0.05$ level of significance. Hence the research hypothesis H3 accepted except the variables such as Age, Gender, and source of information. The calculated χ^2 values of the variable such as source of information was greater than the table value at $p \leq 0.05$ level of significance. Hence Research hypothesis H3 is accepted except Age, gender, Total years of experience, marital status, monthly income, and in-service education programme.

Conclusions

The study was used to evaluate the utilization of personal protective equipment among municipal workers. The result of the study that there is need to improve the knowledge regarding utilization of personal protective equipment among municipal workers. Hence the community health nurse plays a direct role in creating awareness on utilization of personal protective equipment among municipal workers.

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