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### Effectiveness of planned teaching programme on knowledge regarding biomedical waste management norms

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#### Abstract

On March 27 2019, the Government of India published the Biomedical Waste Management Rules. Hospitals and other health care institutions are one of the essential commodities of daily life. Biomedical wastes are any waste that is generated during diagnosis, treatment, or immunization of human beings or animals. Hospitals generate substantial quantity of wastes that has potential to cause health and environmental hazards.

In the new Biomedical Waste Management Rules, 2019, several changes and additions have been made to further improve the collection, segregation, processing, treatment and disposal of the Biomedical Waste in an environmentally sound manner.

**Aim:** The present study aim to assess the knowledge of fourth class workers regarding bio medical waste management among selected hospital, Indore.

**Design:** The research approach used in the study is quantitative approach.

**Sample:** convenient sample of 60 fourth class of selected hospital, Indore.

**Result:** The calculated value of "t" at degree of freedom 59 is 24.52 which is greater than the tabulated value at  $p=2$  0.05 level of significance. Thus,  $H_0$  is rejected and  $H_1$  is accepted ie, there is significant difference in the level of knowledge before and after administration of Planned teaching programme among fourth class group. The unpaired' test value after intervention in fourth class group is 27.01(df=59), which is greater than tabulated value at 0.05 level of significance. Thus,  $H_2$  is accepted that there is significant difference in the knowledge score of fourth class group and control group. So,  $H_2$  is accepted and  $H_0$  is rejected.

**Conclusion:** The study concludes that fourth class workers of selected hospital, Indore implies the knowledge regarding Biomedical Waste Management norms 2019 has been enhanced.

**Keywords:** Fourth class workers, biomedical waste management, planned teaching programme

#### Introduction

Biomedical waste (BMW) generated in our nation on a day to day basis is immense and contains infectious and hazardous materials. It is crucial on the part of the employees to know the hazards of the biomedical waste in the work environment and make its disposition effective and in a scientific manner. It is critical that the different professionals engaged in the healthcare sector have adequate Knowledge.

Improper disposal practices of hospital waste affects the people who come in direct contact with it. Waste piles also attract a variety of disease vectors including mosquitoes and flies. Thus, improper waste management practices are a serious problem that involve not only to the hospital administration but society at large. Within waste management, the health care waste management is a process that helps to ensure proper hospital hygiene and safety of health care workers and communities. Human beings are exposed to a huge variety of health risks over their entire life. Every day, relatively large amount of potentially infectious and hazardous waste are generated in the health

care hospitals and facilities around the world. A special concern of environmental and humankind protection focuses on effective management of biomedical waste, incorporating an appropriate waste reduction and neutralization component. Along with this idea, a systemic approach of biomedical waste is compulsory, since without proper guidance, the hazardous medical waste management may compromise the quality of patient caretaking. Medical care is vital for our life and health, but the waste generated from medical activities represents a real problem of living nature and human world. Main purposes of waste management are to clean up the surrounding environment and to identify the appropriate methods for waste neutralization, recycling and disposal. Within waste management (WM), the health care waste management.

Improper management of waste generated in health care facilities causes a direct health impact on the community, the health care workers and on the environment every day, relatively large amount of potentially infectious and hazardous waste are generated in the health care hospitals and facilities around the world.

## Method

A convenient research approach was used in the study, 60 fourth class workers, selected hospital Indore, was selected by using probability sampling technique who were 20 years of age & above & willing to participate in the study. Data was collected by using socio-demographic & structured knowledge questionnaire.

## Result

**Table 1:** Mean, Standard Deviation and paired 't' test values of pre and post test level of knowledge about biomedical waste management among B.Sc. Nursing students of study group.

Group	Pre-Test		Post-Test		Paired 't' test
	Mean	Standard Deviation	Mean	Standard Deviation	
Study group (n=60)	7.4	1.58	17.1	1.61	24.52

The calculated value of "t" at degree of freedom 59 is 24.52 which is greater than the tabulated value at p=2 0.05 level of significance. Thus, H<sub>0</sub> is rejected and H<sub>1</sub> is accepted ie,

The pre-test knowledge score that is 92.5% (n=57) in the control group had average knowledge score as compared to 7.5% (n=3) having poor knowledge score and none of the participants had very good and good knowledge score.

The table shows that the study group who received the intervention about the biomedical waste management norms 2019 have achieved great difference in the post-test score as compared with their pre-test knowledge score.

there is significant difference in the level of knowledge before and after administration of planned teaching programme among study group.

**Table 2:** Mean, Standard Deviation and independent 't' test values of post test knowledge score of study group with control group on Biomedical waste management 2019.

Group	Study group (n=60) Post-test		Control group (n=60) Post test		Unpaired 't' test
	Mean	Standard Deviation	Mean	Standard Deviation	
	17.1	1.61	7.8	1.43	27.01

The unpaired' test value after intervention in study group is 27.01(df=59), which is greater than tabulated value at 0.05 level of significance. Thus, H<sub>2</sub> is accepted that there is significant difference in the knowledge score of study group and control group. So, H<sub>2</sub> is accepted and H<sub>0</sub> is rejected.

## Discussion

The present study was conducted to assess the knowledge and enhance the knowledge regarding Biomedical Waste Management Norm 2019 among fourth class worker in selected hospital, Indore.

## Conclusion

The study concludes that the fourth class worker of selected hospital, Indore implies that the knowledge of fourth class worker regarding Biomedical Waste Management norms 2019 has been enhanced.

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