

A Study on Awareness of Hazardous Waste Management in One of the Hospitals in Tamil Nadu

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Abstract: Biomedical wastes are one of the major reasons for environment hazard. In general, all activities produce waste as by product. Some wastes are bio degradable and are non-hazardous. On the other hand, some wastes require proper treatment such as biomedical wastes. The biomedical wastes are the ones that are mostly generated in hospitals and other health care providers. They produce wastes that transmit virus and bacteria. Proper treatment of this is the utmost priority failure of which will lead to hazardous effects. India is one of the largest countries of the world and hence the biomedical wastes produced is also extremely high. The biomedical wastes are segregated into 4 types Yellow, Red, White and Blue. The hazard can very well be contained if the wastes are segregated, collected, stored and disposed off properly. Various steps are being taken by the government for the same. In addition, awareness to both medical professionals and general public can help improve matters.

Index Terms: Hospital, bio medical waste, Hazardous waste, awareness, segregation, pollution.

I. INTRODUCTION

Definition:

Biomedical wastes mean any solid or liquid waste or the byproduct of a medical treatment or process. These wastes are highly toxic as there is a possibility of infectivity and hence needs to be disposed off the properly.

Biomedical Waste:

No more can be used or can be only discarded.

The objectives of the study are:

1. To study the types of hazardous waste.
2. To study the detoxification and neutralization of waste by treatments.
3. To Analyze the destruction of combustible waste by incineration.
4. To suggest or Recommend measures for better management of hazardous waste in hospital.

II. LITERATURE REVIEW:

According to Dr.k.Syamaladevi, O.Sujana and Dr.T.Charan Singh(2018), in this study the hazardous waste management is an important issue in our country now days, unscientific disposal of hazardous waste and only few secured landfill sites available in the country for disposal of hazardous waste in an sound manner posed environmentally sound manner posed serious risk to the environment system.

According to L.Fazzo, F.Minichilli, M.Santaro, P.Comba and Martuzz (2017), in this study the term “hazardous waste is variously applied in different countries, loosely defining non household waste that includes hazardous chemicals. In our search literature, we included the terms. “Hazardous”, “Toxic”, “Industrial” waste excluding the papers about municipal landfills, which have no records of hazardous materials, incinerators, e-waste and radioactive waste disposals. The present review does not consider occupational studies.

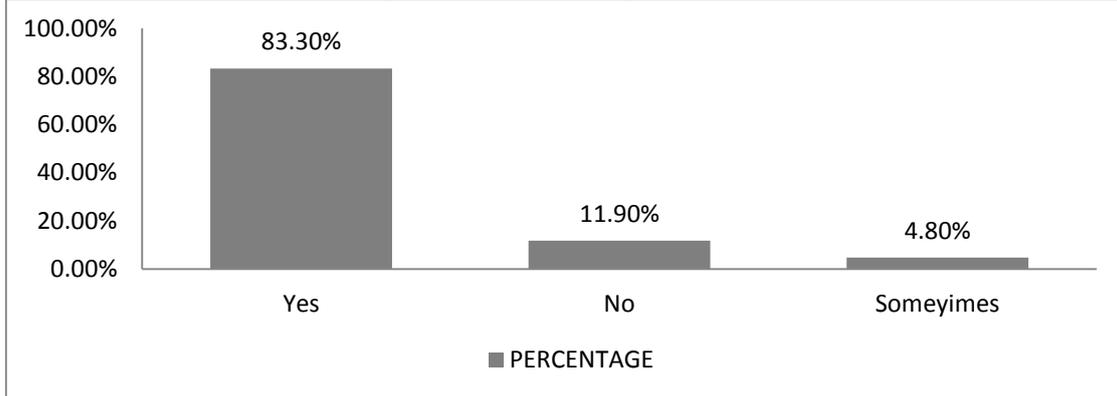
According to Iyyanki Murali Krishnan (2017), in this study Hazardous waste is any waste that poses a threat to the environment, and has explosive, flammable, oxidant, infectious, radioactive and corrosive Properties. The purpose of treating, managing hazardous waste is to convert it into non- hazardous substances and stabilize it by techniques of encapsulation etc.....

III. METHODOLOGY

The research design in this study is Descriptive Research Design. It is the true representative sample of the population where the sample size is 84(primary data), due to limited time factors and for convenience. The sampling technique used is simple random sampling for the present study.

IV. ANALYSIS

CHART-1 Chart showing the respondent’s (Nurses) opinion on “are hazardous waste segregated?”



From the **chart-1** The above table shows that 83.3% of the respondents have selected yes, 11.9% of the respondents have selected no, 4.8% of the respondents have selected sometimes to the question “Are hazardous waste segregated?”.

CHART-II showing the respondent’s (Nurses) opinion on “which department has disposal toxic waste”?

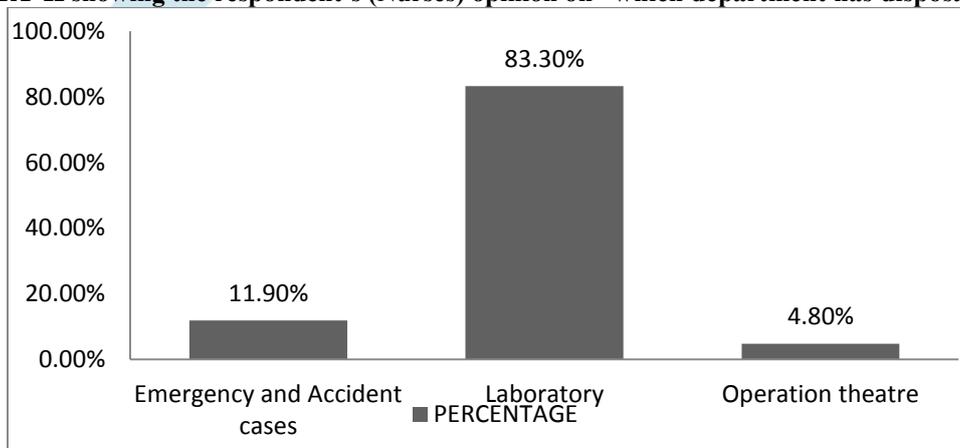


Chart-II The above table shows that 83.3% of the respondents have selected laboratory, 4.8% of the respondents have selected operation theatre, 11.9% of the respondents have selected emergency and accident cases to the question “Which department has disposal toxic waste?”.

Chart III Showing the respondent’s (Nurses) opinion on “which is the best treatment of disposal waste”?

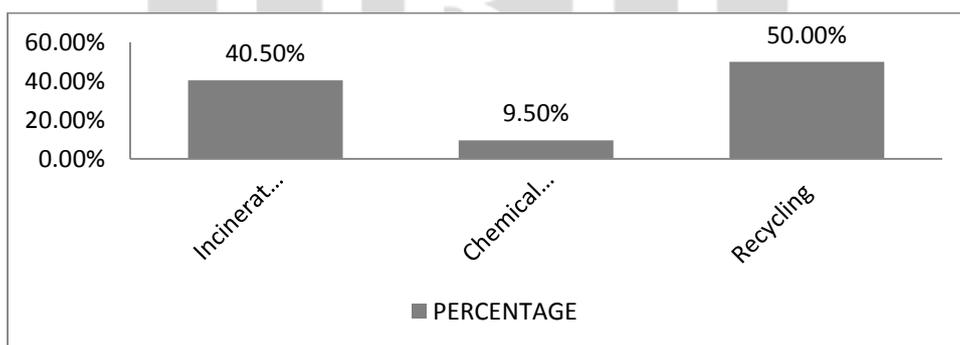


Chart 3- The above table shows that 50% of the respondents have selected recycling, 40.5% of the respondents have selected incineration/Combustible and 9.50% of the respondents have selected chemical treatment to the question “Which is the best treatment of disposal waste?”.

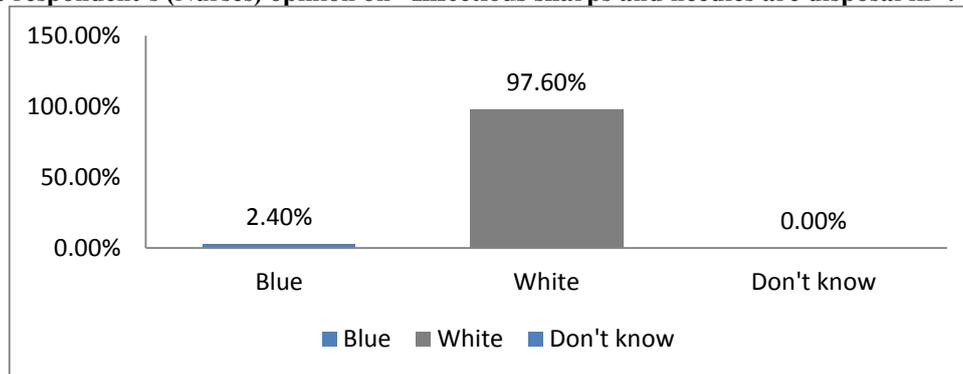
Chart showing the respondent's (Nurses) opinion on "Infectious sharps and needles are disposal in"?

Chart 4- The above table shows that 97.60% of the respondents have selected white, 2.40% of the respondents have selected blue to the question "Infectious sharps and needles are disposal in".

V. FINDINGS**Major Findings**

1. Majority table shows that the 83.3% of the respondents have selected yes to the question "Are hazardous waste segregated"
2. Majority table shows that the 83.3% of the respondents have selected laboratory to the question "Which department has disposal toxic waste"
3. Majority table shows that the 50% of the respondents have selected recycling, 40.5% of the respondents have selected incineration/Combustible and 9.50% of the respondents have selected chemical treatment to the question "Which is the best treatment of disposal waste".
4. Majority table shows that the 97.60% of the respondents have selected white to the question "Infectious sharps and needles are disposal in"

VI. SUGGESTIONS**The Recommendations include**

1. Increasing awareness among the staffs and general public by conducting various awareness and campaigns.
2. A Governance body being set up in every hospital whose sole duty is to check if the government rules are being followed or not.
3. Reducing wastes per bed as and when possible.
4. Use proper methods to dispose hazardous waste.
5. Treatment of hazardous chemicals is highly recommended to prevent environment.
6. Increasing usage of incinerator to burn away the wastes thus reducing waste storage.

VII. CONCLUSION:

In a nutshell, Biomedical wastes are the ones which are produced mostly in hospitals. The proper disposals of these wastes are very much required. The government has defined a process to dispose the wastes. First the wasted need to be segregated in 4 colors, then collection is done with the appropriate technique and transported properly.

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