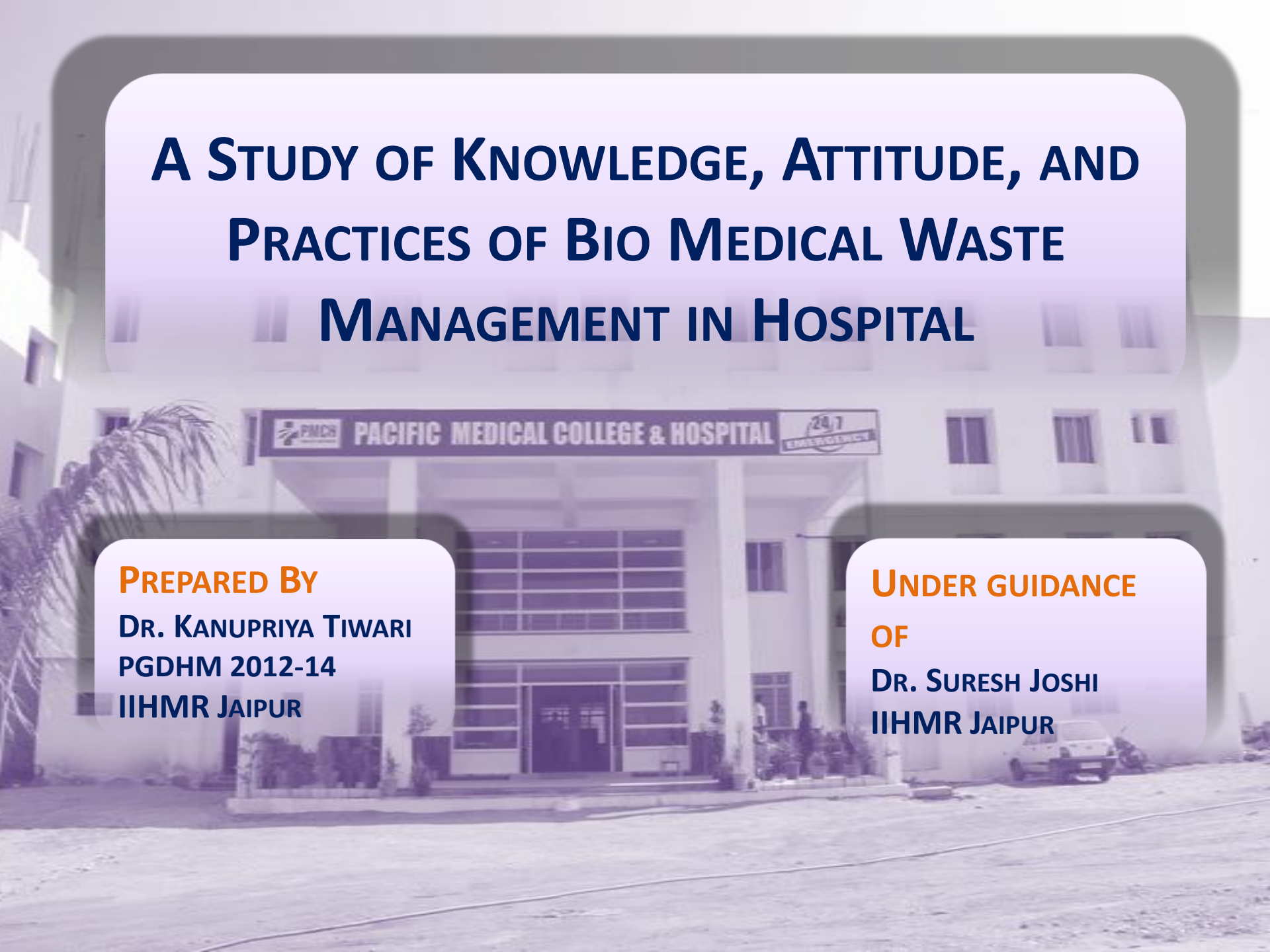
A Study of Knowledge, Attitude, and Practices of Bio Medical Waste Management in Hospital



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INTRODUCTION

PACIFIC GROUP-

The Pacific Education Society established in 1995.

Pacific Medical College & Hospital is a unit of Tirupati Balaji Educational Trust. It is spread over an area of 32.14 acres.

Hospital is 402 bedded multispecialty, tertiary level health care center.

The group of pacific includes 21 higher educational institutes and 3 medical colleges and institutes.

They have few international upcoming projects such as in Dubai etc

DEFINITION

Biomedical wastes (BMW) are defined as waste that is generated during the diagnosis, treatment or immunization of human beings or animals, or in research activities pertaining thereto, or in the production of biological activity.

Biomedical Waste (Management and Handling) Rules, 1998

Keeping in view of inappropriate biomedical waste management, the Ministry of Environment and Forests notified the "Biomedical Waste (management and handling) Rules, 1998" in July 1998.

CATEGORIES OF BIO-MEDICAL WASTE- According to rule the bio medical waste is divided into 10 categories.

GUIDELINES FOR COLOUR CODING

As per the schedule II of the Bio Medical Waste Management and handling rules, 1998, the colour coding of bio medical waste is as follows:

Colour	Container	Categories	Disposal/Treatment
Yellow	Plastic bag Disinfected	Cat1, 2,3&6	Incineration/deep burial
Red	Disinfected container/plastic	Cat 3,6&7	Autoclaving/microwaving/chemical Treatment
Blue	Plastic Bag/Puncture	Cat4&7	Autoclaving/microwaving, chemical treatment
Black	Plastic Bag	Cat5,9,10	According to Municipality norms

PROBLEM STATEMENT-

Study the Knowledge, Attitude, and practices of bio-medical waste management in hospital.

JUSTIFICATION OF THE STUDY-

Hospital waste management is a part of hospital hygiene and maintenance activities. In fact only 15% of hospital waste i.e. “Biomedical waste” is hazardous, not the complete. But when hazardous waste is not segregated at the source of generation and mixed with nonhazardous waste, then 100% waste becomes hazardous.

AIM

To Study and Evaluate Biomedical Waste Management practices in a 402 bedded multispecialty Hospital of Udaipur.

Objectives

- To determine the awareness among Nurses/Housekeeping staff regarding waste management practices.
- To study the current procedures followed for the segregation, treatment, collection, transportation of Bio-Medical Waste generated by the Hospital.

Methodology-

Study Design - Cross sectional

Study Area - Pacific Medical College & Hospital, Udaipur

Sample size & Sample Design - All staff working in IPD (Nursing stations), OPD, OT, ICU, Lab.

Study Population - Housekeeping and Nursing staff of the hospital (Because these two groups mainly involved in handling of Bio Medical Waste management).

Data collection Tools

KAP (Knowledge, Attitude, Practices) Questionnaire for primary data and Bio medical waste records register for secondary data.

Data collection Techniques –

- Direct observation of various departments generating Bio medical waste.
- Questionnaire based interview of Nursing and Housekeeping staff.

Data Analysis

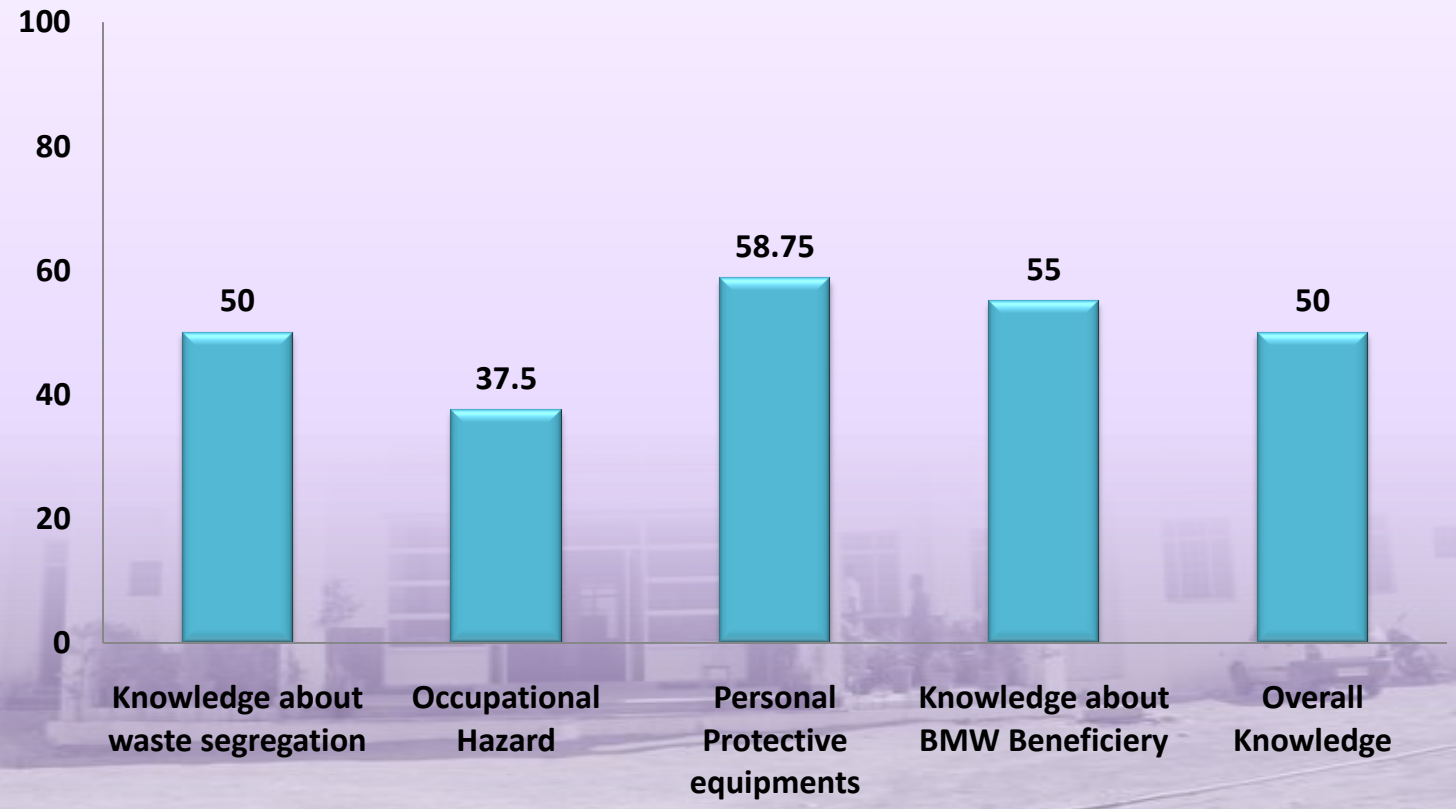
Data were collected on the basis of KAP (Knowledge, Attitude, Practices) questionnaire for Housekeeping and Nursing staff.

KAP Analysis (Housekeeping Staff)

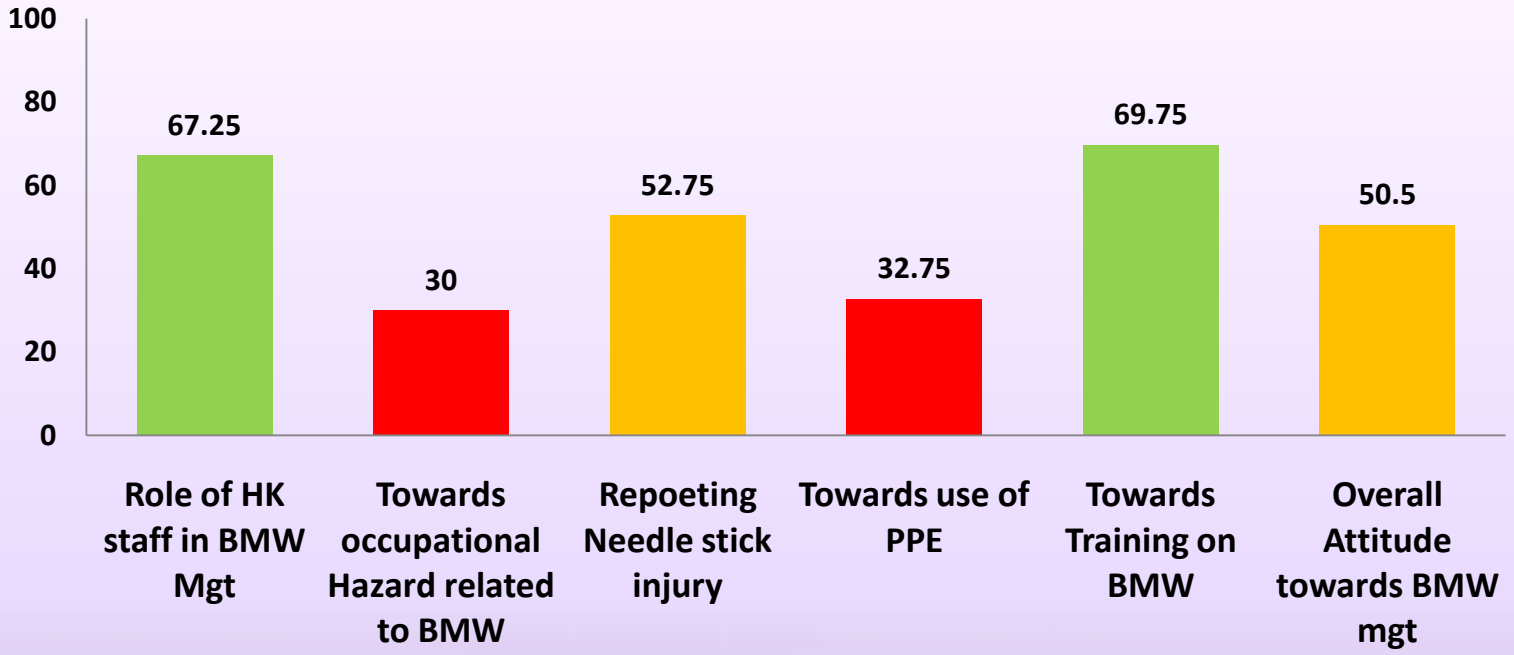
Knowledge was assessed on framing four questions on Bio Medical Waste Management,

Attitude and practices is measured on the basis of likert scale (1-3), five questions were framed to assess attitude and six questions for practices followed.

KNOWLEDGE ABOUT BIO MEDICAL WASTE MANAGEMENT AMONG HOUSEKEEPING STAFF IN (%)

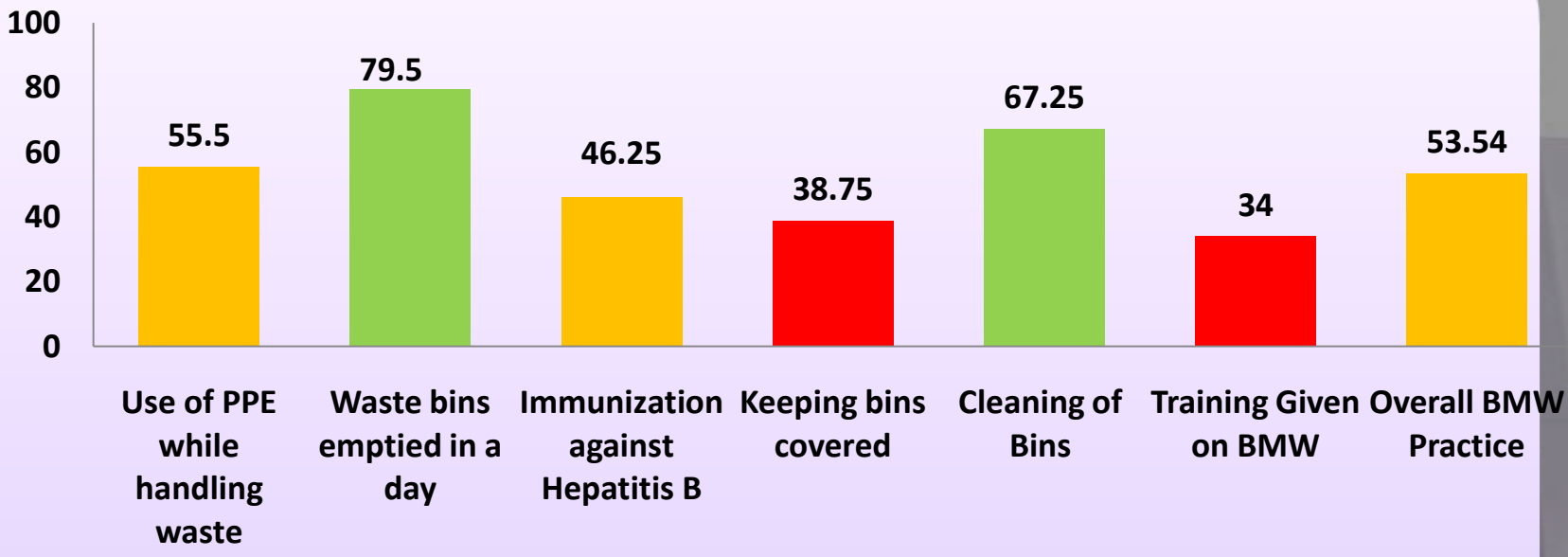


Attitude of Housekeeping staff towards BMW management in(%)



Likert scale	In form of %	Attitude
1	Upto 33.33	Negative
2	33.33% to 66.66%	Neutral
3	More than 66.66%	Positive

Practice of HK staff Towards BMW Management in (%)

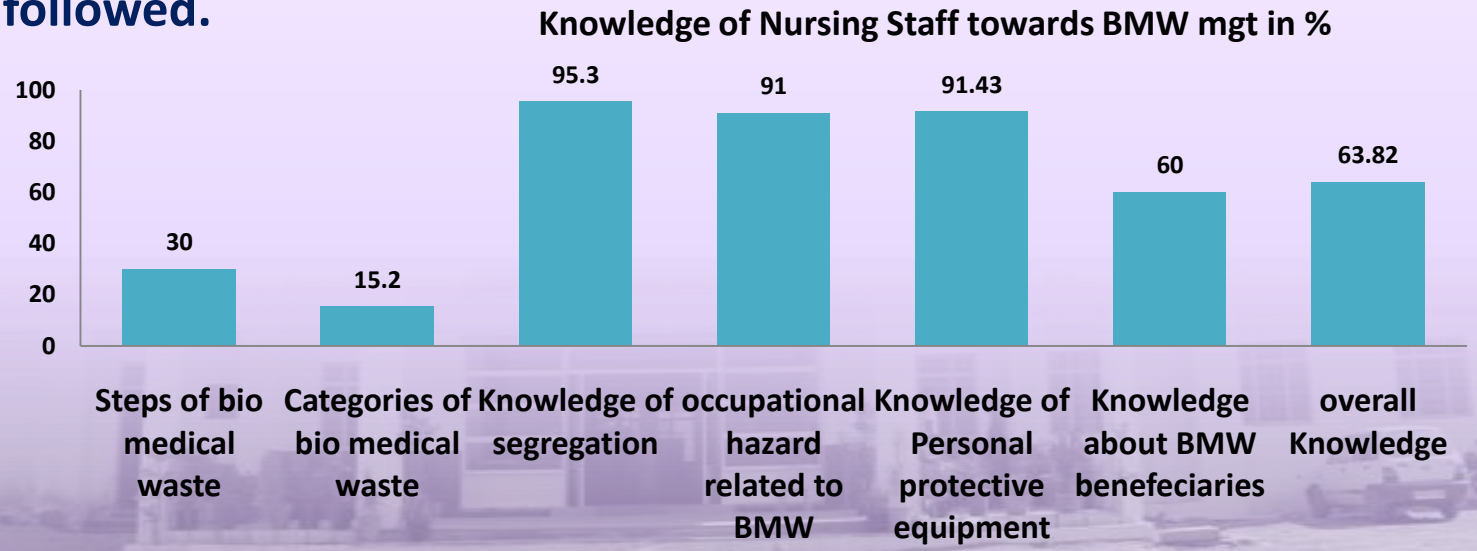


Likert scale	In form of %	Practice
1	Upto 33.33	Poor
2	33.33% to 66.66%	Average
3	More than 66.66%	Good

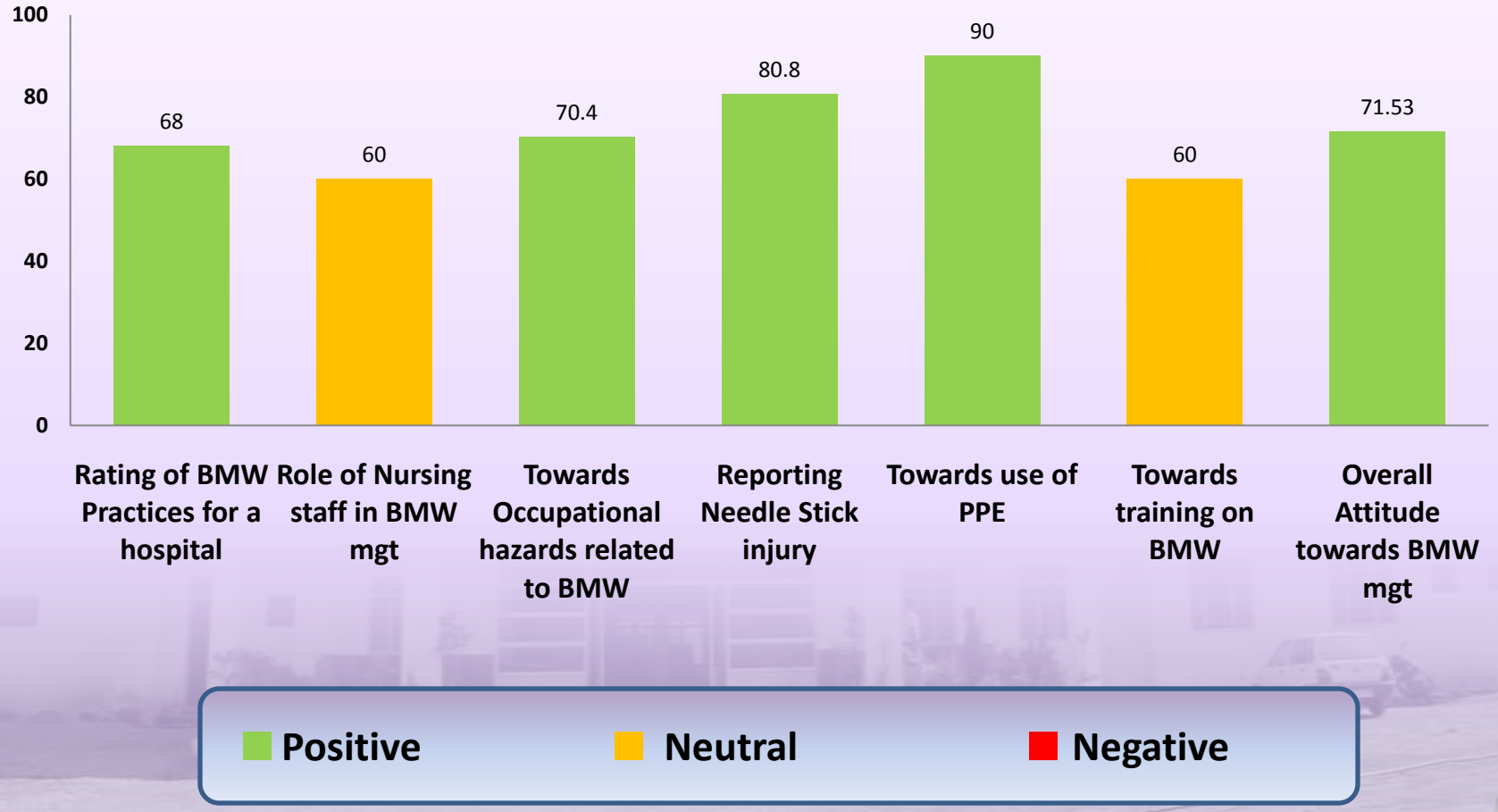
(B) KAP Analysis :- (Nursing Staff)

Knowledge of nursing staff was assessed on framing six questions on Bio Medical Waste Management.

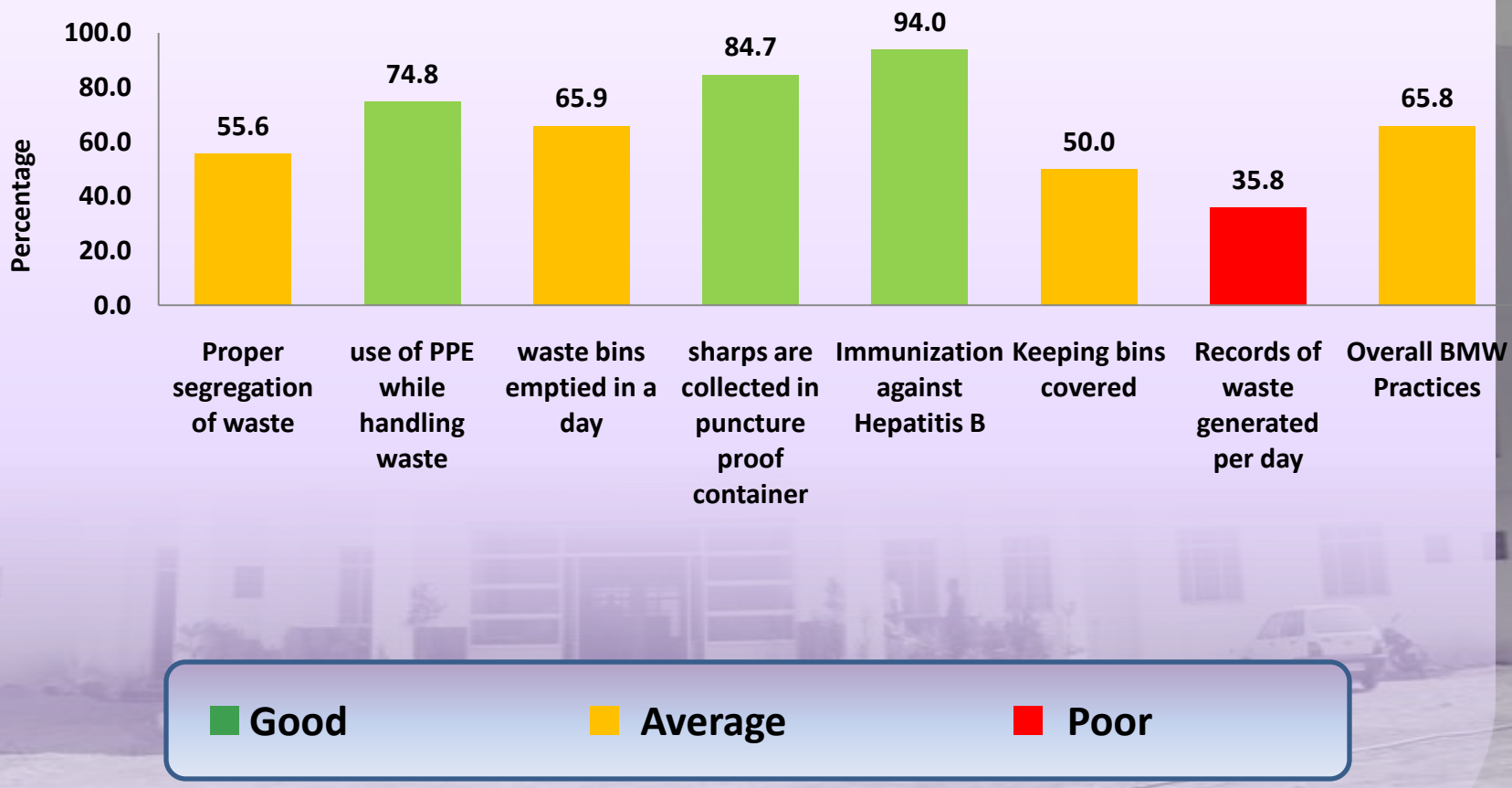
Attitude and practices towards the biomedical waste handling is measured on the basis of likert scale (1-3),six questions were framed to assess attitude and seven questions for practices followed.



ATTITUDE :- (NURSING STAFF IN PERCENTAGE)



PRACTICES:- (NURSING STAFF TOWARDS BMW MANAGEMENT IN %)



RECOMMENDATIONS

On the basis of study findings, following recommendations are suggested –

PERIODIC TRAINING ON BIO MEDICAL WASTE MANAGEMENT –

- The periodic training is the effective method to enhance the knowledge, to develop positive attitude and to ensure right practices regarding bio medical waste management.

- Waste segregation is the key step of BMW management. So all staff should be trained on proper segregation of BMW.

- As the BMW is most hazardous, the staff should be well trained about use of PPE while handling the bio medical waste.

- Training on occupational hazards related bio medical waste must be given to aware the staff.

• This training should preferably be carried out in the local language for housekeeping staff.

• The induction training should also be given to the new staff of nursing or housekeeping staff on BMW management.

• The effectiveness of these training should be evaluated by post training examination of the staff.

MONITORING –

•The effective monitoring system should be established by hospital management to ensure the safe practice of bio medical waste management.

•The infection control nurse should take two rounds in a day to monitor the proper segregation of waste in all the departments.

•The use of PPE while handling the BMW should be monitored by respective department head.

INCREASE MOTIVATION –

- One of the housekeeping boys should be chosen every week and shall be asked to address his colleagues about the BMW management. This activity will encourage them the quality of leadership and responsibility for their job.
- Colored dustbins corresponding to the color of the polythene bags must be used to avoid any confusion.

- Weekly , the inventory for the bags should be checked to check any shortage so that the hospital doesn't run out of poly bags stock.

- Special instructions must be given for blue bags to gently put them into containers and not throw them as they contain glasses, which can tear the bags.

Regarding transportation of waste

- Transportation trolley should not be overloaded
- Transportation trolley should be properly covered
- The trolleys have to be cleaned daily.
- The trolley should not keep in a long period in hospital premises as the waste is more hazardous

Conclusion

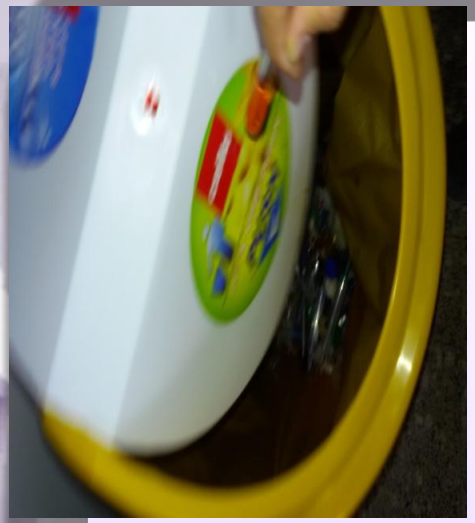
•The study reveals that 50% of housekeeping staffs have knowledge about biomedical waste management with compare to nursing staff have (64%).

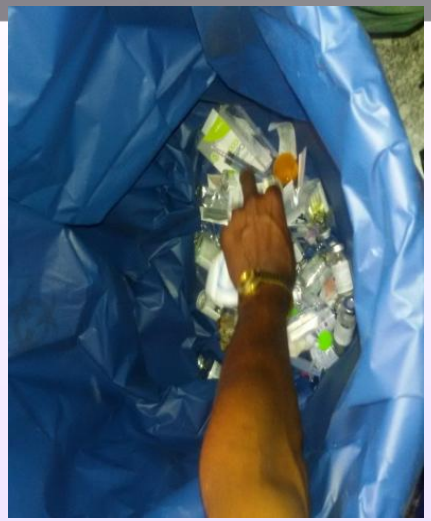
•The attitude is more positive and practices are well followed by nursing staff with compare to housekeeping staff.

Biomedical waste bags were use for civil work

Waste bins were not covered properly and yellow bin covered with black liner instead of yellow liner

Bins were overfilled





waste were not segregated properly in ICU & staff did not use PPE

Microbiology lab, yellow bin have broken lid, & disposable glasses were present.

Normal open container for sharps

Waste bin trolley with biomedical waste kept in hospital premises for long


THANK
YOU