A Study of Attitude of Nursing Staff towards BMW Practices

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Abstract

Nursing staff of the healthcare institution directly involved in handling of biomedical waste. Handling of such hazards waste requires strict implementations of biomedical waste regulation. The government of India has recently upgraded biomedical waste management regulation to conduct smooth and safe practices in the health institutions and every institution bound to follow the new regulation. It has been observed that majority of institutions are lacking behind in implementation of the regulation, here attitude plays significant role. It's important to study the attitude of the nursing staff towards biomedical waste management practices. Present research work is an attempt to study the attitude of nursing staff towards various issues discussed in the regulation and issues raised in the implementation. Attitude has been accessed on various variables such as role of education and training programs, legal provisions, periodical medical exam, awareness, procedures used in practices. The study concluded that respondents have positive attitude towards BMW practices and interested to involve in various educational and training programs. Limitation of the study resides with small sampling size.

KEYWORDS: Biomedical waste, hospital waste, nurses' attitude, health hazards

1. Introduction

Biomedical waste management deals with handling and disposal of clinical and laboratory waste generated during diagnosis and treatment of patients. The waste so generated is a potential source of transmission of diseases and handling such infected waste require proper planning and strategies. If it is not disposed off in an efficient manner, the infected wastes may containing microorganisms can infect the people who comes in contact with the waste as well as the community at large (Krishna Vijai,2014). The governments of Indian, ministry of environment, forest and climate have published a manual called Bio-medical waste management, rules, 2016 to efficiently handle and dispose of biomedical waste. Every health institute is bound to abide biomedical waste management regulations, 2016. The implementation aspect is based on this rule book and the aim is to access whether the rules framed in the rule book are being abided in same manner as listed or not. Attitude played an important role in conducting practice according to regulation framed for it. Person with positive attitude expected to conduct practice in more efficient and obedient manner.

Present study aimed to access the attitude of the respondents towards biomedical waste management practices. A questionnaire was designed to address various issues related to attitude. The respondents were nursing staff involved in practice at the government hospitals.

Research methodology

The study was exploratory in nature and conducted in Patiala city of Punjab district. It was a pilot study conducted to access the data collection instrument design to study attitude awareness and knowledge level of the nursing staff working in the

government hospitals. The convenience sampling technique was used to collect data from respondents.

Questionnaire

Questionnaire was designed to access the attitude of the respondents. Various questions were asked and responses were recorded on likert scale. The major factors considered for study included attitude towards importance of BMW practices, responsibility of staff, attitude towards practices and procedures followed in BMW practices, legal provisions, role of training, privatizations etc.

Sample Size: The pilot study was conducted in three government hospitals i.e. civil hospital Sangrur, Govt. Mata Kaushalya Hospital Patiala and Govt. Rajendera Hospital Patiala. In order to consider uniformity in the sample size, equal numbers of respondents were selected for the study. There were 75 respondents, each twenty five respondents from these three hospitals.

The questionnaires were distributed in different wards in the hospital. The brief idea about the objectives of study was discussed with respondents. The majority of respondents were nursing staff as few respondents were from cleaning staff. The major hindrance during data collection was the availability of the respondents as all were found over busy in their daily work schedule.

2. Data collection and analysis

Demographic data defines characteristics of the respondents such as gender, age group, education, profession, occupation, marital status. It helps to divide the respondents into different groups. Following are few variables considered in the demographic profile.

Educational Qualification: Level of educational qualification is considered as one of the important variable which can be associated with other important variables such as awareness level, attitude and knowledge about biomedical waste management.

Table 1: Respondents' Education Qualification Profile

Sr. No.	Qualification	Frequency	Percentage
1	Matric	2	2.7
2	High School	3	4
3	Graduation	31	41.3
4	Diploma	32	42.7
5	PG	7	9.3
	Total	75	100

Table1 describes that majority of respondents were Diploma holders (42.7) and graduation degree holder were (41.3 %). Only seven respondents were having post graduation degree. Very few were metric (2.7%) and only (4%) passed high school.

Education Qualification

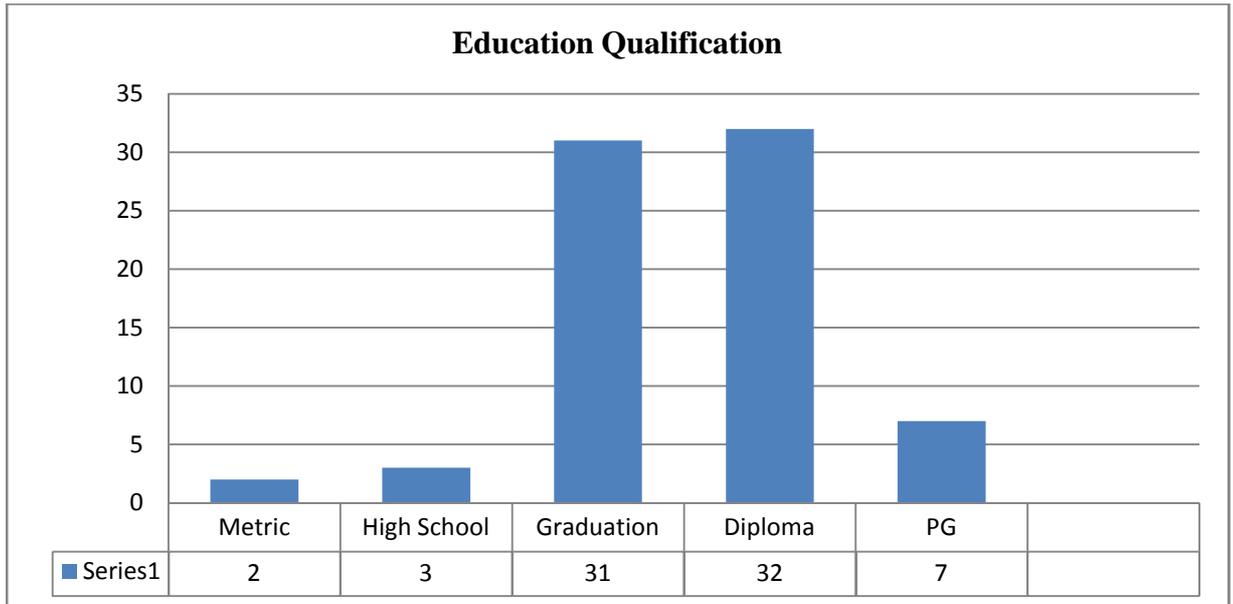|	Metric	High School	Graduation	Diploma	PG
■ Series1	2	3	31	32	7

Figure1: Education qualification profile of respondents

Figure1 also shows majority of respondents are Diploma holders and graduates. It also reveals that respondents have sufficient educational qualification required to pursue their profession.

Diversity of respondents from different wards: The study was conducted in multi-facility hospitals where respondents were appointed different duties in different wards. As per biomedical waste management rules 2016, every ward has its potential source of biomedical waste and generates different kind of waste which needs different kind of disposal treatment. It is significant to know diversification of respondents based on different wards.

Table 2: Diversity of respondents based on wards

S. No.	Ward	Frequency	Percent
1	Emergency ward	7	9.3
2	Surgery ward	11	14.7
3	Oncology ward	3	4.0
4	Micro Biology lab	1	1.3
5	Ophthalmology ward	4	5.3
6	General ward	40	53.3
7	Blood Bank	2	2.7
8	Pathology lab	4	5.3
9	Pediatrics ward	1	1.3
10	Gynecology ward	2	2.7
	Total	75	100.0

Table 2 shows majority of respondents (53.3%) were from general ward and surgical ward (14.7) Respondents from emergency ward were only 9.3 % and merely 4% from Ophthalmology ward, 3% from Oncology ward and 1% from Micro Biology Lab and Pediatric wards.
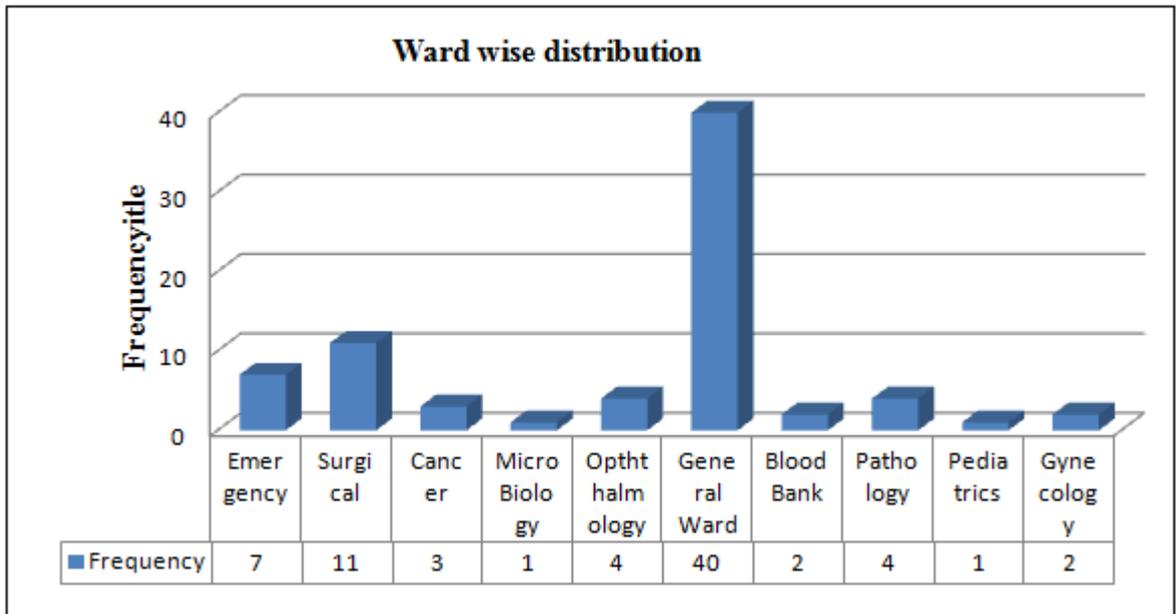
Figure 2: Diversity of respondents based on wards

Respondents from different wards were asked to fill the questionnaire in almost equal ratio but only general wards and surgical ward respondents returned the questionnaire filled in all respect. In future, efforts will be made to get responses from every ward with reasonable ratio.

Distribution of respondents based on experience: Experience is another important factor which may have significant impact on awareness and knowledge about biomedical waste management.

Table 3: Distribution of respondents based on experience

Experience(Years)	Frequency	Percent
0-2	46	61.3
3-4	15	20.0
5-6	3	4.0
7-8	2	2.7
9-10	2	2.7
More than 10	7	9.3
Total	75	100.0

Table3 shows majorities (61.3%) of respondents were having experience between 0-2 year and 20% respondents had experience between 3-4 years. There were only few respondents who had experience between 5-6(4%) and 2% respondent were experience of 7-8 year and 9-10year each. The more than 10 years experience was held by only 7 (9.3%) respondents. It was a mixed group where respondents ranging from fresher to highly experienced.
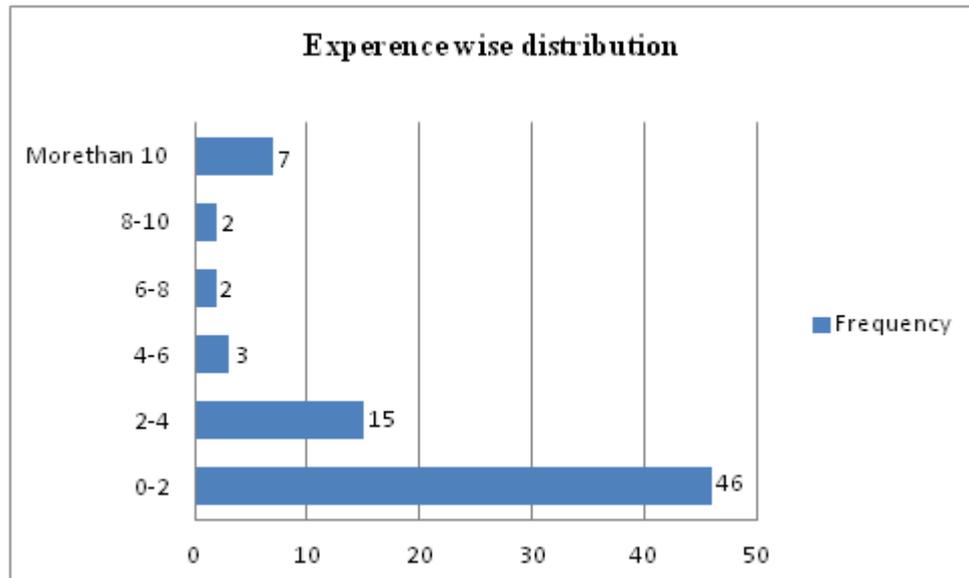
Figure3: Distribution of respondents based on experience

It is clearly visible from figure3 that majority of respondents were having less experience between 0-2 years and 2-4 years.

3. Attitude towards biomedical waste management

Attitude helps to understand how people react on particular situation. It has been observed that despite of strict regulation for conducting biomedical waste management practices, there are various problems being reported about mismanagement and dispose of waste in unwanted places in the hospital, Sehgal RK(2015), Singh Amrita(2014). It is all about attitude towards regulations and guideline observed to conduct practice in more efficient and safe manner. (Ravinder S.T. 2017).Chudasama RK(2013) suggested various parameters to access the attitude of the medical staff which include attitude towards BMW regulation, personal security. Hiremath RN (2016) presented study to assess, Attitude about Biomedical Waste (BMW) management among 80 Health Care Workers (HCWs) at one of the Multispecialty Hospital in Eastern India. It was cross sectional descriptive study in which data were collected by means of 'personal interview technique' by using a pre-designed semi-structured questionnaire in Hindi (local language). Issues related to attitude to wards various practices procedure were considered. Personal hygiene and procedure to safeguard the medical staff while handling biomedical waste were considered as major variable Chaudhari K.(2015). Kulkarni VL(2014) have studied attitude towards training and its impact on medical staff.

The questions were raised to access the attitude towards BMW among respondents. The responses were recorded into 5 point likert scale i.e. statement. (1= Strongly Disagree (SD); 2= Disagree (D); 3= Uncertain (U); 4= Agree (A); 5= Strongly Agree (SA).

Table 4: Describe attitude of respondents on various issues

FACTORS	SD	D	U	A	SA
Do you think it is important to know about BMW generation, hazards and legislation?	2	0	0	25	48
Do you think safe management is the responsibility of staff and hospital	0	0	3	27	45

Do you think if your institution is not complying with guidelines of bio-medical waste management, there should be reporting to Pollution Control Board?	*0*	*0*	*2*	*42*	*31*
Do you think that any type of container including food containers can be used to contain hazardous waste?	*1*	*0*	*0*	*45*	*29*
Maintaining of log book for waste disposal helps for batter management.	*1*	*2*	*1*	*45*	*26*
Do you think that campaigning and education programmes lead to successful BMW management	*0*	*0*	*0*	*47*	*28*
Do you think that improper BMW management leads to water and air pollution which is a serious environmental problem	*0*	*1*	*24*	*0*	*50*
Do you think that improper management of BMW is responsible for epidemic like Chikungunya, Dengue etc.	*0*	*0*	*1*	*32*	*42*
Do you agree that biomedical wastes should be segregated into different categories?	*0*	*4*	*0*	*28*	*43*
Do you feel that biomedical waste management should be compulsorily part of every medical practionner curriculum?	*4*	*0*	*0*	*28*	*43*
Safe management of Bio Medical Waste is an extra burden on Hospital Management	*6*	*20*	*14*	*23*	*12*
Presence of legal provision help in safe management of Bio Medical Waste	*2*	*2*	*0*	*54*	*17*
There should be a hospital policy for safe management of Bio Medical Waste	*17*	*13*	*0*	*22*	*23*
Colour - coding helps in segregation/ transportation of Biomedical Waste	*0*	*0*	*0*	*40*	*35*
It is necessary to disfigure/ mutilate syringes, IV bottles before discarding	*0*	*0*	*4*	*43*	*27*
Training orientation towards safe management of Biomedical Waste is necessary	*0*	*0*	*0*	*50*	*25*
There should be a separate routing system for waste transportation from wards to final disposal facility	*0*	*1*	*6*	*43*	*25*
Accident reporting by healthcare personnel while handling waste helps maintains the safe management activities	*1*	*4*	*19*	*35*	*16*
There should be periodically medical examination for all healthcare personnel	*0*		*4*	*44*	*27*
Lack of awareness is the only reason for mismanagement of Health care waste.	*0*	*1*	*1*	*37*	*36*
Do you think Biomedical waste disposal plant should be government approved agency rather than private undertaking?	*1*	*1*	*7*	*45*	*21*
As per my view, privatization of disposal of biomedical waste is costly?		*2*	*8*	*43*	*22*
Campaigning and educational programmes lead to successful BMW management?	*0*	*0*	*5*	*38*	*32*
Would you like to advice your subordinates to follow color coding for waste disposal?	*0*	*0*	*3*	*45*	*27*

Are you willing to attend any voluntary programme that enhance and upgrade your knowledge about waste management?	0	0	3	8	64
Do you think that before filling with waste labeling the container is of any clinical significance?	5	4	12	39	15
Do you think, Dumping of untreated biomedical waste in municipal bin is correct?	10	16	4	33	12

Conclusion

Majority of respondent were strongly agreed that they must know biomedical waste management practices (48%). 45% respondents were also agreed that its responsibility of the hospital authority to conduct safe and secure biomedical waste management practices in the hospital. The respondents were disagreed on handling biomedical waste in food containers. It reveled from the data analysis that respondents have positive attitude towards attending vulnerary programs (*64%)*
biomedical waste management practice in the hospital. Respondents were positive towards training and education programmes (50%). Respondents were also interested (44%) in periodical medical examinations. The study concluded that respondents have shown positive attitude towards biomedical waste management and have shown interest in training and orientation programs.

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