
Knowledge, attitude of medical students regarding biomedical waste management

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ABSTRACT

Objective: The present study was undertaken to assess the knowledge, attitude and practices of nurses regarding biomedical waste management. **Methods:** A total of 60 final year Medical students were randomly selected by simple random sampling using random numbers generated by computer. A survey was conducted with the help of questionnaire to assess the knowledge and attitude of medical students regarding biomedical waste management. **Results:** The medical students at Andhra Medical College have very good knowledge about the variables associated with waste management. Students have high positive attitude regarding all variables of biomedical waste management. **Conclusion:** From this study, we are able to identify the knowledge and attitude of medical students towards biomedical waste management. We recommend all institutes to conduct similar studies and educate the staff and students for pollution free world for betterment of all in general.

Key words: Biomedical waste management, Knowledge, Attitude, Medical students.

Introduction

“Health is wealth.” In our life health occupies an important place. Preservation of health should be the primary duty of mankind. Health is mans normal condition, his birth right. It is the result of living in accordance with the natural laws, pertaining to the body, mind and environment. These laws relate to fresh air, sunlight, balanced diet, regular exercise, rest, relaxation and sleep, cleanliness, right attitudes of mind, good habits and good patterns of living. Our ignorance about health continues to be profound. There is no yard sticks to measure health. However during the past few decades, there has been a reawakening that health is not merely a precious possession, but also resource. So it is desirable to maintain and promote health. The Government of India as contemplated under section 6,8 and 25 of the environment protection act, 1986, has made the biomedical wastes management and handling rules 1998.

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These rules are applicable to every institution generating biomedical waste includes hospitals, nursing homes, clinic, dispensary, veterinary institutions, animal houses, pathology labs, blood banks. Bio-medical waste means any solid, fluid or liquid waste including its container and any intermediate products which is biological products for humans or animals. Knowledge means awareness or understanding of a circumstance or fact, gained through association or experience. Attitude means a settled way of thinking or feeling about something. Practice means the actual application or use of an idea, belief or method as opposed to theories related to it. The present study was undertaken to assess the knowledge, attitude and practices of nurses regarding biomedical waste management.

Materials and Methods

The present descriptive study was conducted at Andhra Medical College, Visakhapatnam. The study was approved by institutional ethical committee and informed consent was obtained from all the participants.

Participants

A total of 60 final year Medical students were randomly selected by simple random sampling using random numbers generated by computer.

Tools:

Survey

A survey was conducted with the help of questionnaire to assess the knowledge and attitude of medical students regarding biomedical waste management. Two questionnaires were used to assess the knowledge and attitude of medical students towards biomedical waste management. The questionnaire had 6 demographic factors and 17 questions under 6 variables namely general, risks associated, management of waste, color coding and waste management symbols. Attitude questionnaire had four demographic factors and consisted of 14 questions under 3 variables namely

segregation of waste, infection control and safety measures and management of waste.

Statistical analysis: Data was analyzed by SPSS 20.0. Descriptive statistics used for interpretation of data.

Results

Table 1 show that the medical students at Andhra Medical College, have very good knowledge about the variables associated with waste management. Table 2 shows that the students have high positive attitude regarding all variables of biomedical waste management.

Table no:1 Variable wise percentage of knowledge regarding biomedical waste management

S. No	Factor	No of questions	Total score	%	Remarks
1	General	2	114	95	Very good knowledge
2	Risks associated	2	90	75	Good knowledge
3	Disinfection of waste	3	165	92	Very good knowledge
4	Management of waste	4	193	80	good knowledge
5	Color coding bags	4	232	97	Very good knowledge
6	Waste symbols	2	106	88	Very good knowledge

Table 2: Variable wise percentage of attitude regarding biomedical waste management

S. No	Factor	No of Questions	Total score	%	Remarks
1	Segregation	3	140	78	High positive attitude
2	Infection control and safety	6	301	84	High positive attitude
3	Management of waste	5	231	75	High positive attitude

Discussion

Earlier studies reported that Housekeepers were significantly more knowledgeable than physicians or nurses about hospital policies and systems for waste disposal, but less so about specific details of disposal. Housekeepers also had the highest overall scores for attitudes to waste disposal among the 3 groups. Nurses knowledge is better than physicians.[1] In contrast other study reported that majority of the respondents have unsatisfactory knowledge attitude and inadequate practices related to waste management.[2] Singh Ajai et al—measured the attitude reported that the people with higher education and knowledge have better attitudes towards the subject.[3] Grodzinska et al. (2002) also supported this view.[4] Research reported that there is a significant gap in the knowledge, attitude and practice of the consultants, residents and scientists with regard to biomedical waste disposal, to their knowledge/understanding on the subject.[5] Suchitra et al. (2007) testified that education has positive correlation on retention of knowledge, attitudes and practices in all categories of staff. However, it is required to develop a system of continuous education for all categories of staff.[6] In the present study we

have observed highly good knowledge and positive attitude of medical students towards the biomedical waste management. The management of biomedical wastages poses a great challenge to the policy planners, city administrators, medical personals and workers in the recycling industry. There is a need for adopting cost effective system for providing better medical waste treatment facilities and reduce the amount of waste generation by awareness and education of all concerned.

Conclusion

From this study, we are able to identify the knowledge and attitude of medical students towards biomedical waste management. We recommend all institutes to conduct similar studies and educate the staff and students for pollution free world for betterment of all in general.

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