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A descriptive study to assess the knowledge regarding household waste management among general population visiting in Mohan Dai Oswal Hospital, Ludhiana, Punjab

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A B S T R A C T :

Household waste refers to waste material usually generated in the residential environment. Waste with similar characteristics may be generated in other economic activities and can thus be treated and disposed of together with household waste. General population need to have knowledge about the segregation of waste, different types of waste among save disposal of waste. Therefore, a descriptive study to assess the knowledge regarding household waste management among general population visiting Mohan Dai Oswal Hospital, Ludhiana, Punjab was undertaken with the objectives to assess the knowledge regarding household waste management among general population visiting in Mohan Dai Oswal Hospital, Ludhiana, Punjab and to determine the association of knowledge regarding household waste management with selected socio-demographics variables i.e. age, gender, education, religion, family type, occupation, monthly income of family, source of information. A quantitative research approach and non-experimental descriptive research design was adopted to carry out the study. Study was conducted in Mohan Dai Oswal Hospital, Ludhiana. 30 subjects were selected by Convenience sampling technique. Verbal consent was obtained before data collection and subjects were assured for confidentiality of data. The data was collected by using structured questionnaire consisted of 24 items on household waste management. The reliability of the tool was calculated after pilot study on 10% of subjects and it was found to be reliable. The results of the study revealed that 1 (20%) had below average knowledge, 17 (59.18%) had average knowledge, 12 (48.33%) had good knowledge and none of them had excellent knowledge. The findings of relationship between knowledge regarding household waste management among general population and socio demographic variables concluded that there was no statistically significant association between knowledge and selected demographic variables

Keywords: Knowledge, HouseholdWaste, General Population

BACKGROUND OF THE STUDY

Waste is a term used for unwanted materials which is discarded after the primary use or it is worthless, defective and of no use. Waste is a complex mixture of different substances that are discarded by household, individual or organization that are harmful to be environments and health. Waste management consists of collection, processing, transport and disposal of solid waste. Municipal authorities are responsible for waste management in the municipalities; they implement measures to ensure an effective and efficient way to manage solid waste, facing challenges that are beyond them to tackle. This problem in turn affects the environment and the health of ecosystems and biodiversity. Studies estimate that on an average each person produces 0.57 kg garbage per day in India. There are millions of tons of waste is generated as a result of the ordinary day to use of a domestic premises. The per capita daily solid waste produced ranges between 0.25 and 2.5 kg in different countries. India generates more than 1 lakh metric tons of domestic waste every day. Large metropolis such as Mumbai and Delhi generate around 9000 metric and 8300 metric tones of waste per day, respectively. The impact of improper disposal of waste materials like toxic if consumed by man or animals can be very dangerous to life. It is vital to have an effective and systemic waste disposal management system at the basic source of waste production which is the household in order to combat its harmful effects on the environment and human health.

Problem statement

A Descriptive study to assess the knowledge regarding household waste management among general population visiting Mohan Dai Oswal Cancer Hospital, Ludhiana, Punjab.

Objectives

- To assess the knowledge regarding household waste management among general population visiting in Mohan Dai Oswal Hospital, Ludhiana, Punjab.
- To determine the association of knowledge regarding household waste management with selected socio-demographics variable among general population visiting in Mohan Dai Oswal Hospital, Ludhiana, Punjab.
- To prepare the booklet about safe disposal of household waste to general population visiting in Mohan Dai Oswal Hospital, Ludhiana, Punjab.

METHODOLOGY:

Research approach and design

Quantitative research approach and Descriptive Design was adopted.

Variables

Age, Gender, Education , Marital status, Religion, Family type, Occupation, Monthly income, Source of information were selected as independent and knowledge was selected as Dependent Variable.

Research setting

This study was conducted in Mata Mohan Dai Oswal Cancer Hospital, Ludhiana.

Sample size and technique

The sample of the study consisted of 30 persons in Mata Mohan Dai Oswal Cancer Hospital, Ludhiana, were selected by using convenience sampling technique.

Data collection tool

Self-structured questionnaire was used to assess the knowledge regarding household waste management among general population. An expert's opinions and investigator's own experience and suggestion of research panel provided the basis for the constructions of questionnaire was constructed in the 2 parts: Part-1 Sample characteristics: This part consists of personal information that is Age, Gender, Education, Religion, Family type, Occupation, Monthly income of the family, Sources of information regarding household waste management. Part-2 Self-structured questionnaire contained 24 questions based on knowledge regarding household waste management. Each item consists of one answer among the four choices and each question has four options which carry marks 0,1.
Criterion Measure was divided into three categories

- Excellent 19-24
- Good 13-18
- Average 07-12
- Below average 00-06.

Criteria for sample selection

Inclusion criteria was People who were with the age group of 20-50 years. People who were willing to participate in this study. People who can read and write.
Exclusion criteria was People who were below 20 years of age. People who were not willing to participate. People who cannot read and write.

Content validity

To established content validity of tool, the tool was given to the experts in nursing. The experts were requested to judge the items for relevance, clarity, appropriateness of content area. The modifications were done in the tool based on experts' suggestion and in consultation with the guide. Final tool was reframed.

Pilot study

Pilot study was conducted on 3 subjects selected by convenience sampling technique from Mohan Dai Oswal Hospital Ludhiana. Pilot study was done to ensure the reliability of tool. Prior permission to conduct the study was taken from the authorities of Mohan Dai Oswal Hospital, Ludhiana. Data was collected by investigators with the help of questionnaires. Participants were explained regarding the study and its objectives. Reliability of structured tool was determined by applying odd-even split half method. The reliability of questionnaire was found to be 0.8. Hence the tool was reliable.

Data Collection Procedure

Data collection of procedure started from 11th June to 16th June 2021.The data was collected from 30 subjects visiting Mata Mohan Dai Oswal Cancer Hospital, Ludhiana. Written permission was obtained from higher authorities of Mohan Dai Oswal Hospital, Ludhiana. The investigator first introduced self to the respondent and explain the purpose of gathering information and took verbal permission from the people for filling the questionnaires. They were assured that their responses would be kept confidential and use for only research purpose. Analysis for data was in accordance with objectives of the study.

ANALYSIS AND INTERPRETATION:

Table 1. Frequency, mean, mean% according to levels of knowledge of subjects

N=30

LEVEL OF KNOWLEDGE	SCORE	N	MEAN	MEAN%
EXCELLENT	19-24	0	0	0
GOOD	13-18	12	14.5	40
AVERAGE	07-12	17	9.47	56.67
BELOW AVERAGE	00-06	01	06	3.33

MAXIMUM SCORE : 24
MINIMUM SCORE : 0

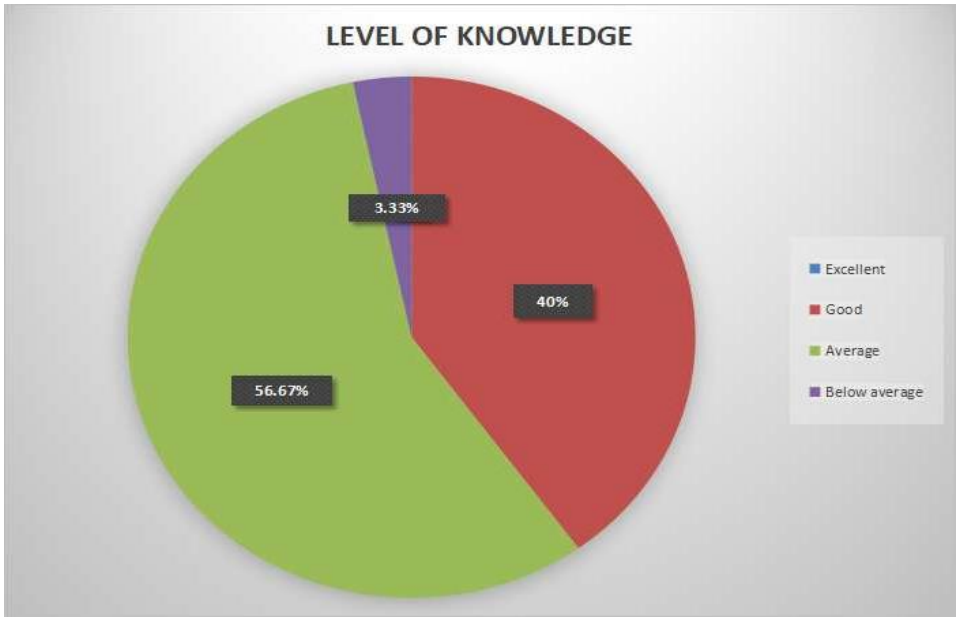

Figure 1: mean% according to levels of knowledge of subjects

Table 1 and Figure 1. depicts the maximum mean percentage of samples have average knowledge regarding household waste management that is 56.67% between 7-12 , mean percentage of good 40% between 13-18 , the mean percentage of excellent 0% between the 19-24 and the mean percentage of below average 3.33% between 0-06.Thus, it can be concluded that majority of samples had average knowledge regarding household waste management.

Mean, Standard Deviation and Analysis of variance of knowledge regarding Household waste Management of general population according to age group.

N=30

AGE	N	MEAN	N%	SD	DF	F
a.21-30	11	10.8	36.66	3.18		

b.31-40 c.41-50 d. above 50	8 9 2	12 11.7 10	26.67 30 6.67	3.29 2.63 5.65	3/29	**NS** 0.38

*NS = Not Significant

MAXIMUM SCORE = 24 MINIMUM SCORE = 0

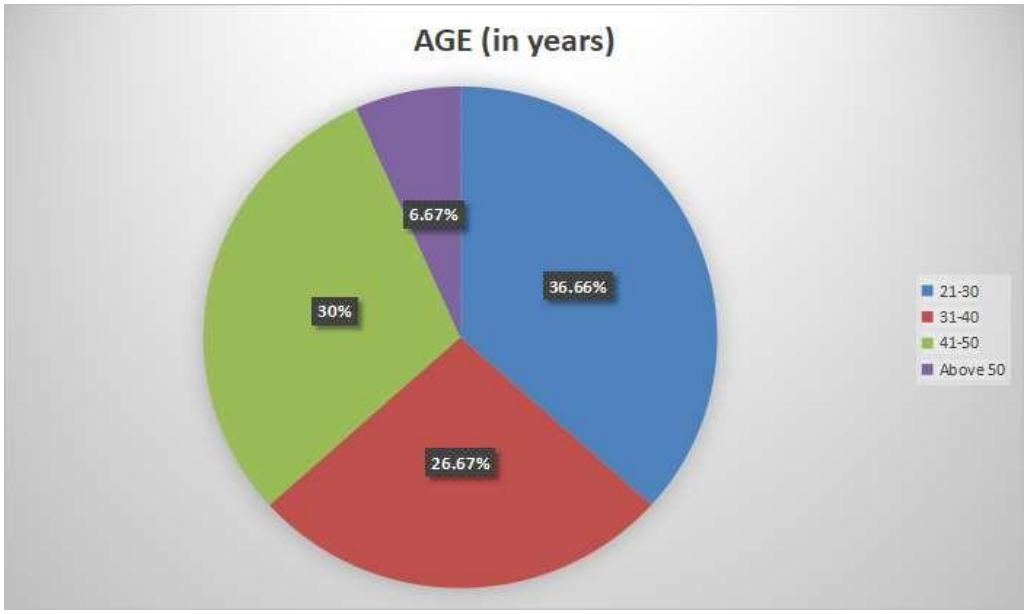

Table 2 and figure 2 depicts that in general population the highest mean percentage score 36.66% was found between 21-30 years, followed by 30% found in 41-50, followed by 26.67% between 31-40 minimum mean percentage score 6.67% were above the age of 50 years. the calculated value was 0.38 at 3/29 degree of freedom and was found to be statistically non-significant. Hence, it was found that age has not any statistically significant influence on level of knowledge regarding household waste management.

Mean, standard deviation of knowledge regarding household waste management among general population according to education

N=30

EDUCATION	**N**	**MEAN**	**N%**	**SD**	**DF**	**F**
a. Primary b. Secondary c. Graduate	5 13 12	9.4 12.30 11.16	16.67 43.33 40	2.70 2.35 3.68	2/29	NS 1.722

MAXIMUM SCORE = 24 *NS = Non- Significant

MINIMUM SCORE = 0

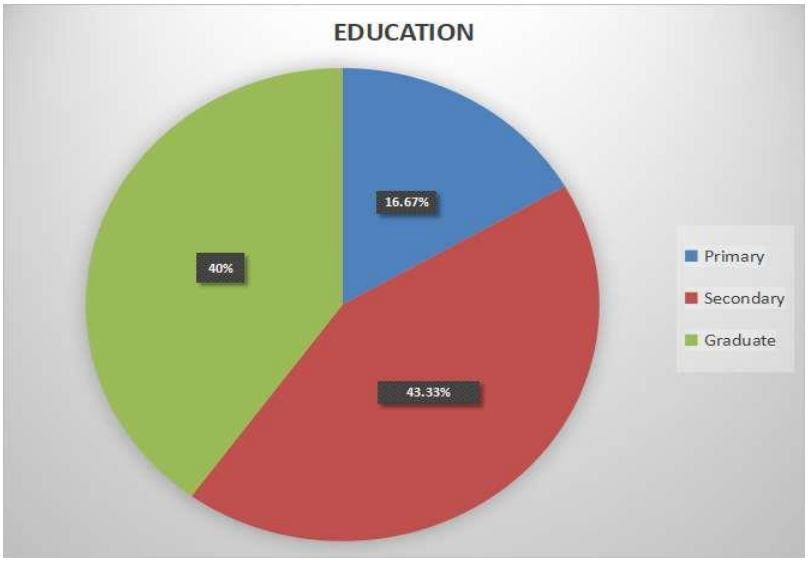

Table and figure 3 shows that the mean percentage is highest in secondary (43.3%), followed by graduate (40%) and lowest in primary (16.67%) . The calculated value was 1.722 at 2/29 degree of freedom and was found to be statistically non-significant.Hence, it can be concluded that the education has not any significant influence on knowledge regarding household waste management.

CONCLUSION

The results of the study revealed that 1 (20%) had below average knowledge, 17 (59.18%) had average knowledge, 12 (48.33%) had good knowledge and none of them had excellent knowledge. The findings of relationship between knowledge regarding household waste management among general population and socio demographic variables concluded that there was no statistically significant association between knowledge and selected demographic variables. The finding of the study concluded that knowledge was deficit in area of household waste management among general population but they had good knowledge in area of general portion regarding household waste management.

LIMITATION

- The size of the sample was only 30 general population. Hence it was difficult to make a broad generalization
- Consecutive sampling was done from a selected Mohan Dai Oswal Hospital, Ludhiana, Punjab.
- The results are based only on the response given by the general population.

IMPLICATIONS

The study findings have certain very important implication of the nursing profession
i.e. nursing education, nursing administration and nursing research. Nurses have expanded and extended role for promotive, preventive, curative and household waste management at individual, family level. Nurses act as an educator, counsellor, organizer, direct care provider ,leader and motivator.

RECOMMONDATION

a) Similar study with large sample can be concluded.
b) This study can be replicated with different area on a large sample thereby generalizing the study results.
c) A similar study can be conducted to assess the knowledge of the nursing student and staff.
d) A comparative study can be conducted between different areas.

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