

Assessment of the Knowledge and Attitude Regarding Plastic Use and its Health Effects among Nursing Students of Selected Nursing Colleges of Ambala, Haryana

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Abstract

Background: India has witnessed a substantial growth in the consumption of plastics and an increased production of plastic waste. Polyolefin account for the major share of 60% in the total plastics consumption in India. Plastic causes major health problems.

Aims and Objectives:

1. To assess the knowledge regarding plastic use and its health effects among nursing students.
2. To assess the attitude regarding plastic use and its health effects among nursing students.
3. To determine the relationship between knowledge and attitude regarding plastic use and its health effects among nursing students.
4. To find out the association of knowledge and attitude regarding plastic use and its health effects among nursing students with selected variables.

Material and Method: The research approach adopted for the study was quantitative research approach and design was descriptive research design. The study was conducted at selected colleges of Ambala, Haryana. A total of 300 students were selected by using convenience sampling technique. The tool used for the data collection consisted of selected variables, structured knowledge questionnaire and structured attitude scale to measure knowledge of students.

Results: Study results revealed that mean score of knowledge was i.e. 59% than mean score of attitude was i.e. 80.3% in the study. A mild positive correlation ($r=0.07$) was found between knowledge and attitude. There was a significant association of knowledge with gender ($p=0.03$), academic qualification ($p=0.01$) and types of school ($p=0.03$). There was a significant association of attitude with religion ($p=0.00$), year (0.00), residence (0.00) and previous knowledge (0.01).

Conclusion: Study concluded that the students have average knowledge and moderately favorable attitude regarding plastic use and its health effects.

Keywords: Knowledge, Attitude, Plastic, Health Effects, Nursing, Students.

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Introduction

“If you are kind so show your kindness towards reducing plastic” –*Smarthemione Grang*

Plastic industry is one among the quickly developing enterprises in the India. In India, 70 percent of absolute

plastic utilization is disposed of as waste. Around 5.6 million tons for each annum (TPA) of plastic waste is produced in nation, which is around 15,342 tons for every day. The development rate is relied upon to be 10% throughout the following five years.¹

In Haryana the assessed plastic waste age in the State is around 23369.09 tons/annum.²

The utilization of plastic convey packs has been mostly prohibited in some pioneer age focuses, visitor and recorded spots situated in Andhra Pradesh, Arunachal Pradesh, Goa, Gujarat, Karnataka, Odessa, Tamil Nadu, West Bengal, Uttar Pradesh and Uttarakhand.³

The purposes behind fame for utilizing the plastic sacks are that these are light weight, protection from corruption (synthetic concoctions, daylight and microscopic organisms), sturdiness or more all ease. After their entrance to condition, plastics take somewhere in the range of 15 to 1000 years to biodegrade. It stances hazard to human wellbeing, creatures and marine life.⁴

Utilization of Plastic is influencing human wellbeing. Harmful synthetic concoctions filter out of plastic and are found in blood and tissue of us all. Presentation to them is connected to the malignant growths, birth defects, impeded insusceptibility, endocrine interruption and different issues. Because of the utilization of compound added substances during plastic creation, plastics have possibly hurtful consequences for human's life that could demonstrate to be cancer-causing or can prompt endocrine interruption.⁵

If a ban is placed on the employment of plastics on emotional grounds, the \$64000 value would be abundant higher, the inconvenience far more, possibilities of injury or contamination abundant bigger. The risk to the family health and safety would be increase and particularly of the environmental burden would be manifold.⁶

Plastic has several dangerous effects on health and students are pillars of a demographic nation. Nurses can play a main role in educating the community they ought to have correct data concerning health effects of plastic.⁷

Objectives:

1. To assess the knowledge regarding plastic use and its health effects among nursing students.
2. To assess the attitude regarding plastic use and its health effects among nursing students.

3. To determine the relationship between knowledge and attitude regarding plastic use and its health effects among nursing students.
4. To find out the association of knowledge and attitude regarding plastic use and its health effects among nursing students with selected variables.

Methodology

The study was conducted during the month of February-march 2019 at selected nursing colleges of Ambala, Haryana India. A sample of 300 nursing students participated in this study with the prior permission. The *ethical clearance* was obtained from the Principles of the respective colleges. A written consent was obtained from the participants who were enrolled in the study. Quantitative research approach with Non Experimental Descriptive survey design was used in this study. The study includes the regular B.Sc Nursing students who were willing to take part in the study, A total of 300 participants were enrolled for the study by using convenience sampling technique. Data was collected by using selected variables, Structured Knowledge questionnaire and Structured Attitude Scale. The technique used was Self report (paper and pencil)

Description of data collection tools

Section I: Development and description of selected variables: It consist of 11 items such as age in year, gender, religion, year of study, academic qualification, type of school, area of living, residence, total family income, monthly pocket money, previous knowledge and if yes, then specify

Section II: Development of Structured knowledge questionnaire to assess knowledge of nursing students: A structured questionnaire was developed to assess the knowledge of Nursing Student regarding plastic use and its health effects. It consist of 30 multiple choice questions related to concept, types, use, hazards and management of plastic

Section III: Development of Structured attitude scale to assess attitude of primary school teachers: Structured attitude scale (5- point Likert scale) consisted of 30 items on attitude. It was prepared to assess the attitude of nursing students. Interpretation of attitude scores was strongly agree, agree, undecided, disagree and strongly disagree

Procedure: The permission was taken to conduct the study from the Respective Principles of selected nursing colleges of Ambala, Haryana. The Consent was taken from the participants prior to the study. The selected variables, Structured Knowledge Questionnaire and Structured Attitude Scale Questionnaire were administered to students. The participants were assured about their confidentiality of their response. Purpose of the study was explained to sample subjects before

data collection. It was found that it took 20 minutes to complete the questionnaire. The items were found clear and understandable.

Results

Section-I: Frequency and percentage distribution in terms of level of knowledge and attitude of mothers regarding oral hygiene of under five children as given in table 1 and table 2.

Table 1: Frequency and percentage Distribution in terms of level of knowledge regarding plastic use and its health effects among nursing students. N=300

Level of Knowledge	Scores	Frequency	Percentage
Very Good	26-30	3	1
Good	20-25	47	15.67
Average	14-19	177	59
Poor	7-13	64	21.33
Very Poor	<6	9	3

The data presented on table 1 shows that majority of students (59%) had average knowledge regarding plastic use and its health effects and only 1% students had very good knowledge.

Table 2: Frequency and percentage Distribution in terms of levels of attitude regarding plastic use and its health effects among nursing students. N=300

Level of attitude	Scores	Frequency	Percentage
Highly favorable	121-150	13	4.4
Moderately favorable	91-120	241	80.3
Unfavorable	30-90	46	15.3

Maximum Score- 150 Minimum Score-30

The data presented in table 2 shows that majority of students (80.3%) have moderately favorable attitude. The data further shows that only 4.4% of students had highly favorable attitude regarding plastic use and its health effects.

Section-II: Range, Mean, median and standard deviation of knowledge and attitude scores regarding plastic use and its health effects among nursing students.

Table 3: Mean Median, Range and Standard Deviation of knowledge scores regarding plastic use and its health effects among nursing students N=300

Variable	Range	Mean \pm SD	Median
Knowledge	26	15.93 \pm 4.24	16
Attitude	78	101.27 \pm 11.39	102

The data presented in table 3 shows that the mean \pm standard deviation of knowledge score regarding plastic use and its health effects among nursing students is 15.93 \pm 4.24 and median is 16 and the mean \pm standard

deviation of attitude scores regarding plastic use and its health effects among nursing students is 101.27 \pm 11.39 and median is 102.

Section III: Coefficient of correlation between the knowledge and attitude scores regarding plastic use and its health effects.

Table-4: Correlation between knowledge scores and attitude scores regarding plastic use and its health effects among nursing students.

Group	Mean±SD	r (p value)
Knowledge	15.93±4.2456	0.07 (0.02)*
Attitude	101.27±11.39	0.07 (0.02)*

The table 4 shows that there is a mild positive correlation (0.07) between knowledge and attitude with p value 0.02 which shows that there is a significant relationship between knowledge and attitude scores regarding plastic use and its health effects among nursing students.

Section-IV Association between the level of knowledge and attitude regarding plastic use and its health effects among nursing students with the selected variables shows that there is significant association of knowledge with gender (0.03), academic qualification (0.01) and type of school (0.03) at 0.05 level of significance. Further it shows that there is significant association of attitude with religion (0.00), year of study (0.002), residence (0.004) and monthly pocket money (0.03) at 0.05 level of significance.

Discussion

The present study was conducted to assess the knowledge and attitude regarding plastic use and its health effects among nursing students.

The present study finding indicate that more than half students (59%) have average knowledge which is contradicted to the findings of the study done by N. Srinivasam and et al.⁴⁰ which indicated that less than half students (48%) have average knowledge.

The present study findings indicated that majority of students (80.3%) had moderately favourable which is similar to the findings of the study done by Ali haider and et al⁴⁹ which indicate that majority of the students (85%) had moderately favourable attitude.

The present study findings indicated that maximum number of students (37%) belongs from age group of 18 year which is similar to the findings of the study done by Mr. Parahad V Iddalagi⁴³ which indicated that

maximum number of students (47%) belongs to age group of 18 year.

The present study indicated that majority of students (86.7%) were having academic qualification of senior secondary which is not contradicted to the findings of the study done by Nitin Joseph⁴⁶ and et al. which indicated that majority of the students (89%) were having academic qualification is graduation

Conclusion

Majority of nursing students had average knowledge regarding plastic use and its health effects. i.e., 59%. Majority of nursing students had moderately favorable attitude regarding plastic use and its health effects. i.e., 80.3%. A mild positive correlation was found between knowledge and attitude i.e., $r=0.07$. There was significant association between the knowledge and attitude score with selected variables

Conflict of Interest: Nil

Financing Sources: Nil

Ethical Clearance: The permission was obtained from the principles of the respective colleges and written consent from the nursing students.

Reference

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