"A descriptive study to assess the knowledge regarding food alteration among GNM 1st year students"

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Abstract-
The current study has been undertaken to assess the knowledge score regarding food alteration among GNM 1st year students in Index Nursing College, Indore. The research design used for study was descriptive in nature. The tool for study was self-structured knowledge questionnaire which consists of 2 parts-PART- I consisted questions related to Socio-demographic data; PART-II consisted of self -structured knowledge questionnaire to assess the knowledge score regarding food alteration among GNM 1st year students. The data was analyzed by using descriptive & inferential statistical methods. The most significant finding was that 73.3% subjects have poor knowledge, 26.7% have average knowledge score while 0.0% GNM 1st year students were having good knowledge score.
Keyword- Food alteration and GNM 1st year students.

I. Introduction

Food adulteration is the process of lowering or reducing the quality of food through ingredient substitution, unauthenticated material addition, or removal from food for the intent of profit or owing to other accidental causes. Food adulteration eventually deceives consumers while also posing a range of health risks. It can be difficult to locate a section of the food market today that is free from adulteration. The customer must be aware of the most common adulterants and how they could harm their health as a result. This is due to manufacturers' increased capacity to fool and con consumers due to the growing number of food producers and the unprecedented quantity of food imports. Our food and beverages shouldn't contain adulterants, which are chemicals that can be added to more expensive components to increase their apparent quantities, decrease their manufacturing costs, or for other dishonest or malevolent reasons. Adulteration has been present in society for a very long time but has gone unreported because of its low incidence and negligible impact. However, economic adulteration is a persistent problem in the current period that has the biggest effect on the food industry. According to one study, red chilli powder has 100% artificial colour, turmeric powder contains 43% chalk powder, sugar contains 37% chalk powder, and milk contains 70% water. Afzal et al. (2011) assert that the main reason people adulterate their products is to boost their income.

II. Objective of the study

1. To assess the pre-test knowledge scores regarding food alteration among GNM 1st year students.
2. To find out association between knowledge score regarding food alteration among GNM 1st year students with their selected demographic variables.

III. Hypotheses:

RH_0: There will be no significant association between knowledge score on food alteration among GNM 1st year students with their selected demographic variables.

RH_1: There will be significant association between knowledge score on food alteration among GNM 1st year students with their selected demographic variables.

IV. Methodology

A descriptive research design was used to assess the knowledge score regarding food alteration among GNM 1st year students residing in Index Nursing College, Indore. The study was carried out on 30 GNM 1st year students selected by convenience sampling technique. Demographical variable and self-structured 30 knowledge questionnaire were used to assess the knowledge score regarding food alteration by survey method.

V. Analysis and interpretation

SECTION-I Table -1 Frequency & percentage distribution of samples according to their demographic variables.

n = 30

S. No	Demographic Variables	Frequency	Percentage
1	**Age in Years**		
a.	Less than 20	23	76.7
b.	Greater than 20	7	23.3
2	**Living area**		
a.	Rural	20	66.7
b	Urban	10	33.3
3	**Family income**		
a.	<15000/-	1	3.3
b.	15001-20000/-	20	66.7
c.	>20000/-	9	30.0
4.	**Sources of information regarding Food alteration**		
a.	Internet	10	33.3
b	News paper	13	43.3
c	Conference/workshop	7	23.3

SECTION-II- Table- 2.1.1- Frequency and percentage distribution of knowledge score of studied subjects:

Category and test Score	Frequency (N=30)	Frequency Percentage (%)
POOR (1-10)	21	70.0
AVERAGE (11-20)	9	30.0
GOOD (21-30)	0	0.0
TOTAL	30	100.0

The present table 2.1.1 concerned with the existing knowledge regarding food alteration among GNM 1st year students were shown by knowledge score and it is observed that most of the GNM 1st year students 21 (70.0%) were poor (01-10) knowledge, 9 (30.0%) were have average (11-20) knowledge score and rest of the GNM 1st year students have 0 (0.0%) were from good (21-30) category.

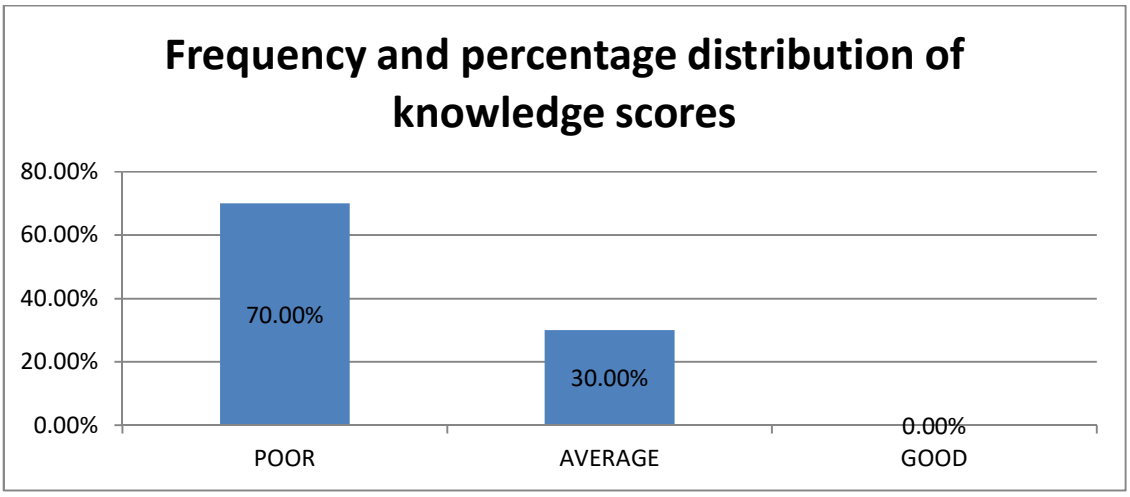

FIG.-2.1.1- Frequency and percentage distribution of Knowledge score of studied subjects

Table-2.1.2. - Mean ($\overline{X}$) and standard Deviation (s) of knowledge scores:

Knowledge **Pre –test**	**Mean** **($\overline{X}$)**	**Std Dev** **(S)**
Knowledge score	9.23	2.47

The information regarding mean, percentage of mean and standard deviation of test scores in shown in table 2.1.2 knowledge in mean knowledge score was 9.23 ± 2.47 while in knowledge regarding food alteration among GNM 1st year students in Index nursing college.

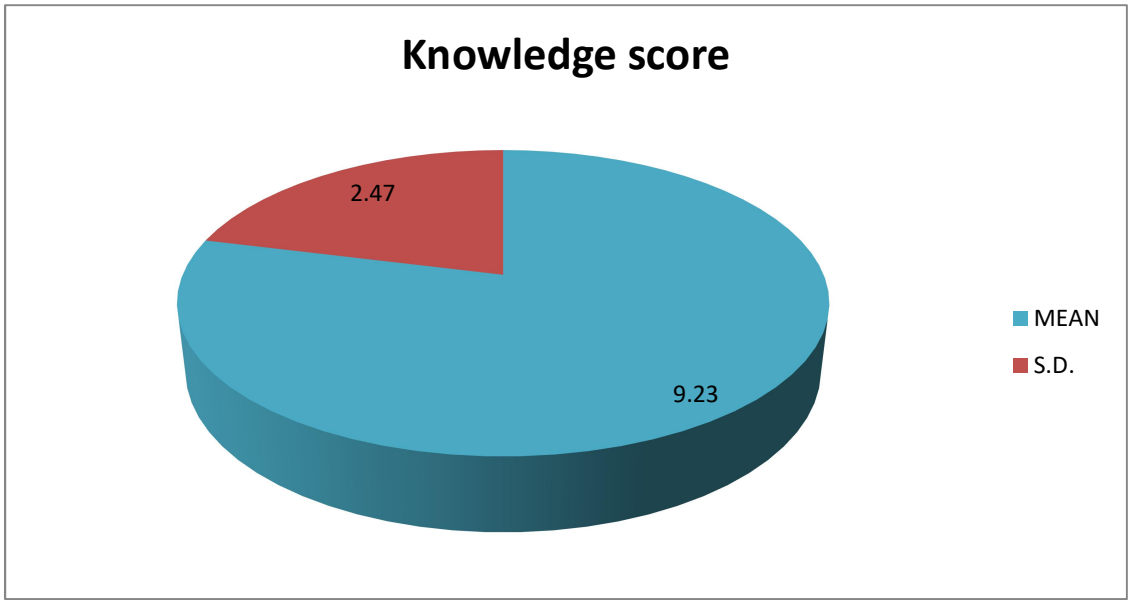

Figure no.-1 Mean and SD of knowledge score of GNM 1st year students.

SECTION-III Association of knowledge scores between test and selected demographic variables:

Table- 3.1 Association of age of GNM 1st year students with knowledge score:

Age	**Test scores**			**Total**
(In years)	**POOR (1-10)**	**AVERAGE (11-20)**	**GOOD (21-30)**	
Less than 20	16	7	0	**23**
Greater than 20	5	2	0	**7**
Total	**21**	**9**	**0**	**30**
	X= 0.009	p>0.05 (Insignificant)		

The association of age & test scores is shown in present table 3.1. The probability value for Chi-Square test is 0.009 for 1 DF which indicated insignificant value (p>0.05). Hence, it is identified that there is insignificant association between age & test scores. Moreover, it is reflected that age isn't influenced with current problem.

Table- 3.2 Association of living area with knowledge score:

Living area	**Test scores**			**Total**
	POOR (1-10)	**AVERAGE (11-20)**	**GOOD (21-30)**	
Rural	13	7	0	**20**
Urban	8	2	0	**10**
Total	**21**	**9**	**0**	**30**
	X= 0.71	p>0.05 (significant)		

The association of living area & test scores is shown in present table 3.2. The probability value for Chi-Square test is 0.71 for 1 df which indicated living area & test scores. Moreover, it is reflected that living area is influenced with current problem.

Table- 3.3 Association of Family income with knowledge score:

Family income	Test scores			Total
	POOR (1-10)	AVERAGE (11-20)	GOOD (21-30)	
<15000/-	0	1	0	1
15001-20000/-	15	5	0	20
>20000/-	6	3	0	9
Total	21	9	0	30
X= 2.61		p>0.05 (Insignificant)		

The association of Family income & test score is shown in present table 3.3. The probability value for Chi-Square test is 2.61 for 2 degrees of freedom which indicated Family income and test scores. Moreover, it is reflected that Family income isn't influenced with present problem.

Table- 3.4 Association of sources of knowledge with knowledge score:

Sources of knowledge	Test scores			Total
	POOR (1-10)	AVERAGE (11-20)	GOOD (21-30)	
Internet	5	5	0	10
News paper	10	3	0	13
Conference	6	1	0	7
Total	21	9	0	30
X= 3.02		p>0.05 (Insignificant)		

The association of sources of knowledge & test scores is shown in present table 3.4. The probability value for Chi-Square test is 3.02 for 2 degrees of freedom which indicated sources of knowledge & test scores. Moreover, it is reflected that source of knowledge isn't influenced with current problem.

VI. Results

The findings of the study revealed that 70.0% subjects have poor knowledge, 30.0% have average knowledge score while 0.0% GNM 1st year students were having good knowledge score towards food alteration. The mean knowledge score of subjects was 9.23 ± 2.47.

VII. Conclusion

It was concluded that majority of GNM 1st year students had poor knowledge score regarding food alteration. GNM 1st year students should also educate regarding food alteration.

VIII. Limitations

- This was limited to Index Nursing College, Indore.
- This was limited to 30 GNM 1st year students.

IX. Reference

1. K. Giannakas, "Information asymmetries and consumption decisions in organic food product markets," Canadian Journal of Agricultural Economics/Revue canadienned & apos;agroeconomie, vol. 50, no. 1, pp. 35–50, 2002.
2. UK National Food Crime Unit, Food Crime Annual Strategic Assessment, Food Standards Agency and Food Standards Scotland Report, 2016.
3. Choudhary, N. Gupta, F. Hameed, and S. Choton, "An overview of food adulteration: concept, sources, impact, challenges and detection," International Journal of Chemical Studies, vol. 8, no. 1, pp. 2564–2573, 2020.
4. G. Anita and S. Neetu, "Hazards of new technology in promoting food adulteration," IOSR Journal Of Environmental Science, Toxicology And Food Technology, vol. 5, no. 1, pp. 08–10, 2013.
5. FAO, Assuring Food Safety and Quality: Considerations of Food Safety and Consumer Protection, FAO Corporate Document Repository, Agriculture and Consumer Protection Division, Food and Agriculture Organization, Rome, Italy, 2011.
6. S. Majumdar, "Food hazards and food security," Everyman's Science, vol. 64, pp. 348–355, 2010.
7. WHO, Evaluation of Certain Food Additives and Contaminants, 67th Report of the Joint FAO/WHO Expert Committee on Food Additives, WHO Technical Report Series no. 940, World Health Organization, Geneva, Switzerland, 2007.