"A COMPARATIVE STUDY TO ASSESS THE KNOWLEDGE REGARDING JUNK FOOD CONSUMPTION AMONG ADOLESCENTS BETWEEN URBAN AND RURAL AREA IN SELECTED SCHOOLS OF DISTRICT HISAR, HARYANA."

DIVYA

Nursing Tutor, Shaheed Baba Deep Singh College of Nursing, Fatehabad, Haryana

ABSTRACT

INTRODUCTION: Food is an important part of a balanced diet. It is something everyone needs every day. Life can be sustained only with adequate nourishment. Man needs food for growth, development and to lead an active and healthy life. Food is a substance, usually composed of carbohydrates, fats, proteins and water that can be eaten or drunk by an animal or human for nutrition or pleasure. Healthy nutritious foods have been replaced by the new food mantra – JUNK FOOD or fast food! Junk food is the term given to food that is high in calories but low in nutritional content. In the context of world economy, junk food is a global phenomenon.

MATERIAL & METHOD: A descriptive study was conducted. The conceptual framework adopted for the study is based on Health Belief Model (Rosenstock,1999). The study population consisted of 80 adolescents from rural and urban area schools, Hisar. Convenient sampling was used to select study participant. The tool developed and used for data collection was demographic variable and structured knowledge questionnaire. Descriptive and inferential statics was used to analyze the data.

APPROACH: A research approach tells the researcher as to what data to be collect and how to analyses them. It also suggests possible conclusion to be drawn from the data. Research approaches refer to the overall plan for obtaining answers to the research questions and for testing the assumption. (Polit D.F. and back, C.T.,1995) The approach tells the basic procedure for the conduct of research inquiry. In the present study. The investigator selected Quantitative approach was taken as it is appropriate whenever the research question tests the knowledge of the people. The present study aim is to "A comparative study to assess the knowledge regarding junk food consumption among adolescents between urban and rural area in selected schools of district Hisar, Haryana."

RESULT: The study concluded that the mean score on level of knowledge regarding junk food consumption among adolescents in urban area was 14.5 with SD 6.36, whereas in rural areas the mean score on level of knowledge regarding junk food consumption among adolescents in was 11.275 with SD 6.36. The mean difference of urban and rural area knowledge score was 3.225. The value of unpaired test was 0.0165. which was significant at p-value 0.05. Which means there was difference in level of knowledge regarding junk food consumption among adolescents in urban and rural areas. Hence the hypothesis H2 was accepted.

CONCLUSION: The chapter deals with the conclusion, implication, recommendation and limitation of the study, comparative study to assess the knowledge regarding junk food consumption among adolescents between urban and rural areas in selected schools of district Hisar, Haryana.

INTRODUCTION

The availability of junk food and snacks at low prices and marketing strategies adapted by manufacturers of such foods has

triggered an evolution wherein, consumption of foods that require neither the structure nor the preparation of a formal meal. It seems to have engulfed every age; every race and the newest entrants on stage are children, school going in particular. In adolescents both boys and girls undergo several physical and psychological changes which make them become partly responsible for their own health and welfare. Junk foods have no or very less nutritional value and irrespective of the way they are marketed, they are not healthy to consume.

METHODOLOGY

Methodology includes research approach and its rationale, description of setting and population, sampling technique, sample population, discrimination of sample, tools selection, and construction, discrimination and rationale procedure of data collection, data analysis, statistically method used. This chapter deals with the description of methods and different steps used for collecting and organizing data. It includes research design, research approach, setting, sample and sampling techniques, development and description of tool, development of teaching strategy, pilot study, data collection procedure and plan for data analysis. The study was conducted on “A comparative study to assess the knowledge regarding junk food consumption among adolescents between urban and rural area in selected schools of district Hisar, Haryana.”

RESULT

The research determined that the average score reflecting knowledge about junk food consumption among adolescents in urban areas was 14.5, with a standard deviation of 6.36. In contrast, the average score for adolescents in rural areas was 11.275, also with a standard deviation of 6.36. The difference in mean knowledge scores between urban and rural areas was 3.225. The unpaired 't' test yielded a value of 0.0165, which is significant at a p-value of 0.05. This indicates a disparity in knowledge levels regarding junk food consumption among adolescents in urban and rural settings, leading to the acceptance of hypothesis H2. Furthermore, there is a significant correlation between the level of knowledge regarding junk food consumption among adolescents in urban areas and selected demographic variables. However, factors such as gender, educational status, religion, family type, father's education, mother's education, and previous sources of information did not show any association with knowledge levels regarding junk food consumption. Conversely, a significant association was found between the demographic variable of age and knowledge levels regarding junk food consumption. In rural areas, there is also a significant association between adolescents' knowledge levels regarding junk food consumption and selected demographic variables. Similar to urban areas, factors such as gender, religion, family type, father's education, mother's education, and previous sources of information did not demonstrate any association with knowledge levels regarding junk food consumption. However, significant associations were observed between the demographic variables of age and education and the level of knowledge regarding junk food consumption. Therefore, hypothesis H0 was rejected while hypothesis H1 was accepted.

ANALYSIS

TABLE: -1 Frequency and Percentage distribution of samples according to their selected demographic variables

Demographic variable	Adolescent in urban area (N=40) - F	Adolescent in urban area (N=40) - %	Adolescent in rural area (N=40) - F	Adolescent in rural area (N=40) - %
Age				
13-14 years	18	45%	11	27.50%
15-16 years	13	32.50%	15	37.50%
17-18 years	9	22.50%	12	30%
Gender				
Girls	24	60%	18	45%
Boys	16	40%	22	55%
Education				
9th	14	35%	12	30%
10th	10	25%	13	32.50%
11th	7	17.50%	8	20%
12th	9	22.50%	7	17.50%
Religion				
(a) Hindu	30	75.50%	33	82.50%
(b) Sikh	7	17.50%	5	12.50%
(c) Muslim	3	7.50%	2	5%
(d) Other	0	0%	0	0%
Type of family				
Nuclear family	23	57.50%	15	37.50%
Joint family	17	42.50%	25	62.50%
Education of father				
Primary education	3	7.50%	4	10%
Secondary education	10	25%	13	32.50%
Sr. Sec. education	8	20%	11	27.50%
Graduation and above	19	47.50%	12	30%
Education of mother				
Primary education	4	10%	6	15%
Secondary education	7	17.50%	15	37.50%
Sr. Sec. education	15	37.50%	8	20%
Graduation and above	14	35%	11	27.50%
Source of previous information				
Mass media	8	20%	4	10%
Health professional	4	10%	6	15%
Family and relative	16	40%	14	35%
Friends	12	30%	16	40%

TABLE: -2 COMPARISON OF LEVEL OF KNOWLEDGE REGARDING CONSUMPTION OF JUNK FOOD BASED ON MEAN, SD, SE AND 'T'- VALUE AMONG ADOLESCENTS OF URBAN AREA AND RURAL AREA

Level of knowledge	Adolescent in urban area (N=40) - F	Adolescent in urban area (N=40) - %	Adolescent in rural area (N=40) - F	Adolescent in rural area (N=40) - %
Inadequate knowledge <50%	24	60%	28	70%
Moderate knowledge 50-75%	16	40%	12	30%
Adequate knowledge >75%	0	0%	0	0%

TABLE: -3 Association of KNOWLEDGE Score with Demographic variables (Post KNOWLEDGE) Experimental Group

Group	Mean	SD	Mean difference	't' value
Adolescent in urban area (N=40)	14.5	6.36	3.225	0.0165
				Significant at p=0.05
Adolescent in rural area (N=40)	11.28	6.36		

TABLE:-4 Association of the level of knowledge regarding consumption of junk food among adolescents in urban area with their selected demographic variables.

Demographic variable	Level of knowledge: Inadequate ≤12	Level of knowledge: Moderate 13-19	Level of knowledge: Adequate >19	Chi-square At p<0.05
1. AGE				
13-14 years	14	4	0	$\chi^2 = 12.855$ df = 4 p = 0.001** S
15-16 years	4	9	0	
17-18 years	1	8	0	
2. GENDER				
Girls	10	14	0	$\chi^2 = 0.818$ df = 2 p = 0.664 NS
Boys	9	7	0	
3. EDUCATION				
9th	11	3	0	$\chi^2 = 11.229$ df = 6 p = 0.081 NS
10th	5	5	0	
11th	2	5	0	
12th	1	8	0	
4. RELIGION				

Hindu	16	14	0	$\chi^2 = 1.656$ df = 6 p = 0.948 NS
Sikh	2	5	0	
Muslim	1	2	0	
Others	0	0	0	
5. TYPES OF FAMILY				
Nuclear family	13	10	0	$\chi^2 = 1.766$ df = 2 p = 0.413 NS
Joint family	6	11	0	
6. EDUCATION OF FATHER				
Primary education	1	2	0	$\chi^2 = 2.692$ df = 2 p = 0.846 NS
Secondary education	6	4	0	
Senior sec.	2	6	0	
Graduation & above	10	9	0	
7. EDUCATION OF MOTHER				
Primary education	2	2	0	$\chi^2 = 2.076$ df = 9 p = 0.912
				NS
Secondary education	5	2	0	
Senior sec.	6	9	0	
Graduation & above	6	8	0	
8. SOURCE OF INFORMATION				
				$\chi^2 = 1.403$

Mass media	5	3	0	df = 6 p = 0.965 NS
Health professional	2	2	0	
Family and relative	6	10	0	
Friends	6	6	0	

TABLE:-5 **Association of the level of knowledge regarding consumption of junk food among adolescents in rural area with their selected demographic variables.**

Demographic variable	Level of knowledge: Inadequate	Level of knowledge: Moderate	Level of knowledge: Adequate	Chi-square At p<0.05
1. AGE				
13-14 years	17	1	0	Chi-sq = 14.571
15-16 years	9	6	0	df = 4
17-18 years	2	10	0	p = 0.006*** (S)
2. Gender				
Girls	11	7	0	Chi-sq = 0.174
Boys	17	10	0	df = 2
				p = 0.916 (NS)
3. Education				
9th	11	1	0	Chi-sq = 15.271
10th	12	1	0	df = 6
11th	2	6	0	p = 0.018*** (S)
12th	1	6	0	
4. Religion				
Hindu	21	12	0	Chi-sq = 3.431
Sikh	4	1	0	df = 6
Muslim	1	1	0	p = 0.753
Others	0	0	0	(NS)
5. Types of family				
Nuclear family	11	4	0	Chi-sq = 2.462
Joint family	17	13	0	df = 2
				p = 0.291 (NS)

6. Education of father				
Primary education	2	2	0	Chi-sq = 0.402
Secondary education	6	7	0	df = 6
Senior sec.	0	5	0	p = 0.998
Graduation & above	7	5	0	(NS)
7. Education of mother				
Primary education	4	2	0	Chi-sq = 0.664
Secondary education	8	7	0	df = 6
Senior sec.	4	4	0	p = 0.995
Graduation & above	7	4	0	(NS)
8. Source of information				
Mass media	2	2	0	Chi-sq = 0.930
Health professional	4	2	0	df = 6
Family and relative	9	5	0	p = 0.988
Friends	8	8	0	(NS)

DISCUSSIONS AND CONCLUSIONS

This chapter interprets the statistical findings of a comparative study assessing junk food knowledge among 80 school-going adolescents (40 urban, 40 rural) in Hisar, Haryana. Baseline data was gathered via structured pre-test questionnaires to address three primary objectives: assessing independent knowledge levels, comparing regional variations (H_2), and identifying demographic associations (H_0/H_1).

1. Demographic Profiles of the Study Sample

- **Urban Cohort ($n = 40$):** Features a majority aged 13–14 years (45%), 60% girls, and a predominantly nuclear family structure (57.5%). Academically, 35% were in the 9th standard. Paternal (47.5%) and maternal (35%) higher education rates (graduation and above) were relatively high. The primary information pipeline was family/relatives (40%).
- **Rural Cohort ($n = 40$):** Characterized by a leading age block of 15–16 years (37.5%), 55% boys, and a strong prevalence of joint family configurations (62.5%). Academically, the 10th standard was the largest group (32.5%). Secondary schooling was the most common benchmark for both fathers (32.5%) and mothers (37.5%). Peers/friends served as the primary source of information (40%).

2. Analysis of Objectives and Hypothesis Testing

Objective 1 & 2: Knowledge Assessment and Regional Comparison

The study revealed significant gaps in baseline nutritional awareness:

- **Urban Area:** 60% of adolescents had inadequate knowledge, and 40% had moderate knowledge (Mean: 14.5, SD: 6.36).
- **Rural Area:** 70% exhibited inadequate knowledge, and 30% had moderate knowledge (Mean: 11.275, SD: 6.36).

An independent unpaired t-test generated a value of 0.0165, which is highly significant at $p \le 0.05$. The mean difference of 3.225 confirms that urban school adolescents maintain a statistically superior baseline of knowledge over their rural peers. **Hence, the research hypothesis H_2 is formally accepted.**

Objective 3: Demographic Associations

- **Urban Sector:** Cross-tabulation confirmed that **age** was the only variable sharing a statistically significant association with baseline knowledge scores. Secondary variables like gender, grade, and parental education showed no correlation.
- **Rural Sector:** A dual correlation emerged, proving that both **age and educational status (grade level)** significantly influenced knowledge profiles.

Consequently, the global null hypothesis **H_0 was rejected, and the alternative hypothesis H_1 was accepted** across both sectors.

3. Implications of the Study

- **Nursing Practice & Community Health:** Community and school health nurses must prioritize rural environments to close regional knowledge gaps, establishing structured dietary counseling frameworks targeting younger adolescent cohorts.
- **Nursing Education:** Curriculum designs should incorporate field-based nutritional research to train future nurses in translating clinical data into accessible community teachings.
- **Institutional Policy:** School administrations and boards should embed structured dietary awareness modules into regular curricula and enforce strict regulations regarding processed food availability in canteens.

4. Recommendations and Limitations

Recommendations

- **Scale and Scope:** Replicate the study using a larger sample size across multiple districts to improve generalizability.
- **Longitudinal Design:** Conduct evaluative studies tracking the long-term behavioral effects of Structured Teaching Programs (STP) on daily food choices.
- **Holistic Inclusion:** Develop localized, media-led intervention packages and conduct parallel baseline studies evaluating parental and teacher dietary literacy.

Limitations

- **Confinement:** The study was restricted to a single district (Hisar, Haryana) and capped at a small sample size ($N = 80$).
- **Methodological Scope:** Data collection relied exclusively on self-reported questionnaire scores without tracking objective metrics like biological Body Mass Index (BMI), direct caloric intake, or active eating habits.

REFERENCES

1. **Joseph N, et al.** Fast Food Consumption Pattern and Its Association with Overweight Among High School Boys in Mangalore City of Southern India. *Journal of Clinical & Diagnostic Research*. 2015 May; 9(5): LM01–LM05. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4484093

2. **Mathur JS.** *A Comprehensive Textbook of Community Medicine*. 2nd ed. New Delhi: CBS Publishers; 2009. p. 405–408.

3. **Trinath MA, et al.** A comparative study to assess the knowledge regarding effects of junk food consumption between urban and rural area, among school children. *International Journal of Advanced Research in Medical, Pharmaceutical and Science (IJARMPS)*. 2017 Oct; 2(10).

4. **Anuradha M.** Impact of fast food on obesity among children in selected Matriculation School at Madurai District, Tamilnadu [Dissertation]. The Tamil Nadu Dr. M.G.R. Medical University; 2011. Available from: http://repository.tnmgrmu.ac.in/4942

5. **Shri Chaitanya Educational Institutions.** Essay on Junk Food for Children and Students. *Infinity*

6. **Ashakiran S, Deepthi R.** Fast Foods and their Impact on Health. *Journal of Krishna Institute of Medical Sciences*

University (JKIMSU). 2012 Jul-Dec; 1(2): 7–15. ISSN: 2231-4261.

7. **Manasa Trinath.** A comparative study to assess the knowledge regarding effects of junk food consumption between urban and rural area, among school children. *International Journal of Development Research*. 2017 Oct; 7(10): 2455–6998.

8. **Trinath MA, et al.** A comparative study to assess the knowledge regarding effects of junk food consumption between urban and rural area, among school children. *International Journal of Advanced Research in Medical, Pharmaceutical and Science (IJARMPS)*. 2017 Oct; 2(10).

9. **Geeta Arya, Sunita Mishra.** Effects of Junk Food & Beverages on Adolescent's Health. *IOSR Journal of Nursing and Health Science*. 2013 Jul-Aug; 1(6): 26–32. p- ISSN: 2320–1940, e-ISSN: 2320–1959.

10. **Balbir Yadav, Mandeep Kaur.** Knowledge Regarding Health Hazards of Junk Food and Its Prevention among Adolescents. *International Journal of Advances in Nursing Management*. 2019; 1(2). e-ISSN: 2582-001X. DOI: http://doi.org/10.5281/zenodo.3346467

11. **World Health Organization.** Global Burden of Disease, Injury, and Impairment Summaries: Diet high in sugar-sweetened beverages - Level 3 risk. GBD 2019. [Last accessed on 2022 May 30]. Available from: https://nhm.gov.in/WriteReadData/l892s/14057960315712013 48.pdf

12. **Anjana RM, Unnikrishnan R, et al.** Metabolic non-communicable disease health report of India: the ICMR-INDIAB national cross-sectional study. *The Lancet Diabetes & Endocrinology*. 2023 Jul; 11(7): 474-489. Available from: https://www.thelancet.com/journals/landia/article/PIIS2213-8587(23)00119-5/fulltext

13. **Ramchandra U, Salunkhe AH, Mohite VR.** Knowledge Regarding Health Hazards of Junk Foods among Adolescents. *International Journal of Science and Research (IJSR)*. 2013; ISSN (Online): 2319-7064. Index Copernicus Value (2013): 6.14.

14. **Suraj Sujan Bohara, Kanchan Thapa.** Determinants of Junk Food Consumption Among Adolescents. *Frontiers in Nutrition*. 2021; Volume 8. DOI: https://doi.org/10.3389/fnut.2021.644650

15. **Ashakiran S, Deepthi R.** Fast foods and their impact on health. *Journal of Krishna Institute of Medical Sciences University (JKIMSU)*. 2012; 1(2): 7-15.

16. **Ms. Fancy R, Mr. Vijay M, Ms. Pushpakala KJ.** Assess the knowledge regarding ill effects of junk foods among adolescents. *IOSR Journal of Humanities and Social Science*. 2019; 24(1): 45-48.

17. **World Health Organization.** *Food marketing exposure and power and their associations with food-related attitudes, beliefs and behaviours: a narrative review*. Geneva: World Health Organization; 2022. Licence: CC BY-NC-SA 3.0 IGO. Available from: https://www.who.int/publications/i/item/9789240041783

18. **National Health Mission.** Operational Guidelines on Adolescent Health. Ministry of Health and Family Welfare, Government of India. Available from: https://nhm.gov.in/WriteReadData/l892s/14057960315712013 48.pdf

19. **Bayol SA, Macharia R, Farrington SJ, Simbi BH, Stickland NC.** Evidence that a maternal junk food diet during pregnancy and lactation can reduce muscle force in offspring. *European Journal of Nutrition*. 2009; 48(2): 62-65.

20. **Sushma Marita Dsouza, et al.** To assess the knowledge and practice of junk food consumption among students in Udupi Taluk, Karnataka,

India. *Clinical Epidemiology and Global Health*. 2017; Available from: https://www.sciencedirect.com/science/article/pii/S2213398417301069