

The Effect of Advertisements on Food Habits of Adolescent Girls: A Study in Jharsuguda District Odisha

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Abstract:

➤ Aim:

The present study “The Effect of Advertisements on Food Habits of Adolescent Girls: A study in Jharsuguda District Odisha,” was undertaken to examine the influence of food advertisements on the food choices, eating patterns, purchasing behaviour, and nutritional practices of adolescent girls. The study adopted an exploratory cum descriptive research design and it was conducted among 120 adolescent girls selected through purposive sampling from Bandhabahal High school and women’s college, Jharsuguda. Primary data were collected using a structured questionnaire covering socio-demographic characteristics, factors influencing food habits, beneficial and harmful effects of advertisements and food habits in relation to BMI.

➤ Result:

The findings revealed that 53.33% of respondents were aged 13–16 years and 55% belonged to rural areas. Regarding advertisement exposure, 45% watched food advertisements sometimes and 30.83% watched them very often. Facebook/Instagram was the major platform (58.83%), followed by mobile games/apps (20.83%). More than half (52.5%) spent 1–2 hours online daily. Fast-food advertisements were most influential (51.67%), followed by snacks (35.83%). About 55% reported purchasing a product after watching an advertisement, while 59.17% indicated that advertisements sometimes influenced snack choices. Celebrity endorsements sometimes influenced food choices among 49.17%. 51.67% agreed that advertisements made unhealthy foods attractive. Regarding dietary practices, 45.83% consumed junk/fast food once a week, while 54.17% reported daily consumption of sugary foods or beverages. About 51.67% sometimes skipped breakfast. 60% had a moderately healthy eating pattern. BMI findings showed that 51.67% had normal weight, 18.33% were overweight, and 10.83% were obese. The study indicates that food advertisements significantly influence food preferences and eating behaviour. The present study highlights the need for nutrition education and media literacy.

Keywords: Adolescents Girls, Food Habits, Advertisement Exposure, Junk Food Consumption, Dietary Behaviours.

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I. INTRODUCTION

Adolescence is a critical period of rapid physical, psychological, and social development, during which adequate nutrition is essential for healthy growth and overall well-being. However, many adolescents develop unhealthy dietary habits, including frequent snacking, skipping breakfast, and increased consumption of fast foods and processed foods (Blaine et al., 2017; Almoraie et al., 2021). Such dietary practices, combined with reduced physical activity, may contribute to overweight and obesity (Mistry

& Puthussery, 2015; Askari et al., 2020). Food habits among adolescents are influenced by several factors, including family environment, socioeconomic status, peer influence, culture, lifestyle, and media exposure. Food advertising has emerged as an important influence on adolescents' food preferences and consumption patterns. Attractive packaging, taste appeals, celebrity endorsements, and digital marketing can encourage the consumption of commercially promoted foods. Adolescents are increasingly exposed to food advertisements through television, social media, mobile phones, and other digital platforms (Cairns et al., 2013;

Harris, 2009). Research indicates that exposure to unhealthy food advertising is associated with greater preference for and consumption of unhealthy foods and beverages among adolescents. At the same time, advertising and marketing can also promote nutritious and fortified foods and encourage healthier dietary choices. Therefore, understanding the influence of food advertisements on adolescents' food preferences and eating behaviour is important for promoting healthy nutrition and developing effective public health interventions.

➤ *Objectives of the Study:*

- To study the socio-demographic profile of adolescent girls.
- To assess the study between BMI and food habits of respondents.
- To explore both the beneficial and harmful effects of advertisements on respondents food habits.

II. METHODOLOGY

The present study entitled “The Effect of Advertisements on Food Habits of Adolescent Girls: A Study in Jharsuguda District” adopted an exploratory-cum-

descriptive research design. The study was conducted in Jharsuguda District, Odisha, and the respondents were selected from Bandhabahal High School and Women's College, Jharsuguda. A purposive sampling technique was used to select a total sample of 120 adolescent girls, comprising 64 respondents from Bandhabahal High School and 56 respondents from Women's College. Primary data were collected using a structured questionnaire designed to obtain information on the socio-demographic profile, advertisement exposure, factors influencing food habits, dietary practices, and the beneficial and harmful effects of advertisements. The collected data were coded, categorized, tabulated, and analysed using percentage and graphical representation for proper interpretation of the findings.

III. RESULTS AND DISCUSSION

➤ *Socio-Demographic Characteristics:*

Each and every research study is important to collect information on the socioeconomic characteristics categorized under general or personal information of the respondents. General information contains variables like age, area, caste, type of family, number of family members, Monthly income, Education of the respondents were represented in the following tables.

Table 1 Distribution of Respondents According to BMI Categories [n=120]

VARIABLES	CATEGORIES	FREQUENCY	PERCENTAGE
Age(Years)	13-16	64	53.33
	16-19	56	46.67
Educational Qualification	Class 9 th	30	25.00
	Class 10 th	34	28.33
	Graduation 1 st year	32	26.67
	Graduation 2 nd year	24	20.00
Area	Rural	66	55.00
	urban	54	45.00
Caste	General	23	19.17
	Obc	50	41.67
	SC/ST	47	39.16
Monthly income of parents	Rs 20,000-40,000	37	30.83
	Rs 40,000-60,000	49	40.83
	Above 60,000	34	28.34
Head of the family	Father	85	70.83
	Mother	17	14.17
	Grandfather	13	10.83
	others	5	7.17
Type of family	Joint family	63	52.50
	Nuclear family	57	47.50
Family size	0-3 members	25	20.83
	3-5 members	40	33.33
	5-7 members	15	12.50
	Above 7 members	40	33.33

The Table presents the general information of the 120 respondents. More than half of the respondents (53.33%) belonged to the age group of 13–16 years, while 46.67% were aged 16–19 years. Regarding educational qualification, the highest proportion (28.33%) belonged to Class 10, followed by Graduation 1st Year (26.67%), Class 9 (25%), and Graduation 2nd Year (20%). A majority of the

respondents (55%) were from rural areas, while 45% belonged to urban areas. With regard to caste, 41.67% belonged to the OBC category, followed by SC/ST (39.16%) and General category (19.17%). Most respondents' parents (40.83%) had a monthly income of ₹40,000–₹60,000. In the majority of families (70.83%), the father was the head of the family. Slightly more than half of the respondents (52.5%)

belonged to joint families, whereas 47.5% belonged to nuclear families. Regarding family size, equal proportions of

respondents (33.33% each) belonged to families with three to five members and above seven members.

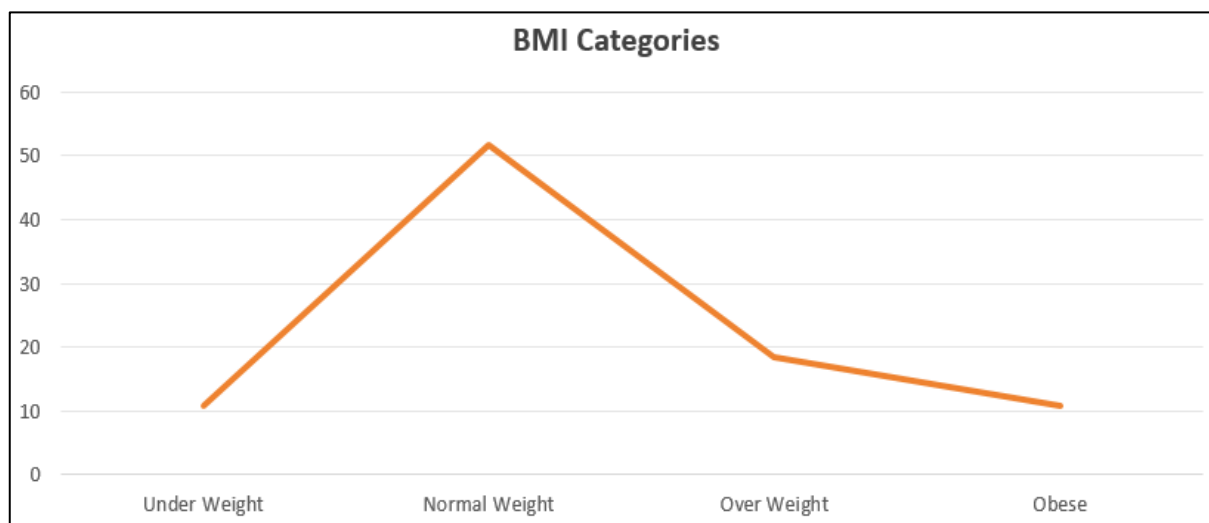


Fig 1 Distribution of Respondents According to BMI Categories [n=120]

The line graph presents the BMI categories of 120 respondents. The majority of respondents, 62 (51.67%), were in the normal weight category. This was followed by 22 respondents (18.33%) who were overweight. The pi-chart

further shows that 13 respondents (10.83%) were underweight, while an equal number, 13 respondents (10.83%), were classified as obese.

Table 2 Distribution of Respondents Based on Number of Meals Consumed Per Day[n=120]

Eating meals per day	Frequency	Percentage(%)
One meal	0	0
Two meals	19	15.83
Three meals	67	55.83
More than 3 meals	34	28.33

The table presents the distribution of 120 respondents based on the number of meals consumed per day. The findings show that the majority of respondents, 67 (55.83%), consumed three meals per day. This was followed by 34

respondents (28.33%) who consumed more than three meals per day. 19 respondents (15.83%) reported consuming two meals per day, while none of the respondents (0%) consumed only one meal per day.

Table 3 Frequency of Junk/Fast Food Consumption Among Respondents[n=120]

Fast food consumption	frequency	Percentage(%)
Daily	9	7.5
3-4 times a week	30	25
Once a week	55	45.83
Rarely	24	20
never	2	1.67

The table presents the frequency of junk/fast food consumption among 120 respondents. The findings show that the majority of respondents, 55 (45.83%), consumed junk/fast food once a week. This was followed by 30 respondents (25%) who consumed it 3–4 times a week. 24

respondents (20%) reported consuming junk/fast food rarely, while 9 respondents (7.5%) consumed it daily. Only 2 respondents (1.67%) reported that they never consumed junk/fast food.

Table 4 Frequency of Consumption of Fruits and Vegetables Among Respondents [n=120]

Consumption of fruits and vegetables	frequency	Percentage(%)
Daily	27	22.5
2-3 times a week	33	27.5
4-5 times a week	43	35.83
Rarely	16	13.33
never	1	0.83

The table presents the frequency of fruit and vegetable consumption among 120 respondents. The findings show that the highest proportion of respondents, 43 (35.83%), consumed fruits and vegetables 4–5 times a week. This was followed by 33 respondents (27.5%) who consumed them 2–

3 times a week. 27 respondents (22.5%) reported consuming fruits and vegetables daily. Meanwhile, 16 respondents (13.33%) consumed them rarely, and only 1 respondent (0.83%) reported never consuming fruits and vegetables.

Table 5 Consumption of Sugary Foods/Beverages Among Respondents [n=120]

Consumption of fruits and vegetables	frequency	Percentage(%)
Daily	65	54.17
Frequently	27	22.5
occasionally	58	48.33
Rarely	26	21.67
never	2	1.67

The table presents the consumption of sugary foods/beverages among 120 respondents (n = 120). The findings show that 65 respondents (54.17%) consumed sugary foods/beverages daily, representing the highest proportion. This was followed by 58 respondents (48.33%)

who reported occasional consumption. 27 respondents (22.5%) consumed sugary foods/beverages frequently, while 26 respondents (21.67%) consumed them rarely. Only 2 respondents (1.67%) reported that they never consumed sugary foods/beverages.

Table 6 Distribution of Respondents Based on Frequency of Skipping Meals, (Particularly Breakfast)[n=120]

Skipping meals	frequency	Percentage(%)
Always	10	8.33
often	25	20.83
sometimes	62	51.67
rarely	23	19.17
never	4	3.33

The table presents the distribution of 120 respondents according to their frequency of skipping meals, particularly breakfast. The findings indicate that the majority of respondents, 62 (51.67%), reported that they sometimes skipped meals. This was followed by 25 respondents

(20.83%) who often skipped meals. 23 respondents (19.17%) reported rarely skipping meals, while 10 respondents (8.33%) stated that they always skipped meals. Only 4 respondents (3.33%) reported that they never skipped meals.

Table 7 Whether Advertisements Encourage Unhealthy Eating Among Respondents[n=120]

Encourage unhealthy eating	frequency	Percentage(%)
Strongly agree	43	35.83
Agree	26	21.67
Neutral	44	36.67
Disagree	7	5.83
Strongly disagree	0	0

The table presents the respondents' perception regarding whether advertisements encourage unhealthy eating among the 120 respondents. The findings indicate that 43 respondents (35.83%) strongly agreed that advertisements encourage unhealthy eating, while 26

respondents (21.67%) agreed with the statement. A considerable proportion, 44 respondents (36.67%), remained neutral. Only 7 respondents (5.83%) disagreed, and none of the respondents (0%) strongly disagreed.

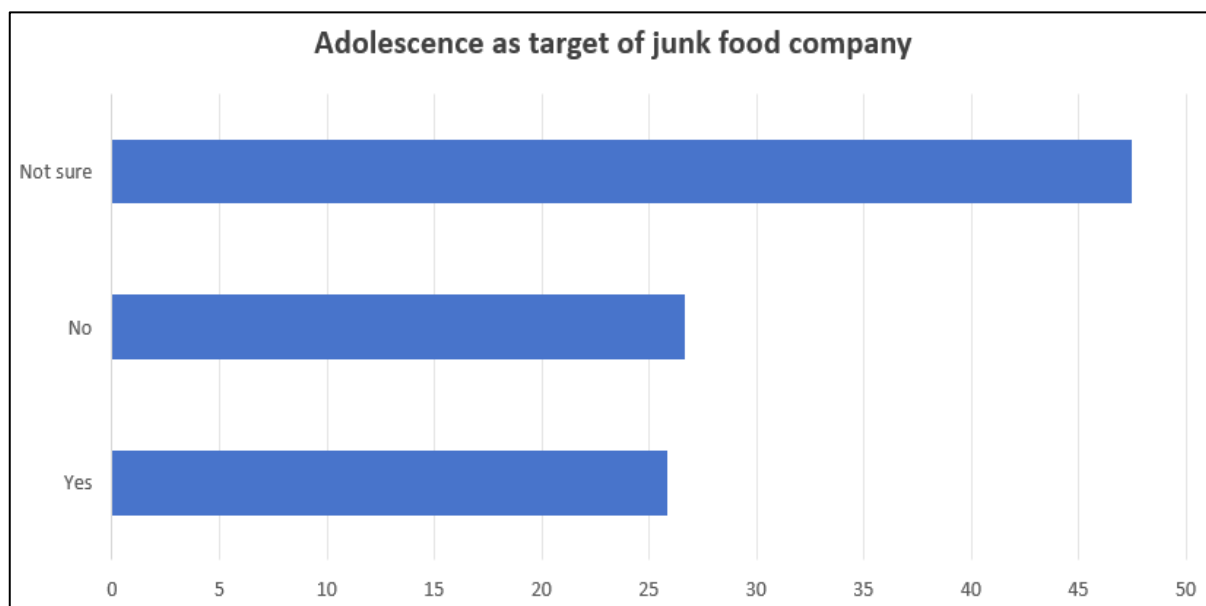


Fig 2 Perception of Adolescents as a Target of Junk Food Companies [n=120]

The bar graph presents the distribution of respondents based on their perception of adolescents as a target of junk food companies among 120 respondents. The findings show that 31 respondents (25.83%) agreed that adolescents are targeted by junk food companies. In contrast, 32 respondents (26.67%) did not agree with the statement. A considerable

proportion, 57 respondents (47.50%), were not sure whether adolescents are specifically targeted by junk food companies.

➤ *The Beneficial and Harmful Effects of Advertisements on Respondents Food Habits*

Table 8 Frequency of Fast Food Consumption by the Respondents [n=120]

Fast food consumption	frequency	Percentage(%)
Never	8	6.67
1-2 times/week	73	60.83
3-4 times/week	33	27.5
More than 4 times/week	6	5

The table presents the frequency of fast food consumption among the respondents. The findings reveal that the majority of respondents (60.83%) consumed fast food 1-2 times per week, followed by 27.50% who consumed it 3-

4 times per week. Only 6.67% reported that they never consumed fast food, while 5.00% consumed fast food more than four times per week.

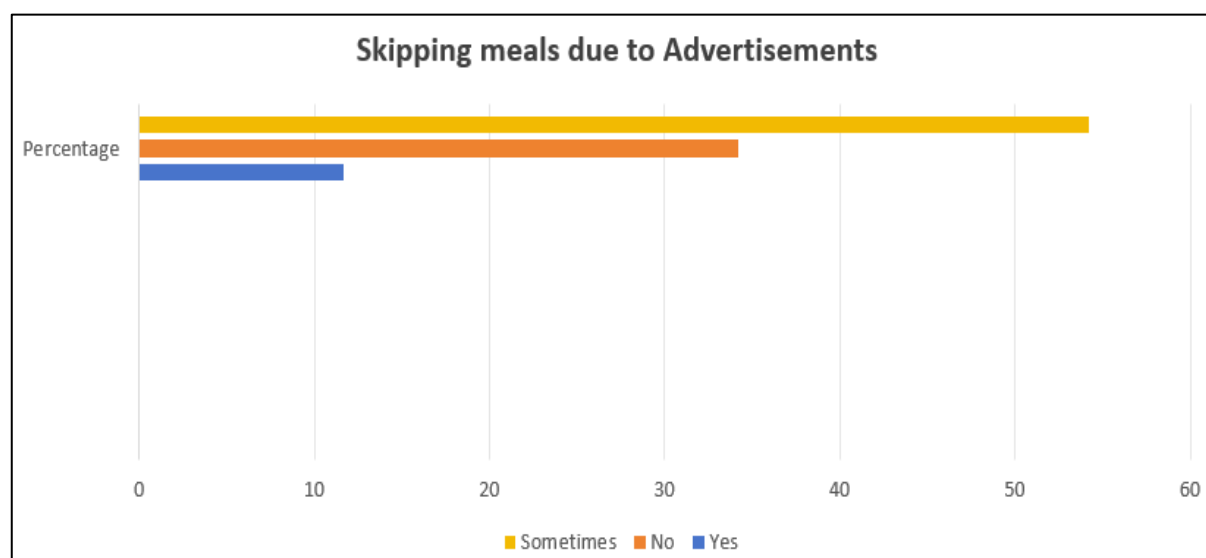


Fig 3 Influence of Advertisements on Respondents for Skipping Home Meals [n=120]

The bar graph shows the influence of advertisements on respondents tendency to skip home meals. More than half of the respondents(54.17%) reported that they sometimes skipped home meals due to advertisements, whereas 34.17%

stated that they did not skip home meals for advertisements. A smaller proportion(11.67%) reported that they did skip home meals due to the influence of advertisements.

Table 9 Influence of Advertisements to Increase Awareness of New Food Products [n=120]

Aware of new food products	frequency	Percentage(%)
Stronhly agree	15	12.5
agree	66	55
Neutral	37	30.83
Disagree	2	1.67

Table 9 presents the respondents' awareness of new food products. The findings show that 55% of the respondents agreed that advertisements increase their awareness of new food products, while 12.5% strongly

agreed. In contrast, 30.83% remained neutral, and only 1.67% disagreed. Overall, the findings indicate that advertisements play an important role in creating awareness among respondents about newly available food products.

Table 10 Whether Advertisements Motivate to Try Healthy Foods [n=120]

Motivate to try healthy foods	frequency	Percentage(%)
Stronhly agree	19	15.83
agree	68	56.67
Neutral	31	25.83
Disagree	2	1.67

Table 10 shows the respondents' perception of whether advertisements motivate them to try healthy foods. More than half of the respondents (56.67%) agreed, while 15.83%

strongly agreed that advertisements motivated them to try healthy foods. About 25.83% expressed a neutral opinion, whereas only 1.67% disagreed.

Table 11 Perception Regarding Accuracy of Information Provided Through Advertisements.[n=120]

Accuracy of information provided through advertisements	frequency	Percentage(%)
Yes	15	12.5
No	36	30
Sometimes	69	57.5

Table 11 presents the respondents' perception regarding the accuracy of information provided through advertisements. The findings reveal that the majority of respondents (57.5%) believed that advertisements

sometimes provide correct information, while 30% stated that advertisements do not provide correct information. Only 12.5% of the respondents believed that advertisements provide correct information.

Table 12 Perception Regarding Whether Advertisements Increase Interest in Balanced or Fortified Foods. [n=120]

increase interest in balanced or fortified foods	frequency	Percentage(%)
Strongly agree	17	14.17
Agree	56	46.67
Neutral	35	29.17
Disagree	12	10

Table 12 presents the respondents' perception regarding whether advertisements increase their interest in balanced or fortified foods. The results show that 46.67% of the respondents agreed and 14.17% strongly agreed.

Meanwhile, 29.17% expressed a neutral opinion, whereas only 10% disagreed. Overall, the findings indicate that advertisements may positively influence respondents' interest in balanced and fortified foods.

Table 13 Distribution of Respondents on Purchasing Food without Checking Nutritional Value [n=120]

purchasing food without checking nutritional value	frequency	Percentage(%)
Always	15	12.5
often	16	13.33
sometimes	69	57.5
Rarely	15	12.5
Never	5	4.17

Table 13 shows the frequency of respondents purchasing food without checking its nutritional value. The majority of respondents (57.5%) reported that they sometimes bought food without checking its nutritional value. This was followed by 13.33% who did so often, while

12.5% reported always and rarely purchasing food without checking nutritional information. Only 4.17% stated that they never purchased food without checking its nutritional value.

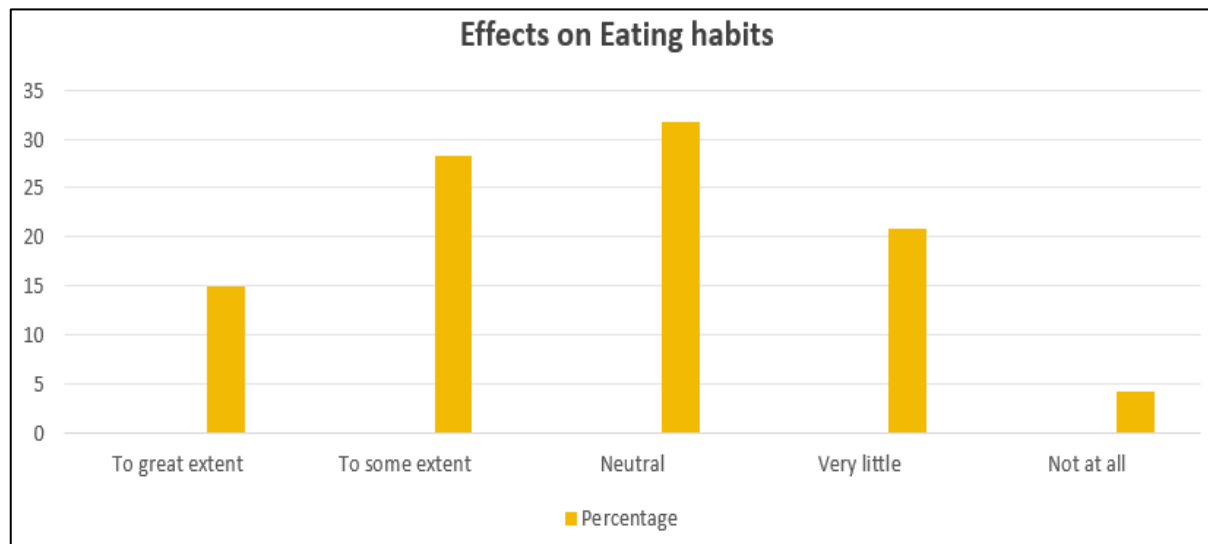


Fig 4 Effect of Advertisements on the Eating Habits of the Respondents [n=120]

The bar graph presents the perceived effect of advertisements on the eating habits of the respondents. The findings show that the highest proportion of respondents (31.67%) expressed a neutral opinion regarding the effect of advertisements on their eating habits. This was followed by 28.33% who reported that advertisements affected their eating habits to some extent, while 20.83% indicated that the effect was very little. Furthermore, 15% of the respondents reported that advertisements affected their eating habits to a

great extent, whereas only 4.17% stated that advertisements had no effect at all.

➤ Research Hypotheses:

- Null Hypothesis(Ho)- No significant relationship existed between BMI and Eating habits of the respondents.
- Alternative Hypothesis(H1): A significant relationship existed between BMI and Eating habits of the respondents.

Table 14 Relationship Between BMI and Eating Habits of the Respondents (n=120)

Eating Habits BMI	Under weight	Normal weight	Over weight	Obese
To a great extent	2	7	5	4
To some extent	6	18	8	2
Neutral	4	23	6	5
Very little	1	12	7	5
Not at all	0	3	1	1

Statistical Test	X ² Value	df	P-value
Pearson Chi-square	8.902	12	0.711

Table 14 evaluates the statistical association between Body Mass Index(BMI) and eating habits among a sample of 120 respondents. The descriptive distribution shows that normal-weight individuals comprise the largest cohort, with responses predominantly clustering within the 'neutral' and 'To some extent' categories. To evaluate the independence of these variables, a chi-square test was applied, yielding a test statistic of 8.902 and an asymptotic significance(p-value) of 0.711. Since the P-value is substantially higher than the standard 0.05 significance threshold, the null hypothesis is sustained, demonstrating no statistically significant relationship between an individual's BMI classification and their self-reported eating habits. This

absence of statistically significant correlation indicates that anthropometric measurements like BMI are not definitive indicators of perceived dietary behaviors within this study population. This outcome suggests that eating habits are multifaceted constructs influenced by a complex matrix of psychological, cultural, and metabolic factors that operate independently of an individual's weight status.

IV. CONCLUSION

The present study concludes that advertisements have a moderate but significant influence on the food habits and purchasing behaviour of adolescent girls. The findings

revealed that 58.83% of respondents were mainly exposed to food advertisements through social media. About 55% reported purchasing food products after watching advertisements, while 53.33% sometimes tried new foods because of advertising exposure. Advertisements also influenced snack choices, as 59.17% of respondents reported being sometimes influenced, and 51.67% were influenced by fast-food advertisements. Promotional factors such as discounts and offers attracted 40.83% of respondents, while celebrity endorsements sometimes influenced the food preferences of 49.17%. The study further showed a possible negative influence on dietary habits, with 45.83% sometimes being encouraged to try unhealthy foods, 51.67% agreeing that advertisements make unhealthy foods more attractive, 54.17% consuming sugary foods daily, and 60.83% consuming fast food one to two times per week. However, advertisements also had positive effects, as 55% of respondents reported increased awareness of new food products and 56.67% felt motivated to try healthy foods. Overall, the findings indicate that food advertisements can influence both healthy and unhealthy dietary behaviours, highlighting the importance of responsible advertising and nutrition education among adolescents.

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