

EFFECTIVENESS OF STRUCURED TEACHING PROGRAM ON KNOWLEDGE AND PRACTICE REGARDING HEALTH HAZARDS OF JUNK FOODS AMONG HIGH SCHOOL STUDENT IN SELECTED SCHOOLS OF RAJNANDGAON (C.G.)

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Abstract	<p><i>The objective of the study was to evaluate the effectiveness of structured teaching program on knowledge and practice regarding health hazards of junk foods among high school students. To assess the pre -test and post- test knowledge of students regarding health hazards of junk foods in selected high schools of Rajnandgaon. This research approach used for the study was true experimental approach. The sample size consists of 300 students. 150 students were selected for experimental group & and 150 students were selected for control group. The schools were randomly assign to both experimental and control group, Both experimental and control group the students were selected for the study by simple random sampling technique. A self-administered questionnaire for the assessment of knowledge and practice regarding health hazard of junk foods among high school children. The data analysis was planned according to the study by using descriptive statistics and inferential statistics. The experimental group while doing pre- test knowledge were 72% students had moderate knowledge. During post- test knowledge were 73% had moderate knowledge. The control group while doing pre - test knowledge 69.33% had moderate knowledge, post- test of control group knowledge 68.67% students had moderate knowledge. The mean score of post- test knowledge 9.22> 8.78 of pre - test knowledge score on experimental group and control group. There was a statically significant difference between control group and experimental group. The variables age, standard, gender, education, occupation and income of parents, family type and source of information are in no relation with knowledge score of students regarding health hazards of junk foods. And it is clear from the table that the variables type of food pattern, and religion where highly significantly associated with knowledge score.</i></p>
Keywords	<i>Structured Teaching, Health Hazards, High School, Junk Food, Knowledge</i>

INTRODUCTION

Food is the most important factor for the betterment of health .our health is depends on what we eat in daily. The right selection and preferences of food makes a person perfect in their all of the spheres. Consumption of fast foods has becomes almost global phenomenon, India’s fast food industry is expanding at the rate of 40% percent every year .India rank 10th in the fast food per capita spending figures with 2.1 %percent of expenditure in annual total spending. Adolescents represent around 20% of the world population and around 84% of them are found in developing countries. Adolescent is a period, which forms the base of future health and social life. The health problems and habits acquired during this phase prove a lifelong hindrance in wellbeing. Adolescents missing their meals at home are increasing in number.

Junk foods consumption in India a growing concern in rural area research reveals. The increase in junk foods intake in India has lead to increase in the percentage of overweight and obese school children in India from 9.7% to 13.9% between 2001 to 2010. According to WHO report 40,000 deaths occurs per year in world due to excessive intake of junk foods .It has been found that India’s overweight rate increasing by 20%. Now India is the grip of an obesity epidemic. World’s adolescent population is 1200 million persons in 10 to 19 years of age or about 19 % of the total population faces a series of serious nutritional challenges.

NEED OF THE STUDY

A 2011 study by Je hanging hospital in Pune & ULC Institute of child health London show that a 30% of children living in urban area are obese and overweight .In 2017 study published in Indian journal of public health experts in off level school of Rajkot are obese or overweight .According to experts the rupees 8,000 Crore junk foods industry in India is largely responsible for the increasing incidence of non –communicable diseases and will play a significant role in killing two third of Indians by 2030. According to WHO report 40,000 deaths occurs per year in world due to excessive intake of junk foods .It has been found that India’s overweight rate increasing by 20%. Now India is the grip of an obesity epidemic. World’s adolescent population is 1200 million persons in 10 to 19 years of age or about 19 % of the total population faces a series of serious nutritional challenges. The increase in junk foods intake in India has led to an increase in the percentage of overweight and obese school children in India, from 9.7 % to 13.9 % between 2001 and 2010. Junk foods have emerged as a major challenge for health of young generation of the country. Recent studies indicate that the incidence of juvenile diabetes is on the rise in cities, around 20% of school going children in India is overweight.

OBJECTIVES

1. To assess the pre -test and post- test knowledge of students regarding health hazards of junk foods in selected high schools of Rajnandgaon(C.G.)
2. To assess the pre- test and post-test practice of students regarding health hazards of junk foods in selected high schools of Rajnandgaon (C.G.).
3. To compare the post -test and pre -test knowledge scores of the students regarding health hazards of junk foods in selected schools of Rajnandgaon (C.G.).
4. To compare the post- test and pre- test practice scores of the students regarding health hazards of junk foods in selected schools of Rajnandgaon (C.G).
5. To determine the association of pre-test knowledge scores regarding health hazards of junk foods among high schools students with their selected demographic variables.
6. To determine the association of pre -test practice scores regarding health hazards of junk foods among high schools students with their selected demographic variables.

REVIEW OF LITERATURE

“Never base your life decision an advice from people who do not have a deal with the result”.

Review of literature is a body of the text that aims to review critical point of current knowledge on particular topic .It ultimate goal is to bring the reader up to date with current literature on a topic and forms the basis for another goal . Such as future researcher that may be need in the area.

- The review of literature deals with the four sections:-

SECTION A: - Article related to junk food.

:-Problems associated with junk food

:-How to avoid junk foods

SECTION B: -Studies Related To Knowledge Regarding Health Hazards of Junk Foods

SECTION C: - Studies Related To Practice Regarding Junk Food Consumption

SECTION D: Studies Related To Knowledge And Practice Regarding Health Hazards Of Junk Foods

METHODOLOGY

RESEARCH APPROACH

This research approach used for the study was true experimental approach. Diagrammatic representation of the design is given below.

RESEARCH DESIGN

Research design for this study was two groups pre- test, post -test, experimental and control group design.

01 02 X 03 04 (experimental group)

01 pre-test assessment of knowledge.

02 pre- test assessment of practice.

X administration of structured teaching programme.

03 post-test assessment of knowledge.

04 post-test assessment of practice.

01 02 = 03 04 (control group)

01 pre-test assessment of knowledge.

02 pre-test assessment of practice

= Not administered structured teaching programme.

03 post-test assessment of knowledge.

04 post-test assessment of practice.

SETTING OF THE STUDY

In this study **BAL BHARTI PUBLIC SCHOOL RAJNANDGAON (PRIVATE SCHOOL)** was taken for experimental group and **SHREE GURUNANK HIGHER SECONDARY SCHOOL RAJNANDGAON (PRIVATE SCHOOL)** was selected for the control group randomly.

POPULATION –

All the student who are studied in 9th to 12th class of **BAL BHARTI PUBLIC SCHOOL RAJNANDGAON, AND SHREE GURUNANK HIGHER SECONDARY SCHOOL, RAJNANDGAON.**

SAMPLE SIZE

The sample size consists of 300 students. 150 students were selected for experimental group from **BAL BHARTI PUBLIC SCHOOL RAJNANDGAON** and 150 students were selected for control group from **SHREE GURUNANK HIGHER SECONDARY RAJNANDGAON** by simple random method.

CRITERIA FOR THE SAMPLE SELECTION

INCLUSION CRITERIA –

- Students who were studying in 9th to 11th class.
- Both boys and girls.
- Students who were willing to participate.
- Students who were available during data collection.

EXCLUSION CRITERIA –

- Students who were not studying in 9th to 11th class
- Students who were not willing to participate.
- Students who were not available during data collection.

SAMPLE TECHNIQUE

BALBHARTI PUBLIC SCHOOL AND SHREE GURUNANK HIGHER SECONDARY SCHOOL RAJNANDGAON Were randomly assign to both experimental and control group, Both experimental and control group the students were selected for the study by simple random sampling technique. In **BALBHARTI PUBLIC SCHOOL RAJNANDGAON.** Daily classes start from 7:30 am to 12:30pm there were total number of students in 9th to 11th class was 180. Among 180 students select 150 students for an experimental group over a period of 3 days through simple random technique.

In **SHREE GURUNANAK HIGHE SECONDARY SCHOOL RAJNANGAON**. Daily classes start from 8:30 to 1:30 pm there were total number of students in class 9th to 11th class was 200. Among 200 students select 150 students selected randomly for control group over a period of days.

TOOLS

DISCRIPTION OF THE TOOLS

It consists of 3 sections

SECTION A- It deals with the socio demographic profile, which includes age of student, standard of studying, gender, education and occupation of parents, monthly income of family, types of family, types of food, sources of information about junk foods.

SECTION B – A self-structured questionnaire administered in which multiple choice question for assessment of knowledge regarding health hazards of junk food among high school students Total items were 15, each subject score ‘1’ mark for every correct answer and scored ‘0’ mark for every wrong answer.

SECTION C- A self-structured questionnaires administered in which ‘yes /no’ questions which consist of 15 items for the assessment of practice regarding health of junk foods. Each subject scored ‘1’ mark for every correct answer and scored ‘0’ mark for every wrong answer.

SCORING PROCEDURE

A self-administered questionnaire for the assessment of knowledge regarding health hazard of junk foods among high school children , each subject score of ‘1’ (one) mark was given for every correct answer and score of ‘0’ (zero) was given for every wrong answer .The resulting score is as follows .

Inadequate knowledge - a score from - 05(0 - 50 %)

Moderately adequate knowledge -a score from 6 – 10 (51 – 75 %)

Adequate knowledge - a score from 10 – 15 (76 – 100 %)

A self-administered questionnaire for assessment of practice regarding health hazards of junk foods among high school children ,each subject score of ‘1’(one) mark was given for every correct answer and score of ‘0’ (zero) was given for every wrong answer. The resulting score is as follows.

Unsatisfactory practice - a score from 0- 5 (0 – 50 %)

Moderate satisfactory practice - a score from 6 – 10 (51 to 75 %)

Adequate satisfactory practice - a score from 10 – 15 (56 – 100 %)

METHODS AND MATERIALS

This research approach used for the study was true experimental approach. In this study BAL Bharti Public School Rajnandgaon (private school) was taken for experimental group and Shree Gurunank Higher Secondary School Rajnandgaon (private school) was selected for the control group randomly. The sample size consists of 300 students. A self-administered questionnaire for the assessment of knowledge and practice regarding health hazard of junk foods among high school children.

The reliability co-efficient of the knowledge questionnaire was $r = 0.9$.To assess the practice of junk foods the coefficient of reliability was found $r = 0.8$. Reliability of the questionnaire done by Karl's Pearson's formula.

DATA ANALYSIS

It consists of 3 sections. SECTION A- It deals with the socio demographic profile, which includes age of student, standard of studying, gender, education and occupation of parents, monthly income of family, types of family, types of food, sources of information about junk foods. SECTION B – A self-

structured questionnaire administered in which multiple choice question for assessment of knowledge regarding health hazards of junk food among high school students . Total items were 15, each subject score '1' mark for every correct answer and scored '0' mark for every wrong answer. SECTION C -A self-structured questionnaires administered in which 'yes /no' questions which consist of 15 items for the assessment of practice regarding health of junk foods. Each subject scored '1' mark for every correct answer and scored '0' mark for every wrong answer. The experimental group while doing pre- test knowledge were 72% students had moderate knowledge. During post- test knowledge were 73% had moderate knowledge. The control group while doing pre - test knowledge 69.33% had moderate knowledge; post- test of control group knowledge 68.67% students had moderate knowledge. Shows that the experimental group while doing pre-tests practice had (43.33%) had moderate practice. During post- test of experimental group practice had 93 (62%) had adequate practice. Descriptive statistics and inferential statistics mean, standard deviation, T' test, Chi- square was used for association.

FINDINGS

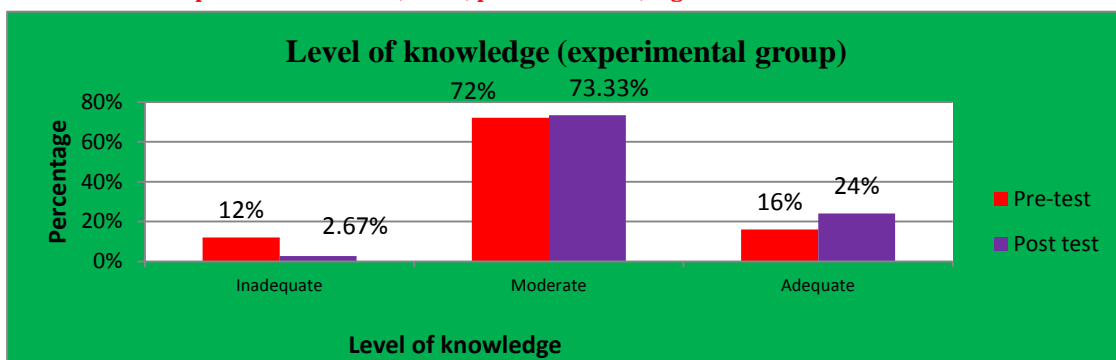
The experimental group while doing pre-tests knowledge were 72% students had moderate knowledge. During post- test knowledge were 73% had moderate knowledge. The control group while doing pre - test knowledge 69.33% had moderate knowledge; post- test of control group knowledge 68.67% students had moderate knowledge. Shows that the experimental group while doing pre- test practice had (43.33%) had moderate practice. During post- test of experimental group practice had 93 (62%) had adequate practice. The mean score of post- test knowledge 9.22> 8.78 of pre - test knowledge score on experimental group and control group. There was a statically significant difference between control group and experimental group. The variables age, standard, gender, education, occupation and income of parents, family type and source of information are in no relation with knowledge score of students regarding health hazards of junk foods.

- **The first and third objective of these study was to assess pre-test and post-test knowledge of children regarding health hazards of junk foods .**Table 11 shows that in experimental group while doing pre- test knowledge were 18 (12%) students had inadequate knowledge, 108 (72%) students had moderate knowledge and 24 (16%) students had adequate knowledge. During post- test knowledge were 4 (2.67%) students had inadequate knowledge, 110 (73%) had moderate knowledge and 36 (24%) had adequate knowledge.

Experimental group

Level of knowledge	Pre-test	Post test
	No. (%)	No. (%)
Inadequate	18 (12%)	4 (2.67%)
Moderate	108 (72%)	110(73.33%)
Adequate	24(16%)	36 (24%)

Chisquare value - 9.703, df - 2, p-value - 0.007, Significant



OBJECTIVE- 1. Shows that the exper

rimental group while doing pre- test knowledge were 18 (12%) students had inadequate knowledge, 108 (72%) students had moderate knowledge and 24 (16%) students had adequate knowledge.

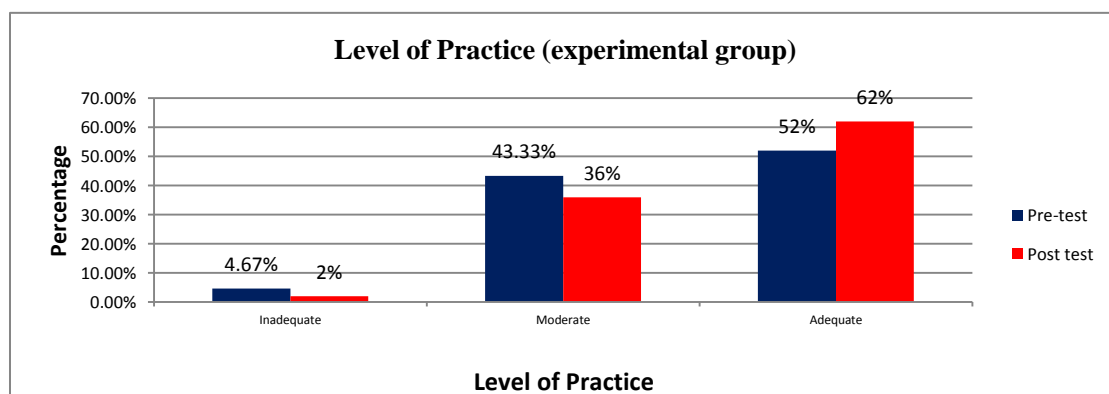
During post- test knowledge were 4 (2.67%) students had inadequate knowledge, 110 (73%) had moderate knowledge and 36 (24%) had adequate knowledge.

- According to **Subhadevi sapkataetal** conducted cross sectional research study [in feb 2018. This is a descriptive cross sectional research study to assess the junk foods and pattern of consumption among secondary level students. 142 responds were drawn by using cluster sample,self-administer semi structure questionnaire in Nepal version was used data collected was interned analysis in epidata and **SPSS** version 20 by using simple statistically method. The finding reveled that more girls 53.5% wereconsumed junk foods than boys (79.6%). Majority of respondents as influence by T.V. advertisement (15.5%) because of peer pressure (31.7%) some (20.6%) responds prefer junk foods because nothing was available. The study concludes all children consumed junk foods in a regular basis. The majority preferred it for taste and some as influence by advertisement only half of them were aware about health risk.
- **The second and fourth objective of this study was to assess the pre- test and post -test practice score of children regarding health hazards of junk foods.**
 Assessment of pre-test and post-test practice score of experimental group.

Experimental group

Level of practice	Pre-test	Post test
	No. (%)	No. (%)
Inadequate	7 (4.67%)	3 (2%)
Moderate	65 (43.33%)	54 (36%)
Adequate	78 (52%)	93 (62%)

Chisquare value - 2.887, df - 2, p-value - 0.23



OBJECTIVE-2 &4 Shows that the exper

rimental group while doing pre- test practice , 7 (4.67%) had inadequate practice , 65 (43.33%) had moderate practice , 78 (52%) had adequate practice.

During post- test of experimental group practice, 3(2%) students had inadequate practice, 54 (36%) students had moderate knowledge 93 (62%) had adequate practice. Represent that the experimental group pre- test practice scores, 7 (4.67%) had inadequate practice score were, 65 (43.33%) had moderate practice, 78 (52%) had adequate practice. And post-test of experimental group practice score were, 3(2%) students had inadequate 54 (36%) students had moderate knowledge 93 (62%) had adequate practice

We infer that the control group while doing pre- test practice score were, 0 (0%) had inadequate practice,69 (46%) had moderate practice, 81 (54%) had adequate practice . During post- test of

control group practice, 1(0.67%) students had inadequate practice, 61 (40.67%) students had moderate knowledge 88 (58.67%) had adequate practice.

Mean pre and post-test knowledge score of experimental group and effectiveness of structure teaching programme (N= 300)

	N	Mean	Std. Deviation
Pre-test knowledge	300	8.78	2.14
Post-test knowledge	300	9.22	1.80
Group	300	0.50	0.50

OBJECTIVE-2 &4 Shows that the mean score of post- test knowledge 9.22> 8.78 of pre - test knowledge score on experimental group and control group. **There was a statically significant difference between control group and experimental group, in pre - test knowledge (p< 0.05) and in post - test knowledge (p< 0.05)**

- Shows that the mean score of post -test knowledge score 9.22> 8.78 of pre- test knowledge score on experimental group and control group. There was a statistically significant difference between control group and experimental group, in pre-test knowledge (p< 0.05) and in post- test knowledge (p< 0.05).

Mean pre-test and post-test practice score of experimental and control group and effectiveness of structured teaching program (N =300)shows that mean score of post test practice score were 10.75 > 10.33 Of pre -test practice score in experimental and control group. There were no statistically significant difference between experimental and control group in pre- test and post-test practice (p> 0.05).

Descriptive Statistics

	N	Mean	Std. Deviation
Pre-test Practice	300	10.33	2.17
Post-test Practice	300	10.75	1.94
Group	300	0.5	0.50

- **The fifth objective of this study was to determine the association of pre- test knowledge score regarding health hazards of junk foods among high school children with their selected socio demographic variables**

Association between knowledge score of experimental group students regarding health hazards of junk food and selected socio demographic variables (such as age , gender, standard ,education , occupation and monthly income of parents ,religion, type of family, food pattern , type of family, sources of information.)

Background characteristics of experimental group	Knowledge			Chi-square value, df, p-value	Significa-nt difference
	Average	Good	Poor		
Age	14	35	5	4.263,8,0.833	NS
	15	21	4		NS
	16	30	10		NS
	17	20	5		NS
	18	2	0		NS
Standard	10 th	1	0	5.568,4,0.234	NS
	11 th	66	19		NS
	9 th	41	5		NS
Gender	Female	49	11	0.008,2,0.996	NS

	Male	59	13	10		NS
Food	Mixed	74	14	6	10.841, 4,0.028	HS
	non vegetarian	6	3	1		HS
	Vegetarian	28	7	11		HS
Religion	Christian	0	1	0	10.728, 4,0.03	HS
	Hindu	97	23	14		HS
	Muslim	11	0	4		HS

BACKGROUND CHARACTERISTICS OF STUDY SUBJECTS

OBJECTIVE-5 Shows that the variables age, standard, gender, education, occupation and income of parents, family type and source of information are in no relation with knowledge score of students regarding health hazards of junk foods.

And it is clear from the table that the variables type of food pattern, and religion were highly significantly associated with knowledge score

*HS. Highly Statistically Significant (P<0.001);

** SS. Statistically significant (P<0.05);

***NSS. Statistically Not Significant (P>0.05).

This findings consistence with the result of the study which is conducted by Amoldeppriyankakumari(2017) a pre experimental study to assess effectiveness of planned teaching program regarding bad effect of junk food and fast food in daily life among school children . Study was conduct on 10 different schools comprising of 2636 children selected by using convenience sampling technique. The pre experimental one group pre-test – post-test research design was adopted for the study to collect the data from adolescent in selected school of kalaamb the target group population of the study in 9th, 10th, 11th, 12thclass .in post-test knowledge score of majority of adolescent were had good knowledge that is 55% and the 37% had average level of knowledge 08% had very good level of knowledge and no adolescent have poor knowledge. It was conclude that there was increase in post knowledge score as compare to pre-test knowledge score.

- Shows that the variables age , standard , gender , education, occupation and income of parents, family type and source of information are in no relation with knowledge score of students regarding health hazards of junk foods.

It shows that type of food pattern, and religion were significantly associated with knowledge score.

- Shows that the variables, gender , occupation, and religion ,were in no relation with knowledge score of students regarding health hazards of junk foods.

And the variables age, standard , education of parents, monthly income, type of family, food pattern ,and source of information were significantly associated with knowledge score.

- **The sixth objective of this study was to determine the association of pre-test practice score regarding health hazards of junk foods among high school children with their selected socio demographic variables.**

Association between practice score of control group students regarding health hazards of junk foods and selected demographic variables such as (age, standard, gender, education occupation of parents, type of family, type of food, religion and sources of information.)

Background characteristics of Control group	Practice		Chi-square value, df, p-value	Signifi-cant differe-nce
	Average	Good		
Age	14	25	2.972, 3, 0.396	NS
	15	9		NS
	16	25		NS
	17	10		NS
Standards	10 th	0	2.018, 2, 0.364	NS
	11 th	38		NS
	9 th	31		NS
Gender	Female	30	1.377, 1, 0.241	NS

	Male	39	38		NS
Education of parents	Graduated	33	23	6.281, 2, 0.043	HS
	High	29	44		HS
	Middle	7	14		HS
Occupation	govt job	22	37	6.167, 3, 0.104	NS
	private job	21	27		NS
	self employee	25	17		NS
	Unemployee	1	0		NS
Income	10000-30000	41	48	13.889, 4, 0.008	HS
	<10000	13	6		HS
	<50000	1	10		HS
	>10000	4	11		HS
	>50,000	10	6		HS

- **OBJECTIVE-6** Shows that the variables age , standard , gender , education, and income of parents, family type and source of information are in no relation with practice score of students regarding health hazards of junk food

And type of food pattern, and occupation where significantly associated with practice score.

Shows that the variables age, standard, gender, occupation of parents, religion, sources of information are in no relation with practice score of students regarding health hazards of junk foods.

And it is clear from the table that variables education of parents , income, type of family and type of food pattern there significantly associated with practice score.

This findings consistence with the result of the study which is conducted by **Miss fancy et al (2019)** A descriptive approach was considered approach for the study . Research design selected for the present study was non experimental descriptive design. The population of the present study include adolescent aged about 18 to 20 year who fulfil sampling criteria. The sample size was 50 selected by simple random technique and permission from concern authority informed written consent was obtained from the each participants by using structured questionnaires schedule collect data from students from selected college in selected demographic variables, BMI (Body mass index) and section B includes the structured questionnaires to asses objective of study by using descriptive and inferential statistics.

CONCLUSION

- The knowledge regarding health hazards of junk foods in post- test was significantly higher than the pre-test.
- The practice regarding health hazards of junk foods in post- test was significantly higher than the pre-test.
- The structure teaching programme was found to be very effective in increasing the knowledge and changing the practice of children about junk foods .
- There were a significant positive relationship between knowledge and practice regarding health hazards of junk foods.
- There were no association of knowledge score between age, standard, gender , education, occupation and income of parents, family type and source of information regarding health hazards of junk foods .
- There were no association between practice score of experimental group age, standard, gender, education, and income of parents, family type and source of information regarding health hazards of junk foods.
- **There were association between knowledge score of experimental group student between** type of foods pattern, and religion regarding health hazards of junk foods.
- **There were association between practice score of control group between** education of parents, income, type of family and type of foods pattern regarding health hazards of junk foods.

RECOMMENDATION

- Based on the findings of the study the investigators propose the following recommendation.
- More research needs to be conducted with large sample size in different setting to increase utilization of the generalization of the findings.
- The study can be done by using different teaching strategies on lifestyle modification programme regarding health hazards of junk food among high school children.
- A comparative study can be done to assess the risk factor of health hazards of junk food among the adolescence in rural and urban setting.
- A study to find out the effectiveness of planned structured teaching programme regarding health hazards among high school students
- A comparative study can be done to assess the health hazards of junk food among girls and boys.
- A descriptive study can to evaluate the practice of junk food .In children in living urban areas.
- Attempt was made to measure the retention of knowledge regarding avoidance of junk food after post test i.e. information booklet distributed at school among the students and teachers can be imparted knowledge regarding the hazards of consumption of junk food and the students were encouraged to spread the knowledge among the family members.

NURSING IMPLICATIONS

The findings of the study have the following implication in nursing.

a. NURSING EDUCATION

Nursing education should emphasize on preparation of nurses, to impart information regarding ill effects of junk foods and healthy diet and its role in maintaining good health. The present study emphasize on as age, gender, monthly family income, and sources of information regarding junk foods etc. To make a curriculum for students and academic session regarding health hazards of junk foods among nursing students, They should be encouraged to attend specialized role play and seminar regarding healthy diet in maintaining good health.

b. NURSING PRACTICE

The nurses can organize role play, work shop, awareness survey and different teaching programme regarding knowledge and practice of junk foods in hospital and community settings for general population and for the non-professional health group as it helps to improve knowledge regarding healthy foods and foods which is ill for their health.

c. NURSING RESEARCH

The finding and results of this research will motivate nurse research to take up similar studies in different setting and this will serve as guideline for further research. The outcome of such nursing measures can be evaluated and the reports submitted to statutory body like food safety and security act of India. And it can be organized in various categories and enhance to upgrade different settings and implication. So it can utilize as evidence based information to developed effective materials useful in preparing new books and for revising health education for general population.

d. NURSING ADMINISTRATION

Nurse administrator can inculcate and reinforced better health teaching program about healthy diet in institutional setup and in public place, hospital and college for general population. The nurse administrator should collaborate with various faculties of institute and nongovernmental organization and they collaborate organized different teaching programmes like health education, health exhibitions planned health teaching program for individual to improve their knowledge on healthy diet.

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