

A comparative study to evaluate the effectiveness of video assisted teaching module on knowledge regarding ill effects of fast food habits on health among early adolescents in selected govt. vs. private schools

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Abstract

Background: 'Good food means the right kind of food for good health; it is nutritious. It contains natural substances that body needs to grow properly and stay healthy. In the circumstance of the global economy, fast food at minimum prices and marketing approaches adopted by manufacturers of such foods has elicited a progression of fast food at high rate. Fast food does not contain the nutrients which are required to sustain our body health. Fast foods have high level of fat and sugars that are not only unhealthy but addictive and that creates a vicious cycle making it hard for children to choose healthy food. Thus the investigator selected this topic for creating awareness among early adolescents, regarding the ill effects of fast food habit through video-assisted teaching programme.

Material and Methods: Quasi experimental research design was adopted for the present study. 60 adolescent students (30 from private school and 30 from govt. school) were selected by simple random sampling technique from selected High schools of Kanpur, U.P. Video assisted teaching programme was conducted after conducting the pre test. Post test was conducted after one week. The data collected were analyzed and interpreted based on descriptive and inferential statistics.

Results: The result was showed In the pre-test the mean score of knowledge was 16.83 and In the Post-test the mean score of knowledge was 20.73 and mean difference was 3.90 and the overall enhancement was 13% in the government school. In the pre-test the mean score of knowledge was 17.27 and In the Post-test the mean score of knowledge was 21.50 and mean difference was 4.23 and the overall enhancement was 14.1% in the private school. Hence the level of knowledge score is increase regarding ill effects of fast food habits on health in Govt. and Private school shows the effectiveness of video assisted teaching module on knowledge regarding ill effects of fast food habits on health in between Govt. and Private school. In Govt. school, the mean score of knowledge was 3.90 (± 2.93) and In Private school, the mean score of knowledge was 4.23 (± 2.40). The unpaired t' test value was (0.40) which is less than the Table value (2.00) at ($p > 0.05$) level of significance. The p-value reveals the fact that there is a similar kind of a progress or effect on knowledge of fast food in both the schools. Hence, there is no significant difference of effectiveness of the Video Assisted Teaching Module on changing the level of knowledge regarding ill effects of fast food habits on health in between Govt. and Private school.

Conclusion: The finding of the present study reveals that there is a significant gain in knowledge among adolescent students following video assisted teaching programme. Therefore such program may be used to promote awareness among early adolescent students regarding ill effects of fast food habit.

Key Words: Effectiveness; fast food; health hazards; students; knowledge; video assisted teaching programme.

Date of Submission: 14-06-2021

Date of acceptance: 28-06-2021

I. Introduction

Food habits of our adolescent are also changing facing such changes. Many of adolescents are fond of readymade outside food. Some guardians are even reluctant in changing food habits of their children. Most junk foods are fast foods as they are prepared and served fast¹. Vitamins, mineral, fiber and amino acids are low or lacking in fast food, but have high energy (calorie). Fast food doesn't contain the nutrients required to sustain our body health². Coming to Indian food, locally called "chat", these mostly include the Samosa, Kachoris, Panipuris/golgappas. Chinese food sold in road side stalls is Junk food, because they contain high amount of Monosodium Glutamate (MSG) which is flavor enhancer & this MSG is recognized as a healthy hazard like nausea, weakness, wheezing, oedema, change in heart rate, burning sensation & difficulty in breathing³. Junk foods are widely available in schools through variety of outlets. Cafeterias at the schools offer sodas, cold

drinks, chips and many other foods of low nutritional value. Most of the Indian fast foods are prepared by deep frying in fats especially Trans fat and saturated fats. Consumption of diet high in sugar, saturated fat, salt and calorie content in children can lead to early development of obesity, hypertension, dyslipidemia and impaired glucose tolerance⁴. Poor nutrition during this stage can have lasting consequence on an adolescent's cognitive development, resulting in decreased learning ability, poor concentration, and impaired school performance eating junk food has become a trend. Junk food is injurious to health and increase fat is dangerous for heart. Drinking soft drinks adds dangerous toxins in human body. It affects the bone, skin and kidney⁷. The aim of this study is to provide a better understanding of adolescent consumption behavior with regard to fast food. And promotion of healthy eating habits and education about junk foods needs to be strengthened. And also evaluate the effectiveness of video – assisted teaching on knowledge regarding ill effects of fast foods habit.

II. Material And Methods

A comparative study was carried out on the early adolescents at Sunshine Convent Public School and Shitla Shiksha Madhyamik Vidyalaya Kanpur, Uttar Pradesh from July to September 2020. A total 60 early adolescents were selected for in this study.

Study Design: Quasi – experimental research design.

Study Location: This study was conducted at Sunshine Convent Public School and Shitla Shiksha Madhyamik Vidyalaya Kanpur, Uttar Pradesh.

Study Duration:

Sample Size: 60 Early adolescents.

Subjects & Selection Method: This study population was drawn from the early adolescents who are studying in school at Sunshine Convent Public School and Shitla Shiksha Madhyamik Vidyalaya Kanpur, Uttar Pradesh. Probability simple randomized sampling technique was used to select the samples.

Inclusion criteria:

1. Both Gender from 10 to 14 years of age group.
2. Early adolescents studying in selected schools in Kanpur.
3. Early adolescents who are willing to participate in the study.
4. Early adolescents who are available at the time of data collection.
5. Early adolescents who know either English or Hindi.

Exclusion criteria:

1. Below 10 & above 14 years of age group.
2. Early adolescents who are studying in other than selected schools.
3. Early adolescents who has exposed to similar teaching within 6 months.

Procedure methodology

After written informed consent was obtained, a self structured questionnaire was used to assess the general information about fast food, effects of fast food on health and prevention of ill effects due to fast food that may arise among the selected early adolescents due to studying in schools. The tool comprise of two sections: Section A includes demographic characteristics of the samples such as age, gender, educational status of the father, educational status of the mother, occupation of father, occupation of mother, family income per month, type of family, total number of children in the family, have you obtained ant previous information regarding ill effects of fast food and if Yes, in above statement, mention the source of information. Section B includes self structured questionnaire to assess the general information about fats food, effects of fast food and prevention of ill effects due to fast food problems that may arise among the early adolescents due to studying in schools.

Statistical analysis

Data was analyzed using Microsoft office excel 2007. Chi-square test was performed to test for finding association between effects of fast food habits and selected demographic variables. The level $P < 0.05$ was considered as the cut off value or significance.

III. Results

Findings have been organized and presented under the following sections:

Section-A: 1). Distribution of samples of Govt. and Private school according to the level of knowledge regarding ill effects of fast food habits on health before and after intervention of video assisted teaching module. 2).Comparison of Mean, Standard deviation and Mean difference in the level of knowledge among early adolescents of Govt. school before and after intervention. 3).Comparison of Mean, Standard deviation and Mean difference in the level of knowledge among early adolescents of Private. School before and after intervention.

Section-B: 1).Association between the pre-test scores on the level of knowledge among early adolescents of Govt. school with their selected demographic variables. 2).Association between the pre-test scores on the level of knowledge among early adolescents of Private school with their selected demographic variables.

Section-C: Comparison of effectiveness of assisted video teaching module in between Govt. and Private School.

Section A - 1

The data Table no. 1 and Fig no. 1 & 2 shows that there were 30 samples each in Govt. and Private school. In Govt. school, in the pre-test 10(33.33%) of them had inadequate knowledge, 20(66.67%) had moderate knowledge and no one had adequate knowledge regarding ill effects of fast food habits on health. In the post-test 1(3.33%) of them had inadequate knowledge, 28(93.34%) subjects of them had moderate knowledge and 1 (3.33%) of them had adequate knowledge regarding ill effects of fast food habits on health. Whereas in Private school, in the pre-test 10(33.33%) of them had inadequate knowledge, 20(66.67%) had moderate knowledge and no one had adequate knowledge regarding ill effects of fast food habits on health. In the post-test no one of them had inadequate knowledge, 26(86.67%) subjects of them had moderate knowledge and 4 (13.33%) of them had adequate knowledge regarding ill effects of fast food habits on health.

Table no.1: Distribution of samples according to the level of knowledge before and after intervention of video assisted teaching module.

L Level of knowledge	Grading	GOVT. (N=30)				PRIVATE (N=30)			
		PRE TEST		POST TEST		PRE TEST		POST TEST	
		f	%	F	%	f	%	f	%
≤50% (Inadequate)	0-15	10	33.33	01	3.33	10	33.33	0	0.00
51-80% (Moderate)	16-24	20	66.67	28	93.34	20	66.67	26	86.67
>80% (Adequate)	25-30	0	0.00	01	3.33	0	0.00	04	13.33
Total		30	100	30	100	30	100	30	100

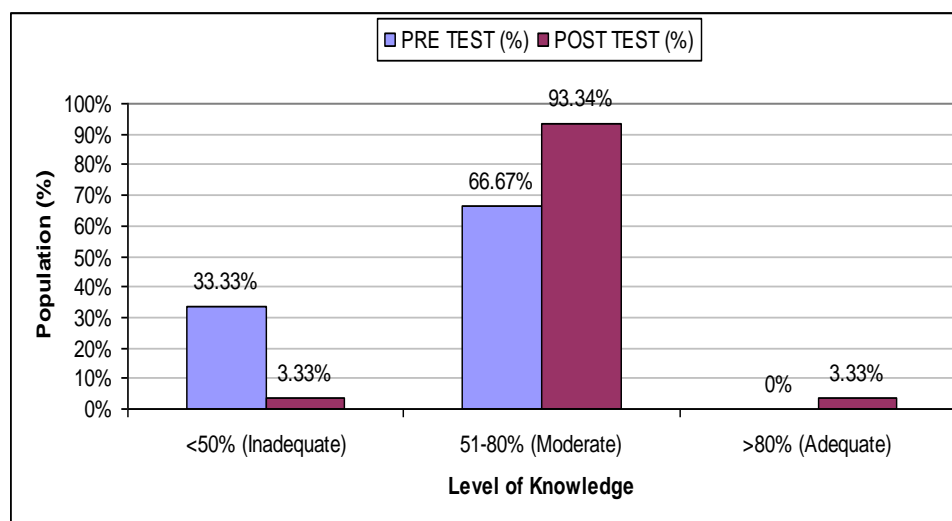


Fig. no. 1 :Bar diagram showing distribution of samples in Govt. school according to the level of knowledge before and after intervention.

Diagram: Private School Pre-Test and Post-Test Comparison

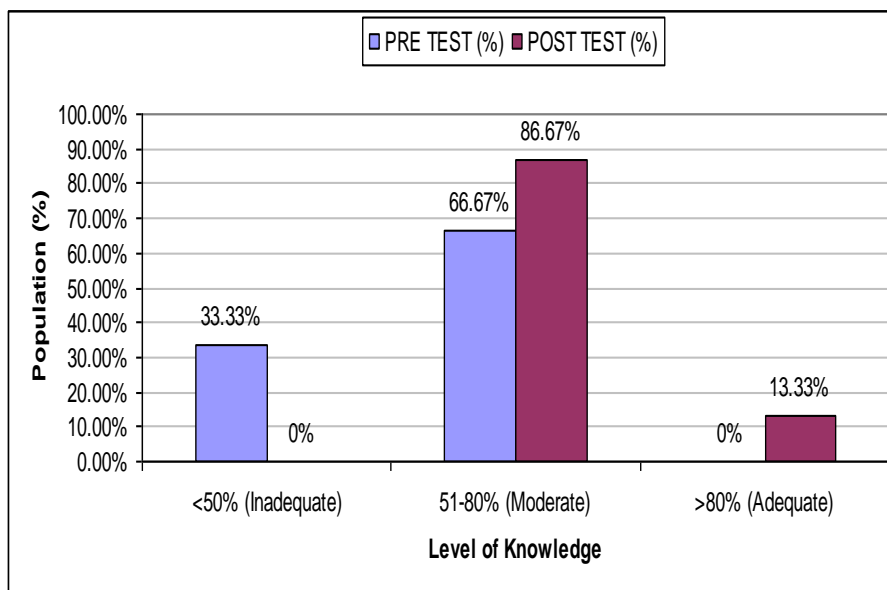


Fig. no. 2: Bar diagram showing distribution of samples in Private school according to the level of knowledge before and after intervention.

Section A - 2

Table no. 2 and Fig no. 3 shows the effectiveness of video assisted teaching module on knowledge regarding ill effects of fast food habits on health in Govt. school. In the pre-test the mean score of knowledge was 16.83 (± 2.75) and In the Post-test the mean score of knowledge was 20.73 (± 2.37). The paired t' test value was (7.18) which is greater than the Table value (2.05) at ($p < 0.05$) level of significance. Hence the Video Assisted Teaching Module is more effective in changing the level of knowledge regarding ill effects of fast food habits on health in Govt. school.

Table no. 2: Comparison of Mean, Standard deviation and Mean difference in the level of knowledge among early adolescents of Govt. school before and after intervention.

(N=30)

S. No.	Variables	Maximum Score	Pre-Test		Post-Test		Mean Difference	't' Value	df	Significance
			Mean	SD	Mean	SD				
1	Knowledge	30	16.83	2.75	20.73	2.37	3.90	7.18	29	S

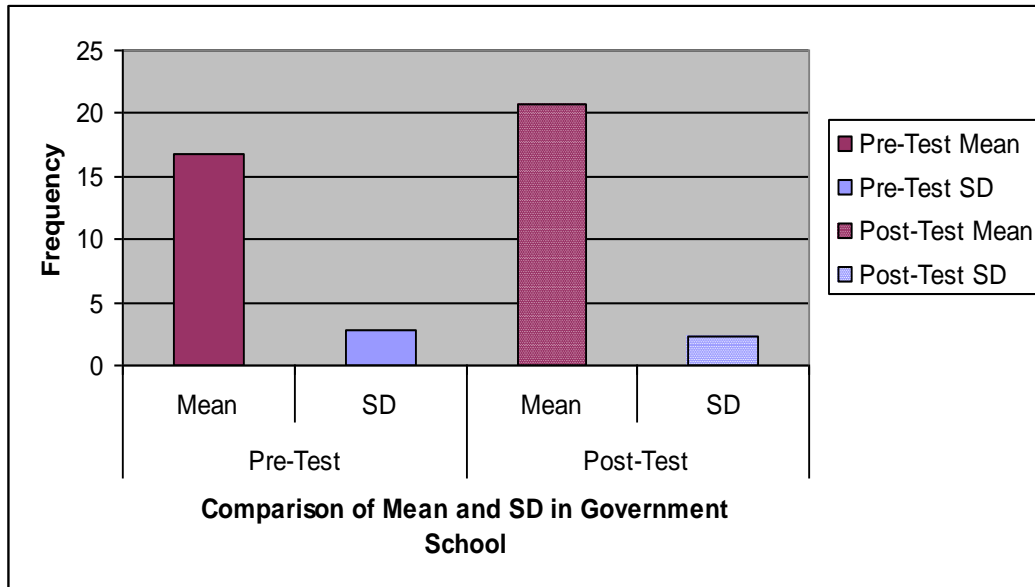


Figure no.3: Bar diagram showing comparison of mean and standard deviation before and after intervention of Video Assisted Teaching Module in Govt. school students

Section A – 3

Table no. 3 and Fig no. 3 shows the effectiveness of video assisted teaching module on knowledge regarding ill effects of fast food habits on health in Private school. In the pre-test the mean score of knowledge was 17.27 (± 4.25) and In the Post-test the mean score of knowledge was 21.50 (± 2.75). The paired t’ test value was (9.48) which is greater than the Table value (2.05) at ($p < 0.05$) level of significance. Hence the Video Assisted Teaching Module is more effective in changing the level of knowledge regarding ill effects of fast food habits on health in Private school.

Table no. 3: Comparison of Mean, Standard deviation and Mean difference in the level of knowledge among early adolescents of Private school before and after intervention

(N=30)

S. No.	Variables	Maximum Score	Pre-Test		Post-Test		Mean Difference	‘t’ Value	df	Significance
			Mean	SD	Mean	SD				
1	Knowledge	30	17.27	4.25	21.50	2.75	4.23	9.48	29	S

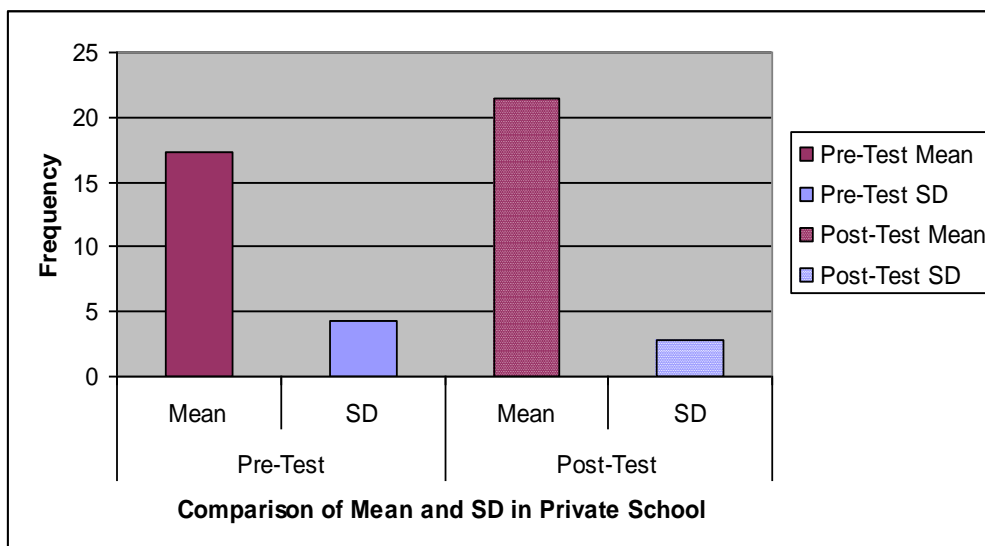


Fig no. 4 : Bar graph showing comparison of mean and standard deviation before and after intervention in Private school students.

Section B – 1

❖ **Association between pre test knowledge regarding ill effects of fast food habit among early adolescent in Govt. School with their selected socio demographic variables**

Shows that there was a no significant association between the levels of Pre-test knowledge regarding ill effects of fast food habit among early adolescent in Govt. school with their selected demographic variables.

Section B – 2

❖ **Association between pre test knowledge regarding ill effects of fast food habit among adolescent in Private school with their selected socio demographic variables**

Shows that there was a no significant association between the levels of knowledge regarding ill effects of fast food habit among early adolescent in Private school with their selected demographic variables.

Section C

Table no. 4 and Fig no. 5 & 6 shows the effectiveness of video assisted teaching module on knowledge regarding ill effects of fast food habits on health in between Govt. and Private school. In Govt. school, the mean score of knowledge was 3.90 (±2.93) and In Private school, the mean score of knowledge was 4.23 (±2.40).

Table no.4: Comparison of effectiveness of assisted video teaching module in between Govt. and Private School

S. No.	Variables	Govt.		Private		Mean Difference	't' Value	df	Significance
		Mean	SD	Mean	SD				
1	Knowledge	3.90	2.93	4.23	2.40	0.33	0.48	58	NS

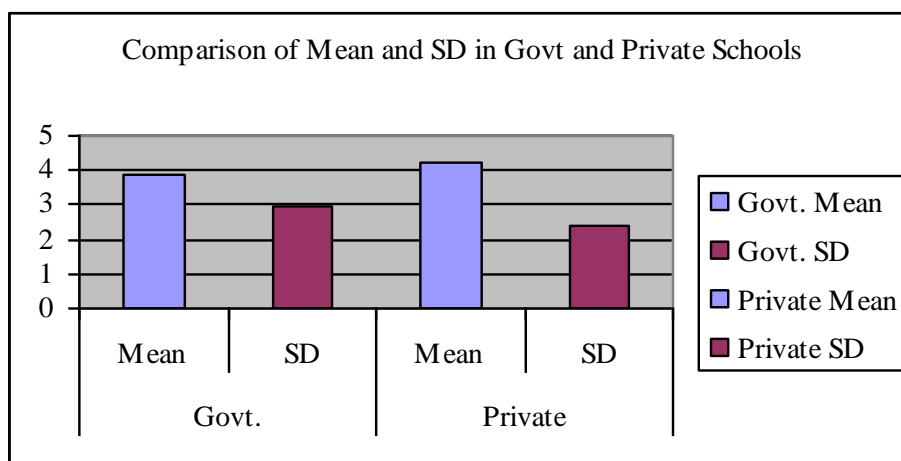


Fig. no. 5 :Bar diagram showing comparison of mean and standard deviation of values of pre-test and post-test difference in between Govt. and Private school students.

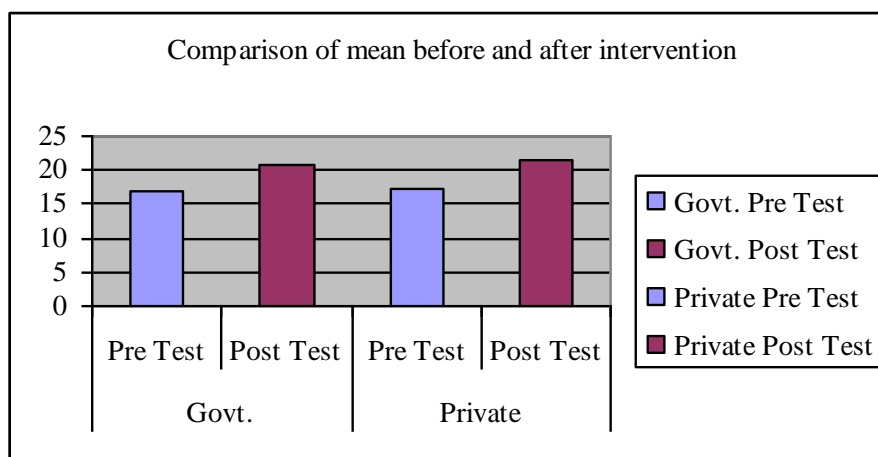


Fig. no. 6 :Bar graph showing comparison of mean progress of pre-test and post-test in between Government and Private school students.

IV. Discussion

Food is essential for growth and development of a child. Good food means the right kind of food for good health; it is nutritious. It contains natural substances that body needs to grow properly and stay healthy. We must choose the right food in daily diet for good health of our child. Socioeconomic conditions and cultural norms of our community have been changing. Many of adolescent are fond of readymade outside food. Some guardians are even reluctant in changing food habits of their children. Fast foods and junk foods are often used interchangeably. Most junk foods are fast foods as they are prepared and served fast¹. Fast food indicates food which is quickly prepared and served at outlets such as fast food restaurants. Healthy nutrition rich foods have been substituted by the new food named as fast food. Vitamins, mineral, fibre and amino acids are low or lacking in fast food, but have high energy (calorie). In the circumstance of the global economy, fast food at minimum prices and marketing approaches adopted by manufacturers of such foods has elicited a progression of fast food at high rate. Fast food doesn't contain the nutrients required to sustain our body health². In adolescents both boys and girls undergo several physical and psychological changes which make them to become partly responsible for their own health and welfare. Psychological development of adolescents such as independence and acceptance by peers may affect adolescent's food choices and nutrient intake, which places them to adopt unhealthy eating behaviours like addiction to junk foods. India even Chinese food sold in road side stalls is Junk food , because they contain high amount of Monosodium Glutamate (MSG) which is a flavour enhancer & this MSG is recognized as a health hazard if taken in larger quantities because it causes headache, nausea, weakness, wheezing, oedema, change in heart rate, burning sensation & difficulty in breathing³.

For children skipping breakfast at home, fast food comes handy in school. A positive correlation of increased fast food consumption, skipped breakfasts and increased body mass index was found among adolescents. Junk foods are widely available in schools through variety of outlets. Cafeterias at the schools offer sodas, cold drinks, chips and many other foods of low nutritional value. Sale of junk foods in school cafeteria often competes with more nutritious school lunch schemes. Most of western countries and few schools in India have banned the sale of junk foods in the school cafeteria. Most of Indian fast foods are prepared by deep frying in fats especially trans fat and saturated fats. Consumption of diet high in sugar, saturated fat, salt and calorie content in children can lead to early development of obesity, hypertension, dyslipidemia and impaired glucose tolerance. The concerns with fast food consumption in developing countries also include poor hygiene during preparation storage and handling leading to microbiological contamination. Calcium and magnesium depleted fast food are responsible for osteoporosis. Diets rich in free sugars may lead to increased risk of dental caries also. Very often fast food restaurants and habit of fast food consumption are becoming issue of criticism in the media of India due to adulteration of food items with food colors, other hazardous chemicals, microbial safety and hygiene of the restaurants. The coloring agents in the foods are regarded as carcinogen⁴.

According to World Health Organization (WHO) estimates, by 2030 67 percent of all deaths in India will be due to such causes on people suffering from non-communicable diseases like diabetes and cardiovascular diseases⁶. Poor nutrition during this stage can have lasting consequences on an adolescent's cognitive development, resulting in decreased learning ability, poor concentration, and impaired school performance Eating junk food has become a trend. The children hate homemade healthy food. Junk food is injurious to health. Eating Burger and Pizza increases cholesterol in human body. The fat in human body increases. The increase fat is dangerous for heart⁷. The investigator selected this topic for creating awareness among early adolescents, regarding the ill effects of fast food habit through video-assisted teaching programme.

Thus the present study is aimed to provide a better understanding of adolescent consumption behaviour with regard to fast food & home food. And Promotion of healthy eating habits and education about junk foods needs to be strengthened. And also evaluate the effectiveness of video – assisted teaching on knowledge regarding ill effects of fast foods habit.

The result of the present study showed In the pre-test the mean score of knowledge was 16.83 and In the Post-test the mean score of knowledge was 20.73 and mean difference was 3.90 and the overall enhancement was 13% in the government school. In the pre-test the mean score of knowledge was 17.27 and In the Post-test the mean score of knowledge was 21.50 and mean difference was 4.23 and the overall enhancement was 14.1% in the private school. Hence the level of knowledge score is increase regarding ill effects of fast food habits on health in Govt. and Private school shows the effectiveness of video assisted teaching module on knowledge regarding ill effects of fast food habits on health in between Govt. and Private school. In Govt. school, the mean score of knowledge was 3.90 (± 2.93) and In Private school, the mean score of knowledge was 4.23 (± 2.40).The unpaired t' test value was (0.40) which is less than the Table value (2.00) at ($p > 0.05$) level of significance. The p-value reveals the fact that there is a similar kind of a progress or effect on knowledge of fast food in both the schools. Hence, there is no significant difference of effectiveness of the Video Assisted Teaching Module on changing the level of knowledge regarding ill effects of fast food habits on health in between Govt. and Private school.

V. Conclusion

The finding of the present study reveals that there is a significant gain in knowledge among adolescent students following video assisted teaching programme. Therefore such program may be used to promote awareness among early adolescent students regarding ill effects of fast food habit.

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