

“A Study to Assess the Effect of Nutrition Education Programme on Dietary Habits in terms of Knowledge and Attitude among College Students”

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Key Words

Knowledge, Attitude, Effectiveness, Nutrition Education Programme, Healthy Dietary Habits, Adolescents.

Abstract

College students are at risk for making poor dietary preferences that can cause major health problems. The perfect fraction of food and nutrition starting from our early stages of life plays a vital role in the later life. OBJECTIVES: 1.To assesses the level of knowledge and attitude on Dietary Habits.2. To evaluate the effectiveness of Nutrition Education program on Dietary Habits AIM: The study was aimed to assess the effectiveness of Nutrition Education Programme on Dietary Habits in terms of Knowledge and Attitude among Students of Mahila Arts College Nadiad, Gujarat.

Methodology: A quasi-experimental (pretest- posttest control group) design was employed in Mahila Arts College Nadiad, Gujarat. The simple random sampling technique was used to draw sixty college students as samples. A structured pretested knowledge assessment questionnaire consisting of 25 questions and Five Point Likert Attitude Scale (20 items) on healthy dietary habits was used. Lesson plan along with appropriate flipbook had been utilized for teaching. On the 7th day, post test was conducted using the same questionnaire. The total sample size was 60 college students.

Result: Nutrition Education Program was imparted and knowledge and attitude regarding dietary habits was assessed. Knowledge on dietary habits was assessed pre and post-intervention, the mean score of knowledge on dietary habits during pre-intervention was 7.78 ± 1.59 and post-intervention was 10.28 ± 2.92 . There was significant ($p < 0.05$) improvement observed regarding knowledge on dietary habits after intervention. Similarly, mean score of attitude on diet habits before intervention and post intervention were 49.82 ± 4.94 and 54.55 ± 6.74 respectively. Significant ($p < 0.05$) improvement was observed also in the attitude of the subjects post-intervention. It confirms the positive impact of nutrition education program.

Conclusion

This Nutrition Education Programme improved healthy dietary habits among college students. Results suggest that a scaled-up initiative using existing colleges and health resources could change dietary habits in a large population over time. The nutrition education programme also provided lessons for implementing and evaluating similar nutrition programmes.

1 Introduction

Nutrition education is very important for the health of the college students. It is defined as a term linked to the daily requirements of healthy eating. It is used in strategies, preparation, and research by the public¹. Skipping the daily meals which leads to under nutrition, and at the same time, consuming junk food and fast food which leads to overweight, is very common among adolescents revealing the double edge of the issue.² Nutrition plays an important role in the development of children and in the prevention of disease. It is important for good health and the proper functioning of human body ³. Nutrition education is any combination of academic strategies, which go along with environmental supports, planned to facilitate optional adoption of food choices and other food and nutrition-related behaviors favorable to health and well-being.⁴ Nutrition education is delivered through various different sites and involves activities and action at the individual and community levels.⁵ Nutrition knowledge is an vital element of health awareness. Many factors are included in nutrition knowledge, out of which some are taste, convenience, cost, food security, and cultural beliefs.⁶ To provide a baseline for the evaluation of intervention programs, the most effective surveys are the KAP (knowledge, attitudes, and practices) surveys.⁷ Nutrient intake and diet habits are characterized by meal pattern and nutrient intake; meal patterns can affect body fat, bone density and many other situations. Moreover, snacking, skipping of meals, adoption of specific diets, and fast-

food eating are the key aspects of meal patterns. Different socioeconomic factors are responsible for different preferences and dietary habits of an individual. The total consumption of junk foods and fatty foods should be decreased while the intake of fruits and vegetables should be increased.⁸

2. Objectives of the study were

1. To assesses the level of knowledge and attitude on Dietary Habits.
2. To evaluate the effectiveness of Nutrition Education program on Dietary Habits.

3. Methods

A quasi experimental study was conducted in 2021 by distributing a self structured Questionnaire among the college students. A brief description of study objectives was explained and by convenience, those who agreed is respond to the questionnaire confirmed their agreement through signing the consent form. Participants who were not willing to participate were excluded. This study was approved by institutional research committee of the Dinsha Patel College of Nursing, Nadiad, Gujarat. Participation was voluntary with assurance about the confidentiality of their information, as no identifiers or personal information were collected.

The data collection tool comprised of 3 section, namely the participant's demographic detail, structured pretested knowledge assessment questionnaire consisting of 25 questions and Five Point Likert Attitude Scale (20 items) on healthy

dietary habits. Participant`s detail include Gender, Age in years, Religion, Education (UG programme), Monthly Family Income, Family History of Obesity, Hemoglobin level, BMI, Using Nutrient supplements ,Type of Family, Type of dietary food. Knowledge assessment questionnaire includes 25 items where < 50% score for poor knowledge, 50-70 % indicates average knowledge and > 70% indicates good knowledge. The higher score indicates good knowledge. Five point Likert Attitude Scale include 20 items. The higher score indicates good attitude. The concurrent validity and reliability were obtained by Cronbach`s alpha 0.89, 0.77 for knowledge and attitude domain respectively.

4. Results

Among 60 samples, 60 (100%) were female. The sample comprised 55 (92%) children aged 17-20 years, 03 (05%) aged 21-24 years and 02(03%) aged >24 years. 49(82%) were Hindu, 5(08%) were Muslim, 4(7%) were Christian and 2(03%) were belong to other cast. 25 (41%) studied in 1st year, 20 (33%) studied in 2nd year and 15(25%) studied in 3rd year. Monthly Family Income of 33(55%) students was less than 10000, of 21(35%) students was between 10000-20000 and of 5(08%) students was between 20000-50000. 48(80%) students had no any family history of obesity, 6(10%) students had obese siblings and 6(10%) students had obese relatives. 11(18%) students had less than 9gm/dl hemoglobin level, 48(80%) students had 9-11gm/dl hemoglobin level and 1(2%) students had

more than 11gm/dl hemoglobin level. 29(48%) students were underweight, 24(40%) students had normal weight, 04(07%) students had overweight, 02(03%) students were belong to obesity class I and 01(02%) students were belong to obesity class II. 60(100%) students were not using any nutrient supplements. 36(60%) students were living in the joint family, 19(32%) students were living in the nuclear family and 05(08%) students were belongs to other family type. 41(68%) students were Vegetarian, 12(30%) students were Non-vegetarian and 07(12%) students were Eggitarian.

The overall Mean Score and SD of Knowledge and Attitude before intervention were 7.78±1.59 and 49.82±4.94 respectively. The overall Mean Score and SD of Knowledge and Attitude after implementing Nutrition Education Programme were 10.28±2.92 and 54.55±6.74 respectively.

Table: 1 Analysis and Interpretation of the Demographic Data. [N=60]

Demographic Data		Frequency	Percentage
Gender	Female	60	100%
	Other	0	0%
Age in years	17-20	55	92%
	21-24	03	5%
	More than 24	02	3%
Religion	Hindu	49	82%
	Muslim	5	8%
	Christian	4	7%

	Other	2	3%
Education (UG programme)	1 st Year	25	41%
	2 nd Year	20	33%
	3 rd year	15	25%
	10000-20000	21	35%
	20000-30000	5	8%
	Above 30000	0	0%
Family History of Obesity	No any	48	80%
	Siblings	0	0%
	Relatives	0	0%
Hemoglobin level	Less than 9gm/dl	11	18%
	9 to 11gm/dl	48	80%
	More than 11gm/dl	01	2%
BMI	Under weight	29	48%
	Normal weight	24	40%
	Over weight	04	7%
	Obesity Class-I	02	3%
	Obesity Class-II	01	2%
	Obesity Class-III	0	0%
Using Nutrient supplements	Protein powder	0	0%
	Multi vitamin tablet	0	0%
	Iron and folic acid	0	0%

	tablet		
	B Complex tablet	0	0%
	Calcium tablet	0	0%
	No any	60	100%
Type of Family	Joint	36	60%
	Nuclear	19	32%
	Other	5	8%
Type of dietary food	Vegetarian	41	68%
	Non vegetarian	12	30%
	Eggitarian	7	12%

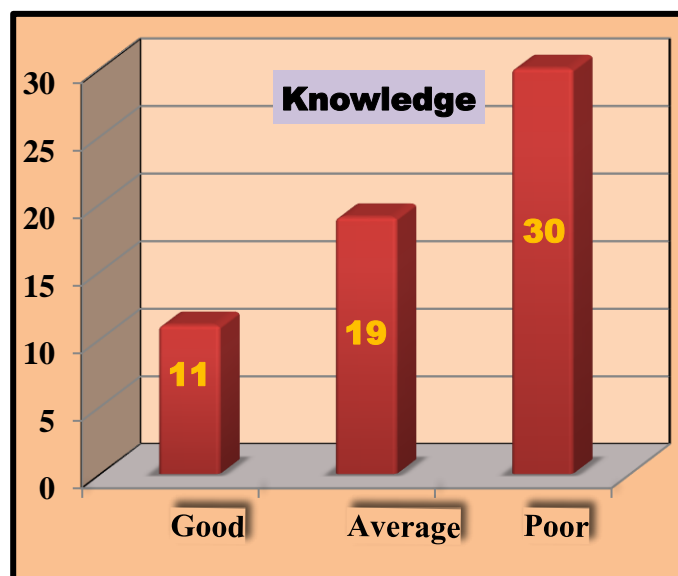


Figure -1: Pre test Knowledge of College Students on Dietary habits

Figure 1 depicts the Pre test Knowledge of College Students on Dietary habits. 11 College Students had a Good Knowledge

regarding the Dietary habits, 19 students have average knowledge regarding the Dietary habits while 30 students have Poor Knowledge regarding the Dietary habits which shows that majority of the students have poor knowledge regarding the dietary habits before intervention.

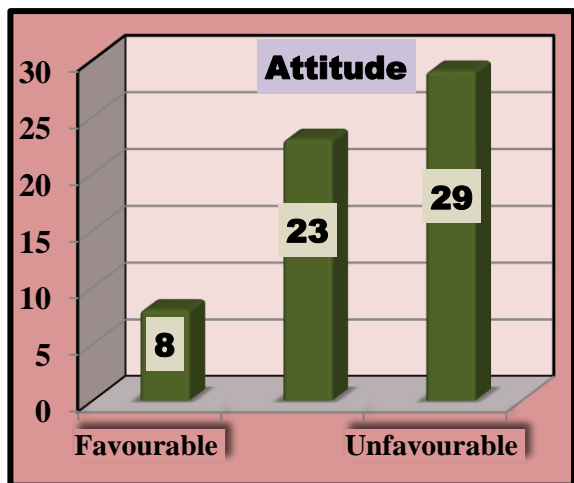


Figure 2 Pre-test Attitude of College students on Dietary habits

Figure 2 depicts the Pre test Attitude of College Students on Dietary habits. 8 College Students had a favourable attitude towards the Dietary habits, 23 students had a Moderately favourable attitude towards the Dietary habits while 29 students had a unfavourable attitude towards the Dietary habits which shows that majority of the students have unfavourable attitude towards the Dietary habits before intervention.

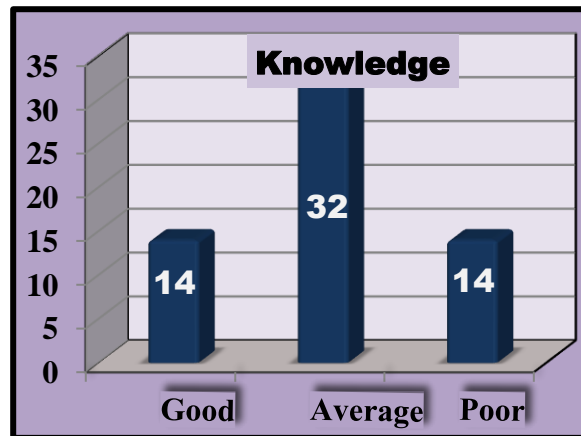


Figure - 3: Post test Knowledge of College Students on Dietary habits

Figure 3 depicts the Post test Knowledge of College Students on Dietary habits. 14 College Students had a Good Knowledge regarding the Dietary habits, 32 students have average knowledge regarding the Dietary habits while 14 students have Poor Knowledge regarding the Dietary habits which shows that Nutrition Education Programme had Positive impact on the knowledge of Students towards the dietary habits.

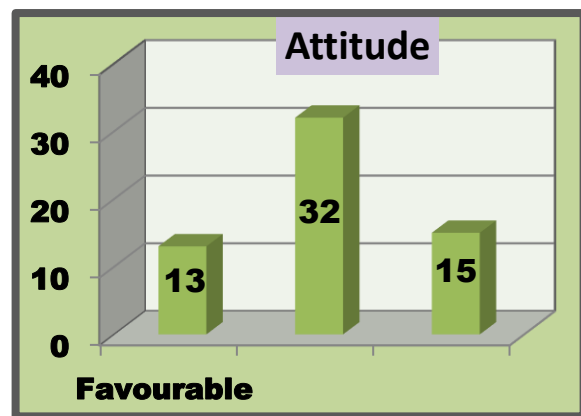


Figure - 4: Post test Attitude of College Students on Dietary habits

Figure 4 depicts the Post test Attitude of College Students on Dietary habits. 13 College Students had a favorable attitude towards the Dietary habits, 32 students had a moderately favorable attitude towards the Dietary habits while 15 students had a unfavorable attitude towards the Dietary habits which shows that Nutrition Education Programme had Positive impact on the Attitude of Students towards the dietary habits.

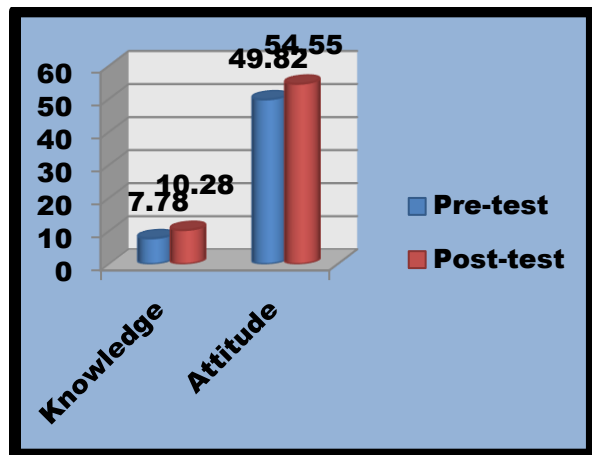


Figure - 5: Mean Score of Pre-test and Post-test Knowledge and Attitude of College Students on Dietary habits

Figure 5 depicts the Mean Score of Pre-test and Post-test Knowledge and Attitude of College Students on Dietary habits. Mean score of Pre-test Knowledge and Attitude is 7.78 and 49.82 respectively. After the implementation of nutritional education programme the Mean score of Knowledge and Attitude is 10.28 and 54.55 respectively. It shows that Nutrition Education Programme had Positive impact on the

Knowledge and Attitude of Students towards the dietary habits.

Table 2: Paired ‘t’ test to assess the post-test nutrition education programme on knowledge of dietary habits among college students.

Level of knowledge	Pre test		Post test			Difference in mean	‘t’ value
	Mean	SD	Mean %	Mean	SD		
Overall	7.78159	1.59	12.96%	10.28292	2.92	17.13%	‘t’= 5.8206 P<0.001*** HS

Table-2: paired ‘t’ test to assess the post-test nutrition education programme on knowledge of dietary habits among college students, the mean pre-test level of knowledge is 7.78159, standard deviation is 1.59 and the mean % is 12.96. paired ‘t’ test to assess the post-test nutrition education programme on knowledge of dietary habits among college students, the mean post-test level of knowledge is 10.28, standard deviation is 2.92 and the mean % is 17.13. The mean difference between pre-test and post-test is 2.49241, the p-value is 5.8206 (p<0.001***) which is highly significant.

Table 3: Paired ‘t’ test to assess the post-test nutrition education programme on attitude towards dietary habits among college students

Level of attitude	Pre test			Post test			Difference in mean	‘t’ value p-value
	Mean	SD	Mean %	Mean	SD	Mean %		
Overall	49.82	4.94	83.03%	54.55	6.74	28.55%	4.73	‘t’=4.3844 P<0.001*** HS

Table-3: paired ‘t’ test to assess the post-test nutrition education programme on attitude of dietary habits among college students, the mean pre-test level of attitude is 49.82, standard deviation is 4.94 and the mean % is 83.03. paired ‘t’ test to assess the post-test nutrition education programme on attitude of dietary habits among college students, the mean post-test level of attitude is 54.55, standard deviation is 6.74 and the mean % is 28.55. The mean difference between pre-test and post-test is 4.73, the p-value is 4.3844 (p<0.001***) which is highly significant.

5. Discussion

Our study found that the Post-test Knowledge and Attitude of college students

regarding the Dietary habits was higher than the Pre-test Knowledge and Attitude. It means that Nutrition Education Programme has Positive impact on the Knowledge and Attitude of college students regarding the Dietary habits.

6. Conclusion

This study reports that Nutrition Education Programme improved healthy dietary habits among college students. Results suggest that a scaled-up initiative using existing colleges and health resources could change dietary habits in a large population over time. The nutrition education programme also provided lessons for implementing and evaluating similar nutrition programmes.

Ethics Declaration and Consent

Dinsha Patel College of Nursing institute ethics committee reviewed this study and granted ethical approval. Consent has been obtained from all participants.

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