

Effect of Educational Qualification on Nutrition Knowledge of College Students in Tamil Nadu, India

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ABSTRACT

The present research was explored to study the effect of educational qualification on nutrition knowledge of college students. About 1000 college going population in the age group of 19-22 years were selected. Nutrition knowledge questionnaire was used to test the nutrition knowledge; interview schedule was used to obtain basic information. After obtaining the details, raw data was subjected to statistical analysis using SPSS version 20. The pre-test results showed the average score of 4.36 and among them the post-graduate students scored higher (4.99), followed by B.Sc. (4.4), B.A (4.3) and B.Com (4.0). When the F test was implied for this table, F value found to be 11.187, which is also statistically significant ($p < 0.001$). It is also evident that a majority of the subjects (34.5%) reported media as the source to increase the nutrition knowledge. Knowledge is a powerful and essential tool to eradicate nutritional related problems. Education of the youngsters must be improved to understand about nutrition and health. Thus, we conclude the present research study stating the significance of Nutrition as an individual as: "If we could give every individual the right amount of nourishment and exercise, not too little and not too much, we would have the safest way to health."

Keywords: Nutrition Knowledge, Education, Nutrition awareness, Pre –test, Post-test, Intervention

INTRODUCTION

Malnutrition, a double-edged sword, encompasses both under-nutrition and over-nutrition. Knowledge alone seems to be the remedy for this ignorance. Nutrition education is an important part of practical aspects. It plays an important role in raising public awareness and ultimately the health of society. Awareness camps on nutrition and balanced diet will help the public to maintain a proper diet (Eza, 2017).

Nutritional awareness is an aspect of health care and is a significant element in treating a lot of illnesses. Nutrition awareness provides the modern basics fostering the daily life skills that enhance and reinforce the right nutrition practices in a specific social and economic context. This

awareness may provide the knowledge and the skills that help the family produce, buy and prepare the diet they need (Ali Ahmad Khader Bany Sayd, 2014). It plays an important role in raising public awareness and ultimately the health of society. The tips given to the patient by the nutritionist at the hospital have an integral role with other aspects of health care.

The process of "nutrition education" is defined broadly as "any combination of educational strategies, accompanied by environmental supports, is designed to facilitate voluntary adoption of food choices and other food and nutrition related behaviors conducive to health and wellbeing" (Contento, 2011). This definition extends beyond perceiving the "education"

as a process that merely provides information, to the one that combines information and communication strategies (motivational), provision of skills (where the goal is to encourage people's ability to make progress), and changes to the nutritional or food environment (for support and reinforcing the actions on information and skills). Under this definition, the ultimate objective of nutrition education would be to change the inherent behavior. Thus is the justification of the usage of the term "behavior change communication" (Corrina Hawker, 2013).

According to the WHO, the conditions that promote unhealthy eating practices among individuals include a lack of adequate health and nutritional knowledge, and the acquisition of misinformation about health and nutrition matters (Eza, 2017). The unhealthy dietary patterns may lead to the progression of obesity and many other chronic diseases. As there are increasingly available nutrient-poor products in the market, nutrition knowledge of the products, people consume plays a pivotal role in maintaining a balanced diet, which in turn maintains a healthy body (Yajesh Chalmuri, 2018).

Young adults are generally considered to be healthy and global health planners in most cases neglect their health needs. Though some standardized indicators of health for young adults are available in western part of the world, such indicators or markers are almost non-existent in the developing parts of the world. The risk perception in adolescents in relation to their health related behaviors are crucial to determine long-term health consequences. Therefore educating the adolescent generation with regards to the negative impacts of risk-taking and encouraging a health responsible lifestyle may play an important role in controlling adolescent adverse health situation in countries such as India (Soumitra kumar, 2017).

MATERIALS AND METHODS

About 1000 samples (500 males and 500 females) in the age group of 19 to 22 years were selected using purposive random sampling method. The study samples were colleges students belonged to Arts and Science colleges of North Chennai. Subjects who were not on any kind of medical complication were selected for the study. Physically challenged, pregnant and lactating women were excluded from the study. Before the commencement of the study, Ethical clearance was obtained from Universal Ethics Committee (UEC). After selecting the colleges for research purpose, permission was obtained from the respective college authorities for conducting the study. Since all our study participants were majors (aged 18 years and plus), written consent to participate in the study was got from all of them. The selected participants who have consented to be a part of the study were informed about the study and its importance by the researcher so that they would cooperate and make possible in collecting the necessary information for the study.

A pre-test knowledge questionnaire, which consists of 15 basic Nutrition related questions, was used for evaluating the nutrition knowledge of the subjects. General interview schedule was used to collect the basic information of the subjects. Nutrition Education Program (Intervention) was conducted to all the participants of the study. This includes workshops and group counseling. Participants with the abnormal BMI and severe anaemia were given individual Nutrition counseling. Nutrition brochures were issued in the Nutrition education program to create awareness among the students. Audio visuals, posters, Nutritious foods were exhibited to create awareness about nutrition. After the nutrition education program and individual nutrition counseling, post-test knowledge questionnaire were given and tested. The obtained details were coded and subjected to statistical analysis using SPSS Version 20.0. After analysis, results were interpreted.

RESULTS AND DISCUSSION

Table-1: General profile of the participants

General profile		Male	Female	Total
Age (in years)	19	81 (30.3)	186 (69.7)	267 [26.7]
	20	208 (54.7)	172 (45.3)	380 [38]
	21	149 (62.6)	89 (37.4)	238 [23.8]
	22	62 (53.9)	53 (46.1)	115 [11.5]
	Total	500 (50)	500 (50)	1000 [100]
Education	B.Sc	158 (51.1)	151 (48.9)	309 [30.9]
	B.Com	215 (65)	116 (35)	331 [33.1]
	B.A	69 (33)	140 (67)	209 [20.9]
	P.G	58 (38.4)	93 (61.6)	151 [15.1]
	Total	500 (50)	500 (50)	1000 [100]
Type of Living	Hostel	95 (58.6)	67 (41.4)	162 [16.2]
	Parents	360 (46.9)	407 (53.1)	767 [76.7]
	Relatives	7 (21.2)	26 (78.8)	33 [3.3]
	Friends	38 (100)	0 (0)	38 [3.8]
	Total	500 (50)	500 (50)	1000 [100]
Type of Family	Joint	38 (31.9)	81 (68.1)	119 [11.9]
	Nuclear	455 (53)	404 (47)	859 [85.9]
	Separated	7 (31.8)	15 (68.2)	22 [2.2]
Total	500 (50)	500 (50)	1000 [100]	

Note: Values within () denote row percentage; Values within [] denote column percentage

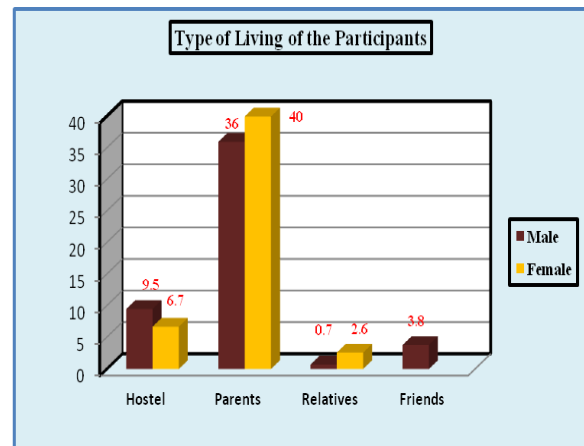


FIGURE-3

Age is a significant predictor of malnutrition. Thus, the age profile of the subjects was studied and the data procured are presented in the above table. In the present study the maximum number of college-going students (38%) was in the age group of 20 years followed by 26.7% in 19 years, 23.8% in 21 years, and 11.5% in 22 years. Similarly, *Sutapa Datta (2014)* conducted a study among the tribal students in North East state of India covering the age group of 18 to 21 years.

The above table also represented that about 33.1% participants belonged to B.Com stream, followed by 30.9% from B.Sc Stream and 20.9% from B.A stream (84.9% under graduation). About 15.1% of the people are pursuing post-graduation. A similar study conducted by *Steffi (2013)* revealed that 83% of them were undergraduate students and remaining 17% were postgraduate.

The present study also documented that majority of the participants (76.7%) resided with the parents. About 16.2% were hostel dwellers and 3.8% stayed with the friends and only 3.3% resided with relatives. From the above table, it is interesting to note that none of the female participants stayed with friends and the percentage of female participants resided in Hostel and with relatives were also comparatively less than the male counterparts. A study conducted by *Tahira Sidiq (2016)* observed that the current place of residence of most students were at college hostel (50.66%),

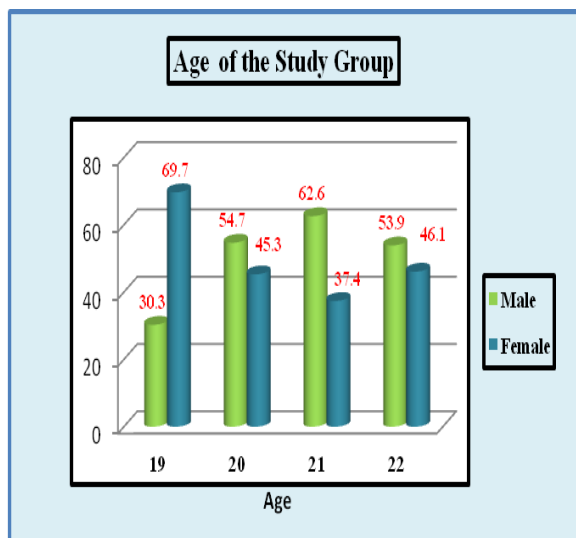


FIGURE-1

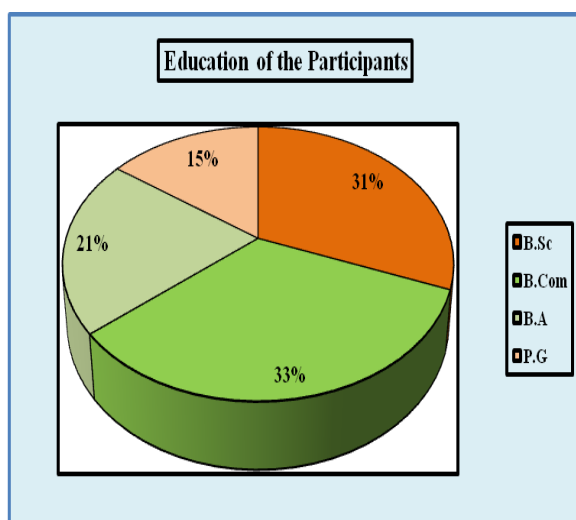


FIGURE-2

then home (32.1%) and privately rented apartment (17.33%).

When family types of the participants of the study was analyzed, it was evident the maximum percentage of participants were from a nuclear family (85.9%) followed by joint family system

(11.9%) and 2.2% were in separated family. A study conducted by *Harika Yadav (2015)* showed that a majority of the students belonged to the nuclear family (79%) and only 21% of the students belonged to a joint family.

Table-2 : Effect of Educational qualification on Nutrition knowledge of the participants

Knowledge Test	Educational qualification	N	Mean	SD	F value	P value
Pre test	B.Sc	309	4.41	1.69	11.187	<0.001**
	B.Com	331	4.03	1.45		
	B.A	209	4.36	1.73		
	PG	151	4.99	2.15		
	Total	1000	4.36	1.7		
Post test	B.Sc	309	9.18	2.07	20.277	<0.001**
	B.Com	331	8.83	2.02		
	B.A	209	9.32	1.88		
	PG	151	10.52	3.19		
	Total	1000	9.30	2.29		

Note: ** denote 1% level significance

The above table presented the comparative nutrition knowledge of the students with respect to their educational qualification. The pre-test results showed the average score of 4.36 and among them the post-graduate students scored higher (4.99), followed by B.Sc (4.4), B.A (4.3) and B.Com (4.0). When the F test was implied for this table, F value found to be 11.187, which is also statistically significant ($p < 0.001$).

Using the one-way ANOVA, it can be clearly seen that there exists a significant difference in the post-test knowledge level between student of different disciplines ($F=20.277$ and $p < 0.001$). Postgraduates scored higher (10.52), followed by the students belong to BA (9.32), B.Sc (9.1) and B.Com (8.8). The above table clearly suggests that postgraduate students scored higher and have better nutrition knowledge when compared to undergraduates (B.SC, B.A, and B.Com). This is might because of their education, age, and experience of the postgraduates. There is also a wide difference in the pre-test and post-test scores irrespective to the disciplines, which showed that intervention program was effective among the participants.

The Nutritional awareness of science students, especially those who studied

biology as one of their subjects was found to be better than the students of the humanities and commerce (*Aprajita Sharma, 2015*).

Table-3: Nutrition Awareness of the Study Group

Nutrition knowledge	Male	Female	Total
Designing a nutrition website	43	72	115 (11.5)
Media	205	140	345 (34.5)
Nutrition counseling	39	99	138 (13.8)
Nutrition workshop/ seminar	82	53	135 (13.5)
Newspaper	72	49	121 (12.1)
Brochures	43	63	106 (10.6)
Nutrition courses	16	24	40 (4.0)

The strategies to increase the nutrition knowledge of the students were analyzed in the above table and figure. It is evident that a majority of the subjects (34.5%) reported media as the source to increase the nutrition knowledge. About 13.8% and 13.5% mentioned nutrition counseling and nutrition workshop/seminars respectively. About 12.1% and 11.5% subjects stated newspaper and nutrition websites, respectively as source of nutrition knowledge. About 4% mentioned nutrition course to increase nutrition knowledge.

A study conducted by *Tahir Sidiq, (2016)* showed that main source of nutritional knowledge was internet (28.6%) and from friends (24.6%). Television and radio were source of information in 16.6% students, 10.6% were received information from books, magazines and newspaper.

Only 0.66% consult dietician for nutritional information.

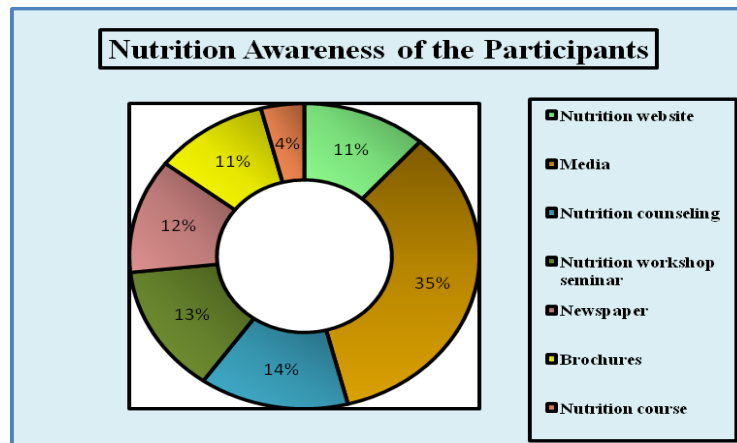


FIGURE- 4

CONCLUSION

India faces both forms of Malnutrition. Malnutrition can be said to have two sides of a coin with under-nutrition and over-nutrition. This is an important challenge in public health in the country like India. Thus, knowledge is a powerful and essential tool to eradicate nutritional related problems. Education of the youngsters must be improved to understand about nutrition and health. College authorities should conduct regular medical and nutritional camps for screening nutrition related problems. College canteens or hostels should provide with low cost, traditional, healthy food items instead of junk foods, carbonated beverages and other westernized foods. Nutrition awareness programs must be conducted periodically to initiate good eating habits. Nutrition awareness programs regarding 'right eating pattern' should be conducted among college students by the Government. Nutritionally balanced lunch could be provided to all government college students in their college campus, since most of the students do not bring lunch. Healthy traditional foods namely health mix, sesame balls, roasted bengal gram ball could be provided to Government college students to improve their nutritional status. In the case of severe micro nutrients deficiency, supplements can be given. Nutritionally fortified foods can be supplied to college

canteens and hostel, free of cost or at subsidized price. Hence we conclude the present research study stating the significance of Nutrition as an individual as: "If we could give every individual the right amount of nourishment and exercise, not too little and not too much, we would have the safest way to health."

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