

Comparison of Nutritional Knowledge of Home Economics and Media Science Students in Karachi

Sumaiya Sajjad^{1*}, Farzana Asar²

^{1,2}Department of Nutrition, R.L.A.K College of Home Economics, Karachi, Pakistan.

*Corresponding author: Sumaiya Sajjad (Email: sumaiyasajjadche@gmail.com)

ABSTRACT

Nutritional knowledge is a prerequisite for making healthy food choices, however nutrition education is rarely provided at high school or undergraduate in Pakistan. Home Economics colleges are the only one that have been providing effective nutrition education since 1950s but this fact is not recognized and appreciated public or education department. The purpose of this study was to assess the impact of home economics education on the level of nutritional knowledge of Home Economics students by comparing them with Media Science students. Data was collected from a total of 200 students. A twenty-item questionnaire was used to assess nutritional knowledge. Data analysis was done to assess and to compare nutritional knowledge on the basis of scoring which was categorized as (1-7= fair), (8-14= good) and (15-20=excellent). A significantly higher proportion of Home economics students had excellent knowledge (90%) as compared to general science students (9%). The study identified significant differences in knowledge between both the departments. This is consistent with previous studies which showed that nutrition knowledge is related with the field of study.

Keywords: *Nutritional knowledge, Home economics, Science students*

1. INTRODUCTION

Knowledge about nutrition and its basic foundations in science are changing drastically. In the midst of this change, nutrition is rapidly emerging as a vital component in personal health care and in the national policies established to meet nutrition needs. Developed countries have been facing an alarming increase in the prevalence of obesity over the last century. The dietary habits of youth are among the poorest of all age groups, which puts them at significant risk for developing overweight/obesity and a host of chronic illnesses including heart disease, type 2 diabetes, several cancers, joint problems, body image dissatisfaction and mental health issues (Castillo, Feinstein, Tsang, & Fisher, 2016; Hyun, Lee, Ro, Gray, & Song, 2017; Philippou, Middleton, Pistos, Andreou, & Petrou, 2017).

During adolescence, young people are assuming responsibility for their own eating habits, health-related attitudes and behaviors and their growing independence is often associated with unconventional eating patterns (Chepulis & Mearns, 2015; El-Sabban & Badr, 2011; Nazni & Vimala, 2010; Vitzthum et al., 2013). There are certain factors that leads to this, the most important one is the globalization phenomena that shows that there is a change in life style and nutritional habits not only in Pakistan but worldwide. Due to the massive effect of the media that may give people mixed messages about what to eat to advertise their products, the rapid spread of restaurant's that causes people to divert to such places rather than eating at home due to the lack of motivation and due to the fast life nowadays, fast foods became the main diet taken by the Pakistani population, particularly among students at various levels of education. The prevalence of such unhealthy eating behaviors and rising numbers of obese people in the country has led many health professionals to become more concerned about ways by which these trends may be altered. Many strategies and ideas have been suggested to reverse such unhealthy eating habits. One of these strategies involves increasing nutrition knowledge. Nutritional education is also one of the important aspects that play a big role in nutritional knowledge by raising awareness and ultimately the health of the society (Chen et al., 2010; Chepulis & Mearns, 2015; Nuss, Freeland-Graves, Clarke, Klohe-Lehman, & Milani, 2007; Sharma, Gernand, & Day, 2008; Vitzthum et al., 2013). In order to remain healthy and physically active and enjoy a healthier lifestyle it is necessary to obtain good nutritional knowledge and implement it.

Unfortunately, in Pakistan there are no adequate studies about student nutrition, and sufficient information is not available. This research was conducted in order to check whether individuals have basic information about nutrition that are exposed to the subject of nutrition in comparison with people who are not exposed as basic nutritional knowledge is important for every individual. The main focus behind this study was to assess and to compare nutritional knowledge of students of R.L.A.K College of Home Economics, Karachi and students of

2. METHODS

The population for this study was students of R.L.A.K College of Home Economics and students of Media Science of Bahria University. A total of 200 students were selected through convenient sampling aged 18-22 years. The subjects were recruited through convenient sampling. 100 samples were taken from RLAK college of Home Economics and 100 from Media Science Department of Bahria University.

A simple questionnaire method was used to collect data in order to assess and to compare nutritional knowledge of both the departments. The questionnaire consisted of 20 questions. Each question had one right answer therefore the total marks available were 20. The questions were divided into three categories i.e., Macronutrients, Vitamins and Minerals. On the basis of correct answers ranges were made which scored each individual according to the following categories (1-7: fair, 8-14: good, 15-20: excellent).

3. RESULTS

The dependent variable in the study was nutritional knowledge whereas; the field of study was an independent variable. Among Home Economics students level of nutrition knowledge of majority of students was excellent (70.00%) as compared to students of Media Science students of Bahria University (9.00%).

Table 1. Overall nutritional knowledge.

Level of knowledge	Group	
	HE	MS
Fair	1.00%	16.00%
Good	29.00%	75.00%
Excellent	70.00%	9.00%

*HE= Home Economics, MS =Media science

It has been observed in this research that Macronutrient knowledge of both the groups was good. One gram of Protein and Carbohydrates provides the same amount of calories was the main question which was marked as wrong by majority of the respondents from both the groups. This shows that they were not familiar with the caloric content of macronutrients.

Table 2. Macronutrient related knowledge.

Questions	Correct answer	Percentage of correct answers	
		HE	MS
Which nutrient is considered as body's primary fuel source?	CHO	50%	38%
Is Protein the basic building block of body?	Yes	88%	86%
Which nutrient is considered as the stored form of energy?	Fat	64%	54%
Bread, Cereal, Rice and Pasta are an excellent source of?	Starch	83	47
Water regulates the body temperature?	Yes	92	91
One gram of protein and carbohydrate provides the same amount of calories.	Yes	44	22
The sugar in milk is called.	Lactose	87	44
Which of the following cannot be digested by the body?	Fiber	55	52

Overall in the area of macro nutrients, average percentage of correct answers was significantly higher ($P < 0.05$) for HE students (70.3%) as compared to MS students (54%) For Vitamin related questions also, a vast majority of the Home Economics students (88-93%) marked all the answers correctly except one that assessed identification of Dark green vegetables as the richest source of Folic acid.

From the results of this study, we conclude that the vitamins related knowledge of Home Economics students (83%) was excellent as compared to students of Media Science (59%).

In this research we found out that the knowledge about minerals among students of Media Science was lower as compared to students of Home Economics College. Table 4 depicts that the majority respondents of both the

universities knew about the major function of Calcium which is developing strong bones and teeth
 In this research I found out that the knowledge on minerals of RLAK students (84%) was excellent as compared to students studying at the Media Science (45%) department of Bahria University.
 Comparison of nutritional knowledge among students of R.L.A.K College of Home Economics and students of Bahria University.

Results of this study showed P value $0.00 < 0.05$ which indicates that there is significant difference in nutritional knowledge among students of R.L.A.K College of Home Economics and students of Media science of Bahria University

4. DISCUSSION

The study assessed the nutritional knowledge of R.L.A.K College of Home Economics and Media Science department of Bahria University. The overall assessment showed excellent knowledge about nutrition in R.L.A.K (70%) where the knowledge of Media Science students was fairly good (54%). This showed a significant difference among the students of both the fields that is nutritional knowledge of students of R.L.A.K College was greater as compared to the students of Media Science of Bahria University.

Table 3. Percentage of respondents who gave correct answer for Vitamin related knowledge

Questions	Correct answers	Group	
		HE	MS
Richest source of vitamin C is?	Orange	96	82
Vitamin D deficiency in children causes?	Rickets	88	46
Vitamin D helps in the absorption of?	Calcium	93	57
Vitamin K helps in blood clotting?	Yes	88	47
Dark green vegetables are the richest source of?	Folic Acid	29	51
Richest source of vitamin D is?	Sunlight	92	64

Note: *HE= Home Economics, MS =Media science

Table 4. Percentage of respondents who gave correct answer for Mineral related knowledge.

Questions	Correct answers	Group	
		HE	MS
Iodine deficiency is called Goiter?	Yes	91	34
Anemia is caused by the deficiency of?	Iron	92	58
An excellent source of iron is?	Liver	82	23
Table salt is a rich source of?	Iodine	60	38
Calcium helps in developing?	bones and teeth	97	72

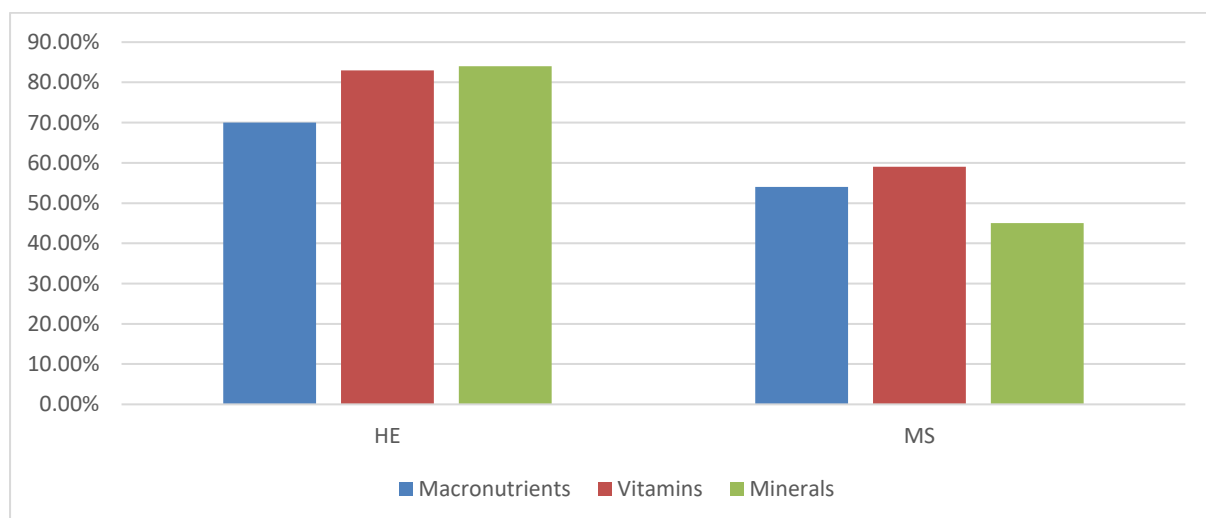


Figure 1. Comparison of Nutritional knowledge between both the institutes (% of correct answers)

The findings of this study were in accordance with the previous researches. Level of awareness has found to be associated with exposure to nutrition knowledge in other studies also (Chepulis & Mearns, 2015; Hoddinott, Ahmed, Ahmed, & Roy, 2017; Jennings, Nepocatyh, Ketcham, & Duffy, 2016; Philippou et al., 2017; Vitzthum

et al., 2013). Basic nutritional knowledge questionnaire was developed in order to assess and to compare nutritional knowledge between both the groups. In this research we have found a significant difference in knowledge $p=.000$ i.e. < 0.005 between the students of RLAK college of home economics and media science department of Bahria university due to lack of nutrition related course in their curriculum.

The findings of these studies show that educational interference leads to an increase in nutrition knowledge and the enhancement of people's attitudes. In this research, higher attitude and knowledge of Home Economics students also verify this.

The importance of nutrition education is increasingly recognized at present, and there is a consensus that people's food choices, dietary practices and physical activity behaviors influence health.

The findings of these studies show that educational intervention leads to an increase in nutrition knowledge and the enhancement of people's attitudes. In this research, higher attitude and knowledge of Home Economics students also verify this.

FUNDING

This study received no specific financial support.

CONFLICT OF INTEREST

The authors declare that they have no competing interests.

ARTICLE HISTORY

Received: 19 March 2015/ Revised: 22 September 2015 / Accepted: 2 November 2015 / Published: 31 December 2015

Copyright: © 2015 by the authors. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

REFERENCES

- Castillo, M., Feinstein, R., Tsang, J., & Fisher, M. (2016). Basic nutrition knowledge of recent medical graduates entering a pediatric residency program. *International Journal of Adolescent Medicine and Health*, 28(4), 357-361. Available at: <https://doi.org/10.1515/ijamh-2015-0019>.
- Chen, Y.-H., Yeh, C.-Y., Lai, Y.-M., Shyu, M.-L., Huang, K.-C., & Chiou, H.-Y. (2010). Significant effects of implementation of health-promoting schools on schoolteachers' nutrition knowledge and dietary intake in Taiwan. *Public Health Nutrition*, 13(4), 579-588. Available at: <https://doi.org/10.1017/s1368980009991017>.
- Chepulis, L. M., & Mearns, G. J. (2015). Evaluation of the nutritional knowledge of undergraduate nursing students. *Journal of Nursing Education*, 54(9), S103-S106. Available at: <https://doi.org/10.3928/01484834-20150814-19>.
- El-Sabban, F., & Badr, H. E. (2011). Assessment of nutrition knowledge and related aspects among first-year Kuwait University students. *Ecology of Food and Nutrition*, 50(2), 181-195. Available at: <https://doi.org/10.1080/03670244.2011.552376>.
- Hoddinott, J., Ahmed, I., Ahmed, A., & Roy, S. (2017). Behavior change communication activities improve infant and young child nutrition knowledge and practice of neighboring non-participants in a cluster-randomized trial in rural Bangladesh. *PLoS One*, 12(6), e0179866. Available at: <https://doi.org/10.1371/journal.pone.0179866>.
- Hyun, H., Lee, H., Ro, Y., Gray, H. L., & Song, K. (2017). Body image, weight management behavior, nutritional knowledge and dietary habits in high school boys in Korea and China. *Asia Pacific Journal of Clinical Nutrition*, 26(5), 923-930.
- Jennings, L., Nepocatysh, S., Ketcham, C., & Duffy, D. (2016). The effect of a summer camp intervention on the nutrition knowledge and dietary behavior of adolescent girls. *Health Promotion Practice*, 17(4), 521-529. Available at: <https://doi.org/10.1177/1524839915627998>.
- Nazni, P., & Vimala, S. (2010). Nutrition knowledge, attitude and practice of college sportsmen. *Asian Journal of Sports Medicine*, 1(2), 93-100. Available at: <https://doi.org/10.5812/asjasm.34866>.
- Nuss, H., Freeland-Graves, J., Clarke, K., Klohe-Lehman, D., & Milani, T. J. (2007). Greater nutrition knowledge is associated with lower 1-year postpartum weight retention in low-income women. *Journal of the American Dietetic Association*, 107(10), 1801-1806. Available at: <https://doi.org/10.1016/j.jada.2007.07.010>.
- Philippou, E., Middleton, N., Pistos, C., Andreou, E., & Petrou, M. (2017). The impact of nutrition education on nutrition knowledge and adherence to the Mediterranean Diet in adolescent competitive swimmers. *Journal of Science and Medicine in Sport*, 20(4), 328-332. Available at: <https://doi.org/10.1016/j.jsams.2016.08.023>.
- Sharma, S. V., Gernand, A. D., & Day, R. S. (2008). Nutrition knowledge predicts eating behavior of all food groups except fruits and vegetables among adults in the North Pass region: What a tasty life. *Journal of Nutrition Education and Behavior*, 40(6), 361-368. Available at: <https://doi.org/10.1016/j.jneb.2008.01.004>.
- Vitzthum, K., Endres, E., Koch, F., Groneberg, D. A., Quarcoo, D., Wanke, E., & Mache, S. (2013). Eating behavior and nutrition knowledge among musical theatre students. *Medical Problems of Performing Artists*, 28(1), 19-23. Available at: <https://doi.org/10.21091/mppa.2013.1004>.