PEOPLE: International Journal of Social Sciences
ISSN 2454-5899

Teves & Narciso, 2017

Volume 3 Issue 1, pp. 761 - 769

Date of Publication: 29th March, 2017

DOI-https://dx.doi.org/10.20319/pijss.2017.s31.761769

This paper can be cited as: Teves, K., L., & Narciso, J., F. (2017). The Consequences of Students' Eating Behaviors and Food Perception on their Nutritional Status and Academic Achievement. PEOPLE: International Journal of Social Sciences, 3(1), 761-769.

THE CONSEQUENCES OF STUDENTS' EATING BEHAVIORS AND FOOD PERCEPTION ON THEIR NUTRITIONAL STATUS AND ACADEMIC ACHIEVEMENT

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Abstract

Maximization of growth and learning among students requires the support of good nutrition. Students' food perception affects their food selection decision which in turn influences their nutritional status and academic performance. Generally, students choose food to eat based on taste, cost, nutritional benefits, convenience and pleasure, among others. As they grow up and leave their family to attend higher studies, it is a critical period for them because they make their own food decisions that can impact eating behaviors. In this study, the respondents were 348 Secondary from the six schools of DepEd Mabinay District II, Mabinay, Negros Oriental, Philippines. Factors such as students'socio-demographic profile, extent of eating behavior, perceptions on healthy food, academic performance and nutritional status were looked into and inter-relationship of these variables was investigated. Results showed that majority of the

respondents aged 13-16 years old, female, have daily allowance of PhP20 and whose parents have meagre monthly income of PhP3000 and below. On extent of eating behaviour, students ate/drink bread, pastries, junk foods, candies and softdrinks. They general choose food to eat based on taste. In terms of academic achievement, majority were average students and when it comes to nutritional status, majority were normal, very few were underweight and obese. Parents' income negatively influenced students'eating behaviour resulting to overeating and undereating. No significant relationship was found between students' profile and their perception of healthy foods and also with their eating behaviour and food perception. A strong significant positive correlation was found between students' eating behaviour and nutritional status but there was no significant relationship between the respondents' nutritional status and academic performance. Though academic performance was not influenced by students' eating behaviour and food perception, the Department of Education in the country should closely check students' frequency of eating junk food as it pose ill effects on their health.

Keyword

Eating Behavior, Food Perception and Academic Achievement

1. Introduction

Eating behavioris a health behavior that can be modified. Food selection as a health behavior is affected by many factors such as food taste, food price, health considerations, and weight status of eater among others. Choices, like many other health behaviors, can be affected by a number of factors. Many studies have reported students' poor eating habits and frequent junk foods eating and avoidance of vegetables (Driskell, Kim, & Goebel, 2005). A study reveals that the change to high school life often deteriorates dietary habits among students (Grace, 1997)which could contribute to weight problems until college and later years (Racette, *et al.*, 2005). Eating behaviors of students may be influenced by family and friends, television and media, or from the latest trendy diets. Investigating how students perceive food, select food to eat and their eating behavior may provide information as to how these factors impact their academic achievement, thus this study.

2. Statement of the Problem

The purpose of this study is to determine the consequences of eating behaviors and food perception on students' academic performance. Specifically, this study seeks to answer the following questions:

1. What is the socio-demographic profile of student-respondents in terms of age, gender, daily allowance and parents' monthly income?
2. What is the extent of eating behavior of students?
3. What is the extent of students' perception on healthy food?
4. What is the academic achievement of students in terms of average grade?
5. What is the nutritional status of students?
6. Is there a significant relationship between socio-demographic profile and eating behaviour of students?
7. Is there a significant relationship between socio-demographic profile and students' perception on healthy food?
8. Is there a significant relationship between eating behaviour and students' perception on healthy food?
9. Is there a significant relationship between eating behaviour and nutritional status of students?
10. Is there a significant relationship between students' nutritional status and academic performance?

3. Methodology

The study followed the descriptive research design using a self-structured questionnaire subjected to validity and reliability tests prior to administering to student-respondents. The respondents of the study were the 348 students coming from the six secondary schools of Mabinay District II, Mabinay, Negros Oriental, Philippines. The Slovin's formula was used to determine the sample size of the six secondary schools (Table 1).

Table 1: *Distribution of Respondent's Sample Size*

Secondary Schools	**Total Enrolment**	**Sample Size**
Paniabonan NHS	785	157
Pantao NHS	344	69

Canggohob PCHS	176	35
Campanun-an PCHS	102	20
Cansal-ing PCHS	157	31
Mayaposi PCHS	182	36
Total	1746	348

4. Data Analysis

Means, frequency count and percentage distribution were used to analyze the socio-demographic profile of the respondents as to age, gender, allowance and parents' monthly income. On the extent of students' eating behavior of students and students' perception on healthy food, the weighted mean was utilized.To determine the academic achievement of students, secondary data was used from the Philippine Department of Education Division office. To determine if relationship exist between student's responses to their academic achievement and nutritional status, thePearson r was used. Data were compiled and statistically analysed using the statistical analysis program SPSS (Statistical Package for Social Science). For the reliability test and internal consistency of each factor, Cronbach's Alpha was used.

5. Results and Discussion

5.1 Socio –Demographic Profile of the Respondents

Based on the results, most of the student respondents belong to the age 13 to 16 years 72.1%, few high school students aged 17 to 20 years 27.9% (Table 2). As reflected in the table, secondary schools of Mabinay district II are dominated by female students 64.1% while male is only 35.9% of the total population. In terms of daily school allowance, as shown in the table, student respondents have a daily school allowance that ranges from 20 pesos and below, 34.8%, 10 pesos below and 34.5% 11 to 20 pesos. Only few student respondents have 21 pesos and above daily school allowance. On the parents' monthly income, about 44.5% of parents have 3000 and below monthly income and 20.7% have 3000 to 5000 monthly income, eventually very few were belonged to 7000 to 9000 which is only 4.3% in the total population.

Table 2: *Socio-Demographic Profile of Student Respondents(N=348)*

	Frequency	**Percentage**
AGE		
13-16	251	72.1
17-20	97	27.9
GENDER		
Male	125	35.9
Female	223	64.1
DAILY SCHOOL ALLOWANCE		
10 pesos below	121	34.8
11-20 pesos	120	34.5
21-30 pesos	38	10.9
31-40 pesos	20	5.7
41-50 pesos	29	8.3
51 pesos up	20	5.7
PARENTS'MONTHLY INCOME		
3,000 below	155	44.5
3,000 to 5,000	72	20.7
5,001 to 7,000	40	11.5
7,001 to 9,000	15	4.3
9,001 to 11,000	23	6.6
11,000 above	43	12.4

5.2 Eating Behavior and Food Preference of students

Survey results based on ranking, student respondents prefer to eat most often junk foods, followed by bread and pastries, softdrinks, candies and the least preferred are fruits and these behavior was developed as influenced by a number of factors such as their parents encouraging them to always eat nutritious foods, eat fresh fruits and/or vegetables after every meal and parents buying nutritious foods for them. But despite all these positive behavior towards healthy food taught to students by their parents, still students cannot avoid eating unhealthy foods. This findings may be due to students' food preference based on some factors such as the price of food , the ingredients in it, the taste, and others.Studies show that some factors influence students' the eating behaviors. Based on the results, among the eight factors, student respondents considered ingredients, taste and nutrition value to be very important considerations in their choice of food. The rest of the factors such asfood temperature, appearance of the food, short serving time were considered by the students as somewhat important in their food preference before they actually eat the food (Table 3).

Table 3: *Factors in Choosing Foods (N-348)*

Factors in Choosing Foods	Responses					WM	Descriptive Equivalent
	NI	SNI	N	SI	VI		
Ingredients	5	12	38	101	192	4.33	VI
Temperature	10	10	75	137	116	3.97	SI
Prices	9	12	52	108	167	4.18	SI
Taste	7	4	34	71	232	4.48	VI
Appearance	8	24	35	115	166	4.16	SI
Nutrition Value	9	9	21	63	246	4.51	VI
Short Serving Time	14	36	94	102	102	3.69	SI

Legend – NI- Not at All Important SI- Somewhat Important N- Neutral
SNI-Somewhat Not Important VI- Very Important

Table 4 shows the factors considered by students in the choice of healthy foods. Looking at the table, nutrition value (WM=4.53), ingredients (WM=4.34), taste (WM=4.39) and appearance (WM=4.20) were given much importance by the student respondents in their preference of healthy foods. They gave importance to these factors because aside from their parents instilled in them while they were still very young, the value of health and wellness from eating good foods, they love to eat food if they choose it by themselves and not being forced by others, thus suggestions by family and friends (WM=3.99) as a factor were considered by students as only somewhat important. The rest of the factors did not matter much at all by the respondents such as price of the food and the temperature of the food.

Table 4: *Making Healthy Food Choice (N-348)*

Factors in Choosing Healthy Foods	Responses					WM	Descriptive Equivalent
	NI	SI	N	I	VI		
Reasonable price	21	12	89	111	115	3.82	SI
Nutrition Value	5	8	22	74	165	4.53	VI
Following suggestions of friends or family.	10	16	84	95	143	3.99	SI
Ingredients	8	8	34	103	195	4.34	VI
Reasonable Temperature	10	63	107	126	110	3.85	SI
Taste	11	7	25	94	211	4.39	VI
Appearance	1	7	49	117	165	4.20	VI

Legend – NI- Not at All Important SI- Somewhat Important N- Neutral
SNI-Somewhat Not Important VI- Very Important

5.3 Students 'Academic Achievement and Nutritional Status

Based on Table 5, most (49.4%) of the student respondents were average having average grade ranging from 80-84, while few (34.8%) of them haveaveragegrade of 85-89. Very few students (4.6%) were considered high achievers with grade of 90-94 and likewise very few of them were low achievers with grade of 75-79. This only implies that the students of the responding schools were considered average in general. Majority (84.55) of the students were in normal nutritional status, few (12.6%) were underweight and only very few (2.9%) were overweight (Table 6).

Table 5: *Academic Achievement of Student Respondents(N-348)*

Average Grade	Frequency	Percentage
75-79	39	11.2
80-84	172	49.4
85-89	121	34.8
90-94	16	4.6

Table 6: *Nutritional Status of Student Respondents(N=348)*

Status	Frequency	Percentage
Underweight	44	12.6
Normal	294	84.5
Overweight	10	2.9

5.4 Relationship between Students' Eating Behaviour and Food Preference to Selected Factors

5.4.1 Socio-demographic profile and eating behaviour of students

Based on the table, among the three socio-demographic factors, only the parents' monthly income is significant but with negative correlation (-.140**), this means that, if the parents income will increase, there will be a negative effect on the student respondents' eating behaviour in a sense that they will be tempted to buy those foods which are unhealthy, and at the same time they will be prone to under eating/overeating due to meagre allowance provided to them by their parents or excessive amount of allowance given to them. Two of the socio-demographic profiles the gender and daily school allowance have negative correlation but are not significant and the age of students have a positive correlation with their eating behaviour but is also not significant.

Table 7: Relationship between Socio –Demographic Profile and Eating Behavior of Students

Areas	Significance	R
Age	.451	.041
Gender	.094	-.090

Daily School Allowance	.057	-.102
Parents' Income	.009	-.140**

**. Correlation is significant at the 0.01 level (2 tailed).

5.4.2 Socio-demographic profile and Perception on Healthy Foods of students

Looking at Table 8, it can be seen that all socio-demographic profiles of the student respondents except age have positive correlation with their perception on healthy foods, but are not significant. Only the age has negative correlation (-.043) but still is not significant.

Table 8: *Relationship between Socio–Demographic Profile and Perception on Healthy Foods*

Areas	Significance	R
Age	.423	-.043
Gender	.243	.063
Daily School Allowance	.527	.034
Parents' Income	.323	.053

5.4.3 Interrelationship of Students 'eating behaviour, Perception on Healthy Foods, Nutritional Status and Academic Achievement

Table 9 shows there is a positive correlation between respondents' eating behaviour and their perception on healthy foods (.045) but is not significant. Table 10 shows that there is a significant positive correlation between student respondents eating behaviour and their nutritional status (.674**). This means that, eating behaviour greatly affects the nutritional status of the respondents, the quality and quantity of the foods they eat will determine their nutritional status. Students are highly exposed to eating and living habits that are often unhealthy and that can contribute to undesired weight gain (Cheli Vettori, Josiane, et.al, 2013). When students are in school, their eating behaviour changes because of their peers, pressures in their studies, and they tend to skip meals, or if not, overeat that's why there nutritional status is greatly affected. Table 11 reveals that there is a positive correlation (.001) between nutritional status and academic performance but is not significant.

Table 9: *Relationship between respondents' Eating Behaviour and Perception on Healthy Foods*

Areas	Significance	R
Eating Behavior	.401	.045

Table10: *Relationship between respondents' Eating Behaviour and their Nutritional Status*

Areas	Significance	R
Nutritional Status	.000	.674**

**. Correlation is significant at the 0.01 level (2 tailed).

Table 11: Relationship between respondents' Nutritional Status and Academic Achievement

Areas	Significance	R
Academic Achievement	.979	.001

6. Conclusions and Recommendations

Students 'eating behavior in this study revolves around typical teenage unhealthy choice of foods like junk foods, bread, pastries, candies and soft drinks which are mostly influenced by their peers, even if they knew well the importance of healthy eating and value of good foods. In general, the respondents prefer foods based on ingredients, taste and nutritional value.They are academically average and in normal nutritional status and among other factors, only their parents' income can significantly affect their eating behaviour. Since their eating behaviour can significantly affect their nutritional status, but not their academic performance, it is still recommended that parents, school administrators and teachers should constantly remind them the value of healthy eating.

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