MOSUL JOURNAL OF NURSING
Online ISSN: 2663-0311 - Print ISSN: 2311-8784
Website: https://mjn.mosuljournals.com

RESEARCH ARTICLE

The Relationship Between Food Habits, Eating Behavior, and Nutritional Knowledge of High School Female Students and Their Demographic Attributes

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ABSTRACT

Background: *The importance of promoting a balanced diet and physical activity in children and adolescents cannot be overstated because the habits that develop during these years tend to persist throughout adulthood.*

Objectives: *The aim of this study is to analyze the relationship between food habits, eating behavior, and nutritional knowledge of high school female students and their demographic attributes*

Methodology: *The descriptive correlational design, sometimes referred to as the simple correlational design, is a subtype of correlational study whose main goal is to analyze relationships between and among variables.*

Results: *The study results reveal that there is no statistically significant difference in their Self-Efficacy, barriers to change, nutritional knowledge, knowledge about food safety, and knowledge about food safety and behavior among the groups of grade.*

Conclusion: *Most do not eat breakfast. Most have poor nutritional knowledge. Most drink soft drinks (cola, orange, soda, iced tea, tonic water, etc.) between meals. Most never practice physical activity.*

Recommendations: *There is a pressing for the community health nurses to collaborate with the directorates of education and schools' administration to reactivate the physical activity lesson in the schools.*

Key words: *Food Habits, Eating Behavior, Nutritional Knowledge, High School Female Students.*

Received: 13 August 2022, Accepted: 4 October 2022, Available online: 28 January 2023

INTRODUCTION

Unhealthy food and physical inactivity are the two key risk factors behind the global rise in cardiovascular illnesses, diabetes, obesity, and other noncommunicable diseases. Inadequate and unbalanced diet also has negative effects on growth in height and weight, delaying puberty, lowering learning capacity, making it difficult to concentrate, and lowering academic achievement (Pender et al., 2015; Stephanie Nicely et al., 2019).

The importance of promoting a balanced diet and physical activity in children and adolescents cannot be overstated because the habits that develop during these years tend to persist throughout adulthood (Pender et al., 2015; Yang et al., 2019). Many of the significant health issues that affect adults have ties to adolescent behavior (Liao et al., 2019).

Given that childhood and adolescence are crucial times for growth and development, it is necessary to adopt healthy eating habits during these years (Ness et al., 2005). According to studies, eating behaviors formed and reinforced during these stages are more likely to persist into adulthood (Mikkilä et al., 2004). However, it is apparent that adolescence is also a time when effective treatments for promoting healthy eating habits tend to evolve. Thus, increasing the consumption of nutritious meals during infancy and adolescence is a significant public health concern (Rasmussen et al., 2006).

A lower risk of mortality has repeatedly been linked to regular physical activity (Mok et al., 2019; Stewart et al., 2017).

This study is the first of its kind in Iraq, Arab nations, and the Middle East to look at eating habits, physical activity, healthy and unhealthy diets, self-efficacy, barriers to change, knowledge of nutrition, knowledge of food safety, knowledge of food safety, and behavior in hygienic practices.

Adolescence is a time to develop and solidify good dietary and lifestyle habits. To understand the relationships between influencing variables and eating behaviors, various models and ideas have been put forth. (Story et al., 2002). However, little is understood about the psychological factors affecting adolescents' eating behaviors. Environmental determinants (food availability at home/school) and personal (attitudes, self-efficacy, perceived hurdles and benefits of a healthy diet) as well as social (reported parent and peer conduct and support) have all been linked to a healthy diet (Story et al., 2002; Vereecken et al., 2009). Additionally, socioeconomic status (SES) must be considered because it appears to have an effect on the caliber of European adolescents' diets (Michels et al., 2018).

Low intake of fruits and vegetables and frequent eating of unhealthy foods, such as ultra-processed foods, are characteristics of adolescent food consumption (UPFs). Teenagers' consumption of UPFs is influenced by a number of behaviors, including eating breakfast, watching television while eating, and spending a lot of time in front of screens (Delfino et al., 2020).

METHOD

Study Design

The descriptive correlational design, sometimes referred to as the simple correlational design, is a subtype of correlational study whose main goal is to analyze relationships between and among variables.

The Setting of the Study

The study was conducted in Baghdad City's public high schools female students.

Sample and Sampling

A simple random sample of female high school students who agreed to take part in the study was included in it. The study subjects were recruited from eight public high schools. The student researcher obtained the list of students enrolled in the selected schools and cut each student’s name in identical piece of paper with folding them in the same way. The student researcher put the students’ names in each school in an independent container in order to draw proportionate number of students from each school. The student research stirred well these papers and draw a piece of paper alternatively till obtaining the required proportion.

The sample size calculation using G*Power software considered the parameters of an effect size 0.25 (medium effect size), A power of 0.95, five groups, and an alpha error probability of 0.05. Thus, the recommended sample size would be 305. If there were a 20% attrition rate, 61 more participants would be needed. So, 366 would be the suggested sample size. The total number of samples is 384.

Inclusion Criteria

The study subjects were recruited to involved in this study based on the criteria of high public

schools and those who do not experience any physical disability.

Exclusion Criteria

The exclusion criteria include students of private schools and those who are experiencing any physical disability.

The Study Instrument

The sociodemographic characteristics consists the first part of the study instrument consists of subjects' of age, gender, grade, students' living arrangement, the family's socioeconomic status was determined by the 2016 revisions of the Kuppuswamy and B. G. Prasad socioeconomic scales (Shaikh & Pathak, 2017) which encompasses parents' level of education which consists of 10 level (10 points for each of the parents), household's occupation which consists of seven levels; the seventh level takes 10 points, and family's monthly income which includes six categories; the highest or sixth category takes 10 points.

Data collection

A self-reported instrument was used for data collection for the period from February 24th, 2021 to March 31th, 2022.

Statistical Analyses

Data were analyzed using the statistical package for social science (SPSS) for Windows version 28. The students researcher utilized statistical measures included linear regression, one-way analysis of variance (ANOVA), independent-sample t-test, frequency, percent, mean, and standard deviation,

Ethical Considerations

The student researcher presented the study's findings to the administration of the schools after gaining consent from the College of Nursing, University of Baghdad, for the investigation. To ensure that the study subjects understood that participation was voluntary and that they might withdraw at any moment, the student researcher explained the broad goal of the study and how they could respond to the study instrument to them. The student researcher gave participants his word that he would securely keep and uphold the confidentiality of their information both during and after study participation. The student researcher gave study participants additional assurances that he would protect their anonymity in the presentation, reporting, and/or any potential study publications.

RESULTS

Table 1
Difference in study concepts among grade groups

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Self-Efficacy	Between Groups	11.280	2	5.640	.318	.727
	Within Groups	6748.696	381	17.713		
	Total	6759.977	383			
Barriers to Change	Between Groups	12.490	2	6.245	1.468	.232
	Within Groups	1621.111	381	4.255		
	Total	1633.602	383			
Nutritional Knowledge	Between Groups	1.049	2	.525	.184	.832
	Within Groups	1088.284	381	2.856		
	Total	1089.333	383			
Knowledge about Food Safety	Between Groups	.742	2	.371	.229	.795
	Within Groups	616.998	381	1.619		
	Total	617.740	383			
Knowledge about Food Safety	Between Groups	.742	2	.371	.229	.795
	Within Groups	616.998	381	1.619		
	Total	617.740	383			

df = Degree of freedom; F = F-statistics; Sig. = Significance

The study results reveal that there is no statistically significant difference in their Self-Efficacy, barriers to change, nutritional knowledge, knowledge about food safety, and knowledge about food safety and behavior among the groups of grade.

Table 2
Difference in study concepts among track groups

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Self-Efficacy	Between Groups	18.585	2	9.293	.525	.592
	Within Groups	6741.391	381	17.694		
	Total	6759.977	383			
Barriers to Change	Between Groups	5.134	2	2.567	.601	.549
	Within Groups	1628.468	381	4.274		
	Total	1633.602	383			
Nutritional Knowledge	Between Groups	.150	2	.075	.026	.974
	Within Groups	1089.184	381	2.859		
	Total	1089.333	383			
Knowledge about Food Safety	Between Groups	2.711	2	1.356	.840	.433
	Within Groups	615.028	381	1.614		
	Total	617.740	383			
Knowledge about Food Safety	Between Groups	2.711	2	1.356	.840	.433
	Within Groups	615.028	381	1.614		
	Total	617.740	383			

df = Degree of freedom; F = F-statistics; Sig. = Significance

DISCUSSION

The study results reveal that there is no statistically significant difference in their Self-Efficacy, barriers to change, nutritional knowledge, knowledge about food safety, and knowledge about food safety and behavior among the groups of tracks.

The study's findings show that there is no statistically significant relationship between the participants' age, birth order, body mass index, family's socioeconomic status, level of self-efficacy, resistance to change, nutritional knowledge, food safety knowledge, and knowledge of food safety and behaviour.

The study's findings show that there are no statistically significant differences between the grade groups in terms of self-efficacy, barriers to change, nutritional awareness, food safety information, and understanding of food safety and behaviour.

According to the study's findings, there are no statistically significant differences between the groups of track participants in their self-efficacy, barriers to change, nutritional awareness, information about food safety, and knowledge about food safety and behaviour.

According to the study's findings, there are no statistically significant differences between the groups of track participants in their self-efficacy, barriers to change, nutritional awareness, information about food safety, and knowledge about food safety and behaviour.

According to the study's findings, there are no statistically significant differences between the body mass index groups in terms of self-efficacy, barriers to change, nutritional knowledge, knowledge about food safety, and knowledge about food safety and behaviour.

CONCLUSIONS

Most do not eat breakfast. Most have poor nutritional knowledge. Most drink soft drinks (cola, orange, soda, iced tea, tonic water, etc.) between meals. Most never practice physical activity. Most have problematic recreational screen time. More than a third described their lifestyle as very sedentary. The clear majority have poor nutritional knowledge. Most have poor knowledge about food safety. The clear majority have fair knowledge about food safety and behaviour.

RECOMMENDATIONS

There is a pressing for the community health nurses to collaborate with the directorates of education and schools' administration to reactivate the physical activity lesson in the schools.

There is a need for the community health nurses to collaborate with the directorates of education, schools' administration, mass media, and students' families to raise the public's awareness of the harmful effects of excessive screen time.

ETHICAL CONSIDERATIONS COMPLIANCE WITH ETHICAL GUIDELINES

This study was completed following obtaining consent from the University of Baghdad.

FUNDING
This research did not receive any grant from funding agencies in the public, commercial, or non-profit sectors.

AUTHOR'S CONTRIBUTIONS

Study concept, Writing, Reviewing the final edition by all authors.

DISCLOSURE STATEMENT:

The authors report no conflict of interest.

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