

Determine of Midwifery Students Dietary and Physical Activity Attitudes and Behaviors: Analytic Study



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Abstract

Background: The less physical activity and an unhealthy diet are the factors contributing to the poor health among university students. This study aims to address this, by investigating the factors that influence eating behaviour and attitudes.

Methods: This is an analytic study. The study was carried out on May 2018 in Kutahya, Turkey. The research was completed with the participation of 333 students. The Diet-Exercise Behaviour Scale (DEBS) and The Diet-Exercise Attitude Scale (DEAS) were used to determine the diet behaviours and attitudes of the students.

Results: This is an analytic study. The study was carried out on May 2018 in Kutahya, Turkey. The research was completed with the participation of 333 students. The Diet-Exercise Behaviour Scale (DEBS) and The Diet-Exercise Attitude Scale (DEAS) were used to determine the diet behaviours and attitudes of the students.

Conclusion: Habitual physical activity, regular and balanced diet established during the university years may provide the greatest likelihood of impact on morbidity and longevity. Efforts should be focused on facilitating an active lifestyle for a person in an effort to put a stop to the increasing prevalence of obesity.

Keywords: Dietary; Physical Activity; Attitudes; Behaviors

Abbreviations: DEAS: Diet-Exercise Attitude Scale; DEBS: Diet-Exercise Behaviour Scale

Introduction

A healthy diet is crucial for the growth and the development, that contributed to prevent future illness and improve the quality and the length of the life [1]. The World Health Organization (WHO) addresses two of the major risk factors which are responsible for the heavy and growing burden. Up to 60% of the global deaths and almost half (47%) of the global burden disease have been related to an unhealthy diet and physical inactivity. Poor eating and physical inactivity are associated with the higher health risks that are high blood pressure, elevated blood cholesterol, low intake of fruits and vegetables and high body mass index [2].

The initiating to university has been identified as an anxiety period of transition for many young adults. For instance; the first time living away from the home causes to the high rates of unhealthy behaviours which are common in this particular population. The less physical activity and an unhealthy diet are the factors contributing to the poor health among university students. Therefore, university students are considered as a risk group [3,4]. The recent studies about eating disorders were focused mainly on adolescents [5]. The other important

strategy is the reducing excessive sedentary behaviour [6,7]. The sedentary lifestyle automatically leads to the obesity. The regular physical activity fixed during the early life years may provide the greatest likelihood of impact on the mortality and the longevity [8]. Midwives are in a unique position, given the emphasis of the philosophy of midwifery care on incorporating a holistic approach with the aim of promoting health and preventing illness [9]. Therefore, this specific population is important because of the support for the health promotion. This study was aimed to determine the eating and the physical activity behaviours and the attitudes in midwifery students.

Materials and Methods

Study design and ethical considerations

This is an analytic study. The study was carried out on May 2018 in Kutahya, Turkey. The target population of this study was midwifery student. 444 students of the Department of Midwifery of 2017-2018 academic year formed the research sample. All students were planned to include the sampling. The research was completed with the participation (participation rate 75%) of 333

students. The study was approved by The Institution and Ethics Committee and carried out in accordance with the Declaration of Helsinki. The participants signed an informed consent.

Participants

Inclusion criteria: Those who voluntarily agree to participate in the research after being informed by the researchers. Fully fill in the questions of the Diet-Exercise Attitude Scale and Diet-Exercise Behaviour Scale. The participants who can completely fill the questions of the scales and who can understand, read and write in Turkish are included in the research.

Measures: Data collection: the basic information questionnaire form, diet-exercise attitude scale and diet-exercise behaviour scale were used. The basic information questionnaire included information about age, height, weight, residence, family type, family history of obesity and dietary history.

The Diet-Exercise Attitude Scale (DEAS) was used to determine the attitudes of the students towards diet. The DEAS which was adapted from the work of Yurt (2015), consisted of 13 items with Likert responses (Each item uses five points Likert type ranging from “always” to “never”. A score of five points was given for “always”, four points for “usually”, three points for “sometimes”, two points for “rarely,” and one for “never”), and were summed to create a score ranging from 13 to 65. All items in the scale contain positive expression. The higher is the score, the better is the attitude at diet and exercise behaviours [10].

The Diet-Exercise Behaviour Scale (DEBS) was used to determine the nutritional behaviours of the students. The DEBS comprise 45 items with Likert responses, and is summed to create a score ranging from 45 to 225. Items 7, 8, 9, 10, 11, 12, 14, 15, 17, 18, 20, 22, 30, 31, 32, 34, 35, 36, 37, 38, 39, 42, 43 are encoded in the opposite direction. The scale interpretation is based on the scores obtained from the subscales. DEBS include four subscales: 1-psychological eating, 2-healthy eating-exercise behaviour, 3-unhealthy eating-exercise behaviour, 4-meal scheme. Psychological eating consists of 11 items. The total possible score ranges from 11 to 55 (higher scores indicate that psychological eating behaviour is high.). Healthy eating-exercise behaviour

consists of 14 items. The total possible score ranges from 14 to 70 (higher scores indicate that healthy eating-exercise behaviour is high). Unhealthy eating-exercise behaviour consists of 14 items. The total possible score ranges from 14 to 70 (higher scores indicate that unhealthy eating-exercise behaviour is high). Meal scheme consists of 6 items. The total possible score ranges from 6 to 30 (the higher the score, the better is the meal scheme).

Statistical Analysis

The statistical analyses were performed using IBM SPSS (Statistical Package for Social Sciences) Statistics 22 software. Descriptive statistics (mean, standard deviation, number, percentage) were used to summarize demographic data. Kolmogorov-Smirnov test was used to test the normality of distribution before the further analysis. As a result, the Mann-Whitney U and Kruskal-Wallis Test were used for comparing variables. Correlations between the DEAS and the DEBS subscales were determined using Spearman correlation coefficient. To explain the relationship between DEBS Subscales mean and DEAS total score, linear logistic regression analysis (OR, CI, R2) was applied to the total sample. Statistical significance was set at the level of p<0.050.

Results

Demographic and selected lifestyle characteristics of the 333 midwifery students who participated in the present study are summarized in Table 1. The average age of all participants was 20.07±1.49 years. The participants were generally within the range of healthy weight (22.73±3.55) and physically active (65.8%). More than half of participants (65.8%) were in the nuclear family structure. For family monthly income it was found that 44.1% (n = 147) was answered equal to revenue expense. 45% of the participants had obesity in their family history. The frequency of fast food consumption included once a week (37.2%). About half of participants (46.2%) do something else (watching television (TV)/video, reading newspaper, novel, working at the desk, sitting in front of the computer, driving a car etc. while eating. A half of participants (58.6%) eating in front of TV, computer or smart phone screens (Table 1).

Table 1: Socio-demographic, diet and physical activity characteristics.

Characteristics	n=333	%	Mean±SD	Range
Age			20.07±1.49	18-26
BMI			22.73±3.55	16-37
Family Type				
Nuclear family	219	65.8		
Extended family	90	27		
Broken family	24	7.2		
Income State				
Less than revenue expense	115	34.5		
Equal to revenue expense	147	44.1		
More than revenue expense	71	21.3		

Family History of Obesity	150	45		
Obesity in family history	183	55		
Absence of obesity in family history				
Weekly Fast Food Consumption				
Never	59	17.7		
Once	124	37.2		
Twice	79	23.7		
Three and more times	71	21.3		
To Do Something Else While Eating*				
Always	104	31.2		
Frequently	154	46.2		
Never	75	22.5		
A Day in Front of a Screen Time**				
No time consuming	28	8.4		
About an hour	195	58.6		
Two and more hours	110	33		
Participation in Sport/ Physical Activity				
No participation				
1 time per week	114	34.2		
2-3 times a week	75	22.5		
4 times a week	107	32.1		
	37	11.1		

*watching TV/video, reading newspaper/book, working at the desk, sitting in front of the computer, driving a car, etc.

**TV, computer or smartphone screens.

Table 2: Spearman Correlation Coefficients of DEBS Subscales Score with DEAS Total Score

Subscales and Total	Diet-Exercise Attitude Scale					
	Range (Min.-Max.)	Mean ± SD	Statistically Significant			
			W*	p*	r**	p**
DEAS Total	(13-65)	49.11±13.47				
DEBS						
Psychological eating	(11-55)	34.62±13.18	259.655	0	-0.83	0
Healthy Eating-Exercise Behavior	(14-70)	48.39±16.35	161.281	0	0.579	0
Unhealthy Eating-Exercise Behavior	(17-70)	43.20±15.95	116.236	0	-0.17	0.002
Meal Scheme	(6-30)	22.01±6.09	115.397	0	0.445	0

*Kruskal-Wallis Test, ** Spearman correlation coefficient

The mean of the DEAS total scores was 49.11±13.47. The mean of the DEBS's subscales scores were shown on (Table 2). The psychological eating subscale mean score was 34.62±13.18, a healthy diet-exercise behaviour subscale mean score was 48.39±16.35, unhealthy diet-exercise behaviour mean score was 43.20±15.95 and meal scheme mean score was 22.01±6.09. The

DEBS's subscales mean scores were higher than its subscales average score. There was a statistically significant difference (p<0.000) between the DEBS subscales (except healthy diet-exercise behaviour and meal scheme) mean score and DEAS total score. The psychological eating (power correlate) and unhealthy diet-exercise behaviour (weak correlate) mean score negatively

correlate with DEAS total score. A healthy diet-exercise behaviour and meal scheme mean score positively power correlate with DEAS total score (Table 2).

In order to examine the relationship between DEBS Subscales mean and DEAS total score, the logistic regression analysis was conducted on the total sample. In the logistic regression model, DEAS total score was used as the dependent variables. The independent variables entered into the model were DEBS subscales. In the regression, psychological eating, a healthy diet-

exercise behaviour, unhealthy diet exercise behaviour and meal scheme were associated with DEAS total score. As for each unit increase in psychological eating and unhealthy diet exercise behaviour subscales, the developing positive attitude at diet and exercise behaviours decreases (OR=-0.776, 95% CI -0.848- -0.704; OR=-0.151, 95% CI -0.241- -0.061). Higher scores in a healthy diet-exercise behaviour and meal scheme subscales indicated more positive attitudes at diet and exercise behaviours (OR= 0.511, 95% CI 0.441-0.581; OR=0.878, 95% CI 0.658-1.097) (Table 3).

Table 3: Logistic Regression Analysis of DEBS Subscales Score with DEAS Total Score.

Subscales	Odds Ratio	Diet-Exercise Attitude Scale 95% Confidence Interval			
		Lower	Upper	R ²	p
DEBS					
Psychological eating	-0.776	-0.848	-0.704	0.576	0
Healthy Eating-Exercise Behavior	0.511	0.441	0.581	0.385	0
Unhealthy Eating-Exercise Behavior	-0.151	-0.241	-0.061	0.032	0.001
Meal Scheme	0.878	0.658	1.097	0.158	0

Table 4: Association of DEBS Subscales Score, DEAS Total Score (n=333) and socio-demographic, diet, physical activity characteristics.

Characteristics	DEAS Total Score			Psychological eating			Healthy Eating-Exercise Behavior			Unhealthy Eating-Exercise Behavior			Meal Scheme		
	Mean ± SD	**W /M*	p	Mean ± SD	**W /M*	p	Mean± SD	**W /M*	p	Mean ± SD	**W /M*	p	Mean ± SD	**W /M*	p
	(Range)			(Range)			(Range)			(Range)			(Range)		
BMI	49.11 ± 13.47 (13-65)	93.285	0	34.62 ± 13.18 (11-55)	76.414	0	48.39 ± 16.35 (14-70)	99.47	0	43.20 ± 15.95 (14-70)	48.003	0	22.01 ± 6.09 (6-30)	83.506	0
Family history of obesity															
Obesity in family history	47.13 ± 13.63 (13-65)	-3.124	0.002*	37.04 ± 12.75 (11-55)	-3.03	0.002*	46.02 ± 16.58 (14-70)	-2.533	0.011*	43.36 ± 15.35 (14-70)	-0.021	0.983*	21.30 ± 5.92 (6-30)	-2.229	0.026*
Absence of obesity in family history	57.93 ± 14.74 (14-65)			32.64 ± 13.22 (11-54)			50.34 ± 15.93 (14-70)			43.07 ± 16.46 (14-70)			22.59 ± 6.18 (8-30)		

To Do Something Else While Eating																	
Always	43.79± 15.71	18.296	0	37.88 ± 13.58	10.287	0.006	44.17 ± 18.43	5.858	0.053	44.61 ± 16.33	1.805	0.406	19.97 ± 6.90	13.517	0.001		
	(13-65)			(11-54)			(14-70)			(14-70)			(6-30)				
Frequently	52.01± 10.49			32.78 ± 12.13			50.55 ± 13.60			43.30 ± 15.21			22.60 ± 5.62				
	(14-65)			(11-54)			(14-70)			(14-69)			(9-30)				
Never	50.54± 13.54			33.89± 13.98			49.83 ± 17.52			41.05 ± 16.85			23.64 ± 5.05				
	(13-65)			(11-55)			(14-70)			(14-70)			(13-30)				
Weekly fast food consumption																	
Never	50.64± 10.31	14.532	0.002	34.78 ± 12.54	7.886	0.048	54.73 ± 14.57	17.521	0.001	48.93 ± 15.17	11.963	0.008	24.37 ± 5.43	20.853	0		
	(17-65)			(12-52)			(14-70)			(14-70)			(10-30)				
Once	52.26± 11.73			32.35 ± 12.38			50.45± 13.78			39.84 ± 15.71			22.72± 5.67				
	(13-65)			(12-54)			(14-70)			(14-69)			(9-30)				
Twice	45.35± 15.28			37.35 ± 13.99			44.10 ± 18.83			43.84 ± 14.85			21.09 ± 6.42				
	(13-65)			(11-54)			(14-70)			(18-70)			(8-30)				
Three and more times	46.53± 15.09			35.40 ± 13.70			44.31 ± 16.85			43.61 ± 16.97			19.85 ± 6.15				
	(13-65)			(11-55)			(14-70)			(14-70)			(6-30)				
A Day in Front of a Screen time																	
No time-consuming	54.21± 10.72	6.569	0.037	30.14 ± 13.65	7	0.03	59.11 ± 10.95	14.21	0.001	42.75 ± 16.95	0.334	0.846	24.82 ± 6.40	7.55	0.023		
	(23-65)			(12-53)			(15-70)			(21-70)			(12-30)				
About an hour	49.00± 12.32			36.13 ± 12.40			47.84 ± 15.59			43.76 ± 15.20			21.72 ± 5.89				
	(15-65)			(11-54)			(14-70)			(14-70)			(9-30)				
Two and more hours	48.02± 15.68			33.09 ± 14.05			46.65 ± 17.86			42.33± 17.05			21.82 ± 6.46				
	(13-65)			(11-54)			(14-70)			(14-70)			(6-30)				

Participation in sport/physical activity																	
No participation	45.09 ± 16.14 (13-64)	9.767	0.021	37.30 ± 13.30 (11-55)	9.71	0.021	45.00 ± 16.25 (14-70)	12.72	0.005	43.66 ± 14.94 (14-67)	2.053	0.562	21.05 ± 6.30 (9-30)	7.174	0.067		
1 time per week	49.47 ± 11.98 (14-65)			34.72 ± 12.12 (12-54)			49.52 ± 15.73 (14-70)			43.99 ± 16.06 (14-70)			21.80 ± 5.80 (6-30)				
2-3 times a week	51.63 ± 11.14 (13-65)			32.43 ± 13.35 (11-52)			49.12 ± 16.28 (14-70)			41.54 ± 16.86 (14-70)			22.53 ± 6.08 (8-30)				
4 times a week	53.54 ± 10.18 (22-65)			32.51 ± 13.32 (11-55)			54.46 ± 15.14 (14-70)			45.00 ± 16.25 (14-70)			23.89 ± 5.68 (9-30)				

*Mann Whitney-U testi, **Kruskal Wallis Testi

Findings showed that the total score of DEAS, a healthy diet-exercise behaviour and meal scheme DEBS subscales increased with the following features: High BMI (p<0.001), more than revenue expense (p<0.050), absence of obesity in the family history (p<0.050), frequently to do something else while eating (p<0.050), eat fast food once per week (p<0.050), any time spent in front of a screen (p<0.050), take part in sports/physical activity regularly (4 times a week) (p<0.050). The mean subscales scores for the entire study and levels of significance are given in Table 4.

Discussion

The assessment of the eating attitudes can be useful to understand people’s relationship with the foods and their associated behavioural choices. Diet and physical activity evaluation of the DEAS total score and the DEBS subscales mean scores were performed on midwifery students. The findings of this study reported a significant relationship between diet-physical activity attitudes and behaviours [4,11]. There is a significant effect of the DEAS total score and the DEBS subscales mean scores on psychological eating and unhealthy diet-exercise behaviours; the students who have high DEAS total scores, they have less psychological eating and unhealthy diet-exercise behaviours. In addition, in the agreement with the current study, the mean scores of the high healthy diet-exercise behaviour and meal scheme were also found among university students who had high DEAS total scores. The findings of this study reported that the diet-exercise attitude was strong correlated with diet-exercise behaviour (psychological eating, healthy diet-exercise behaviour and meal scheme). The similar studies also support this finding of the present study [12-16].

The findings of this study reported a significant relationship between Socio-demographic, diet, physical activity characteristics and diet-exercise behaviour. This study underlined that the values of the underweight, overweight and obese participants were high and as the values increased, the psychological eating and unhealthy diet-exercise behaviours increased. Also, the participants who had the absence of obesity in family history showed the more evidences of improved diet-exercise behaviour. We found that the participants, who frequently do something else while eating and eat fast food once per week, are more sedentary (a lot of time spent in front of a screen) or less physically active. Since the participants who do something else while eating, have weekly fast food consumption and spend time in front of screen may be associated with an increased risk for the psychological eating and unhealthy diet-exercise behaviours. Our findings were similar to previous studies [6,17-21]. Given the importance of the university years in establishing lifelong dietary habits [22], it is imperative to have better understanding of diet-exercise attitude and behaviour of the university students. The maintaining healthy habits, including reducing sedentary behaviour and improving physical activity, is essential even in the fit person.

Conclusion

Diet-exercise attitudes and behaviours were moderate and affected by some demographic characteristics. The results of this study highlight the diet-exercise behaviours and attitudes of the midwifery students, and also identifying and assessing interventions that target reducing sedentary life, establishing the healthy attitude and behaviour for the midwifery students. To maximize physical wellness, we may obtain the greatest potential

benefit based on reducing sedentary life and establishing the healthy attitude and behaviour by providing a foundation for a lifetime of positive behaviours. It is considered that students should be encouraged to about regular and balanced diet-exercise. A better understanding of the factors affecting the dietary patterns of future health professionals can help improve the quality of diet, which has significant implications for the overall reduction of chronic disease risk.

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