



Exploration of the midwifery students' health-promoting lifestyle behaviors according to their body mass indexes and body perceptions

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Abstract

The present study aims to examine the health-promoting lifestyle behaviors of midwifery students according to their body mass indexes and body perceptions. This cross-sectional study was conducted with 239 midwifery students at a state university between May and June 2023. Research data were collected using the personal information form, Body Cathexis-Self Cathexis Scale (BC-SCS), and Health-Promoting Lifestyle Profile (HPLP). It was determined that the differences between the HPLP and the subscales of interpersonal support, nutrition, and self-actualization were statistically significant according to the students' body perceptions ($p < 0.05$). Students who perceived themselves as slim have higher HPLP and self-actualization mean scores than those who perceived themselves as fat, and it was determined that they have a higher nutrition mean score than those who perceived them as having normal weight. It was determined that the Interpersonal Support mean score of those who perceived themselves as fat was lower. When the mean scores of the students from the HPLP were compared according to their BMI, it was determined that the differences between HPLP and the subscales of interpersonal support, health responsibility, stress management, and self-actualization are statistically significant ($p < 0.05$). According to the research, it is seen that the distribution of healthy lifestyles differs between the body perceptions of midwifery students and their Body Mass Indexes (BMI).

Keywords: Body mass index, body image, midwifery student, health-promoting lifestyle profile

Introduction

Health-promoting lifestyle behaviors include behaviors that enable the individual to be well in every aspect, increase the level of well-being, and enable the individual to realize herself (smoking, exercise habits, diet, hygiene, etc.). Health-promoting lifestyle behaviors aim to ensure the physical, social, and mental well-being of the individual. It was stated that health problems are affected by factors such as individuals' sedentary lifestyles, perceptions of health, views of the concept of health, and negative health behaviors [1,2].

The external appearance of individuals and all their body sensations are defined as body perception [3,4]. In recent years, the direction of health behavior has started to change with the progress of technology, everyone's easy access to technology, and the effects of the media on the concept of health and beauty of the individual. The media has a big influence on this. There are strong relationships between the influence of the media, the cultural structure of society, and body perception. It is known that there are negative relationships between the idealization of thinness in the media, the increase in body mass index (BMI), and body image [4]. Society has socially accepted the slim

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physical appearance of women and the muscular body structure of men. The exclusion of individuals who do not have the aforementioned body shape and proportion has begun to be seen as a natural situation [5-7].

Individuals may be dissatisfied with their body and external appearance (weight, height, muscle characteristics, skin color, and face shape) at some periods of their lives [8]. Especially the younger generation cares about what the people around them think and how others see them. This situation causes young people to worry about their social appearance. Women are more concerned about their body image than men [9]. Individuals with a positive body image can be happier and more successful in their lives. On the contrary, individuals with a negative body image feel worthless and are more unsuccessful in their relationships [10,11]. Individuals with a negative body image may resort to inappropriate health behaviors in order to reach the ideal. There is a connection between body image and disorders in eating behaviors [10,11]. Increasing diet clinics, diet recommendations frequently encountered in the media, drugs sold to lose weight, diets and exercises performed due to aesthetic concerns, and even surgical interventions serve the desire of individuals to lose weight and look ideal [12].

The university period, which covers the period when individuals try to adapt to the social environment, is an important period in which individual development is achieved. Change and development in this period are important in individuals' personalities, families, and social lives, and in developing health-promoting lifestyle behaviors [13]. In this period, it will be an important practice in terms of determining and adopting healthy lifestyle changes, reducing obesity, normal blood pressure and blood values, reducing insulin resistance, taking preventive measures, and improving public health [14,15]. Therefore, it is important to assess the health-promoting lifestyle behaviors of midwifery students and examine the health behaviors and body image of midwifery students, who play a crucial role in serving women and families.

In a study conducted with midwifery students, the factors affecting healthy life behaviors were determined by marital status, staying with parents, income level and sports activities.

determined as not participating. In the same study, it was reported that the scores of healthy living behaviors were moderate, but that the students could not apply what they learned to life [16]. Although there are similar studies in the literature, there is no study examining healthy lifestyle behaviors of students according to body mass indexes and body perceptions. For this reason, it is thought that this study will provide data in terms of revealing the current situation and reflecting the obtained results to the education processes.

In the light of the information above, in this study, it was aimed to examine the BMIs, body perceptions and healthy lifestyle behaviors of midwifery students who will serve women and families throughout their lives.

Research questions

1. What are the BMI values, SYBD and body perceptions of Midwifery Department students?
2. What are the health-promoting lifestyle behaviors of midwifery students according to their body perceptions and body mass indexes?

Material and Methods

This cross-sectional study was conducted with midwifery students at a state university in eastern Turkey between May 2023 and June 2023. The population of the study consisted of 320 students registered in the Department of Midwifery at the time of the research. The sample size was determined to be at least 197 at the 5% error level, 80% power, and 95% confidence interval [17], using the openEpi version 3 sample calculation with the known population. However, it was aimed to reach the entire population, not choosing a sample. Since 23 of the students filled out the forms incompletely, they were not included in the analysis, and the study was completed with 239 volunteer students who agreed to participate in the study. The participation rate was determined as 74.6%. The research data were collected by sharing the questionnaire forms from the official social media account of the related university's midwifery department and WhatsApp groups since the date of data collection coincided with the distance education process. Survey forms were created via Google Forms and shared with midwifery students online. Approval of the ethics committee and institutional permissions were obtained before starting the research. Inclusion criteria are being 18 years of age or older, speaking and understanding Turkish. Those who provided incomplete data from the study or who were determined to give incorrect answers were excluded from the study. The time to fill out the survey forms is approximately 10 minutes.

Data collection tools

Data were collected by utilizing the personal information form, Body Cathexis-Self Cathexis Scale, Health-Promoting Lifestyle Profile and ve Data were collected by utilizing the personal information form, Body Cathexis-Self Cathexis Scale, Health-Promoting Lifestyle Profile and a question questioning students' own body perceptions. Question "How would you describe yourself considering your weight?" was in the form. The students answered this question as 'thin', 'normal' and 'fat'. The students' body perceptions were evaluated according to this question, taking into account their own expressions.

Personal information form

This form was prepared by scanning the literature and consisted of 12 questions [8,11,16,18]. In the form, students' age, class, income status, place of residence, social activity status, presence of chronic disease, continuous drug use, smoking status, health perception status, as well as height and weight were questioned for the calculation of BMI. During the analyses, BMI was calculated by dividing the body weight (kg) of the individual by the square of the height (in m) ($BMI = kg/m^2$). BMI classification

was made and evaluated based on the obesity classification (underweight<18.50; normal 18.50 - 24.99; overweight >25.00) of the Public Health Directorate Obesity And Diabetes Clinical Guide [19].

Body Cathexis-Self Cathexis Scale (BC-SCS): The scale developed by Secard and Jurard consists of two parts [19]. The first part consists of 46 items, including body parts and their functions, and the second part consists of 55 items about the self, including various aspects. The scale was translated into Turkish by Hovardaoğlu in 1986 [18]. The Turkish form of the scale consists of 40 items, determines satisfaction with 40 different body parts or functions, and consists of five-point Likert-type items (1= I like it very much, 2= I like it, 3= I am undecided, 4= I don't like it, 5= I don't like it at all). The lowest score that can be obtained from the scale is 40, and the highest score that can be taken from the scale is 200. It indicates that as the total score obtained from the scale increases, the individual's satisfaction with body parts or functions decreases, and as it decreases, satisfaction increases. The Cronbach's alpha reliability coefficient of the scale was determined as 0.91 [20]. In the present study, the Cronbach's alpha reliability coefficient of the scale was determined as 0.89.

Health Promoting Lifestyle Profile (HPLP): The scale, which was developed by Walker et al. in 1987, measures the health-promoting behaviors of the individual along with a healthy lifestyle and consists of 48 questions containing positive statements. The Turkish validity and reliability study of the scale was performed by Bahar et al. The scale has six subscales: interpersonal support, nutrition, health responsibility, exercise, stress management, and self-actualization. Each subscale can be used independently. The lowest score that can be obtained from the scale is 48 and the highest score that can be obtained from the scale is 192. The total score gives the Health-Promoting Lifestyle Profile score. An increase in the scores obtained from the scale indicates that the individual applies the specified health behaviors at a high level. The Cronbach's alpha reliability coefficient of the scale was determined as 0.91 [21]. In the present study, the Cronbach's Alpha coefficient of the scale was determined as 0.90.

Results

Statistical analysis

The data of the study were analyzed with SPSS 26.0 for Windows software (SPSS, Chicago, IL, USA). When reporting results, descriptive statistics were presented as numbers, percentages, and mean scores. The Kolmogorov-Smirnov test was used to determine whether the data had normal distribution. As the data had normal distribution, the one-way ANOVA test was used in the comparison of the scales' mean scores in more than two groups, Tukey test was used as one of the post-hoc tests. Statistical significance was determined as $p<0.05$.

Ethics

Before the data were collected, ethical approval was obtained from the Social and Human Sciences Research Ethics Committee of

Firat University (Decision Number: 2023/07, Date: 03.30.2023). The study was started after obtaining institutional approval from the Faculty of Health Sciences and the Department of Midwifery (Date: 05.10.2023). In addition, prior to the application of the questionnaire forms, the consent of the students was obtained by creating an information letter about the research and data collection tools. Participation in the study was carried out on a voluntary basis.

Results

Comparison of the HPLP mean scores according to the descriptive characteristics of the midwifery students is presented in Table 1. It was determined that the mean age of the participants is 20.99 ± 1.59 . When the mean scores of the students in HPLP were compared according to their class, place of residency, social activity, presence of chronic diseases, smoking, and perception of health, it was determined that there are statistically significant differences between the groups ($p<0.05$). However, it was determined that there is no statistically significant difference between the groups in terms of the variable of economic level ($p>0.05$) (Table 1).

The distribution of the Body Mass Indexes of the students is given in Figure 1.

In Table 2 the distribution of the mean scores of the midwifery students from the BC-SCS, HPLP, and its subscales is presented. It was found that the BC-SCS mean score of the women participating in the study is 84.77 ± 20.65 , and the HPLP mean score is 125.20 ± 21.50 (Table 2).

Comparison of the HPLP and its subscales mean scores according to body perceptions and BMI of the midwifery students is presented in Table 3. When the mean scores of the students in HPLP were compared according to their body perceptions, it was determined that the differences between HPLP and the subscales of interpersonal support, nutrition, and self-actualization are statistically significant ($p<0.05$). It was determined that students who perceive themselves as slim have higher HPLP and self-actualization mean scores than those who perceive themselves as fat. It was determined that students who perceive themselves as underweight have higher nutrition mean score than those who perceive themselves as normal weight. Moreover, it was determined that those who perceive themselves as normal weight have higher interpersonal support mean score than those who perceive themselves as overweight.

When the mean scores of the students in HPLP were compared according to their BMI, it was determined that the differences between HPLP and the subscales of interpersonal support, health responsibility, stress management, and self-actualization sub-dimensions are statistically significant ($p<0.05$). It was determined that midwifery students who were slim have higher HPLP, interpersonal support, health responsibility, and self-actualization mean scores than those who were fat. In addition, it was determined that those who are normal weight have higher stress management mean scores than those who were overweight.

Table 1. Comparison of the HPLP mean scores according to midwifery students' descriptive characteristics (n=239)

Variables	n	%	Mean±SD	Statistical analysis
Age (year)			20.99±1.59	
Class				
1st class ^a	58	24.3	116.25±21.48	F=6.058 p=0.001 c>a, d>a
2st class ^b	52	21.8	124.50±15.26	
3st class ^c	68	28.5	131.92±24.35	
4st class ^d	61	25.5	126.83±20.10	
Place of residency				
Province ^a	148	61.9	115.83±18.66	F=5.721 p=0.004 c>a
Distrivt ^b	54	22.6	122.81±19.87	
Village ^c	37	15.5	128.42±22.05	
Income level				
Good	4	1.7	135.50±14.45	F=1.529 p=0.219
Moderate	196	82.0	125.94±22.22	
Bad	39	16.3	120.46±17.58	
Social activity status				
Yes	65	27.2	129.87±21.35	t=2.065 p=0.040
No	174	72.8	123.46±21.36	
Presence of chronic disease				
Yes	40	16.7	136.60±19.21	t=3.772 p=0.001
No	199	83.3	122.91±21.25	
Continuous medication use				
Yes	27	11.3	132.82±18.55	t=2.262 p=0.030
No	212	88.7	124.19±21.70	
Smoking				
Yes	15	6.3	127.66±15.74	F=2.817 p=0.062
No	206	86.2	124.06±21.29	
Stop the using	18	7.5	136.27±25.57	
Health perceptions				
Very good	35	14.6	131.40±29.83	F=1.710 p=0.183
Good	191	79.9	124.16±19.61	
Bad	13	5.4	123.84±20.68	

HPLP: health-promoting lifestyle profile, F: one-way ANOVA, SD: standart deviation, a,b,c: Türkiye test was used as one of the post-hoc tests

Table 2. The HPLP and BC-SCS mean scores and min-max values

Scales	Min-Max	Mean±SD
BC-SCS TOTAL	45-134	84.77±20.65
HPLP TOTAL	75-181	125.20±21.50
Interpersonal support	10-28	21.55±3.85
Nutrition	8-24	15.84±3.47
Health responsibility	8-37	23.00±5.92
Exercise	5-19	9.07±3.50
Stress management	9-28	17.88±3.82
Self-actualization	20-52	38.10±7.05

HPLP: health-promoting lifestyle profile, BC-SCS: body cathexis-self cathexis scale, SD: standart deviation

Table 3. Comparison of the HPLP and its subscales' mean scores according to body perceptions and BMI (n=239)

Scales and sub-dimensions	Body perceptions ^d						Statistical analysis	BMI						Statistical analysis
	Slim ^a		Normal weight ^b		Overweight ^c			Slim		Normal weight		Overweight		
	n	%	n	%	n	%		n	%	n	%	n	%	
	46	19.2	150	62.8	43	18.0		47	19.7	153	64.0	38	15.9	
HPLP total	129.65±21.04		125.87±21.15		118.13±21.99		F=3.446 p=0.033 a>c	125.78±21.77		127.44±21.63		115.34±18.47		F=4.986 p=0.008 a>c
Interpersonal support	21.95±3.62		21.84±3.83		20.09±3.91		F=3.864 p=0.022 b>c	20.74±3.75		22.05±3.90		20.52±3.53		F=3.771 p=0.024 a>c
Nutrition	16.82±3.49		15.42±3.29		16.25±3.87		F=3.312 p=0.038 a>b	16.51±3.51		15.83±3.42		15.02±3.60		F=1.609 p=0.149
Health responsibility	24.10±5.63		22.98±5.79		21.86±6.56		F=1.609 p=0.202	23.21±5.98		23.58±5.92		20.26±5.23		F=4.988 p=0.008 a>c
Exercise	8.43±3.64		9.29±3.38		8.97±3.75		F=1.076 p=0.343	8.61±3.48		9.31±3.43		8.60±3.83		F=1.094 p=0.337
Stress management	18.04±3.81		18.14±3.68		16.81±4.23		F=2.076 p=0.128	17.91±3.81		18.29±3.98		16.18±2.66		F=4.756 p=0.009 b>c
Self-actualization	40.30±5.77		38.34±6.82		34.93±8.05		F=7.024 p=0.001 a>c	38.80±5.99		38.71±7.22		34.78±6.84		F=5.170 p=0.006 a>c

F: one-way ANOVA, BMI: body mass index, HPLP: health-promoting lifestyle profile, d: the students' perception of body preceptions was taken into consideration by taking into account the individual's own expressions, "How would you describe yourself when you consider your weight?" It was created based on the answer to the question

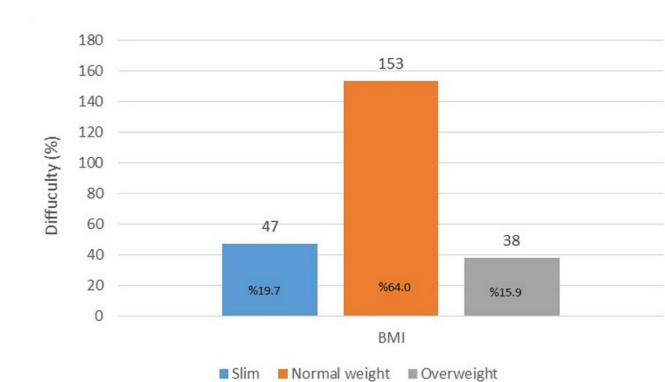


Figure 1. Distribution of body mass index of students

Discussion

In this study, health-promoting lifestyle behaviors of midwifery students were compared according to their body mass indexes and body perceptions. It was determined that those who live in the village, those who have a chronic disease and who constantly use drugs, those who have social activities, those who used to

smoke and quit, and those who perceive their health status as good, adopt the health-promoting lifestyle behaviors more than the midwifery students in the 1st year of the 3rd and 4th grades. It was determined that there was no difference in terms of SYBDs according to income status. In the literature, there are different studies examining the factors affecting health-promoting lifestyle behaviors. Students' being socially active can enable them to evaluate and manage their own health as individuals [22]. In addition, as the grade level increases, positive health behaviors may increase with the effect of the education received [23]. In a study conducted with medical school students, it was reported that those who perceive their health as good, those who exercise, and those who have hobbies mostly adopt health-promoting lifestyle behaviors [24]. In another study that determined the relationship between the eating attitudes and healthy lifestyle behaviors of a group of health school students gave similar results in terms of other factors except income level [25]. Health-promoting lifestyle behaviors are affected by many factors such as the education levels of parents. It is thought that the similarities and differences in our study's results are due to these factors.

Considering the lowest and highest (75-181) values that can be obtained from HPLP in the study (125.20 ± 21.50), it can be said that midwifery students' health-promoting lifestyle behaviors are at a moderate level and midwifery students cannot transfer health-promoting lifestyle behaviors to their own lives at a desired level. When we look at the HPLP's subscales in the study, we see that the lowest score is in exercise, and the highest scores are in self-actualization and health responsibility. As individuals far from their families, university students tend to learn, research, and explore during their university education. In this process, individuals know themselves, act in line with their ideals, and can complete the need for self-actualization [26]. In the present study, it is thought that the low score in the subscale of exercise may be a result of the increase in the sedentary lifestyle of young people due to the recent development of technology and the increase in the widespread use of social media among young people. In addition, this result may be the result of midwifery students not knowing the importance of physical activity enough or not turning it into a health-promoting behavior [22]. The results in the HPLP's subscales' scores of midwifery students are similar to other studies conducted with the faculty of health sciences students.

In the study, it was determined that those who perceive themselves as slim according to their body perceptions adopt more health-promoting lifestyle behaviors and have higher self-actualization mean score than those who are overweight. Additionally, those who perceive themselves as weak have higher nutrition mean score. It was observed that those who perceive themselves as fat have lower interpersonal support mean score than those who perceive themselves as normal. When HPLP was evaluated according to BMI, it was determined that those who were overweight adopted health-promoting lifestyle behaviors at a lower rate. The subscales of Interpersonal support, health responsibility, stress management, and self-actualization mean scores are lower in overweight participants. Although there is no study in the literature that evaluates the health-promoting lifestyle behaviors of midwifery students according to body mass index and body perceptions, there are studies conducted in different groups in which these and similar parameters are evaluated separately. It was determined in some studies that the health-promoting lifestyle behaviors of those with social appearance anxiety are negative [27-29]. In the studies on BMI, it was reported that BMI is associated with eating disorders, which is one of the negative health behaviors [25,30]. In another study, the health-promoting lifestyle behaviors of those with an eating disorder tendency were evaluated using HPLP-II, and it was observed that they adopted health-promoting lifestyle behaviors more, in contrast to our study's results [31]. In another study using BMI values and the HPLP-II scale, no difference was found between BMI and the HPLP-II's subscales [22]. There is a relationship between students' eating habits and health perceptions [32]. In a study conducted with adolescents, body image, BMI values, and adolescents' health-promoting lifestyle

behaviors were evaluated; BMI values and health-promoting lifestyle behaviors were found to be moderate, and exercise values were found to be low [33]. The presence of adolescents in this group, when compared to university students, is thought to be the result of adolescents not knowing themselves fully and not being aware of their health responsibilities. The similarities and differences between the results of our study with other studies conducted with university students may be the result of the fact that more than 60% of the midwifery students included in our study had normal BMI values and the study group consisted of only women.

Limitations

The limitations of the study are that the study was conducted only on midwifery students of a state university and the sample includes only female students. This study cannot be generalized due to the fact that the data collection method used in the study was online, the results were analyzed with the subscales covered by the scales used in the research, and only midwifery students were included in the study. The use of scales adapted to our country with international validity and reliability in the online questionnaire form and the fact that students could fill in the questionnaires online without experiencing any pressure while filling out the questionnaire form constitute the superior aspects of the research. The unhealthy lifestyle behaviors of midwifery students can cause long-term side effects in adulthood. Therefore, changes in health-promoting lifestyle behaviors in the early period may result in more positive health outcomes.

Conclusion and recommendations

According to the results of this research, It was determined that students who perceive themselves as slim have higher HPLP and self-actualization mean scores than those who perceive themselves as fat. It was determined that students who perceive themselves as underweight have higher nutrition mean score than those who perceive themselves as normal weight. According to the BMI it was determined that midwifery students who were slim have higher HPLP, interpersonal support, health responsibility, and self-actualization mean scores than those who were fat. In addition, it was determined that those who are normal weight have higher stress management mean scores than those who were overweight. Negative health behaviors can cause long-term side effects. Acquiring health-promoting lifestyle behaviors and ensuring that these behaviors are permanent throughout life are important for a happier, more productive life and aging. In this context, it may be important for university students to plan interventions that will improve their self-perceptions in a positive way, to direct them to activities such as exercise to have an ideal BMI, to provide training on healthy nutrition, to organize social activities that will increase interpersonal relationships and socialization, in terms of gaining health-promoting lifestyle behaviors. In addition, it is thought that the repetition of such studies and their multivariate planning would contribute to the literature.

Conflict of Interests

The authors declare that there is no conflict of interest in the study.

Financial Disclosure

The authors declare that they have received no financial support for the study.

Ethical Approval

Ethical approval was obtained for the study from the Social and Human Sciences Research Ethics Committee of Fırat University (Date: 30.03.2023, Session number 2023/07). Written permissions were obtained from the institution where the research was conducted. The study was carried out in accordance with the Declaration of Helsinki.

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