

The effects of nursing students' beliefs towards obese individuals on their stigmatisation tendencies

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Abstract

It is very important to provide good quality and equal care to obese individuals without judging, stigmatisation and discrimination. The aim of this study was to determine the effects of nursing students' beliefs towards obese individuals on their stigmatisation tendencies. This descriptive and correlational study was conducted between 05.06.2021 and 20.06.2021 with the participation of 232 students who were studying at Ondokuz Mayıs University, Faculty of Health Sciences, Department of Nursing and who were willing to participate in the study. The data in the study were collected by using a survey form consisting of 25 questions to find out about the sociodemographic characteristics of the students and their attitudes towards obese individuals and Beliefs about Obese Persons Scale (BAOP) and Stigma Scale. Normality distribution of the data was examined with Kolmogorov–Smirnov test. Kruskal–Wallis and Mann–Whitney U test were used in the comparison of data which were not normally distributed. The correlation between the scales and sub-dimensions was examined with Spearman's correlation analysis. It was found that 75.4% of the students in the study were female and 24.6% were male, 82.8% had grown up in a nuclear family, 36.6% had a democratic family structure, 60.8% chose the profession of nursing willingly, 79.7% had a body mass index within the normal range, 69.4% did not have a history of obesity in family members, 67.7% had overweight individuals in their immediate circle, 74.6% were not exposed to stigmatisation and discriminative attitudes due to their body weight; 97.8% were not biased against obese individuals, 78.9% stated that they wanted to provide care to obese individuals and mean age was found as 20.72 ± 1.68 . The mean BAOP score was found as 23.4 ± 1.02 , while the mean Stigma Scale score was found as 44.8 ± 11.7 . The BAOP Scale scores and mean Stigma Scale scores were found to differ in terms of some sociodemographic characteristics of students ($p < 0.05$). In line with the data obtained from the scale, it was found that students' beliefs about obese individuals were not negative and they had low level of stigmatisation tendency. It is recommended to increase social awareness about the increase in obesity prevalence, which has become a global problem, and to prevent the tendency for stigmatisation and discrimination.

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1. Introduction

Stigma is a situation that occurs when certain groups are excluded from the society for various reasons. This situation may occur due to diseases, as well as causes such as language, religion, race and disability [1]. Obesity, which is defined by the World Health Organisation (WHO) as the accumulation of abnormal or excessive fat in the body to the extent of impairing health, is a very common health problem in almost all societies and it is gradually becoming a global epidemic [2]–[4]. Exposure to obesity in both childhood and adulthood increases the rate of mortality and morbidity [5]. In addition to physical problems, obesity can also cause psychological and social problems in the background. Obese individuals are generally stigmatised as unattractive, irresolute, lazy, immobile, slow, selfish, food-loving, not enduring, unsuccessful, disorganised, unmotivated, worthless, anxious, formless, lacking in self-confidence and having a negative body image and they are exposed to prejudiced behaviours [6]–[8]. In a study in which weight discrimination was examined in Germany, it was reported that discrimination against overweight/obese individuals was between 5.6 and 38% [9]. In a meta-analysis conducted on the same topic, it was reported that the rate of discrimination perceived by individuals with a body mass index (BMI) of 30–35 kg/m² was 19.2%, perceived discrimination increased as BMI value increased and it reached 41.8% in individuals with second degree and higher obesity [10].

Negative beliefs and tendencies towards obesity can be observed in different social areas such as media, education, business and health [4]. The fact that obesity has become a health problem increases the rates healthcare professionals encounter and care for obese individuals. Individuals who come to health institutions to find solutions to health problems and to receive treatment have stated that they are faced with obesity prejudice, especially in the field of health [11]. Doctors, nurses, dieticians, physiotherapists, psychologists, medicine and nursing students who provide healthcare services show their prejudices not only verbally, but also through their facial expressions, attitudes and moves when they are working with obese individuals [11]. According to the WHO report, 69% of obese individuals who refer to a health institution are stigmatised by healthcare professionals [12]. In addition to these, studies conducted have shown that obese individuals feel that they are prejudiced while receiving healthcare service and they usually do not want to continue the treatment because of the negative attitudes they encounter [7], [11], [13], [14]. Overweight and obese individuals need services equal to the services provided to other patients. However, the prejudices and negative attitudes they encounter in social and medical fields prevent these individuals from receiving sufficient and qualified healthcare [15].

Prospective nurses, who have a high potential to encounter obese individuals in every area of life and who have important roles in the professional health team, constitute the group that will provide care, service and counselling to these individuals in the future. Nursing students' providing care to obese/overweight individuals without judging, stigmatising and discriminating them plays a huge role in both increasing the quality of care and also decreasing the negative attitudes and behaviours of the society towards obese individuals [6]. Therefore, identifying the beliefs and stigmatisation tendencies of nursing students towards obese individuals, creating trainings and curricula for this is very important in fighting stigmatisation.

1.1. Objective of the study

This study was planned to find out the beliefs and stigmatisation tendencies of nursing students studying at a university towards obese individuals. Answers were sought to the following questions in this study:

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- What are the sociodemographic characteristics of nursing students?
- How are the attitudes of nursing students towards obese individuals?

- Is there a correlation between nursing students' sociodemographic characteristics and their beliefs and stigmatisation tendencies towards obese individuals?

2. Material methods

2.1. Place and time of the research

This descriptive and correlational study was carried out between 05.06.2021 and 20.06.2021 with the participation of 232 students who were studying at Ondokuz Mayıs University, Faculty of Health Sciences, Nursing Department and who volunteered to participate in the study.

2.2. Population and sample of the research

The following formula, which is used to find out the number of individuals to be included in the sample in cases when the population is known, was used in determining the number of samples in the study [16], [17]. For a population of 528 individuals studying in the nursing department, the appropriate sample size was calculated as minimum 223 students with 95% confidence interval. Considering that there would be loss of data, data collection was completed when 232 students were reached. Students who were studying in the nursing department and who agreed to participate in the study were included in the study.

2.3. Tools of data collection

In the study, the data were collected by using a 25-item questionnaire to find out the sociodemographic characteristics of students and their attitudes towards obese individuals and Beliefs about Obese Persons Scale (BAOP) and Stigma Scale. The questionnaire form was tested in a group of 10 individuals by making a preliminary application and the students who participated in the pilot study were not included in the sample. Ethics committee approval was obtained from Ondokuz Mayıs University Social and Sciences Research Ethics Committee before starting the study. The data were collected by the researchers after the students were informed about the study and their informed consents were taken.

2.3.1. Beliefs about Obese Persons Scale

The BAOP was tested for validity and reliability by Dedeli et al. [18] in the Turkish society to evaluate beliefs about obese individuals. The scale is an 8-item, 6-point Likert-type scale with a single dimension. Each question is answered and scored as Strongly agree '3', Mostly agree '2', Somewhat agree '1', Somewhat disagree '-1', Mostly disagree '-2' and Strongly disagree '-3'.

In the validity and reliability study conducted by Dedeli et al. [18], Cronbach's alpha reliability coefficient of the scale was found as 0.84 [18]. In the present study, Cronbach's alpha reliability coefficient of the scale was found as 0.52. Permission to use the scale was taken from Dedeli et al. [18] who conducted the Turkish adaptation of the BAOP.

2.3.2. Stigma Scale

Stigma Scale was developed by Yaman and Gungor [19] to measure the psychological stigmatisation tendencies of individuals. The scale was prepared on a 5-point Likert-type scale with responses of Strongly Disagree, Disagree, Partly Agree, Agree and Strongly Agree. The scale has four subscales as discrimination and exclusion, labelling, psychological health and prejudice and a total of 22 items. Discrimination and exclusion measures discrimination and exclusion perceptions as a result and is an indicator of the tendency to stigmatise. Labelling subscale measures the tendency to label individuals in terms of gender, marital status, age, origin and sexual preference. Psychological health evaluates the tendency to discriminate against individuals with psychological problems and communication

problems. Finally, prejudice subscale indicates the tendency to form a prejudice for individuals in terms of criminal tendency, world view, lifestyle and individual characteristics and to stigmatise them.

The range of scores in the scale is between 22 and 110; a score lower than 55 shows low stigma tendency, while a score higher than 55 shows high stigma tendency. According to the reliability analyses conducted by Yaman and Gungor [19], Cronbach's alpha reliability coefficient of the scale was found as 0,84, while Cronbach's alpha reliability coefficients of the subscales were found as 0.77, 0.68, 0.66 and 0.54, respectively, for discrimination and exclusion, labelling, psychological health and prejudice subscales . In the present study, while Cronbach's alpha reliability coefficient of the scale was found as 0.88; Cronbach's alpha reliability coefficients of the subscales were found as 0.86, 0.75, 0.76 and 0.67, respectively, for discrimination and exclusion, labelling, psychological health and prejudice subscales.

2.4. Data collection

The students were informed that the decision to participate in the study was entirely up to them and the data collected from the study would be used only within the scope of the study. Ethic committee approval from the institution and informed consent from the students were obtained to collect data. Data collection took approximately 15–20 minutes.

2.5. Data analysis

Statistical analyses of the study data were made by using SPSS 21 package programme in a computer environment. Normality distribution of the data was analysed with Kolmogorov–Simirnov test. Kruskal–Wallis test and Mann–Whitney U test were used in the comparison of data which were not normally distributed. The correlation between the scales and subscales was examined with Spearman's correlation analysis.

3. Results

It was found that 75.4% of the students in the study were female, 24.6% were male; the mothers of 45.3% were primary school graduates and the mothers of 79.7% were housewives; the fathers of 35.3% were high school graduates and the fathers of 26.3% were self-employed; 82.8% had grown up in a nuclear family and 36.6% had a democratic family structure; 82.3% had social insurance and 62.9% had an income equal to expense; 39.7% lived in the city centre; 60.8% chose the nursing profession willingly, 75.9% loved the nursing profession and 88.8% did not want to change their profession; 94% did not have any health problems, 79.7% had a body mass index within normal range, family members of 69.4% did not have a history of obesity and 67.7% had overweight individuals around them; 74.6% were not exposed to stigmatising and discriminatory attitudes about their body weight, 50% of the students who were exposed to discriminatory attitudes were exposed to verbal rude behaviours, while 33% were nicknamed; 97.8% were not prejudiced against obese individuals and 78.9% wanted to provide care to obese individuals; and mean age of the students was found as 20.72 ± 1.68 years (Table 1).

Table 1. Frequency distribution of students' sociodemographic characteristics and their views on obese individuals (n = 232)

		<i>n</i>	%
Mean age	20.72±1.68		
Year of study	First year	71	30.6
	Second year	59	25.4
	Third year	52	22.4
	Fourth year	50	21.6

Gender	Female	175	75.4
	Male	57	24.6
Marital status	Single	231	99.6
	Married	1	0.4
Mother's educational status	Illiterate	10	4.3
	Literate	9	3.9
	Primary	105	45.3
	Secondary	50	21.6
	High school	43	18.5
Mother's profession	Undergraduate	15	6.5
	Housewife	185	79.7
	Officer	3	1.3
	Retired	3	1.3
	Worker	29	12.5
	Farmer	5	2.2
Father's educational status	Deceased	7	3.0
	Literate	5	2.1
	Primary	57	24.6
	Secondary	44	19.0
	High school	82	35.3
Father's profession	Undergraduate	44	19.0
	Officer	30	12.9
	Retired	51	22.0
	Worker	52	22.4
	Farmer	17	7.3
	Self-employed	61	26.3
	Unemployed	3	1.3
	Deceased	18	7.8
Family type	Extended	40	17.2
	Nuclear	192	82.8
Family structure	Democratic family	85	36.6
	Oppressive and authoritarian family	33	14.2
	Overprotective family	62	26.7
	Over-tolerant family	24	10.3
	Perfectionist family	5	2.2
	Indifferent and uninvolved family	12	5.2
	Unstable family	11	4.7
Presence of social insurance	Yes	191	82.3
	No	41	17.7
Income status	Income<expense	37	15.9
	Income=expense	146	62.9

	Income>expense	49	21.1
Place of residence	City	92	39.7
	Town	100	43.1
	Village	40	17.2
Did you choose the nursing department willingly?	Yes	141	60.8
	No	24	10.3
	Partly	67	28.9
Do you like the nursing profession?	I do	176	75.9
	I don't	10	4.3
	Undecided	46	19.8
Are you considering changing your profession?	Yes	26	11.2
	No	206	88.8
Do you have any health problems?	Yes	14	6.0
	No	218	94.0
If your answer is 'yes', what are your health problems?	Allergy	1	0.4
	Anaemia	3	1.3
	Asthma	2	0.9
	Irritable bowel syndrome	1	0.4
	Hearing disability	2	0.9
	Cardiac disease	1	0.4
	Stomach hernia	1	0.4
	Myopic	3	1.3
Body mass index of students (BMI)	Weak	15	6.5
	Normal	185	79.7
	Pre-obesity	24	10.3
	Obesity	8	3.4
Do you have a family history of obesity?	Yes	71	30.6
	No	161	69.4
Are there obese individuals in you immediate circle?	Yes	157	67.7
	No	75	32.3
Have you been exposed to stigmatising and discriminatory attitudes about your weight?	Yes	59	25.4
	No	173	74.6
If your answer is 'yes' what were the behaviours you were exposed to?	Discrimination	6	6.8
	Nicknamed	29	33.0
	Exclusion	9	10.2
	Verbal rude behaviours	44	50.0
How would you define your attitude towards obese individuals?	Prejudiced	1	0.4
	I make fun of them	1	0.4
	I don't want to be friends	2	0.9
	I exclude them in social environments	1	0.4

	I am not prejudiced	227	97.8
Do you want to provide care to obese individuals?	Yes	183	78.9
	No	49	21.1

Total score of the students from the BAOP was found as 23.4 ± 1.02 , while the Stigma Scale total score was found as 44.8 ± 11.7 . Discrimination and exclusion, labelling, psychological health and prejudice subscales mean scores were found as 8.3 ± 3.6 , 11.6 ± 4.2 , 10.2 ± 3.6 and 14.6 ± 3.8 , respectively (Table 2).

Table 2. Total scores, subscale mean scores, standard deviation and median values of the BAOP and Stigma Scale

	Mean \pm SD	Median (Min–Max)
BAOP		
Total	23.4 ± 1.02	23 (21–26)
Stigma Scale		
Discrimination and exclusion	8.3 ± 3.6	7(6–26)
Labelling	11.6 ± 4.2	11 (6–25)
Psychological health	10.2 ± 3.6	10 (5–23)
Prejudice	14.6 ± 3.8	14 (5–24)
Total	44.8 ± 11.7	43 (22–95)

It was found that the BAOP median score differed significantly in terms of gender ($p = 0.027$), level of income ($p = 0.015$), the state of choosing the profession willingly ($p = 0.032$) and BMI ($p = 0.022$) score, and the median score was found to be higher in male students, in students who chose the profession willingly and in students who had normal BMI. In addition, it was found that although the BAOP median score was equal in students whose income was equal to expense and those whose income was higher than expense, when the mean ranks were examined, it was found that students whose income was equal to expense had a mean score of 125.12, while students whose income was higher than expense had a mean score of 95.41. This result shows that the BAOP median score was higher in students whose income was equal to expense (Table 3).

Table 3. Comparison of students' sociodemographic information and views about obese individuals and BAOP median scores

		Median (Min–Max)	Test value
		Mean \pm SD	p
Year of study	First year	23 (22–25)	$\chi^2 = 6.440$ $p = 0.092$
	Second year	23 (22–26)	
	Third year	23 (21–26)	
	Fourth year	23 (22–26)	
Gender	Female	23 (21–26)	$U = 5.913$ $p = 0.027$
	Male	24 (22–25)	
Income status	Income<expense	23 (22–25)ab	$\chi^2 = 8.338$ $p = 0.015$
	Income=expense	23 (21–26)a	
	Income>expense	23 (22–25)b	
The state of choosing the profession willingly	Yes	23 (22–26)a	$\chi^2 = 6.887$ $p = 0.032$
	No	23 (21–24)b	

BMI of students	Partly	23 (22–25)ab	$\chi^2 = 9.617$ $p = 0.022$
	Weak	23 (22–25)ab	
	Normal	23 (22–26)a	
	Pre-obesity	23 (21–26)ab	
	Obesity	22,5 (22–24)b	
Do you have a family history of obesity?	Yes	23 (21–26)	$U = 5,604.500$ $p = 0.804$
	No	23 (22–25)	
	Prejudiced	23 (23–23)	
How would you define your attitude towards obese individuals?	I make fun of them	22 (22–22)	$\chi^2 = 9.091$ $p = 0.059$
	I don't want to be friends	22 (22–22)	
	I exclude them in social environments	22 (22–22)	
	I am not prejudiced	23 (21–26)	

It was found that the Stigma Scale median scores differed in terms of maternal educational status ($p = 0.029$), the state of considering to change the profession ($p = 0.014$) and attitudes towards obese individuals ($p = 0.041$) and median scores were found to be higher in students whose mothers were literate, those who considered changing their profession and those who did not have prejudice against obese individuals (Table 4).

Table 4. Comparison of students' sociodemographic information and views about obese individuals and Stigma Scale median scores ($n = 232$)

Characteristics		Discrimination and exclusion	Labelling	Psychological health	Prejudice	Total
Year of study	First year	7 (6–21)	11 (6–25)	10 (5–18)	14 (5–24)	44 (22–72)
	Second year	6 (6–26)	11 (6–25)	10 (5–23)	14 (5–24)	43 (22–95)
	Third year	7 (6–19)	10,5 (6–24)	10 (5–19)	15 (8–24)	43 (28–82)
	Fourth year	6 (6–14)	10 (6–24)	10 (5–19)	14 (5–21)	43 (22–66)
Test statistic		$\chi^2 = 1.183$	$\chi^2 = 0.595$	$\chi^2 = 1.046$	$\chi^2 = 3.018$	$\chi^2 = 1.690$
p		0.757	0.898	0.790	0.389	0.639
Gender	Female	7 (6–26)	11 (6–25)	10 (5–23)	14 (5–24)	44 (22–95)
	Male	6 (6–24)	10 (6–24)	10 (5–20)	15 (5–24)	41 (22–88)
Test statistic		$U = 4,066.5$	$U = 3,983.5$	$U = 4,727.5$	$U = 5,106$	$U = 4,267.5$
p		0.026	0.022	0.553	0.787	0.102
Marital Status	Single	7 (6–26)	11 (6–25)	10 (5–23)	14 (5–24)	43 (22–95)
	Married	10 (10–10)	11 (11–11)	10 (10–10)	12 (12–12)	43 (43–43)
Test statistic		$U = 117.0$	$U = 122.5$	$U = 115.0$	$U = 52.500$	$U = 112.00$
p		0.474	0.939	0.930	0.456	0.974
Mother's educational status	Illiterate	7 (6–12)	10.5 (7–16)ab	8 (5–13)ab	16 (6–24)	42 (30–56)ab
	Literate	10 (6–12)	14 (6–17)ab	11 (7–15)a	18 (12–20)	50 (34–63)a
	Primary	7 (6–26)	12 (6–25)a	10 (5–23)ab	14 (5–22)	45 (22–95)ab
	Secondary	6 (6–24)	9 (6–24)b	9 (5–20)ab	14 (5–21)	38 (22–88)b
	High school	7 (6–24)	10 (6–25)ab	11 (5–20)ab	15 (9–24)	47 (28–88)ab
Undergraduate	6 (6–12)	13 (6–17)ab	7 (5–15)b	16 (10–24)	41 (30–63)ab	

Test statistic		$\chi^2=10,355$	$\chi^2=19,183$	$\chi^2=14,428$	$\chi^2=8,0$	$\chi^2=11,793$
p		0,066	0,002	0,011	0,058	0,029
The state of considering changing the profession	Yes	7 (6–16)	13 (6–25)	12 (5–18)	16 (5–24)	48,5 (22–66)
	No	7 (6–26)	10 (6–25)	10 (5–23)	14 (5–24)	43 (22–95)
Test statistic		$U = 2,495.5$	$U = 1,917.5$	$U = 1,958.0$	$U = 1,952.5$	$U = 1,884$
p		0.547	0.018	0.025	0.026	0.014
How would you define your attitude towards obese individuals?	I make fun of them	12 (12–12)	7 (7–7)ab	14 (14–14)ab	21 (21–21)ab	54 (54–54)ab
	I don't want to be friends	6 (6–6)	8 (8–8)ab	5 (5–5)ab	11 (11–11)ab	30 (30–30)ab
	I exclude them in social environments	6 (6–6)	6 (6–6)a	5 (5–5)a	5 (5–5)a	22 (22–22)a
	I am not prejudiced	6 (6–6)	6 (6–6)ab	5 (5–5)ab	19 (19–19)ab	36 (36–36)ab
	I make fun of them	7 (6–26)	11 (6–25)b	10 (5–23)b	14 (5–24)b	43 (22–95)b
Test statistic		$\chi^2 = 5.418$	$\chi^2 = 10.700$	$\chi^2 = 10.618$	$\chi^2 = 11.296$	$\chi^2 = 9.949$
p		0.247	0.030	0.031	0.023	0.041

No statistically significant correlation was found between students' BAOP and Stigma Scale total, discrimination and exclusion, labelling, psychological health and prejudice subscales (Table 5).

Table 5. Correlation between BAOP and Stigma Scale

	Scale	BAOP
	Discrimination and exclusion	$r = 0.055$
	Labelling	$r = -0.007$
Stigma Scale	Psychological health	$r = 0.013$
	Prejudice	$r = 0.016$
	Total	$r = 0.023$

r: Spearman's correlation coefficient.

4. Discussion

The results obtained in this study, which was carried out to find out the beliefs and attitudes of students studying in the nursing department of a university in the Central Black Sea region about obese individuals, are discussed in line with the relevant literature.

It was found that 74.6% had not been exposed to stigmatising and discriminatory attitudes about their body weight, 97.8% were not prejudiced against obese individuals and 78.9% wanted to provide care to obese individuals. In a study conducted by Yildiz and Yalcinoz Baysal [20] on prejudices about obesity in students in the field of health, 85.18% of the students reported that they had not been exposed to stigmatising and discriminatory attitudes about their body weight. In a study conducted by Usta et al. [21] with nursing students, it was found that 81.8% of the students had not been exposed to stigmatising and discriminatory attitudes about their body weight and 82.5% wanted to provide care to obese individuals.

In a study conducted by Altun [11] on university students' prejudices against obesity, it was reported that 89.1% of the students were not prejudiced against obesity. In a study by Aydin et al.

[22], it was reported that 13.4% of the students were not prejudiced against obesity, while 30.8% were prone to prejudice. In a study conducted by Bellikci Koyu et al. [4] on prejudices about obesity and the related factors in students of health sciences faculty, it was found that 53.6% of the students were prejudiced against obesity, 41.1% were prone to prejudice and 5.3% were not prejudiced. Healthcare professionals are members of the profession who have important roles in the care and treatment of obese individuals and who work actively to increase individuals' quality of life. However, the prevalence of prejudice against obesity stands out in studies conducted with healthcare professionals and students in the field of health in both the world and our country [23]–[25]. Therefore, it is extremely important to plan interventions to decrease the negative beliefs, attitudes and behaviours of the future's healthcare professionals towards obesity.

In this study, the BAOP total score of the students was found as 23.4 ± 1.02 . The BAOP measures positive and negative beliefs about obese individuals. The total score of the scale ranges between 0 and 48 and high scores show stronger beliefs that obesity is not under the control of obese individuals. In this study, it was found that students had strong and positive beliefs that obesity is under the control of obese individuals. In a study conducted by Flint et al. [26], the BAOP total score of the students was reported as 22.79 ± 6.69 . In a study carried out by Usta et al. [21] on the perceptions of nursing students about obese individuals, the scale's total score was found as 23.36 ± 0.83 and the results were found to support the results of our study. Strong and positive beliefs that obesity is under the control of obese individuals reduce prejudice against obesity and facilitate showing positive behaviours towards obese individuals.

In this study, it was found that the BAOP median score differed significantly in terms of gender, level of income, the state of choosing the profession willingly and BMI score, while the median score was found to be higher in male students, in students who chose the profession willingly and in students who had normal BMI. In parallel with the results of our study, Usta et al. [21] found that the BAOP median score was higher in male students and there were no differences in terms of BMI and level of income.

In a study conducted by Uyanik et al. [27] to evaluate the prejudices of Health Sciences Faculty students about obesity, a statistically significant difference was found between nursing students' BMI levels and prejudice levels and it was found that students with lower BMI had higher negative attitudes and prejudice. When other studies conducted were examined, it was found that scale scores did not differ in terms of gender [27]–[30], year of study [28], [30], level of income [28], [30], BMI [30] and presence of obese individuals in the family/among relatives [27], [29], [30].

A large number of factors, such as culture, education and family, which is the smallest building block of society, are effective in shaping attitudes and perceptions against obesity. In recent years, obesity, being thin and perception of beauty have been gradually taking more place in the media and society, and this situation has affected perceptions about obesity. In this direction, it is thought that the differences between studies are resulting from the perspectives of the culture students have been raised in, the perceptions created by the social media on individuals and the different measurement instruments used.

In this study, while the Stigma Scale total score was found as 44.8 ± 11.7 , discrimination and exclusion, labelling, psychological health and prejudice subscales mean scores were found as 8.3 ± 3.6 , 11.6 ± 4.2 , 10.2 ± 3.6 and 14.6 ± 3.8 , respectively. Overall, the score of the scale being lower than 55 shows that individuals have a lower stigmatisation tendency, while a higher score shows that they have a higher stigmatisation tendency. According to this, we can say that the students in our study have low stigmatisation tendencies towards obese individuals. In a study conducted by Sevim and Artan [31] on the stigmatisation tendencies of university students, it was reported in parallel with the results of our study that students had a low level of stigmatisation tendency. Also, in parallel with the results of our study, in a study conducted by Taskin Yilmaz et al. [32] on stigmatisation tendencies of nurses, it was found that nurses had lower than average stigmatisation tendency levels ($49.11 \pm$

12.00), while their highest score was in prejudice subscale (14.55 ± 3.48) and their lowest score was in discrimination and exclusion subscale (8.91 ± 3.80).

In this study, it was found that the Stigma Scale median scores differed in terms of maternal educational status ($p = 0.029$), the state of considering to change the profession ($p = 0.014$) and attitudes towards obese individuals ($p = 0.041$) and median scores were found to be higher in students whose mothers were literate, those who considered changing their profession and those who did not have prejudice against obese individuals. The primary aim of healthcare services is to provide equal and fair care to every individual who will improve their health and quality of life. However, the prejudices, attitudes and behaviours of healthcare professionals towards obese individuals lead to these individuals' being exposed to stigmatisation and discrimination. Prejudices and stigmatising attitudes begin to take shape in the family and the society individuals live in. The educational level of the family is one of the important criteria that are effective in shaping the attitudes and prejudices of students in the later stages of life. In addition to these, loving the nursing profession and choosing the profession willingly can make it easier for students to provide qualified care with an emphatic and integrative approach that is far from stigmatising and discriminatory attitudes to individuals they will provide care in their professional lives. When studies conducted on identifying the prejudices and stigmatising behaviours towards obese individuals were examined, it was found that studies reported healthcare professionals had high levels of obesity prejudice [20], [28], [33]. Having prejudiced and negative attitudes towards obesity increases stigmatising and discriminatory behaviours, decreases individuals' self-confidence and causes decreases in body image perceptions and individual control levels [11], [34].

In this study, no statistically significant correlation was found between students' BAOP and Stigma Scale total, discrimination and exclusion, labelling, psychological health and prejudice subscales. No studies were found in literature which directly examined the correlation between nursing students' beliefs about obese individuals and their stigmatisation tendencies. Although no correlation was found between the two scales in our study, it has been reported in various reviews and resources that individuals who think that only factors under the control of the individual, such as eating and dieting, are effective in the emergence of obesity show stigmatising and discriminatory attitudes more [28]. This situation causes obese individuals to be exposed to discrimination such as stigmatisation and prejudiced negative attitudes [35]. However, it is reported that obesity can also be caused by many reasons such as genetic and environmental factors, which are not under the control of the individual. Therefore, it is thought that it will be beneficial to eliminate prejudices, negative attitudes and beliefs about obesity in the society, to conduct more different studies on this and to plan the required training in parallel with study results in decreasing stigmatisation tendencies against obese individuals.

As a result, due to the increasing prevalence of obesity and it becoming an endemic health problem, obese individuals' needs for healthcare services will increase. For these individuals to receive optimal level of service, it is very important to provide awareness about obesity by providing nurses, the primary care givers of the future, with the required training and to prevent the negative attitudes and behaviours towards obese individuals in terms of providing sustainable qualified care.

5. Conclusion

In this study, the BAOP total score of the students was found as 23.4 ± 1.02 , while the Stigma Scale total score was found as 44.8 ± 11.7 . Discrimination and exclusion, labelling, psychological health and prejudice subscales' mean scores were found as 8.3 ± 3.6 , 11.6 ± 4.2 , 10.2 ± 3.6 and 14.6 ± 3.8 , respectively. No statistically significant correlation was found between students' BAOP and Stigma Scale total, discrimination and exclusion, labelling, psychological health and prejudice subscales.

In line with the results obtained in the study, the following can be concluded:

Prejudiced, negative and stereotyped thoughts of students who will provide healthcare services in the future towards obese individuals will have a negative effect on the service process in their

professional lives while working with obese patients. In this context, both theoretical and applied courses to be added in the university curriculum can be effective in decreasing negative and stigmatising attitudes towards obesity. In courses added in the curriculum, using educational visual elements and video films which emphasise that obesity does not only result from factors under the control of the individual, but also from many reasons such as genetic and environmental factors will contribute to changes in students' behaviours and attitudes. High negative attitudes, prejudice and stigmatising attitudes in the field of health and the problems caused by these attitudes make it compulsory to inform and train nursing students who will care for obese individuals in the future. For this reason, practices with students are very important in order to reduce prejudice, stigma and discriminatory attitudes that are common against obesity, to raise awareness in individuals and to prevent negative attitudes.

Conflicts of interest

We have no conflicts interests to disclose.

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