

## NURSING STUDENTS' ATTITUDES TOWARDS PEOPLE WITH ANOREXIA NERVOSA

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### Abstract

Anorexia nervosa is a complex psychiatric disorder characterized by a restriction of food and energy intake, and drastic weight loss. Persons with psychiatric disorders are more often victims of stigma than persons suffering from organic diseases, and stigmatization has also been registered among healthcare workers. This paper aims to ascertain whether people with anorexia nervosa are stigmatized among nursing students at University North.

The research was conducted by using a structured questioner in which the Social Distance Scale was used, and it contained additional demographic questions and questions about the stigma. The questioner was distributed to the students in the Google Docs form. 154 students participated in the research, 58% of which do not work in their field, while 42% work as nurses.

The analysis of the results showed that students working in healthcare show a statistically significant higher level of social distance towards people with anorexia nervosa than students who are not working in healthcare. Also, the analysis of the results showed that nursing students do not stigmatize persons with anorexia nervosa in formal relationships, however, stigmatization is visible in informal relationships.

The stigmatization of persons with anorexia nervosa from nursing students can affect their later approach to patients, the course the treatment, and the outcome of the treatment, and it can also represent a considerable obstacle in achieving recovery and improving the life quality of patients. Additional theoretical and practical contents have to be included into the education

of nursing students to completely eliminate the stigmatization of patients.

**Key words:** *Anorexia nervosa, Nursing students, Attitudes, Stigmatization.*

### 1. Introduction

The American Psychiatric Association (APA) defines eating disorders as severe and permanent changes in the diet pattern. Eating disorders include the three most common ones: anorexia nervosa, bulimia nervosa, obsessive compulsive overeating and other, less common disorders (APA, [1]). Anorexia nervosa (AN) is a complex psychiatric disorder whose main characteristic is the restriction of food, but it also includes unsettling thoughts and emotions which lead to high mortality rates recorded among people with this disorder (Frank *et al.*, [2]). The disorder is characterized by a permanent restriction of energy intake, which leads to the body weight of the person being significantly lower than expected for the given age and height (APA, [1]). The body mass index among people suffering from the disorder is usually lower than 18 kg/m<sup>2</sup>. The etiopathogenesis of eating disorders is a combination of genetic predispositions, the impact of family and the impact of the environment, and the treatment usually takes long, is complicated, and relapses are common (Treasure *et al.*, [3]). It was believed for a long time that the AN disorder happened exclusively among young women from western countries, but new studies show that the situation is changing and that this disorder is also becoming more and more common among men, people of an

advanced age, and in non-western countries (van Eeden *et al.*, [4]). Globally, around 1.4% of women and 0.2% of men get AN during their lifetime (Treasure *et al.*, [3]), although data from 2019 shows that 4% of people of the female gender and 0.3% of people of the male gender experience this eating disorder during their life (van Eeden *et al.*, [4]).

Generally, people with mental disorders are exposed to negative attitudes coming from their environment. The negative attitudes of the environment, but also medical professionals, can represent an obstacle in providing the patients with the help they need. A mostly negative attitude towards a person because of their characteristics which are different than what is considered to be normal in the sociocultural context is called stigma. A series of studies dealing with stigma and its impact on the treatment of the individual within the health care system has already been conducted, and it showed that one of the most commonly exposed diagnosis was the diagnosis of a mental disorder (Nyblade *et al.*, [5]). The stigmatization of people with mental disorders does not stop with the illness, but it further marks the patient, their family, the institution where they are getting the treatment, medical professional that take part in the treatment, and the medication used in the treatment (Sartorius, [6]). A research from 2006 conducted in Great Britain showed that people suffering from AN are more exposed to stigma coming from the general population than, for example, people suffering from asthma or schizophrenia (Stewart *et al.*, [7]). People suffering from AN experience double stigma: the willing stigma and the mental disorder stigma. The willing stigma refers to the perception that the behaviors connected to eating disorders are the patients' choice, while the mental disorder stigma implies that, because of the severity of their condition, people with this diagnosis significantly differ from other people (Thörel *et al.*, [8]). Stigma towards people suffering from mental disorders exists also among health care workers which can significantly hinder the treatment, the healing process, and it can undermine the quality of life of the patients (Oliveira *et al.*, [9]). Research conducted on the attitudes of medical students and students of similar degrees showed that they, already as students in a clinical environment, express stigmatizing attitudes and negative emotions towards people suffering from anorexia nervosa, which the authors attribute to insufficient education (Bannatyne and Stapleton, [10]). Furthermore, they also showed a higher level of stigma towards people with anorexia than towards people suffering from obesity or carcinoma (Zwickert and Rieger, [11]; Brelet *et al.*, [12]).

The goal of this research was to see whether the work environment affects the attitudes of nursing students towards people suffering from anorexia nervosa.

## 2. Materials and Methods

For the purposes of this paper, a cross-sectional, non-experimental, analytic study was conducted in March 2022. Altogether, 154 nursing students from the undergraduate and graduate program at University North participated in the research. The questionnaire used for the purposes of this research consisted of two parts. The first part of the of the questionnaire referred to the sociodemographic data of the participants: their age, sex, year of study, employment in the health care system, satisfaction with their own appearance, as well as with their dietary habits, and their body mass index (BMI). In the second part of the questionnaire, the Social Distance Scale (SDS) was used - a questionnaire containing seven questions valid for measuring stigma in which the participants express the acceptance of different kinds of contacts with people suffering from anorexia. The authorization of the author was asked, and given for this part of the questionnaire. The questionnaire containing altogether 14 questions was sent to the students of the nursing program through a group on a social network in the Google Forms form. The participation in the research was voluntary, and it was explained to the participants in the introductory part of the research that the data will be processed in groups and that their anonymity was guaranteed.

The collected data was converted from a Microsoft Excel table into a SPSS file and it was processed using descriptive and inferential statistic methods, and published as tables.

## 3. Results and Discussion

### 3.1 Results

154 students of the nursing program of University North in Varaždin participated in the research. From that, 18.2% (28) of them were at the first year of their undergraduate studies, 32.5% (50) students were at their second year, and 34.4% of them (53) were at the third year of their undergraduate nursing studies. Altogether 23 students from the graduate level participated in the research, with them thus making 14.9% of all participants. The distribution of participants according to sex showed that 69.5% (107) of the participants were female students, while 30.5% (47) were male students. Most of the participants were between 18 and 25 years of age, or 61.7% (95). As the nursing program of University North also allows part-time students that can be employed, the questionnaire also asked for information on how many of the students were employed in the health care system. Out of all the participants, 42% (64) of them were employed in the health care system, while 58% (90) were not employed in health care or not employed at all.

All of the participants were also asked to express their satisfaction with their own appearance and their dietary habits from 1 to 5 on the Likert scale, where 1 expresses the lowest level of satisfaction and 5 the highest, and to state their BMI. The participants that evaluated their own appearance with 4 or 5 show satisfaction with their appearance and body weight. Most of the participants answered with the number 4; 36.4% (56) participants, in second place are the participants who evaluated their appearance and body weight with the number 3, or 29.9% (46) of them. Only 3.9% (6) of the participants were not satisfied with their appearance and body weight. The next question in the first part of the questionnaire was whether the participants considered their dietary habits to be good, that is, whether they thought they had enough meals, a healthy diet, enough calorie intake and whether they drank enough fluids throughout the day. Most of the participants answered this question with the number 3, or 30.5% (40) of them. Furthermore, 24.7% (38) of people answered with the number 4, and 22.8% (35) of the participants answered with the number 2. Only 12.3% (19) of people answered with the number 5, that is, that they agree completely that their dietary habits are good, and the least amount of participants answered this question with 1, or 9.7% (15) of them. The last question was related to the body mass index, that is, the participants had to choose one of the offered answers according to their body mass index. Most of the participants, 55.2% (85) of them answered that their BMI was in the 18.5 - 24.9 kg/m<sup>2</sup> range, that is, that they have normal body weight. In second place were the participants that answered that their BMI is in the 25 - 29.9 kg/m<sup>2</sup> range, or 27.9% (43) of them. 9.2%

(14) of the participants have a BMI in the 30 - 34.9 kg/m<sup>2</sup> range. In fourth place are 7.2% (11) of the participants who answered that their BMI was less than 18.5 kg/m<sup>2</sup>, that is, they fall within the category of malnourished people. Only one person (0.6%) answered that their BMI was higher than 35 kg/m<sup>2</sup>, that is, they fall into the category of severely obese people.

The second part of the questionnaire was the Social Distance Scale (SDS) which comprised of 7 statements that the participants had to answer with the numbers from 0 to 3, with 0 meaning that the participants are definitely willing, 1 that they will probably be willing, 2 that they will probably not be willing, and 3 that they are definitely not willing. The statements and the answers are depicted in Table 1.

Most of the seven statements in Table 2 were acceptable to the examinees considering that the highest frequency can be found by the answer coded as 0 (definitely willing). The statements 4 and 5 are an exception here as they were most commonly accepted with the number 1 (probably willing).

### 3.2 Discussion

154 nursing students participated in the research on attitudes towards people with anorexia nervosa, and most of them were female students - 69.5%. Demographic data about the age of the participants and their year of study were also asked for, but since the distribution is not balanced, this data cannot be used in the statistic interpretation. It is interesting to note how many students are employed in the health care system - 42% of them, and how many of them

**Table 1. Distribution of assessments of acceptance of individual statements related to social distance (questions 8 - 14 in the questionnaire, n = 154)**

Variable (statement)	0 = definitely willing	1 = probably willing	2 = probably not willing	3 = definitely not willing	Total
1. How would you feel if you had to rent a room in your house to someone suffering from anorexia nervosa?	<b>64</b>	34	42	14	154
2. Would you be satisfied if someone with anorexia nervosa was your work colleague?	<b>67</b>	62	18	7	154
3. Would you be able to bear having a neighbour suffering from anorexia nervosa?	<b>85</b>	38	25	6	154
4. Would you be able to bear to have a person suffering from anorexia nervosa as a person babysitting your kids for a few hours?	27	<b>54</b>	47	26	154
5. Would you be able to bear your child marrying a person suffering from anorexia nervosa?	39	<b>49</b>	45	21	154
6. Would you be able to introduce a person suffering from anorexia nervosa to a person you are close to or a friend of yours?	<b>73</b>	44	19	18	154
7. Would you be able to recommend a person suffering from anorexia nervosa to your friend who is looking for new employees?	<b>58</b>	45	42	9	154

Legend: \*In every row of the table, the highest frequency is written in bold (mod).

are not employed at all or in the health care system - 58%, because a difference between their attitudes could indicate that the work environment influences the attitudes towards people suffering from anorexia nervosa. As the null hypothesis the research claimed: "A statistically significant difference in the social distance towards people suffering from anorexia nervosa between examinees that are employed in the health care system and those that are not does not exist." We were interested in whether such a difference exists in attitudes towards people suffering from anorexia nervosa between students that are employed in health care and those that are not. This hypothesis was tested with the help of two tests.

Using the chi-square test, whose purpose is to check whether there is a statistically significant connection between some nominal variables ( $p < 0.05$ ) or whether such a connection does not exist ( $p > 0.05$ ), we gained the results depicted in Tables 2 and 3.

The conclusion upon the conducted chi-square test is that there is a statistically significant connection of medium strength between the groups of participants according to social distance (smaller, moderate, and greater) and the fact whether the participant is employed or not employed in the health care system. The test results ( $\chi^2 = 14.600$ ,  $df = 2$ ,  $n = 154$ ,  $p = 0.001$ , and  $\eta = 0.31$ ) prove this. Looking at the contingency table (Table 4) it can be calculated that among the

participants which show a small social distance, 86% of them are not employed in the health care system, while 14% are employed in health care. Among the participants that express a greater social distance, 45% of them are not employed in the health care system, while 55% are employed in the health care system. Therefore, the participants that are not employed in health care show a smaller social distance towards AN, while the participants employed in the health care system show a greater social distance towards AN.

The second method used to check the veracity of the afore-mentioned hypothesis is the Mann-Whitney U test. The results of this test can be found in Table 4.

The social distance towards people suffering from AN expressed by the participants of different fields of work statistically differ significantly ( $p < 0.001$ ). The participants not employed in the health care system show a smaller social distance than the participants employed in health care ( $65.11 < 94.92$ ). This mentioned difference among them is of medium strength. Based on the results gained with the chi-square test and the results gained with the U-test, a final conclusion can be made with 99% certainty that the afore-mentioned null hypothesis about the non-existence of statistically significant differences is not accepted.

The basic limitation of this research was a relatively small turnout of participants, which is a common problem in

**Table 2. Results of the chi-square test**

N°	Variables in the contingency table	Format contingency tables	n	$\chi^2$	df	p
1.	Participant groups according to social distance Participants' field of work (non-health care, health care)	3 x 2	154	14.600	2	0.001***

Legend: \*Notes: n = the size of the sample in the test;  $\chi^2$  = chi-square value gained in the test; df = number of the degree of freedom; p = value of dismissal of the correct null hypothesis about the non-existent connection between the variables; \* statistical significance up to 5%; \*\* statistical significance up to 1%; \*\*\* statistical significance up to 0.1%.

**Table 3. The questioned participants according to the group of showed social distance towards people suffering from AN and according to their field of work (n = 154)**

Field of work	Expressed social distance			Total	Vertical percentage		
	Smaller	Moderate	Greater		Smaller	Moderate	Greater
Non-health care	30	42	18	90	86	53	45
Health care	5	37	22	64	14	47	55
Total	35	79	40	154	100	100	100

**Table 4. The results of the comparison of social distance towards AN of the group of participants not employed in health care in relation to the participants employed in the health care system (n = 154)**

Variable	Group of participants	$n_1$ $n_2$	Mid-range	Mann-Whitney U	z	p	$r^1$
Social distance	Non-health care Health care	90 64	65.11 94.92	1765	-4.098	< 0.001***	0.33

Legend: \* statistical significance up to 5%; \*\* statistical significance up to 1%; \*\*\* statistical significance up to 0.1%, <sup>1</sup> the size of the difference was calculated and interpreted according to Kohen ( $r = z / \sqrt{N}$ ) where  $r = 0.1$  small impact,  $r = 0.3$  is medium impact, while  $r = 0.5$  is big impact.

research conducted at a distance. Furthermore, it is not known in what degree the participants were in contact with people suffering from AN and at which post the students employed in health care were working. Because of the disproportion in the number of male and female participants, a comparison of their answers was not made, which would also make for interesting data. The advantage of this research is that it showed that there is a statistically significant difference in the attitudes towards AN between nursing students that are employed in health care and those that are not, which can be proof that the work environment influences the attitudes. Because of this, the research should be conducted on a bigger pattern and also ask for data concerning the department where the students are employed and how much contact they have with people suffering from AN.

Generally, stigma in the health care system causes non-treatment or insufficient treatment of a medical condition and results in a worse outcome of the treatment (Nyblade *et al.*, [5]). Research showed that health care workers express the same of more negative attitudes towards people with eating disorders than towards people with other diagnoses, and that they often consider the patients to be at fault for their own condition (Brelet *et al.*, [12]). The opinion that people suffering from AN bear responsibility for their own condition is not reserved exclusively for health care workers. It is also the most common stereotype about the stricken people in the general population, and the consequences of such an attitude are a lower self-esteem of the patient, the late discovery of the disorder, and postponed treatment (Kambanis, [13]). This is also noticeable in primary health care and it is mentioned that approximately 3 years pass between the first occurrence of symptoms and the beginning of treatment which can lead to serious health consequences for the patient (Komar and Kamer, [14]). Most of the research dealing with causes of stigma towards people with AN leans on research of the knowledge of the participants about this disorder. The conclusion of the Murat *et al.*, [15], research from 2020 was that students with less education have a higher degree of stigma towards people with mental disorders. Furthermore, research about the connection of knowledge and stigma towards AN by author Varnado-Sullivan *et al.*, [16], showed that the participants think that persons with AN have low self-esteem and that it is difficult and embarrassing for them to ask for help and treatment, but they believed that discipline is a positive characteristic of people with AN. Lupo *et al.*, [17], conducted a big research about the attitudes of nursing students in Italy about stigma around eating disorders and it turned out that male participants more often stigmatized the stricken people than female participants, and that most of the

participants believed that the media were mostly to blame for the occurrence of eating disorders. They also believed that the illness was mostly the responsibility of the patient. Granados-Gámez *et al.*, [18], indicated that theoretical teaching is not enough when increasing the knowledge of the students, but it is also essential that the students have contact with the patients, and they support this with a research which proved that students have different attitudes towards the patients regardless of their year of study, but that those who had contact or had friends with an eating disorder showed less stigma. This research showed that the work environment can be considered to be a factor which will influence the attitudes of nursing students towards people suffering from an eating disorder. The research on the attitudes of health care workers that work in somatic departments towards people with mental disorders showed that the stigma towards such people is a big problem in the health care system and that it can result with worse treatment, inappropriate communication and the discrimination of the patients (Sølvhøj *et al.*, [19]). Newer research indicate a change in the frequency of social distance towards people with AN. In the last three decades, a decline in the social distance and stigmatization can be noticed in various research, but it is still a big problem because of the increase of patients (Lien *et al.*, [20]). Furthermore, experts warn that a change in the research design is needed because eating disorders, including AN, break the stereotype that only young, skinny and wealthy girls are stricken by these disorders. More and more reports emerge about the increase of patients in the male population and people with medium or low incomes, and this part of the population will therefore also have to be researched (Halbeisen *et al.*, [21]).

#### 4. Conclusions

- This research showed on a small pattern that a statistically significant difference in attitudes towards people with AN exists between nursing students employed in health care and those not employed in health care.
- Students employed in health care showed more social distance towards people with AN and more stigmatization. This research showed that education of not only students, but also other health care personnel, about eating disorders is needed because negative attitudes are being transmitted to younger employees in the collective.
- Anti-stigma programs are conducted in the general population, but a bit less in health care institution because it is believed that health care workers have had the necessary education about them. However, this research showed that such an education is not sufficient and that anti-stigma programs should be purposefully conducted also in health care institutions.

## 5. References

- [1] American Psychiatric Association. *Eating Disorders: What are Eating Disorders?* <URL:https://www.psychiatry.org/patients-families/eating-disorders/what-are-eating-disorders. Accessed 17 July 2023.
- [2] Frank G. K. W., Shott M. E., and DeGuzman M. C. (2019). *Recent advances in understanding anorexia nervosa*. F1000 Research. <URL:https://doi.org/10.12688/f1000research.17789.1. Accessed 17 July 2023.
- [3] Treasure J., Hübel C., and Himmerich H. (2022). *The evolving epidemiology and differential etiopathogenesis of eating disorders: implications for prevention and treatment*. World Psychiatry, 21, (1), pp. 147-148.
- [4] van Eeden A. E., van Hoeken D., Hoek H. W. (2021). *Incidence, prevalence and mortality of anorexia nervosa and bulimia nervosa*. Current Opinion in Psychiatry, 34, (6), pp. 515-524.
- [5] Nyblade L., Stockton M. A., Giger K., Bond V., Maria L., Ekstrand M. L., Roger Mc Lean R., Ellen M. H., Mitchell E. M. H., Nelson L. R. E., Sapag J. C., Siraprasiri T., Turan J., Wouterset E. (2019). *Stigma in health facilities: why it matters and how we can change it*. BMC Medicine, 17, (25). <URL:https://doi.org/10.1186/s12916-019-1256-2. Accessed 17 July 2023.
- [6] Sartorius N. (2007). *Stigma and mental health*. The Lancet, 370, (9590), pp. 810-811.
- [7] Stewart M. C., Keel P. K., Schiavo R. S. (2006). *Stigmatization of Anorexia Nervosa*. International Journal of Eating Disorders, 39, (4), pp. 320-325.
- [8] Thörel N., Thörel E., Tuschen-Caffier B. (2022). *Effects of continuum and categorical beliefs on attitudes related to eating disorder stigma*. Stigma and Health. <URL:https://doi.org/10.1037/sah0000386. Accessed 23 July 2023.
- [9] Oliveira A. M., Machado D., Fonseca J. B., Palha F., Silva Moreira P., Sousa N., Cerqueira J. J., Morgado P. (2020). *Stigmatizing Attitudes Toward Patients With Psychiatric Disorders Among Medical Students and Professionals*. Frontiers in Psychiatry, 11, (326). DOI:10.3389/fpsy.2020.00326. Accessed 23 July 2023.
- [10] Bannatyne A. J., Stapleton P. B. (2016). *Attitudes towards anorexia nervosa: volitional stigma differences in a sample of pre-clinical medicine and psychology students*. Journal of Mental Health, 26, (5), pp. 442-448.
- [11] Zwickert K., Rieger E. (2013). *Stigmatizing attitudes towards individuals with anorexia nervosa: an investigation of attribution theory*. Journal of Eating Disorders, 1, (5). DOI:10.1186/2050-2974-1-5. Accessed 23 July 2023.
- [12] Brelet L., Flaudias V., Désert M., Guillaume S., Llorca P. M., Boirie Y. (2021). *Stigmatization toward People with Anorexia Nervosa, Bulimia Nervosa, and Binge Eating Disorder: A Scoping Review*. Nutrients, 13, (8), pp. 1-29.
- [13] Kambanis P. E. (2016). *Exploring the Stigmatization of Anorexia: A Focus on The Structural, Interpersonal, and Individual Levels of Stigma*. Student Works, 11. <URL:https://commons.clarku.edu/studentworks/11. Accessed 23 July 2023.
- [14] Komar E., Kameg B. (2020). *Anorexia nervosa: An overview for primary care providers*. The Nurse Practitioner, 45, (8), pp. 8-10.
- [15] Murat M., Öz A., Güner E., Köse S. (2020). *The Relationship between University Students' Beliefs toward Mental Illness and Stigmatization*. Florence Nightingale Journal of Nursing, 28, (2), pp. 194-204.
- [16] Varnado-Sullivan P. J., Parker C. C., Rohner A. (2020). *Stigmatization and knowledge of anorexia nervosa*. Eating and Weight Disorders - Studies on Anorexia, Bulimia and Obesity 25, pp. 601-608.
- [17] Lupo R., Zaminga M., Carriero M. C., Santoro P., Artioli G., Calabrò A., Ilari F., Benedetto A., Caslini M., Clerici M., Conte L., Carvello M. (2020). *Eating disorders and related stigma: Analysis among a population of Italian nursing students*. Acta Biomedica, 91, (12-S). DOI:10.23750/abm.v91i12-S.10797. Accessed 23 July 2023.
- [18] Granados-Gámez G., López Rodríguez M. D., Corral Granados A., Márquez-Hernández V. V. (2017). *Attitudes and Beliefs of Nursing Students Toward Mental Disorder: The Significance of Direct Experience With Patients*. Perspectives in Psychiatric Care, 53, (2), pp. 135-143.
- [19] Sølvhøj I. N., Kusier A. O., Pedersen P. V., Nielsen M. B. D. (2021). *Somatic health care professionals' stigmatization of patients with mental disorder: A scoping review*. BMC Psychiatry, 21, (1). DOI:10.1186/s12888-021-03415-8. Accessed 23 July 2023.
- [20] Lien Y. Y., Lin H. S., Tsai C. H., Lien Y. J., Wu T. T. (2019). *Changes in Attitudes toward Mental Illness in Healthcare Professionals and Students*. International Journal of Environmental Research and Public Health, 16, (23). DOI:10.3390/ijerph16234655. Accessed 23 July 2023.
- [21] Halbeisen G., Brandt G., Paslakis G. (2022). *A Plea for Diversity in Eating Disorders Research*. Frontiers in Psychiatry, 13. DOI:10.3389/fpsy.2022.820043. Accessed 23 July 2023.