






Distorted self-perception and dissatisfaction with body image among nursing students

Autopercepção distorcida e insatisfação com a imagem corporal entre estudantes de enfermagem

Autopercepción distorsionada e insatisfacción con la imagen corporal entre estudiantes de enfermería

How to cite this article:

Duarte LS, Koba Chinen MN, Fujimori E. Distorted self-perception and dissatisfaction with body image among nursing students. Rev Esc Enferm USP. 2021;55:e03665. doi: <https://doi.org/10.1590/S1980-220X2019042903665>

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ABSTRACT

Objective: To evaluate distorted self-perception and dissatisfaction with body image among nursing students. **Method:** Cross-sectional study with students from a public university. Self-perception and satisfaction with body image were assessed using the Figure Rating Scale and the Body Shape Questionnaire (BSQ). Body Mass Index was calculated with self-reported weight and height. Analysis was processed in Stata 15.0 with a significance level of 5%. **Results:** A total of 93 students participated in the study. Results showed 87.1% of distorted self-perception, with a greater proportion of students who overestimated their body size (68.8%); 89.2% of students were dissatisfied with their body image according to the Figure Rating Scale, and 55.9% according to the BSQ. Dissatisfaction assessed by the BSQ was associated with biological sex, nutritional status, diets and bullying. **Conclusion:** The results indicate the need to address the theme in the training of nurses, to help them accept their own bodies and to enable them to act effectively in their professional practice.

DESCRIPTORS

Students, Nursing; Body Image; Self Concept; Education, Nursing.

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Received: 01/09/2020
Approved: 05/15/2020

INTRODUCTION

In the midst of a global pandemic of overweight and obesity that accounts for millions of deaths worldwide⁽¹⁾, the pressure for a perfect body and appearance increases, demanding progressively smaller anthropometric measurements. Thus, the perfect body portrayed in the media, particularly on television and on the internet, is desired by people, especially adolescents and young adults⁽²⁾.

Body image is a person's perception of their own body, which encompasses characteristics such as size, structure, shape and contour and the feelings associated with each of these characteristics. Body image can be divided into two dimensions: the perceptual dimension, which refers to self-perception regarding size, shape and body weight; and the attitudinal dimension, which involves affective (feelings related to appearance), cognitive (thoughts or beliefs about the body), behavioral (actions and behaviors related to the body) and satisfaction (appreciation of oneself in relation to their body) components. It is influenced by internal factors, such as gender and age, and external factors, such as the perception of family members and friends, cultural values and the media. Thus, body image is socially determined and influenced by social factors that linger throughout life. Therefore, it is not fixed or static, but changes depending on personal experiences⁽³⁾.

The evaluation of the body image of university students has been the subject of national and international studies, as the biological changes and the psychological and social instability common in late adolescence and early adulthood add to the demands of university life⁽⁴⁻⁵⁾. This context, combined with the thin ideal and the body standards conveyed in the media and in social network makes this group vulnerable to distorted self-perception and dissatisfaction with body image⁽⁶⁻⁸⁾. A literature review showed a high level of dissatisfaction with body image among university students of both genders, with values varying from 5% to 87% in national and international studies. Dissatisfaction with body image was associated with exposure to media and social networks, the female gender and low self-esteem⁽⁴⁾.

Distorted self-perception and dissatisfaction with body image may lead to risky health behaviors, such as restricted diets, prolonged fasts and induced vomiting, which indicate a tendency towards eating disorders^(2,5,9-11).

Although there was no significant difference in the frequency of body dissatisfaction between students from different health courses⁽¹²⁾, it is important to assess distorted self-perception and dissatisfaction with body image among nursing students, as they will be professionals responsible for health promotion and, therefore, will have to deal with social expectations and criticism about their weight and their physical form.

METHOD

STUDY DESIGN

This is a quantitative, cross-sectional study.

POPULATION

The study was conducted with nursing students from a public university in the city of São Paulo. At this public university, the nursing undergraduate course is an all-day course that lasts four years and has 80 annual enrollments. All students from the 1st to the 4th year, which accounted for a total of 305 students in 2018-2019, were invited. A total of 93 students participated in the research.

The inclusion criterion was being regularly enrolled, and the exclusion criterion was being pregnant at the time of the interview.

DATA COLLECTION

Data was collected from November 2018 to April 2019. The invitation to participate in the study was sent in an email that contained the Informed Consent Form and the link to access the electronic self-administered questionnaire elaborated in the software REDCap-Research Eletronic Data Capture (<https://redcap.hc.fm.usp.br>). The questionnaire could be filled on a cell phone, tablet, or computer. The responses gathered were sent directly to a database, where common typing errors were corrected. The questionnaire included information on the following aspects of the participants: biological sex and gender identity; age; who they live with; self-reported weight and height; physical activity; if they follow a diet; if they talk to parents/family members about body image; if they seek information about body image on social networks; if so, on which media/social networks; influence of media/social networks on self-perception and satisfaction; experience of bullying due to body image. The questionnaire also included 34 questions from the Body Shape Questionnaire (BSQ) translated and validated in Portuguese⁽¹³⁾, which assesses satisfaction with body image with six answer options: 1) never, 2) rarely, 3) sometimes, 4) often, 5) very often, 6) always.

Self-image and satisfaction with body image were also assessed with the Brazilian version of the Figure Rating Scale⁽¹⁴⁾, which was applied in person by the researchers, in the university classrooms, during intervals and free periods. This scale evaluates the self-perception of the current nutritional status and the satisfaction with body image (desired body size) using 15 figures for each sex. Each silhouette corresponds to a Body Mass Index (BMI), from 12.5 to 47.5 kg/m², with intervals of 2.5kg/m². The figures are presented on individual laminated cards, arranged in ascending order according to the BMI. The students answered two questions: "Which card represents the silhouette that most closely matches your body right now?" (current body size); and "Which card represents the silhouette you would like to have?" (desired body size).

Nutritional status was assessed using the BMI, calculated based on self-reported weight and height data. The BMI scores recommended for adults were used to classify the nutritional status of students aged 20 years or older: underweight=BMI<18.5kg/m²; normal weight=BMI≥18.5 and <25kg/m²; overweight=BMI≥25 and <30kg/m²; obesity=BMI≥30kg/m²⁽¹⁵⁾. For students under 20 years old, weight and height data were entered into the software Anthro Plus and the nutritional

status was classified as: underweight=Percentile<15; normal weight=Percentile≥15 and ≤85; overweight=Percentile>85 and ≤97; obesity=Percentile>97⁽¹⁶⁾.

To evaluate the accuracy of self-perception of body image, the figure chosen (BMI chosen) by the students as the one that most represented their silhouette at that moment was compared with the figure that actually represented their current calculated BMI. If those two figures were the same, the student was classified as having an accurate self-image. If the figure chosen as the one that most represented their silhouette was associated with a lower BMI than the figure corresponding to his current calculated BMI, it was considered that the student underestimated their body size. When the figure chosen was superior to the figure that represented his current calculated BMI, it was considered that the student overestimated his body size⁽¹⁴⁾.

To evaluate body image satisfaction, the figure selected as the desired BMI was compared to the figure of the chosen BMI. The student was classified as satisfied if the desired silhouette was the same as their chosen BMI. If the desired silhouette was inferior, the student was classified as dissatisfied, with a desire to decrease body weight. When the desired silhouette was higher, the student was classified as dissatisfied, with a desire to increase body weight⁽¹⁴⁾.

To evaluate satisfaction with body image with the BSQ, the number corresponding to the answer option was computed as the score for the question. Then, satisfaction with body image was classified as: satisfied (0-80 points), mild concern (81-110 points), moderate concern (111-140 points), severe concern (141-204 points). In the present study, this variable was dichotomized into satisfied (0-110 points) and dissatisfied (≥111 points)⁽¹³⁾.

DATA ANALYSIS AND TREATMENT

The analysis was processed using the software Stata version 15.0. Descriptive analysis was conducted, obtaining frequencies (absolute and relative), means and standard deviation. Then, a univariate analysis using the chi-square test and the Fischer's Exact test was carried out to verify the association between dependent variables (self-perception and satisfaction with body image) and independent variables. The level of significance was set at 5%.

ETHICAL ASPECTS

The project was approved by the Research Ethics Committee, under Protocol No. 2.712.852, on July 14, 2018. The Informed Consent Form was sent along with the electronic questionnaire, which could only be accessed by those who agreed to participate in the study, following the recommendations of Resolution no. 466/12 of the National Health Council.

RESULTS

A total of 93 students participated in study. The mean age was 21.6 years (SD 2.2); the majority of the participants were female (89.3%), had normal body weight (64.5%), lived with their family (80.6%), did not follow a diet (78.5%), obtained information about body image on Instagram (71.0%) and reported the influence of the media on self-perception and satisfaction with body image (91.4%). Half of the students mentioned having experienced bullying due to body image (Table 1). Only one student reported a gender identity different from their biological sex (data not shown in table).

Table 1 – Characteristics of nursing students – São Paulo, SP, Brazil, 2019.

Variables	n	%
Biological sex		
Male	10	10.7
Female	83	89.3
Age group (in years) Mean age (standard deviation)		
< 20	9	9.7
20 24	75	80.6
≥ 25	9	9.7
Who they live with		
Family	75	80.6
Student shared house, boarding house, alone	18	19.4
Self-reported nutritional status		
Underweight	6	6.4
Normal weight	60	64.5
Overweight	17	18.3
Obesity	10	10.8
Physical activity (in minutes)		
< 30	64	68.2
≥ 30	29	31.2

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Variables	n	%
Follows a diet		
No	73	78.5
Yes	20	21.5
Talks to parents/family members about body image		
No	38	51.2
Yes	55	48.8
Seeks information about body image on social media		
No	12	12.9
Yes	81	87.1
Instagram	66	71.0
YouTube	56	60.2
Facebook	48	51.6
Television	24	25.8
WhatsApp	20	21.5
Pinterest	11	11.8
Others (Twitter, Radio, Snapchat)	11	11.8
Influence of media/social networks on self-perception and satisfaction		
No	8	8.6
Yes	85	91.4
Experienced bullying due to body image		
No	45	48.4
Yes	48	51.6

Note: (N=93).

Table 2 presents data on self-perception and satisfaction with body image, evaluated using the Figure Rating Scale. Satisfaction with body image was also evaluated with the BSQ. There was a high percentage of distorted self-perception (87.1%), with a higher proportion of students

who overestimated their body weight. There was also a high percentage of dissatisfaction with body image, according to the Figure Rating Scale (89.2%). Most participants wanted to decrease body weight. The percentage of dissatisfaction detected with the BSQ was lower (55.9%).

Table 2 – Distorted self-perception and dissatisfaction with body image according to the Figure Rating Scale and the BSQ – São Paulo, SP, Brazil, 2019.

Variables	n	%
Distorted self-perception (Figure Rating Scale)		
No	12	12.9
Yes	81	87.1
Overestimate body size	64	68.8
Underestimate body size	17	18.3
Dissatisfaction with body image (Figure Rating Scale)		
No	10	10.8
Yes	83	89.2
Wants to decrease body size	59	63.4
Wants to increase body size	24	25.8
Dissatisfaction with body image (BSQ)		
No	41	44.1
Yes	52	55.9
Mild concern	16	17.2
Moderate concern	20	21.5
Severe concern	16	17.2

Note: (N=93).

Table 3 presents a comparison between distorted self-perception and dissatisfaction with body image as assessed by the Figure Rating Scale. It shows that, even among students who did not have a distorted self-image, three quarters were dissatisfied with their body image. However, among those with distorted self-perception, the proportion

of dissatisfaction was higher: 82.4% and 93.8% among those who underestimated and overestimated body size, respectively. All those who underestimated their body size wished to increase body weight and the vast majority of those who overestimated their body size wanted to decrease body weight (91.7%).

Table 3 – Comparison between distorted self-image and dissatisfaction with body image as assessed by the Figure Rating Scale – São Paulo, SP, Brazil, 2019.

Dissatisfaction with body image	Distorted self-perception					
	No		Yes – underestimates body size		Yes – overestimates body size	
	n	%	n	%	n	%
No	3	25.0	3	17.6	4	6.4
Yes	9	75.0	14	82.4	60	93.8
Wants to increase body weight	5	55.6	14	100.0	5	8.3
Wants to decrease body weight	4	44.4	0	0.0	55	91.7

Note: (N=93).

The analysis of the association between distorted self-perception and dissatisfaction with body image and the independent variables showed that dissatisfaction assessed

with the BSQ was associated with biological sex ($p=0.004$), nutritional status ($p=0.001$), following a diet ($p=0.003$) and experienced bullying due to body image ($p=0.031$) (Table 4).

Table 4 – Association between distorted self-perception and dissatisfaction with body image and independent variables – São Paulo, SP, Brazil, 2019.

Variables	Distorted self-perception (Figure Rating Scale)				Dissatisfaction with body image (Figure Rating Scale)				Dissatisfaction with body image (BSQ)			
	No		Yes		No		Yes		No		Yes	
	n	%	n	%	n	%	n	%	n	%	n	%
Identification												
Biological sex	0.234*				0.145*				0.004*			
Female	9	10.8	74	89.2	7	8.4	76	91.6	32	38.6	51	61.4
Male	3	30.0	7	70.0	3	30.0	7	70.0	9	90.0	1	10.0
Age (in years)	0.655*				1.000*				1.000*			
p-value												
< 20	2	22.2	7	77.8	1	11.1	8	88.9	4	44.4	5	55.6
≥ 20	10	11.9	74	88.1	9	10.7	75	89.3	37	44.0	47	56.0
Individual variables and health behaviors												
Self-reported nutritional status	0.508				0.532				<0.001			
p-value												
Underweight	1	16.7	5	83.3	1	16.7	5	83.3	5	83.3	1	16.7
Normal weight	9	15.0	51	85.0	7	11.7	53	88.3	32	53.3	28	46.7
Overweight and Obesity	2	7.4	25	92.6	2	7.4	25	92.6	4	14.8	23	85.2
Physical activity	0.898*				0.235*				0.210			
p-value												
No	3	10.3	26	89.7	1	3.4	28	96.6	10	34.5	19	65.5
Yes	9	14.1	55	85.9	9	14.1	55	85.9	31	48.4	33	51.6
Follows a diet	0.430*								0.003			
p-value												
No	11	15.1	62	84.9	10	13.7	63	86.3	38	52.0	35	48.0
Yes	1	5.0	19	95.0	0	0.0	20	100.0	3	15.0	17	85.0

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Variables	Distorted self-perception (Figure Rating Scale)				Dissatisfaction with body image (Figure Rating Scale)				Dissatisfaction with body image (BSQ)			
	No		Yes		No		Yes		No		Yes	
	n	%	n	%	n	%	n	%	n	%	n	%
Information on Body Image												
Influence of media/social networks on self-perception and satisfaction												
p-value	1.000*				0.076*				0.142*			
No	1	12.5	7	87.5	3	37.5	5	62.5	6	75.0	2	25.0
Yes	11	12.9	74	87.1	7	8.3	78	91.8	35	41.2	50	58.8
Experienced bullying due to body image												
p-value	0.460				0.071*				0.031			
No	7	15.6	38	84.4	8	17.8	37	82.2	25	55.6	20	44.4
Yes	5	10.4	43	89.6	2	4.2	46	95.3	16	33.3	32	66.7

* Fisher's exact test

Note: (N=93).

DISCUSSION

The present study showed a high percentage of students with distorted self-perception that overestimated their body size and a high percentage of students that were dissatisfied with their body image and wished to reduce their weight. In the context studied, these results are concerning, as the participants are future nurses, who will have a fundamental role in health promotion. When entering a multi-professional primary care team, these professionals will be responsible for taking anthropometric measurements, assessing and monitoring nutrition, promoting healthy eating habits and encouraging physical activity to prevent obesity⁽¹⁷⁾.

Dissatisfaction with body image assessed with the BSQ was also high, but to a lesser extent. Discrepancies between the percentages of dissatisfaction with body image obtained with the Figure Rating Scale and with the BSQ were also observed in a literature review on dissatisfaction with body image among university students⁽⁴⁾. Likewise, a study carried out with young people between 18 and 25 years of age who did gymnastics found a similar discrepancy: the BSQ identified 48.2% of dissatisfaction with their body image, while the Figure Rating Scale detected 77.8%⁽¹⁸⁾. This difference can be explained by the components evaluated in each of the instruments: the BSQ evaluates the four components of the attitudinal dimension of the body image (affective, cognitive, behavioral and satisfaction), while the Figure Rating Scale evaluates only the satisfaction component⁽³⁾.

Despite of the lower percentage of students dissatisfied with body image according to the BSQ, the number found was still higher than in other national studies: in a federal university in the state of Minas Gerais, 15% of students from different undergraduate courses had some degree of dissatisfaction with body image⁽¹⁹⁾; in a private university center in the state of Ceará, a percentage of 47% of dissatisfaction with body image among university students was identified⁽²⁰⁾. The differences in the percentages found confirm the high

rates of dissatisfaction with body image found in national and international studies^(4,6,21).

It is necessary to consider that, in the present study, the Figure Rating Scale used was constructed and validated for the Brazilian population⁽¹⁴⁾, which makes it difficult to compare the results obtained with other studies that, for example, use Stunkard's figure rating scale, which is not validated for our population^(8,22-23).

The high prevalence of distorted self-perception and dissatisfaction with desire to decrease body weight found in the present study could be partly explained by the fact that nursing is a predominantly female profession. As in this study, the association between dissatisfaction with body image assessed by the BSQ and biological sex was also observed in the study that validated the BSQ test in university students⁽¹⁴⁾.

Although two thirds of the students had normal weight, distorted self-perception and dissatisfaction assessed by the Figure Rating Scale affected almost the entire sample, with a greater proportion of participants that overestimated their body size and wanted to reduce their weight. The sample of the study did not allow to confirm an association between these variables; however, the results suggest that self-perception influences satisfaction with body image, since most students who overestimated their body size were dissatisfied and wanted to decrease their weight. However, even in a sample with 70% of students with normal weight, this association was found, as there was a significantly higher proportion of dissatisfaction with body image among students with distorted self-perception⁽²⁴⁾.

Compared to the national data from the last Surveillance System for Risk and Protective Factors for Chronic Diseases by Telephone Survey (Vigitel) 2018⁽²⁵⁾, the nursing students evaluated here had a similar proportion of overweight (BMI \geq 25.0kg/m²), but higher rates of obesity (BMI \geq 30.0kg/m²). However, it is the feeling of being overweight that stands out as an important determinant for women to feel dissatisfied with their body and appearance, as dissatisfaction also occurs among women with normal weight and

even among those with low weight⁽⁸⁾. In this context, it is worth noting that, although it is an important health indicator, nutritional status represents a physical characteristic, whereas body image encompasses social and cultural aspects of society, as well as the individual's personal experiences and personality⁽³⁾. Thus, the evaluation of body image in different age groups would be an important aspect to be addressed in undergraduate courses in the health area, including nursing courses, so that it can be incorporated into professional practice.

A study with young adult students in the Northeast Region of Brazil found that students with overweight/obesity were less likely to have a positive self-perceived health, suggesting that young people recognize that being overweight can negatively affect their health⁽²⁶⁾. The complex construction of self-image and satisfaction with body image requires investigations that associate these constructs with self-perceived health, which can contribute to the effectiveness of health promotion interventions.

The association between dissatisfaction with body image identified by the BSQ and diets was also found in another study⁽⁵⁾, in which the authors explained that following a diet is a common action among university students who wish to fit the perfect body standards that are socially and culturally imposed, leading them to take unhealthy and even extreme measures to reach the ideal body. A national study showed that even adolescents who considered themselves 'fat' took extreme measures to lose weight, such as laxatives, self-induced vomiting and medication or formulas for weight loss⁽²⁷⁾.

Although no association was found between the influence of media/social networks and distorted self-image or dissatisfaction with body image, the literature points out that media and social networks are responsible for the dissemination of information that impose the values, aesthetic norms and standards, especially for the young female population, who are pressured to lose weight, change their appearance and look more attractive^(24,28).

Regarding the association found between dissatisfaction with body image and experiences of bullying, it could be inferred that a person that is dissatisfied with their body image does not fit beauty standards, which makes them more likely to become bullying victims, which, in turn, increases dissatisfaction with body image. A study with 8,050 adolescents from the Health Behavior in School-aged Children found that adolescents dissatisfied with their body size, due

to being overweight, were more likely to become passive or reactive victims of bullying⁽²⁹⁾.

It is worth noting that university students from different areas of knowledge are commonly studied, as the university is easy to access and because its students are individuals with similar characteristics, but with different experiences and backgrounds⁽⁴⁾, which could be a limitation of this study. However, the results obtained are relevant, especially the high percentage of nursing students with distorted self-perception and dissatisfaction with body image, which is a sign of problems in the health student profile. A study in the United Kingdom found that nurses do not always practice what they preach, as the knowledge about healthy behaviors acquired to promote population health is not transferred to their own life⁽³⁰⁾. Thus, in addition to addressing this theme in the training of nurses, interventions that address self-acceptance regardless of physical appearance are necessary, so that healthy lifestyle behaviors can be applied by students in their own life and in professional practice. In this context, nurses should act as facilitators of discussions about physical appearance and body image, with approaches that favor self-esteem and the search for health⁽⁷⁾.

Despite the small sample, the assessment of self-perception and satisfaction with body image using two instruments and the use of an electronic self-administered questionnaire that guaranteed the privacy of the students who were answering intimate questions about body image are the strengths of the present study. However, the limitations inherent in cross-sectional studies should be considered, mainly regarding the establishment of causal relationships between distorted self-image and dissatisfaction with body size.

CONCLUSION

The high prevalence of distorted self-perception and dissatisfaction with body image is concerning, especially being among future nursing professionals, who will be responsible not only for taking anthropometric measurements, but also for monitoring eating habits and nutrition of the population throughout their life cycle, as nurses work in prenatal care, puerperium, childcare and adolescent, adult and older adult health. Thus, despite the small sample, the results signal the need to address the issue in the training of nurses, to help them accept their own bodies and to enable them to act effectively in professional practice.

RESUMO

Objetivo: Avaliar autopercepção distorcida e insatisfação com a imagem corporal em estudantes de enfermagem. **Método:** Estudo transversal com estudantes de universidade pública. A autopercepção e a satisfação com a imagem corporal foram avaliadas com Escala de Silhuetas e Body Shape Questionnaire (BSQ). Calculou-se Índice de Massa Corporal com peso e altura referidos. Análises foram processadas no Stata 15.0, com nível de significância de 5%. **Resultados:** Participaram 93 estudantes. Constatou-se um percentual de 87,1% de autopercepção distorcida, com maior proporção daqueles que superestimavam o tamanho corporal (68,8%). Estavam insatisfeitos com a imagem corporal 89,2% dos estudantes segundo a Escala de Silhuetas, e 55,9% segundo o BSQ. Insatisfação avaliada pelo BSQ associou-se com sexo biológico, estado nutricional, prática de regime alimentar e *bullying*. **Conclusão:** Os resultados sinalizam a necessidade de se abordar o tema na formação dos enfermeiros, tanto para ajudá-los na aceitação do próprio corpo, como também para que possam atuar de forma efetiva na prática profissional.

DESCRIPTORIOS

Estudantes de Enfermagem; Imagem Corporal; Autoimagem; Educação em Enfermagem.

RESUMEN

Objetivo: Evaluar la autopercepción distorsionada y la insatisfacción con su imagen corporal en estudiantes de enfermería. **Método:** Estudio transversal realizado entre estudiantes de una universidad pública. La autopercepción y la satisfacción con la imagen corporal se evaluaron con la Escala de Siluetas y el *Body Shape Questionnaire* (BSQ). El índice de masa corporal se calculó con el peso y la altura declarados. Los análisis se procesaron en el Stata 15.0, con nivel de significación del 5%. **Resultados:** Participaron 93 estudiantes, de los cuales el 87,1% tenía una autopercepción distorsionada, con proporción más alta en aquellos que sobrestimaban el tamaño corporal (68,8%). El 89,2% de los estudiantes estaba insatisfecho con su imagen corporal según la Escala de Siluetas y el 55,9%, según la BSQ. La insatisfacción evaluada por el BSQ se asoció al sexo biológico, estado nutricional, dieta y *bullying*. **Conclusión:** Los resultados muestran la necesidad de abordar este tema en la formación de los enfermeros, para ayudarlos en la aceptación de su propio cuerpo, y que puedan actuar de forma efectiva en la práctica profesional.

DESCRITORES

Estudiantes de Enfermería; Imagen Corporal; Autoimagen; Educación en Enfermería.

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