

Assessment of Empathy, Perception of Nursing Care, and Attitudes Toward People with Disabilities Among Nursing Students

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ABSTRACT

Introduction: The attitudes of healthcare professionals, and particularly of nurses, toward people with disabilities have a significant impact on the quality of care. Empathy, namely the ability to understand patients' emotions and needs, is critical for effective care. In addition, the nursing process, which includes assessment, diagnosis, and the implementation of individualized therapeutic plans, ensures continuous and high-quality care for people with disabilities.

Aim: The aim of the present study was to assess empathy, attitudes toward people with disabilities, and perceptions of nursing care among nursing students. Possible correlations among these variables were also explored.

Methodology: A quantitative research approach was followed through the online completion of four questionnaires using the Google Forms platform. The sample consisted of 122 nursing students. Statistical processing was performed with IBM SPSS v.26, after the data had first been appropriately coded and transformed to ensure compatibility with the software.

Results: The study showed that nursing students present moderate to high levels of empathy. A positive attitude toward people with disabilities was also identified, while their perception of nursing care was oriented more toward technical and communication-related characteristics. Empathy is positively associated with attitudes toward people with disabilities, and perceptions of nursing care are partly negatively correlated with these attitudes. In addition, empathy is partly negatively correlated with students' perceptions of nursing care. Finally, case-specific correlations were observed among empathy, attitudes, and perceptions.

Conclusions: The study demonstrated moderate to high empathy, positive attitudes toward people with disabilities, and a technical approach to perceptions of nursing care. Selective correlations were observed among empathy, attitudes, and perceptions, with some relationships being negative and others positive.

Keywords: Empathy, Nursing care, People with disabilities, Student attitudes, Nursing education

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INTRODUCTION

According to the World Health Organization (WHO), more than one billion people worldwide have some form of disability. This proportion is expected to increase over time because of population ageing and the impact of non-communicable diseases. It is also estimated that every person will experience a permanent or temporary disability at some point (WHO, 2021). These difficulties are described as one of the main challenges faced by people with disabilities in accessing basic health services (Geckil et al., 2017). Nurses and physicians constitute the largest professional groups in the health sector (Lo et al., 2017; Ika et al., 2019). The literature recognizes that negative attitudes among healthcare personnel can directly affect the quality of interaction with people with disabilities (Uysal et al., 2014; Med et al., 2013). Specifically, the negative attitudes of health professionals toward people with disabilities play a decisive role in inequalities in access to and quality of health services (Desroches, 2020). In the existing literature, nurses' and nursing students' attitudes toward people with disabilities are often at moderately positive levels (Oliva Ruiz et al., 2020; Ozdemir & Karadag, 2021). This situation indicates the need for further research aimed at improving nurses' attitudes toward people with disabilities (Geckil et al., 2017).

Another important characteristic of care for people with disabilities is the expression of empathy (Jones & Miller, 2018). Empathy "involves not only understanding the patient's situation and emotions, but also the ability to communicate that understanding" (Cecchetti et al., 2021). Empathy is a fundamental element for many health professionals. In the context of patient care, empathy is the ability to understand and convey each patient's subjective experiences and views (Eklund et al., 2019). In addition, empathy is necessary for assessing patients' actual needs and providing individualized care, thereby ensuring holistic and high-quality care (Moudatsou et al., 2020; Treglia, 2020). Empathy among nursing students is influenced by factors such as interpersonal relationships, gender, self-efficacy, self-esteem, and satisfaction with the choice of field of study. Interpersonal relationships are the strongest predictive factor (Kim, 2018). Finkelman and Kenner (2013) emphasize that the caring relationship, attention to human responses, integration of assessment data, application of scientific evidence, advancement of professional nursing knowledge, promotion of social justice, and assurance of safe and evidence-based practice are characteristics of professional nursing. Professional, personal, scientific, aesthetic, and ethical human interactions are important in nursing, where the patient must be at the center of practice (Kandula, 2019). Patient-centered care includes several aspects, such as respect for patients' values and priorities, provision of assistance and emotional support, patient comfort, patient education, continuity and coherence of healthcare services, respect for patients, their family members and friends, their participation in the therapeutic process, and, ultimately, easy access to healthcare (Boer et al., 2013; Cleary, 2016; Rathert et al., 2013).

The nursing process is a systematic problem-solving approach used in nursing care and includes five stages: assessment, diagnosis, planning, implementation, and evaluation (Aserati et al., 2014). This process forms the basis of the scientific approach to nursing care and is expected to guide nursing practice in providing care to patients (Tadzong-Awasum & Dufashwenayesu, 2021; Osman et al., 2021). In clinical practice, the nursing process must be implemented deliberately through critical thinking, clinical reasoning, and decision-making, with the aim of meeting patients' healthcare needs (Keshk et al., 2018; Lambie et al., 2015). Through the nursing process, nursing care is standardized, thereby improving communication and continuity of care (Adraro & Mengistu, 2020; Agyeman-Yeboah et al., 2017; Akhtar et al., 2018). When implemented effectively, the nursing process can enable the provision of holistic and high-quality nursing care, improving patient outcomes (Shewangizaw & Mersha, 2015; Shiferaw et al., 2020; Mondragón-Hernández & Sosa-Rosas, 2019; Adraro & Mengistu, 2020).

In addition, the nursing process provides a framework for critical thinking, problem solving, and knowledge development (Hagos et al., 2014; Akhtar et al., 2018). The aim of the present study was to assess empathy, attitudes toward people with disabilities, and perceptions of nursing care among nursing students.

The research questions include the following: What is the level of empathy among nursing students? What are nursing students' perceptions of nursing care? What are nursing students' attitudes toward people with disabilities? How is students' empathy correlated with their attitudes toward people with disabilities? Is there a correlation between students' perceptions of nursing care and their attitudes toward people with disabilities? How is students' empathy related to their perception of nursing care? Is there a correlation among empathy, attitudes toward people with disabilities, and perceptions of nursing care?

METHODOLOGY

Study design

For the present study, the quantitative method was selected, as it uses statistical techniques to analyze the large volume of data collected during the research process, with the aim of investigating relationships among different variables. Quantitative research focuses on the scientific examination of phenomena through statistical analyses and numerical variables, using tools such as questionnaires. The questionnaire format was selected as the most appropriate tool for conducting the study. Specifically, the four questionnaires selected for the present study were incorporated into the Google Forms electronic platform to facilitate their broad and immediate distribution. The shared link for completing the questionnaire was sent to public groups of nursing students via the internet and social networking media.

Regarding the sampling method, random criterion-based sampling was followed, since the sample was selected on the basis of availability and relevance to the research

subject (Creswell, 2014). The sample (N=122) consisted of randomly selected students who met specific inclusion criteria (active enrollment in a nursing department in Greece) and were able to respond to the online survey.

Measurement Tools

Four questionnaires were used for the present study. The demographic questionnaire included variables such as gender, age, year of study, professional involvement in the healthcare sector, participation in volunteering, contact with people with disabilities, type of institution (public/private), area of residence, and nationality, with the aim of analyzing the characteristics of the sample.

The MAS (Multidimensional Attitudes Scale) (Findler et al., 2007) measures attitudes toward disability across three dimensions (affective, cognitive, and behavioral) through a social scenario and 34 items on a five-point Likert scale. Its Greek version shows high reliability (Cronbach's alpha: 0.83-0.92) and can be used in education to detect attitudes and prejudices (Govina et al., 2020).

The NDI-35 (Nursing Dimensions Inventory) assesses perceptions of nursing care. It consists of practice-related statements organized into seven factors (e.g., Technical, Intimacy, Important/Unimportant aspects of care), which are rated on a five-point scale. Its Greek version shows satisfactory reliability (Cronbach's alpha=0.85, test-retest reliability $r=0.82$) and is used to study students' and nurses' attitudes toward care (Kotrotsiou et al., 2014).

The Toronto Empathy Questionnaire (TEQ) (Spreng et al., 2009) is a tool for assessing empathy as an emotional process, with 16 items on a five-point Likert scale. It includes elements such as emotional contagion, understanding of emotions, and altruism. It demonstrates high validity (correlation with EQ $r=0.80$) and reliability (Cronbach's alpha=0.85-0.87, test-retest $r=0.81$). The Greek version confirms its suitability for use in adult populations and in the field of education (Kourmoussi et al., 2017).

Ethical Considerations

The questionnaires distributed were anonymous, with the aim of ensuring and protecting participants' personal data. Participants had also been informed about the purposes of the study and about the fact that they could withdraw at any time. No pressure was exerted to participate under any circumstances. Approval from an ethics committee was not requested, as the study was anonymous, non-interventional, and did not involve sensitive personal data.

Statistical Analysis

As a primary stage, the statistical processing of the data required their appropriate coding and transformation so that they would be compatible with the functionality of IBM SPSS v.26, which was used for processing and presenting the results.

Reliability Analysis

The present analysis aimed to investigate the reliability of the data by estimating the values of Cronbach's alpha internal consistency coefficient for each scale and subscale of the present study. Initially, the "Multidimensional Attitudes Scale Toward People with Disabilities - MAS Scale" (Alpha=.799) was found to present very good levels of reliability both overall and by subscale. More specifically, the subscales "Thoughts/Perceptions" (Alpha=.944) and "Affect-related emotions" (Alpha=.912) showed excellent reliability, the "Calmness-related emotions" subscale (Alpha=.893) showed very high reliability, while the "Behaviors" subscale (Alpha=.720) showed acceptable and satisfactory reliability. Regarding the "Nursing Dimensions Inventory GR-NDI-35" questionnaire (Alpha=.888), it was estimated to present very high reliability, a finding also observed for its "Clinical Work" subscale (Alpha=.870), whereas reliability for the "Patient Needs" subscale (Alpha=.675) was marginally acceptable. Finally, regarding the "Toronto Empathy Scale" (Alpha=.763), reliability was estimated to be at acceptable and satisfactory levels, according to the following reliability table (Table 1).

RESULTS

The majority of participants were women (80.33%), aged 18-25 years (94.26%), and mainly in the 2nd year of study (80.33%). Most were not working in the health sector (84.43%) and had not participated in disability-related volunteering activities (87.70%), although 83.61% had personal or professional contact with people with disabilities. The vast majority attended a public university (99.18%) and lived in an urban area (74.59%). In terms of nationality, most were Greek (93.44%), with smaller proportions of Albanian (4.92%) and Cypriot (1.64%) origin. The majority of students (87.70%) had not enrolled in or participated in volunteering activities related to the care of people with disabilities, while 83.61% stated that they had had personal or professional contact with them (Table 2).

Table 1. Cronbach's alpha reliability coefficient

	Cronbach's Alpha	N of Items
Multidimensional Attitudes Scale Toward People with Disabilities - MAS Scale	.799	34
Affect-related emotions	.912	13
Calmness-related emotions	.893	3
Thoughts/Perceptions	.944	10

Behaviors	.720	8
Nursing Dimensions Inventory GR-NDI-35	.888	35
Clinical Work	.870	17
Patient Needs	.675	7
Toronto Empathy Scale	.763	16

Table 2. Frequency table - Demographic characteristics

		<i>N</i>	<i>N%</i>
1. Gender	Male	24	19.67%
	Female	98	80.33%
	Total	122	100.00%
2. Age	18-25	115	94.26%
	26-35	5	4.10%
	36-45	1	0.82%
	46+	1	0.82%
	Total	122	100.00%
3. Year of study	1st	0	0.00%
	2nd	98	80.33%
	3rd	11	9.02%
	4th or higher	13	10.66%
	Total	122	100.00%
4. Employment status in the healthcare sector	Not employed	103	84.43%
	Part-time employment	15	12.30%
	Full-time employment	4	3.28%
	Total	122	100.00%
5. Are you enrolled in a volunteering program or have you participated in activities related to the care of people with disabilities?	No	107	87.70%
	Yes	15	12.30%
	Total	122	100.00%
6. Have you ever had contact (personal or professional) with people with disabilities?	No	20	16.39%
	Yes	102	83.61%
	Total	122	100.00%
7. Educational institution of study	Public University	121	99.18%
	Private College	0	0.00%
	IEK - SAEK - DYPA	1	0.82%
	Total	122	100.00%
8. Area of residence	Urban	91	74.59%
	Semi-urban	16	13.11%
	Rural	15	12.30%
	Total	122	100.00%
9. Nationality	Greek	114	93.44%
	Cypriot	2	1.64%
	Albanian	6	4.92%
	Total	122	100.00%

Regarding the Clinical Work subscale of the nursing care questionnaire, it was initially estimated that protecting the patient's privacy and measuring vital signs recorded the highest percentages, with 95.08% rating them as very important. Similarly, observing the effects of a medication on the patient was considered vital by 94.26%, while reassuring the patient about a clinical procedure was characterized as crucial by 93.44%. In addition, the need for active listening to the patient was recognized by 84.43% of participants, while maintaining a pleasant attitude toward patients was considered important by 83.61%. Likewise, technical competence in a clinical procedure received a high rating from 81.15%, while explaining a clinical procedure to the patient was considered important by 79.51%. Involving the patient in their care was rated as very important by 75.41% of participants, while guidance in self-care was similarly rated by 70.49%. The nurse's presence beside the patient during a clinical procedure was important for 67.21%, while reporting the patient's condition to a senior nurse was considered crucial by 66.39%. Finally, although with lower percentages, assisting the patient in activities of daily living (e.g., washing, dressing) was considered important by 59.02% of participants, while recognizing the patient as a person was rated as very important by 58.20%. Regarding patients' needs, it was initially estimated that prioritizing the patient's needs over the nurse's personal needs was recognized as very important by only 24.59%, while 66.39% rated it as less important. Similarly, the act of a nurse sitting with the patient received a low impor-

tance score, as only 23.77% considered it very important, while 61.48% characterized it as less important. A similar trend was observed in exploring the patient's lifestyle, with only 31.97% rating it as very important, while 50.83% considered it of moderate or low importance. In addition, individualized attention to each patient's problems was considered very important by 36.89%; however, 49.18% placed it in the lower levels of importance. Regarding the spiritual needs of patients, caring for them was recognized as very important by 45.90%, but 40.17% considered it of moderate importance. Similarly, arranging contact between the patient and the chaplain received higher importance percentages (49.18%), although 36.88% rated it as of moderate importance. Finally, maintaining patients' records was characterized as very important by 44.26%, while 35.25% placed it at lower levels of importance. Regarding the emotional and religious dimensions of care, praying for the patient was considered very important by 21.31%, while 63.11% considered it of moderate or low importance; feeling sorry for the patient was judged important by 10.66%, with 67.21% placing it in the lower levels of importance. Reassuring a terminally ill patient that they are not going to die showed a relatively higher evaluation, with 25.41% considering it very important, while 57.38% placed it at the lowest scale level. Finally, keeping relatives informed about everything concerning the patient was considered very important by 54.92%, while 23.77% placed it in the lower importance categories (Table 3) (Table 4).

Table 3. Nursing Dimensions Inventory GR-NDI-35

Clinical Work	Very important		Moderately important		Slightly important		Important		Not at all important		Total	
	N	N%	N	N%	N	N%	N	N%	N	N%	M	SD
1. Involve a patient in their care	92	75.41%	12	9.84%	2	1.64%	14	11.48%	2	1.64%	1.54	1.08
2. Reassure the patient about a clinical procedure	114	93.44%	3	2.46%	0	0.00%	5	4.10%	0	0.00%	1.15	.61
5. Observe the effects of a medication on the patient	115	94.26%	2	1.64%	1	0.82%	4	3.28%	0	0.00%	1.13	.57
11. Be pleasant with patients	102	83.61%	11	9.02%	2	1.64%	6	4.92%	1	0.82%	1.30	.80
12. Protect the patient's privacy	116	95.08%	3	2.46%	2	1.64%	1	0.82%	0	0.00%	1.08	.40
16. Assist the patient with an activity of daily living (washing, dressing, etc.)	72	59.02%	26	21.31%	6	4.92%	16	13.11%	2	1.64%	1.77	1.13
19. Recognize the patient as a person	71	58.20%	25	20.49%	8	6.56%	13	10.66%	5	4.10%	1.82	1.19
20. Explain a clinical procedure to the patient.	97	79.51%	10	8.20%	1	0.82%	13	10.66%	1	0.82%	1.45	1.00
21. Dress neatly when working with patients	89	72.95%	14	11.48%	3	2.46%	14	11.48%	2	1.64%	1.57	1.09
24. Report the patient's condition to a senior nurse	81	66.39%	16	13.11%	8	6.56%	16	13.11%	1	0.82%	1.69	1.11
25. Be beside the patient during a clinical procedure	82	67.21%	20	16.39%	6	4.92%	12	9.84%	2	1.64%	1.62	1.06
26. Be honest with the patient	84	68.85%	20	16.39%	6	4.92%	11	9.02%	1	0.82%	1.57	1.00
28. Listen to the patient	103	84.43%	7	5.74%	3	2.46%	8	6.56%	1	0.82%	1.34	.88

29. Consult the doctor about the patient	104	85.25%	9	7.38%	1	0.82%	7	5.74%	1	0.82%	1.30	.82
30. Guide the patient in self-care (washing, dressing, etc.)	86	70.49%	18	14.75%	3	2.46%	13	10.66%	2	1.64%	1.58	1.07
33. Measure the patient's «vital signs» (e.g., pulse and blood pressure)	116	95.08%	2	1.64%	2	1.64%	2	1.64%	0	0.00%	1.10	.47
35. Be technically competent in a clinical procedure	99	81.15%	12	9.84%	2	1.64%	9	7.38%	0	0.00%	1.35	.84

Table 4. Nursing Dimensions Inventory GR-NDI-35

Patient Needs	N	N%	N	N%	N	N%	N	N%	N	N%	M	SD
4. Attend individually to each patient's problems	45	36.89%	32	26.23%	23	18.85%	17	13.93%	5	4.10%	2.22	1.20
10. Attend to a patient's spiritual needs	56	45.90%	29	23.77%	12	9.84%	17	13.93%	8	6.56%	2.11	1.31
15. Arrange for the patient's chaplain to visit them	60	49.18%	21	17.21%	17	13.93%	17	13.93%	7	5.74%	2.10	1.31
17. Keep patients' records up to date	54	44.26%	22	18.03%	13	10.66%	25	20.49%	8	6.56%	2.27	1.38
22. Sit with a patient	29	23.77%	37	30.33%	33	27.05%	18	14.75%	5	4.10%	2.45	1.13
23. Explore the patient's lifestyle	39	31.97%	43	35.25%	11	9.02%	21	17.21%	8	6.56%	2.31	1.27
34. Put the patient's needs first (i.e., before your own)	30	24.59%	32	26.23%	29	23.77%	11	9.02%	20	16.39%	2.66	1.38

Additional questionnaire items not classified into scales	N	N%	N	N%	N	N%	N	N%	N	N%	M	SD
3. Pray for the patient	26	21.31%	28	22.95%	29	23.77%	19	15.57%	20	16.39%	2.83	1.37
6. Keep in contact with the patient after discharge from the hospital	9	7.38%	15	12.30%	26	21.31%	18	14.75%	54	44.26%	3.76	1.33
7. Reassure a terminally ill patient that they are not going to die	31	25.41%	15	12.30%	23	18.85%	21	17.21%	32	26.23%	3.07	1.54
8. Stay at work after the end of the shift to complete a task	45	36.89%	22	18.03%	13	10.66%	26	21.31%	16	13.11%	2.56	1.49
9. Come to work when you do not feel well	10	8.20%	13	10.66%	33	27.05%	14	11.48%	52	42.62%	3.70	1.34
13. Make a patient do something even if they do not want to	8	6.56%	24	19.67%	31	25.41%	20	16.39%	39	31.97%	3.48	1.30
14. Show that you are busy all the time	7	5.74%	10	8.20%	28	22.95%	15	12.30%	62	50.82%	3.94	1.26
18. Feel sorry for a patient	13	10.66%	38	31.15%	28	22.95%	27	22.13%	16	13.11%	2.96	1.22
27. Organize the work of others for the patient	22	18.03%	25	20.49%	27	22.13%	27	22.13%	21	17.21%	3.00	1.36
31. Share a personal problem with a patient	5	4.10%	2	1.64%	8	6.56%	10	8.20%	97	79.51%	4.57	.99
32. Keep relatives informed about everything concerning the patient	67	54.92%	21	17.21%	6	4.92%	26	21.31%	2	1.64%	1.98	1.27

Table 5. Toronto Empathy Scale

	Never or almost never		Rarely		Sometimes		Often		Always		Total	
	N	N%	N	N%	N	N%	N	N%	N	N%	M	SD
1. When someone else is excited, I tend to become excited too.	4	3.28%	13	10.66%	46	37.70%	46	37.70%	13	10.66%	2.42	.93
2. Other people's misfortunes do not bother me very much. (R)	4	3.28%	20	16.39%	47	38.52%	35	28.69%	16	13.11%	2.32	1.01
3. It upsets me to see someone being treated without respect.	1	0.82%	2	1.64%	6	4.92%	39	31.97%	74	60.66%	3.50	.74

4. I remain unaffected when someone close to me is happy. (R)	0	0.00%	8	6.56%	21	17.21%	42	34.43%	51	41.80%	3.11	.92
5. I enjoy making other people feel better.	0	0.00%	1	0.82%	7	5.74%	36	29.51%	78	63.93%	3.57	.64
6. I have tender, concerned feelings for people less fortunate than me.	2	1.64%	10	8.20%	27	22.13%	46	37.70%	37	30.33%	2.87	1.00
7. When a friend starts to talk about their problems, I try to steer the conversation to something else. (R)	1	0.82%	2	1.64%	21	17.21%	26	21.31%	72	59.02%	3.36	.88
8. I can tell when others are sad, even when they do not say anything.	0	0.00%	2	1.64%	30	24.59%	56	45.90%	34	27.87%	3.00	.77
9. I find that I tune into other people's moods.	2	1.64%	7	5.74%	57	46.72%	45	36.89%	11	9.02%	2.46	.80
10. I do not feel compassion for people who cause themselves serious illnesses. (R)	1	0.82%	7	5.74%	26	21.31%	33	27.05%	55	45.08%	3.10	.98
11. I become irritated when someone cries. (R)	2	1.64%	4	3.28%	18	14.75%	45	36.89%	53	43.44%	3.17	.92
12. I am not really interested in how other people feel. (R)	0	0.00%	0	0.00%	10	8.20%	35	28.69%	77	63.11%	3.55	.64
13. When I see someone who is upset, I feel a strong urge to help.	0	0.00%	1	0.82%	17	13.93%	59	48.36%	45	36.89%	3.21	.71
14. When I see people being treated unfairly, I do not feel pity for them. (R)	3	2.46%	5	4.10%	24	19.67%	35	28.69%	55	45.08%	3.10	1.02
15. I find it silly for people to cry out of happiness. (R)	1	0.82%	10	8.20%	10	8.20%	16	13.11%	85	69.67%	3.43	1.00
16. When I see someone being taken advantage of, I feel somewhat protective toward them.	2	1.64%	5	4.10%	26	21.31%	50	40.98%	39	31.97%	2.98	.92

Table 6. Multidimensional Attitudes Scale Toward People with Disabilities - MAS

Emotions	Not at all		A little		Moderately		Very much		Extremely		Total	
	N	N%	N	N%	N	N%	N	N%	N	N%	M	SD
1. Tension	29	23.77%	27	22.13%	47	38.52%	11	9.02%	8	6.56%	2.52	1.14
2. Stress	23	18.85%	28	22.95%	34	27.87%	20	16.39%	17	13.93%	2.84	1.30
3. Despair	64	52.46%	25	20.49%	21	17.21%	3	2.46%	9	7.38%	1.92	1.21
4. Nervousness	27	22.13%	38	31.15%	26	21.31%	18	14.75%	13	10.66%	2.61	1.28
5. Shame	63	51.64%	18	14.75%	22	18.03%	7	5.74%	12	9.84%	2.07	1.35
6. Relaxation	24	19.67%	36	29.51%	44	36.07%	13	10.66%	5	4.10%	2.50	1.05
7. Serenity	26	21.31%	31	25.41%	40	32.79%	19	15.57%	6	4.92%	2.57	1.13
8. Calmness	20	16.39%	29	23.77%	36	29.51%	26	21.31%	11	9.02%	2.83	1.20
9. Depression	71	58.20%	24	19.67%	17	13.93%	8	6.56%	2	1.64%	1.74	1.03
10. Fear	44	36.07%	30	24.59%	28	22.95%	12	9.84%	8	6.56%	2.26	1.23
11. Distress	41	33.61%	29	23.77%	24	19.67%	15	12.30%	13	10.66%	2.43	1.35
12. Guilt	53	43.44%	33	27.05%	20	16.39%	7	5.74%	9	7.38%	2.07	1.22
13. Inhibition	43	35.25%	36	29.51%	36	29.51%	4	3.28%	3	2.46%	2.08	1.00
14. Pity	36	29.51%	30	24.59%	33	27.05%	14	11.48%	9	7.38%	2.43	1.23
15. Disgust	82	67.21%	14	11.48%	14	11.48%	6	4.92%	6	4.92%	1.69	1.16
16. Alertness	15	12.30%	17	13.93%	36	29.51%	35	28.69%	19	15.57%	3.21	1.23
Thoughts/Perceptions	N	N%	N	N%	N	N%	N	N%	N	N%	M	SD
1. This person seems interesting	8	6.56%	15	12.30%	46	37.70%	36	29.51%	17	13.93%	3.32	1.07
2. This person seems okay	5	4.10%	10	8.20%	39	31.97%	38	31.15%	30	24.59%	3.64	1.07
3. We may get along as people	3	2.46%	8	6.56%	48	39.34%	36	29.51%	27	22.13%	3.62	.98
4. This person seems friendly	4	3.28%	2	1.64%	45	36.89%	40	32.79%	31	25.41%	3.75	.96
5. I like meeting new people	4	3.28%	6	4.92%	33	27.05%	46	37.70%	33	27.05%	3.80	1.00
6. This person will be glad to have met me	5	4.10%	8	6.56%	52	42.62%	34	27.87%	23	18.85%	3.51	1.01

7. I can discuss matters of common interest with this person	3	2.46%	8	6.56%	39	31.97%	40	32.79%	32	26.23%	3.74	1.00
8. I can make this person feel more comfortable	4	3.28%	6	4.92%	36	29.51%	40	32.79%	36	29.51%	3.80	1.03
9. Why not get to know this person better?	3	2.46%	9	7.38%	37	30.33%	41	33.61%	32	26.23%	3.74	1.01
10. This person would appreciate it if I started a conversation with them	3	2.46%	8	6.56%	36	29.51%	41	33.61%	34	27.87%	3.78	1.01
Behaviors	N	N%	N	N%	N	N%	N	N%	N	N%	M	SD
1. Move away	35	28.69%	40	32.79%	37	30.33%	5	4.10%	5	4.10%	2.22	1.04
2. Get up and leave	50	40.98%	29	23.77%	33	27.05%	5	4.10%	5	4.10%	2.07	1.10
3. Read a newspaper or talk on the mobile phone	34	27.87%	29	23.77%	38	31.15%	16	13.11%	5	4.10%	2.42	1.15
4. Continue whatever this person was doing	19	15.57%	28	22.95%	46	37.70%	21	17.21%	8	6.56%	2.76	1.11
5. Find an excuse and leave	43	35.25%	30	24.59%	36	29.51%	7	5.74%	6	4.92%	2.20	1.14
6. Move to another table	54	44.26%	35	28.69%	26	21.31%	7	5.74%	0	0.00%	1.89	.94
7. Start a conversation if this person does not make the first move	11	9.02%	19	15.57%	39	31.97%	36	29.51%	17	13.93%	3.24	1.15
8. Start a conversation	5	4.10%	13	10.66%	42	34.43%	35	28.69%	27	22.13%	3.54	1.08

Table 7. Correlations between variables

			Empathy	GR-NDI-35	Clinical Work	Patient Needs	Calmness-related emotions	Thoughts and Perceptions		Behaviors
Spearman's rho	Empathy	Rho	1.000	-.096	-.228	-.098	-.022	.164	.307	-.045
		p	.	>.05	<.05	>.05	>.05	>.05	<.05	>.05
		N	122	122	122	122	122	122	122	122
	GR-NDI-35	Rho		1.000	.808	.902	-.051	-.027	-.285	.033
		p		.	<.05	<.05	>.05	>.05	<.05	>.05
		N		122	122	122	122	122	122	122
	Clinical Work	Rho			1.000	.715	-.038	-.032	-.302	-.035
		p			.	<.05	>.05	>.05	<.05	>.05
		N			122	122	122	122	122	122
	Patient Needs	Rho				1.000	-.104	.015	-.262	.035
		p				.	>.05	>.05	<.05	>.05
		N				122	122	122	122	122
	Calmness-related emotions	Rho					1.000	-.433	.247	-.061
		p					.	<.05	<.05	>.05
		N					122	122	122	122
	Affect-related emotions	Rho						1.000	-.136	.257
		p						.	>.05	<.05
		N						122	122	122
	Thoughts and Perceptions	Rho							1.000	-.159
		p							.	>.05
		N							122	122
	Behaviors	Rho								1.000
		p								.
		N								122

Regarding the assessment of empathy, it was initially estimated that participants demonstrate strong empathy in many situations. Specifically, almost half of the sample (48.36%) agreed that they usually become excited when someone else is excited, while most did not disregard other people's misfortunes (58.19%). In addition, the majority (92.63%) reported that they are upset by the mistreatment of other people, while the willingness to help others was also significant, as 93.44% stated that they enjoy making others feel better. Empathy is also strengthened in the case of close persons, with 76.23% agreeing that they are affected by their friends' happiness. However, the tendency to steer the conversation to other topics when friends talk about their problems (80.33%) was less common, while participants also recognized others' sadness (73.77%). In addition, they displayed significant empathy toward people who cause themselves serious illnesses (72.13%); 80.33% did not express irritation when someone cried, while 91.80% stated that they always care about how others feel. Regarding support, 85.25% reported that they feel a strong urge to help when they see someone upset, 73.77% stated that they feel pity for those who are treated unfairly, while most participants (82.78%) did not consider it silly for people to cry out of happiness (Table 5).

Regarding the Multidimensional Attitudes Scale toward people with disabilities, it was initially estimated for affect-related emotions that the majority of students recorded low levels of tension (84.42%), stress (69.67%), despair (90.16%), nervousness (74.59%), shame (84.42%), depression (91.80%), fear (83.61%), distress (77.05%), guilt (86.88%), and disgust (90.17%), while alertness was observed to a significant degree by 44.26% of the students in the study. Regarding calmness-related emotions, it was estimated that the majority of students experienced relaxation (85.25%), serenity (79.51%), and calmness (69.67%) at low to moderate levels.

The results from the Thoughts/Perceptions scale show a generally positive attitude among participants toward meeting and interacting with new people. Specifically, 55.74% of participants estimated that the person seems okay and 58.20% considered that the person appears friendly. However, the perception of whether the person seems interesting showed greater variation, with 56.56% of participants expressing moderate or low agreement. The predisposition toward communication also appeared positive, with 59.02% agreeing that they could discuss matters of common interest with the person and 59.84% stating that they would like to get to know the person better. It is noteworthy that 61.48% considered that the person would appreciate an approach for conversation, while 62.30% believed they could make the person feel more comfortable. Finally, the majority, at 64.75%, expressed a positive attitude toward social interactions, agreeing that they like meeting new people.

Regarding the Behaviors scale, participants appeared to avoid distancing or indifference in social situations to a large extent. More specifically, 91.81% agreed to a low degree with the idea of moving away or getting up and leav-

ing (91.80%), while 94.26% did not choose to go to another table, indicating that they do not prefer isolation. In addition, 82.79% did not show willingness to read a newspaper or talk on the mobile phone, while 76.22% rejected the option of continuing what they had previously been doing. Moreover, 89.35% did not prefer the tactic of finding an excuse and leaving, while there was a greater willingness to communicate, with 43.44% stating that they would start a conversation if the other person did not do so, and 50.82% choosing to begin a conversation.

The overall behavior of the scales and subscales of the study, empathy was estimated to be at moderate levels, while the nursing care assessment scale, including the Clinical Work and Patient Needs subscales, was on average at significant levels. Finally, the subscales of calmness-related emotions, affect-related emotions, and behaviors were on average at neutral to low evaluation levels, in contrast to thoughts and perceptions, whose results placed them at neutral to high levels (Table 6).

Analyzing the correlations among the scales, it was estimated that as empathy increases, clinical work tends to be considered increasingly important and thoughts and perceptions about people with disabilities also tend to be strengthened; at the same time, thoughts and perceptions are strengthened as the importance of the overall evaluation of nursing care increases, and vice versa. In addition, the more important clinical work and patients' needs are considered, the more thoughts and perceptions about people with disabilities tend to be strengthened. Also, the stronger the calmness-related emotions, the more affect-related emotions tend to weaken, while thoughts and perceptions about people with disabilities are strengthened. Finally, the stronger the affect-related emotions, the more behaviors toward people with disabilities tend to be strengthened (Table 7).

According to the above results, students' empathy is partly positively correlated with their attitudes toward people with disabilities, as a statistically significant positive relationship exists only with the Thoughts/Perceptions subscale, whereas it is not correlated with calmness-related emotions, affect-related emotions, or behaviors. In addition, students' perceptions of nursing care are partly negatively correlated with their attitudes toward people with disabilities, as the Thoughts/Perceptions subscale shows a statistically significant negative correlation with both the Clinical Work subscale and Patient Needs, whereas the subscales of calmness-related emotions and affect-related emotions, as well as behaviors, are not correlated with the attitudes under examination.

Furthermore, students' empathy is partly negatively correlated with students' perceptions of nursing care, as it is negatively correlated with the Clinical Work subscale and is not correlated at all with Patient Needs. Finally, the existence of a correlation among empathy, attitudes toward people with disabilities, and perceptions of nursing care is confirmed on a case-by-case basis, since the statistically significant correlations, whether positive or negative, appeared in specific combinations of variables and not across

the full set of possible combinations.

Investigating the effect of demographic characteristics on the scales and subscales of the study, it was initially estimated that the factor of students' personal or professional contact with people with disabilities did not affect empathy, the subscales of attitudes toward people with disabilities, or the evaluation of nursing care. On the other hand, empathy was estimated to be affected by gender, with women showing higher mean and median levels of empathy than men, and by year of study, where increasing year of study tended to be associated with decreasing levels of empathy, with students in the 3rd and 4th or later years showing homogeneous behavior.

In addition, empathy is affected by employment status, with students who are not working showing higher mean and median levels of empathy compared with students working part-time; it is also affected by enrollment in a volunteering program or participation in activities related to the care of people with disabilities, where students who are enrolled in a volunteering program or have participated in activities related to the care of people with disabilities present higher levels of empathy compared with those who have not participated in such activities.

Finally, area of residence affects calmness-related emotions, with residents of semi-urban areas showing the highest levels, followed by residents of urban areas, while residents of rural areas were estimated last; residents of urban and semi-urban areas tend to show homogeneous behavior. According to the above results, gender, year of study, employment status, and enrollment in a volunteering program or participation in activities related to the care of people with disabilities affect only empathy, while they do not affect nursing students' attitudes toward people with disabilities or their perceptions of nursing care.

In addition, area of residence partly affects nursing students' attitudes toward people with disabilities through the calmness-related emotions subscale, while it does not affect empathy or nursing students' perceptions of nursing care. Finally, contact (personal or professional) with people with disabilities affects neither empathy, nor nursing students' attitudes toward people with disabilities, nor their perceptions of nursing care.

DISCUSSION

The findings of the study highlight important trends in nursing students' views, behavior, and empathy toward people with disabilities, as well as the importance they attach to aspects of care. Empathy was identified at moderate to high levels, with high levels of agreement in statements reflecting a humanitarian attitude, confirming the findings of the study by Eren and Gürhan (2021). However, its further development appears to require targeted interventions and experiential learning. Demographic factors such as gender, year of study, and involvement in volunteering mainly affect empathy, but not attitudes or perceptions of care, which appear to be shaped more deeply by social factors. Area of residence appears to partly affect attitudes, possibly due to differences in social inclusion. Personal

or professional contact with people with disabilities does not appear to be statistically related to the variables under study. This divergence may be explained by the fact that contact that does not occur under appropriate conditions - that is, without guidance, equality, a shared purpose, and a reflective framework - does not automatically transform attitudes, but may sometimes perpetuate passive or uncritical interaction (Pettigrew & Tropp, 2006).

Empathy, although high in some subgroups (e.g., women, volunteers), does not appear to be sufficient to change attitudes without ethical and critical processing. In other words, empathy needs to be transformed into critical empathy, capable of influencing moral judgment and professional attitude (Wear & Zarconi, 2008). The "cognitive-emotional distance" and the absence of a coherent culture of care in educational environments appear to require reflective interventions. Women showed higher empathy than men, in agreement with other studies (Kim et al., 2004; Ward et al., 2012), while empathy decreases in the later years, possibly because of repeated exposure to stressful clinical experiences and the gradual "desensitization" to human experience through daily contact with pain and illness. This phenomenon has also been highlighted in relevant studies (Ward et al., 2012; Williams et al., 2015), which emphasize the need to strengthen empathy throughout the course of studies, with emphasis on holistic and person-centered education. Students appear to recognize basic aspects of care (e.g., privacy, active listening), but less so emotional and spiritual needs. The technical approach appears to prevail. This finding is supported by the study by Dugué et al. (2021), which reports that training based on emotional development is rare in nursing education programs. This appears to agree with a study reporting that the ethos of most health professional curricula typically uses biomedical models that focus mainly on the teaching, training, and practice of clinical medicine, with less emphasis on patients' psychosocial well-being (Draper & Louw, 2007). Patients' needs and perceptions should be taken into account in every strategic decision concerning nursing staff allocation. Understanding these differences will allow any existing gap to be bridged, so that the nursing care provided ensures patient satisfaction (Alikari et al., 2022).

Students' attitudes toward people with disabilities are positive, with low expression of negative emotions, in contrast to other studies that report negative attitudes or emotions (Linto et al., 2023; Yilmaz & Kitis, 2024). Students appear willing to interact, although they may have difficulty recognizing their feelings. At the same time, 59.02% state that they can discuss common interests with people with disabilities, as also supported by other studies which conclude that nursing students have good communication skills and that more than half showed a positive attitude toward people with disabilities (Atia et al., 2022).

The literature appears to be divided regarding the effect of gender on attitudes (Ozdemir & Karadag, 2021; Subay et al., 2022), but a generally positive effect of experience and

education is evident. In our study, only 12.30% had been involved in relevant volunteering activities despite their expressed empathy, suggesting possible “moral distancing”, whereby positive attitudes are not translated into active social involvement (Darling & Heckert, 2010). Perception of care is partially negatively related to attitudes toward disability, indicating the dominance of a technocratic approach. The concept of care, as formulated in Watson’s theory (2008), is not limited to the functional dimension of nursing work but includes humanistic, cultural, and ethical empathy. Correspondingly, high empathy is not always correlated with a person-centered perception of care. In the study by Evans et al. (2023), educational interventions aimed at strengthening empathy contributed decisively to changing students’ attitudes and to recognizing the importance of the person-centered dimension of care. The study by Geçkil et al. (2017), in which nursing students participated in targeted empathy activities, confirms that strengthening empathy leads to more positive attitudes toward people with disabilities, since students not only changed their perceptions theoretically but also developed a deeper emotional understanding of the everyday life of people with disabilities.

Study limitations

The present study has certain limitations that should be taken into account when interpreting the results. First, the use of a quantitative methodology may not capture in depth the personal experiences, internal processes, and sociocultural contexts of participants. The electronic questionnaire may have affected the authenticity and accuracy of responses, as it presupposed participants’ understanding of the questions. Finally, it was not possible to ensure balanced representation of different years of study and sociodemographic characteristics, which limits the generalizability of the findings to the wider population of nursing students.

CONCLUSIONS

In conclusion, nursing students recorded moderate to high empathy and positive attitudes toward people with disabilities, with limited evidence of negative emotions,

positive cognitive evaluation, and encouraging behavioral intention, while their attitude toward the care provided was oriented more toward technical and communication-related characteristics. At the cognitive level, participants expressed acceptance and openness toward people with disabilities. Agreement rates for statements related to intention to communicate were relatively high, indicating not only cognitive acceptance but also a predisposition toward active involvement in social integration processes.

The majority of participants stated that they were willing to start a conversation and make the person with a disability feel comfortable, while rejecting practices of distancing or social withdrawal. Students’ evaluation of nursing care showed emphasis on the technical and functional aspects of clinical work, such as protecting privacy, measuring vital signs, and observing the effects of medications. Communication skills emerged as particularly important, whereas aspects related to patients’ psychosocial or spiritual needs were recorded as less important. Statistical analysis showed that empathy is positively associated with attitudes toward people with disabilities, while perceptions of nursing care are partly negatively correlated with these attitudes. In addition, empathy is partly negatively correlated with students’ perceptions of nursing care. Finally, case-specific correlations were observed among empathy, attitudes, and perceptions. Gender, year of study, employment status, and enrollment in a volunteering program or participation in activities related to the care of people with disabilities affect only empathy, while they do not affect nursing students’ attitudes toward people with disabilities or their perceptions of nursing care. Area of residence also partly affects nursing students’ attitudes toward people with disabilities, while it does not affect empathy or nursing students’ perceptions of nursing care. Finally, contact (personal or professional) with people with disabilities affects neither empathy, nor nursing students’ attitudes toward people with disabilities, nor their perceptions of nursing care.

Future research could focus on evaluating the effectiveness of educational interventions aimed at improving nursing students’ empathy and attitudes toward people with disabilities.

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