

Students' Awareness and Perceptions of Nursing Diagnoses: A Descriptive Study

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ABSTRACT

This research aimed to assess nursing students' awareness and perceptions of nursing diagnoses. This was a cross-sectional study that conducted in June 2022. The sample for this descriptive study comprised of 112 fourth-grade students enrolled in the nursing faculty of a state university. Data were collected using the Nursing Diagnosis Question Booklet and the Perceptions of Nursing Diagnosis Survey (PNDS). Analysis involved the use of numerical statistics, percentage, means, standard deviations, and Pearson correlation analysis. The study revealed that 76.7% of participating students were able to identify at least one medical diagnosis related to care problems in case samples. Their average score on the Nursing Diagnosis Question Booklet was 7.30 ± 2.46 . The mean score on the PNDS was moderate at 2.48 ± 0.64 . No statistically significant correlation was found between the mean score of the PNDS and the total score obtained from the Nursing Diagnosis Question Booklet ($p > 0.05$). The findings indicate that students tend to articulate nursing care problems using medical diagnoses, reflecting a relatively low level of awareness and moderate perceptions regarding nursing diagnoses. To address this, nursing programs are advised to incorporate mandatory and supplementary courses focusing on the nursing process and nursing diagnosis. Additionally, it is recommended to replicate this study using different samples to validate the results.

Öğrencilerin Hemşirelik Tanılarına İlişkin Farkındalık ve Algıları: Tanımlayıcı Bir Araştırma

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ÖZET

Araştırma, hemşirelik öğrencilerinin hemşirelik tanılarına yönelik farkındalık ve algılarını belirlemek amacıyla yapılmıştır. Tanımlayıcı tipte olan araştırmanın örneklemini bir devlet üniversitesinin hemşirelik fakültesinde öğrenim gören 4. sınıf öğrencileri ($n=112$) oluşturmuştur. Veriler, Haziran 2022'de Hemşirelik Tanıları Soru Kitapçığı ve Hemşirelik Tanılarını Algılama Ölçeği (HTAÖ) ile toplanmıştır. Veriler sayı, yüzde, ortalama, standart sapma ve Pearson korelasyon testi ile analiz edilmiştir. Araştırmaya katılan öğrencilerin %76.7'sinin vaka örneklerinde bakım sorunlarına ilişkin en az bir tıbbi tanı belirledikleri ve Hemşirelik Tanıları Soru Kitapçığından aldıkları ortalama puanın 7.30 ± 2.46 olduğu belirlendi. Öğrencilerin HTAÖ puan ortalaması orta (2.48 ± 0.64) olarak bulundu. HTAÖ puan ortalaması ile Hemşirelik Tanıları Soru Kitapçığından alınan toplam puan arasında istatistiksel olarak anlamlı bir ilişki bulunmadı ($p > 0.05$). Öğrencilerin hemşirelik bakım sorunlarını tıbbi tanımlarla ifade ettikleri ve hemşirelik tanıları farkındalığının düşük düzeyde olduğu, hemşirelik tanılarına ilişkin algılarının orta düzeyde olduğu belirlendi. Hemşirelik programlarında hemşirelik süreci ve hemşirelik tanısında zorunlu ve tamamlayıcı derslere yer verilmesi ve farklı örneklemeler kullanılarak çalışmanın tekrarlanması önerilmektedir.

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INTRODUCTION

Nursing diagnosis is the clinical judgement that nurses make about individual, family, or community responses to health conditions or life processes. It provides the basis for selection of nursing interventions aimed at achieving outcomes for which the nurse is held accountable (North American Nursing Diagnosis Association International [NANDA-I], 2012). Diagnosis is a crucial stage in the nursing process. Nursing diagnosis within the nursing process offers numerous benefits, including fostering critical thinking in nurses' clinical practice and enhancing their professional identity (Berman et al., 2015; Yoost et al., 2022). Furthermore, the utilization of nursing diagnosis improves communication among nurses, establishes a common language, supports the continuity of care, and enhances patient care safety (Sanson et al., 2017). To extend these benefits to both the educational and clinical environment, nurses and nursing students should comprehend diagnostic systems and possess the ability to apply nursing diagnosis effectively. Diagnostic systems are accessible in various disciplines (Knotnerus et al., 2008). However, the diagnostic focus varies in each field. The role and responsibilities of the physician, who is responsible for medical diagnosis and treatment, and the nurse, who is responsible for care, differ significantly. As a result, nursing diagnosis and medical diagnosis vary in terms of their purpose, targets, and therapeutic interventions (Seaback, 2012).

In medical education, students are expected to diagnose and treat pathophysiological conditions, while in nursing education, students are expected to be able to identify current or potential changes in an individual's health status. Nursing diagnosis involves naming the care needs that must be addressed through nursing practice for an individual or a group (NANDA-I, 2012). Nurses have responsibilities irrespective of nursing diagnoses. Nursing diagnoses serve as the foundation for planning, implementing, and evaluating nursing care, with a specific focus on the patient's response to a health-related problems (Berman et al., 2015; Matthews, 2017). Nursing diagnoses define the domain for which nurses bear sole responsibility, setting nursing apart from other health disciplines and establishing it as an independent and professional field (Berman et al., 2015; Chiffi & Zanotti, 2015; Herdman, 2011; Matthews, 2017). Furthermore, an individual's medical diagnosis typically remains constant, whereas the nursing diagnosis may vary based on changes in the individual's health status (Seaback, 2012). While medical diagnosis focuses on diagnosing and treating a disease or condition, nursing diagnosis focuses on the individual's/patient's responses to a disease or condition. So a nursing diagnosis describes the reaction to a disease, not the disease itself. Patient response refers to individuals' physical, psychological, sociocultural, and spiritual needs, not a medical diagnosis, surgery, or drug therapy. However, nursing diagnoses are not limited to the patient's reactions to the disease. Nurses can also determine the diagnosis for the patient's needs, such as patient education, comfort/comfort, counselling, and caring for the patient until the patient can perform physical and emotional self-care (Matthews, 2017; Seaback, 2012). The most commonly used international nursing diagnosis terminology is developed by the North American Nursing Diagnosis Association International (NANDA- I). Currently, NANDA International, includes 244 nursing diagnoses, which are categorized into 13 domains and 47 classes. Each domain represents an area of interest for nurses, such as health promotion, nutrition, elimination/exchange, activity and rest, perception and cognition, self-perception, role of relationships, sexuality, coping and stress tolerance, life principles, safety and protection, and comfort. These domains are further classified into classes (Herdman & Kamitsuru, 2018).

When examining previous studies, it becomes evident that students have been found to incorrectly identify nursing diagnoses (Tambağ & Can, 2014; Tasdemir & Kızılkaya, 2013), struggle to translate a patient's care needs into a nursing diagnosis (Mahmoud & Bayoumy, 2014), and sometimes mistake symptoms, signs, and etiological factors associated with a disease as the nursing diagnosis (Uysal et al., 2016). Both students and nurses often confuse medical diagnosis with the nursing diagnosis and struggle to fully distinguish problems related to the nursing field (Çakar & Avşar, 2020; Hakverdioğlu Yönt et

al., 2014; Taşdemir & Kızılkaya, 2013; Uysal et al., 2016). Meanwhile, risks for infection, pain, activity intolerance, anxiety were the most common used diagnoses, while nursing diagnoses in domains of cognitive-perceptive, self-perception, and role relations were relatively rare (Aydın & Akansel, 2013). Despite the inclusion of more than 200 nursing diagnosis in the NANDA-I classification, previous studies have identified that nursing diagnosis are not widely or accurately used at the desired level in practical settings. The correct use of nursing diagnoses necessitates diagnostic awareness. Failure to use diagnoses correctly may result from a lack of awareness of all available nursing diagnoses.

On the other hand, the perception of nursing diagnosis is also an important factor in their use. It has been noted that both positive or negative perceptions of nursing diagnoses impact their utilization and, subsequently, the quality of patient care (Abed El-Rahman et al., 2017; Frisch & Kelley, 2002; Halverson et al., 2011). A positive perception of nursing diagnoses enhances the quality of patient care, while a negative perception can hinder the adaption of common diagnostic terminology and universally accepted methods in patient care planning (Halverson et al., 2011).

Therefore, it is crucial to gain a clear understanding of the perceptions and awareness of student nurses, who represent the future of nursing profession, regarding nursing diagnoses. This understanding is essential for enhancing the quality of future nursing practices and patient care. In this context, the present study aims to assess students' awareness and perceptions of nursing diagnoses.

Research Questions

1. What is the awareness and perception of nursing students about the nursing diagnosis?
2. Is there a correlation between nursing students' awareness of nursing diagnoses and their perceptions?

METHOD

Research Design: It was as descriptive study conducted in June 2022.

Study Group: The study population consisted of 153 fourth-grade students enrolled in the Faculty of Nursing for the 2021-2022 academic year at a state University in Turkey. The sample study comprised 112 students from the population who agreed to participate and met the sample criteria. The student participation rate was 73%.

The inclusion criteria for the study were as follows: participants needed to be fourth-year nursing student, currently enrolled in the fourth-year undergraduate program without exceeding the absenteeism limit. They should not have taken any course related to nursing diagnoses apart from those offered in the undergraduate nursing program, and they were required to volunteer to participate in the research. Conversely, participants were excluded from the study if they failed to complete the data collection forms within the scope of the research or expressed a desire to withdraw from the study.

Research Instruments and Processes:

Data were collected using the Nursing Diagnosis Question Booklet prepared by the researchers and Perceptions of Nursing Diagnosis Survey (PNDS).

1. The Nursing Diagnosis Question Booklet: The questionnaire consists of twelve questions, with two of them related to the sociodemographic characteristics of the students, while the remaining ten questions involve multiple-choice case analysis for nursing diagnoses (Table 1). Students' awareness of nursing diagnoses was assessed using these ten questions containing case analysis (please see "question example" below). After preparing the questions, feedback was obtained from three experts who have conducted studies in the field of nursing. Each question in the booklet was assigned a single point, with a maximum score of ten points achievable for the questions.

Question example: Your patient, Mrs. H., is a 52-year-old woman who underwent colon resection due to a benign tumor. Consequently, a temporary colostomy was performed on her descending colon. There were no complications during the post-operative recovery period. However, you observed that Mrs. H. was crying, turning her face away, and holding her nose to avoid the smell while changing the colostomy bag. She expressed disappointment, saying, "How am I going to live with this thing?" She has declined visitors and only allows her two daughters to visit. Based on this assessment, which nursing diagnosis would you assign to your patient? (1 point).

- a) Depression
- b) Post-traumatic stress disorder
- c) Generalized anxiety disorder
- d) Disturbed body image
- e) Social phobia

Table 1

The Nursing Diagnosis Question Booklet's Contents

Cases' Questions	Related Nursing Diagnosis
1.	Diarrhea
2.	Hypervolemia
3.	Risk for impaired oral mucous membrane
4.	Risk for aspiration
5.	Impaired skin integrity
6.	Disturbed sleep pattern
7.	Ineffective health management
8.	Risk for infection
9.	Urge urinary incontinence
10.	Disturbed body image

2. Perceptions of Nursing Diagnosis Survey (PNDS): The survey consists of 26 items that were completed by the students. This scale was originally developed by Olsen, Frost, and Orth (1991) (Frost et al., 1991), and its Turkish validity and reliability were confirmed by Akın- Korhan et al. (2013) (Akın-Korhan, Hakverdioğlu-Yönt et al., 2013). The Cronbach's alpha coefficient for the 26-item scale, which employ a five-point Likert type response format, was calculated to be 0.94. The scale includes sub-scales related to the definition and introduction of the nursing profession (9 items), clearly defining the patient's condition (7 items), ease of use (6 items), and conceptual direction (4 items). The total score on the scale can range from one and five, with lower scores indicating a more positive perception of nursing diagnoses (Akın-Korhan et al., 2013). In this study, Cronbach's alpha value for the scale was calculated to be 0.91.

Data Analysis: The data collected from the study were analysed using SPSS (Statistical Package for Social Sciences) for Windows version 24.0. Descriptive statistical methods, including number, percentage, mean, and standard deviation values, were employed to evaluate the data. The Spearman's correlation test was utilized to compare the total scale scores of PNDS and Nursing Diagnosis Question Booklet to determine any differences between the scores. The findings were assessed at a 95% confidence interval, and a significance level of $p < 0.05$ was considered.

RESULTS

The mean age of the students was 22.24 ± 1.14 (years), and the majority of the students (97.3%) were not employed as a nurse (Table 2).

Table 2

Descriptive Characteristics of the Participants (n=112)

Characteristics	(X̄ ±SD)	
Age (year)	22.24±1.14	
Working as a nurse	n	%
Yes	3	2.7
No	109	97.3

76.7% of the students identified at least one medical diagnosis related to the cases in the Nursing Diagnosis Question Booklet. Additionally, more than 25% of the students selected one of the medical diagnoses for hypervolemia, the risk for aspiration, impaired skin integrity, urge urinary incontinence, disturbed body image, and ineffective health management.

The average score of the students on the Nursing Diagnosis Question Booklet was 7.30±2.46 (points). The lowest score recorded was 1 point, while the highest score achieved was 10 points (Table 3).

Table 3

Distribution of Answers to Case Questions on Nursing Diagnosis Question Booklet (n=112)

Questions and answers	True/False	N	%
Question 1. (Diarrhea)	True	87	77.7
	False	25	22.3
Question 2. (Hypervolemia)	True	79	70.5
	False	33	29.5
Question 3. (Risk for impaired oral mucous membrane)	True	105	93.8
	False	7	6.2
Question 4. (Risk for aspiration)	True	66	58.9
	False	46	41.1
Question 5. (Impaired skin integrity)	True	75	67.0
	False	37	33.0
Question 6. (Disturbed sleep pattern)	True	92	82.1
	False	20	17.9
Question 7. (Ineffective health management)	True	82	73.2
	False	30	26.8
Question 8. (Risk for infection)	True	85	75.9
	False	27	24.1
Question 9. (Urge urinary incontinence)	True	74	66.1
	False	38	33.9
Question 10. (Disturbed body image)	True	73	65.2
	False	39	34.8
Nursing Diagnosis Question Booklet total score		(X̄ ±SD) = 7.30±2.46	

The total mean score of the Perceptions of Nursing Diagnosis Survey was 2.48 ±0.64. The mean score for the "definition and promotion of nursing profession" sub-scale was 1.93±1.04. For the "clear definition of patient status" sub-scale, the mean score was 2.72±0.61. The mean score for the "ease of use" sub-scale was 2.87±0.63. Lastly, for the "conceptual aspect" sub-scale, the mean score was 2.68±0.71 (Table 4).

Table 4*Average Scores of Perceptions of Nursing Diagnosis Survey (n=112)*

PNDS	Mean \pm SD	Median	Min.	Max.
Definition and promotion of nursing profession	1.93 \pm 1.04	1.7	1.0	5.0
Clear definition of patient status	2.72 \pm 0.61	2.7	1.0	5.0
Ease of use	2.87 \pm 0.63	2.8	1.0	5.0
Conceptual aspect	2.68 \pm 0.71	2.6	1.0	5.0
PNDS total score	2.48 \pm 0.64	2.4	1.0	5.0

No statistically significant correlation was identified between the scores obtained from the Nursing Diagnosis Question Booklet (the number of correct questions answered), the subscales of the PNDS, and the total score ($p>0.05$). (Table 5).

Table 5*Comparison of the Perceptions of Nursing Diagnosis Survey and The Nursing Diagnosis Question Booklet's Score (n=112)*

NDPS subscales	The Nursing Diagnosis Question Booklet's Score	
	r_s^*	p
Definition and promotion of nursing profession	-0.105	0.271
Clear definition of patient status	0.149	0.118
Ease of use	0.052	0.583
Conceptual aspect	0.015	0.879
PNDS total score	0.029	0.761

* r_s = Spearman's correlation

DISCUSSION

In this study, which aimed to assess students' awareness of nursing diagnoses and their perceptions of nursing diagnoses, it was observed that the majority of students identified care problems in sample cases using medical diagnosis as opposed to framing them in the specific language of nursing. This finding underscores the importance of developing the ability to express care problem in a nursing-specific language. Such proficiency is essential not only for enhancing the autonomy of nursing as a distinct discipline but also for establishing standardized terminology in the field. This situation highlights that students face challenges in differentiating between medical and nursing diagnoses, indicating a low level of awareness regarding nursing diagnoses. Similar to our study, previous research involving students (Hakverdioğlu Yönt et al., 2014) and nurses (Çakar & Avşar, 2020), has also identified instances where individuals tend to conflate nursing diagnosis with medical diagnosis. These consistent findings suggest a broader issue within the healthcare education and practice context that warrants attention and targeted interventions to enhance the understanding and differentiation of nursing diagnoses.

Nurses are not authorized to diagnose medical diseases and conditions; however, they are responsible for defining the physiological, social, psychological, and spiritual responses related to the diagnosis, understanding how it is affected by the situation, and facilitating the individual's adaptation to their condition (Kozier et al., 2018; Matthews, 2017). The Successful resolution of an individual's problem depends on the accurate determination of the nursing diagnosis. An accurate and valid nursing diagnosis serves as a guide for selecting the appropriate nursing care outcomes and individual nursing interventions, ultimately leading to the provision of quality care (Matthews, 2017). Furthermore, the nursing diagnosis represents the second step in the nursing process, following the initial assessment.

Initially, the nurse conducts a thorough assessment of the patient, which includes reviewing the medical record, obtaining a comprehensive health history, assessing vital signs, conducting a physical examination, and documenting any signs and symptoms reported by the patient, among other components (Yoost et al., 2022). Ata & Çobanoğlu (2022) stated that nursing students exhibited inadequacies in data collection (Ata & Çobanoğlu, 2022). Similarly, in another study conducted by Basit & Korkmaz (2021), it was noted that students faced challenges in accessing patient data during clinical practices (Basit & Korkmaz, 2021). In our study, the student's inability to prioritize nursing diagnoses could potentially be attributed to their inadequacy in collecting holistic patient data. Additionally, they may have found it easier to access medical diagnosis as opposed to nursing diagnosis data.

On the other hand, when analyzing the responses provided for the diagnoses of hypervolemia, the risk for aspiration, impaired skin integrity, urge urinary incontinence, disturbed body image, and ineffective health management, it was observed that over 25% of the students opted for one of the medical diagnoses. In previous studies (Aydın & Akansel, 2013; Noh & Lee, 2015; Türk et al., 2013; Uysal et al., 2016), the nursing diagnoses most frequently selected by students included the risk for infection, deterioration in sleep pattern, acute pain, impaired skin integrity, activity intolerance, and anxiety. In our study, the students' tendency to choose medical diagnoses for various care problems could possibly be attributed to their limited exposure to diverse care situations, which may have influenced their decision-making process. In the majority of nursing schools in our country, the teaching of nursing diagnosis typically involves in-class theoretical lessons, case studies, and clinical practice that align with the nursing process. However, in studies conducted, issues such as insufficient case discussion, limited active participation of the students in the lesson, and inadequacy in clinical practice have been consistently reported with this teaching model (Akansel & Pallos, 2020; Basit & Korkmaz, 2021).

Our study revealed that nursing student, on average, had moderate perceptions regarding nursing diagnoses. It can be observed that students generally have positive perceptions regarding the definition and promotion of the nursing profession. However, their perceptions concerning the clear description of the patient's condition, ease of use, and conceptual aspects appear to be negative. In contrast to our findings, Inangil & Üzen (2020) and El-Rahman et al. (2017) reported overall positive perceptions among students towards nursing diagnoses in their respective studies (Abed El-Rahman et al., 2017; Inangil & Üzen, 2020). On the other hand, similar to our research, Bağrıçık & Bostanoğlu (2022) and Halverson et al. (2011) found varying perceptions of nurses towards nursing diagnoses in their study with nurses, with some perceiving them positively and others negatively (Bağrıçık & Bostanoğlu, 2022; Halverson et al., 2011). Furthermore, a survey conducted by Karaca & Aslan (2018) determined that the education provided on nursing diagnoses and classifications had a positive impact on increasing students' perception of nursing diagnoses (Karaca & Aslan, 2018). Furthermore, Şahin & Khorshid (2021) determined that nursing process education positively increased nurses' perception of nursing diagnoses (Şahin & Khorshid, 2021). Despite studies such as those conducted by Bağrıçık & Bostanoğlu (2022) and Karaca & Aslan (2018) showing that the education positively influences perception, our research did not identify any statistically significant relationship between the score obtained from the nursing diagnosis question booklet and the sub-dimensions of the nursing diagnosis perception scale, including the total score ($p>0.05$). The negative perception among students may stem from their view of nursing diagnoses as homework assignment within the context of clinical applied courses, as well as their potentially negative experiences during clinical practices. Drawing from the findings of the study conducted by Karaca & Aslan (2018), it appears that the diagnosis teaching course in the curriculum may be insufficient, students might benefit from additional coursework focused on diagnosis. Furthermore, Şahin & Khorshid (2021) have noted that the training provided to nurses

regarding the nursing process and nursing diagnosis had a positive impact on enhancing nurses' perceptions of nursing diagnoses. Consequently, it becomes evident that a lack of knowledge and practical experience concerning diagnoses constitutes a significant barrier to raising awareness about nursing diagnoses. Indeed, the lack of awareness about nursing diagnoses can have a detrimental effect on perceptions regarding their use. As highlighted by Frisch and Kelley (2002), a positive perception of using nursing diagnoses can have a favorable impact on identifying patient's needs, planning patient care, and ultimately enhancing the quality of patient care (Frisch & Kelley, 2002). Therefore, it is evident that students would benefit from additional support and education in the field of nursing diagnoses to foster a deeper understanding and positive perception of their role in patient care.

CONCLUSION AND SUGGESTIONS

It was found that the students encountered nursing care problems related to medical diagnoses, exhibited a limited awareness of nursing diagnoses, and held moderate perceptions of nursing diagnoses. To ensure the visibility of nursing, nurses must identify and quantify their contribution to healthcare. To accomplish this, they should utilize standardized nursing terminology designed specifically for nurses. The recognition of the significance of accurate nursing diagnoses is instilled through nursing education. The future standard of nursing practice will be determined by how well nursing diagnoses are comprehend and upheld prior to graduation. Nursing programs are strongly advised to incorporate mandatory and supplementary courses on the nursing process and nursing diagnosis, and to replicate this study using diverse samples for validation.

LIMITATIONS

A key limitation of this research is that it was conducted exclusively with senior students at a single centre.

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Ethic Approval

Written permission was obtained from The Non-Interventional Clinical Research Ethics Committee of the Hacettepe University where the study was conducted (decision no: 16969557/966, date: 05.04.2022). The students who participated in the study were informed about the research's purpose, and their consent to participate was obtained. Additionally, consent was obtained from Akin Korhan et al., who confirmed the Turkish validity and reliability of the scale, the organisation where the study took place and the students who participated in the survey. It was emphasised that participation in the study would not impact the students' course grades.

Conflict of interest

The authors declare no conflict of interest.

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Authorship Contributions

Design: S.K., G.B., Data Collection or Processing: G.B., Analysis or Interpretation: S.K., Literature Search: S.K., G.B., Writing: S.K., G.B.

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