

# Nursing Diagnoses Determined by First Year Students: A Vignette Study

Gülendam Hakverdioğlu Yönt, RN, PhD, Esra Akın Korhan, RN, PhD, Firdevs Erdemir, RN, PhD, and Maria Müller-Staub, RN, EdN, PhD

Gülendam Hakverdioğlu Yönt, RN, PhD, is an Assistant Professor, Department of Nursing, Sifa University Faculty of Health Sciences, Izmir, Turkey; Esra Akın Korhan, RN, PhD, is an Assistant Professor, Department of Nursing, Izmir Katip Çelebi University Faculty of Health Sciences, Izmir, Turkey; Firdevs Erdemir, RN, PhD, is a Professor, Department of Health Sciences, Adiyaman University, Adiyaman, Turkey; and Maria Müller-Staub, RN, EdN, PhD, is a Professor, Pflege PBS, Bronschhofen, Switzerland.

## Search terms:

Nursing diagnoses, nursing education, nursing student

## Author contact:

gulendam.hakverdioglu@sifa.edu.tr,  
with a copy to the Editor:  
journal@nanda.org

Conflict of interest: The authors have not disclosed any potential conflicts of interest or financial interests.

**PURPOSE:** The study aimed to determine the ability of first year students in identifying nursing diagnoses.

**METHODS:** In a descriptive evaluation study, an expert-validated vignette containing 18 nursing diagnoses was used.

**RESULTS:** The students determined 15 nursing diagnoses. The highest percentages of diagnoses identified were disturbed sleep pattern and nutrition imbalance. Students also considered medical diagnoses as nursing diagnoses: hypertension and tachycardia.

**CONCLUSIONS:** Despite the fact that students were only at the end of their first semester and had limited clinical experience, they successfully identified the majority of nursing diagnoses.

**IMPLICATIONS FOR NURSING PRACTICE:** Patient case study vignettes are recommended for education. To foster students' knowledge and experience, it is also suggested that evaluating nursing diagnoses in clinical practicals becomes a requirement.

**AMAÇ:** Bu çalışmada birinci sınıf öğrencilerinin hemşirelik tanılarını belirleyebilme durumlarının saptanması amaçlandı.

**YÖNTEM:** Uzmanlar tarafından belirlenmiş 18 hemşirelik tanısını içeren bir vaka kullanılarak yapılan tanımlayıcı bir çalışmadır.

**BULGULAR:** Öğrenciler 15 hemşirelik tanısı belirlemiştir. En çok belirlenen hemşirelik tanıları uyku örüntüsünde rahatsızlık ve beslenmede dengesizlik tanısıdır. Öğrenciler ayrıca hipertansiyon ve taşikardi gibi tıbbi tanıları da hemşirelik tanısı olarak düşünmüşlerdir.

**SONUÇLAR:** Öğrenciler sadece birinci dönemin sonunda ve sınırlı klinik deneyimlere sahip olmasına rağmen, hemşirelik tanılarının büyük bir çoğunluğunu tanımlamada başarılı olmuşlardır.

**HEMŞİRELİK UYGULAMALARI İÇİN ÖNERİLER:** Eğitim için hasta vaka çalışmalarının kullanılması önerilmektedir. Öğrencilerin bilgi ve deneyimlerini geliştirmek için ayrıca klinik uygulamalarda hemşirelik tanılarının değerlendirilmesi gerektiği önerilmektedir.

## Background

Nursing diagnoses ensure that nurses use a professional language in determining standards for sharing and organizing information and decision making in nursing practice, as well as for designating appropriate patient outcomes. Nursing diagnoses are the basis for nursing care planning, implementation, and nursing assessments. By using nursing diagnoses, nurses focus on patients' individual responses

to health-related problems (Gordon, 1994; NANDA, 2007). Stating accurate nursing diagnoses and performing diagnoses-focused, effective interventions facilitate patients' healing, and ensures appropriate, systematic nursing care (Carpenito, 2004; Kaya, Babadağ, Kaya, & Esen, 2003; Müller-Staub, Needham, Odenbreit, Lavin, & van Achterberg, 2008).

Nursing diagnoses are based on the synthesis of all data collected from individual patients to guide the nursing care

process. However, for nursing students, one of the most difficult tasks is to state accurate nursing diagnoses that are grounded in a synthesis of data collection.

To increase the use of standardized nursing language in Turkey, research on the use of nursing diagnoses and interventions is needed in both education and practice. Nursing training in Turkey is given in different ways, and for this reason training program content and clinical practicals differ in duration of theoretical time, practical time, and program content. Studies showed differences in the use of nursing diagnoses by students: In a study by Yönt, Khorshid, and Eser (2009), the most commonly used nursing diagnoses by students during their clinical practices included pain (39%), knowledge deficit (31.5%), constipation (26.6%), anxiety (25.7%), and nutrition, imbalanced—less than the body requirements (20.8%). In a study by Erdemir (2003), the nursing diagnoses most commonly used by students were knowledge deficit, nutrition, imbalanced—less than body requirements, anxiety, and pain. No studies have been performed to determine to what extent first year nursing students, after their first clinical practical, can state nursing diagnoses (Erdemir, 2003).

### Research Aims

For later improvement of the content of future courses and practicals in the light of study findings, the study aims to determine the ability of first year students to analyze and identify patient problems/healthcare needs, the ability of students to establish a nursing diagnosis, and the ability of students to distinguish nursing diagnoses from medical diagnoses.

Students have to become experienced in the various phases of the nursing process, and to acquire knowledge and skills required for determining nursing diagnoses through clinical practice. The combination of educational process and practical experience is necessary to develop these skills (Lunney, 2001, 2008). In Turkey, nursing education is given in different types in the education system. These are (a) school of health, (b) health vocational high school, and (c) faculty of health science—department of nursing. Even in the same type of schools, there may be differences in nursing process course content and credits. Nursing education of all types is a 4-year course. The teaching aims and general content of nursing are the same in every nursing education. The *Basics of Nursing Course* is a 14-week course given in the second semester, and clinical practice is performed concurrently in hospitals systems and nursing care in relation to systems. At the same time, students are taught how to establish a nursing diagnosis relating to problems that a patient may be experiencing, which nursing interventions to apply, and how to evaluate nursing outcomes. The teaching aims of the *Basics of Nursing Course* include the ability to see the individual as a whole in terms of basic human needs, to establish the care needs of a patient, to determine a nursing diagnosis by establishing

the patient's problems/health promotion readiness, and to determine the nursing interventions needed by the patient when giving nursing care.

In order to increase the use of standardized nursing language in Turkey, research on the use of nursing diagnoses and interventions is needed in both education and practice. This descriptive study aimed at evaluating the ability of first year nursing students to state nursing diagnoses when presented in a standardized patient case.

### Methods

In this descriptive evaluation study, convenience sampling was applied, and all students of a type (c) faculty of health science—department of nursing school who agreed to take part were included in the study. By including students from one school, the researchers assured education homogeneity in the sample. Before starting the research, students were informed and their consent was sought, following a detailed explanation on the study objectives and methods to be used.

### Instrument

To assess first semester students' abilities in nursing diagnostics, students were given a sample case—a so-called vignette—prepared by their instructors. The sample case vignette reflected the teaching content of the first semester course on nursing diagnoses, as well as the clinical practice requirements related to this course. The vignette described a real patient, including the patient's history and treatment in the clinic. The vignette was based on the individual patient's situation, and was validated by three instructors who compared the individual patient's situation with NANDA-I diagnoses, as presented in the NANDA-I classification (NANDA, 2007). The researchers first of all described the nursing diagnoses relating to actual and possible problems in the case. Then, the vignette was sent to three academically prepared educationalists (RN, PhD, assistant professor, and professor). These educationalists are experts in nursing diagnostics in teaching and in the use of nursing diagnoses in clinical practice. After this expert evaluation, the educationalists were asked to state the nursing diagnoses relating to the case. After the nursing diagnoses of the researchers and educationalists had been established separately, the vignette was given its final form in a group discussion. In this reflection process, the three instructors determined a total of 18 nursing diagnoses included in the vignette. The nursing diagnoses contained in the vignette were as follows: ineffective health maintenance, nutritional balance—less than body requirements, risk for infection, impaired skin integrity, constipation, risk for trauma, self-care deficit syndrome, impaired physical mobility, activity intolerance, disturbed sleep pattern, chronic pain, anxiety, disturbed body image, powerlessness, fatigue, impaired social interaction, ineffective coping, and spiritual distress.

### Data Collection

Students were gathered in a silent room and were given a data collection form. The first page of the form used for data collection dealt with personal information—the student's age, sex, and school of graduation—while the second page dealt with information on the vignette. Immediately beneath the vignette, students were given two questions relating to the case, asking them to write the existing or actual nursing diagnoses in the vignette, and the nursing diagnoses relating to possible risks in the vignette. An extra blank page was added to write the nursing diagnoses “found” in the vignette. Students could use a nursing diagnoses book or their class notes on nursing diagnoses when filling out the data collection form. The vignette was read out to the students by the instructor once, and an explanation was given on how to assess the patient case. The students were then required to determine the nursing diagnoses presented in the vignette and to write the nursing diagnoses on a data collection form. Students were given a total of 2 hr to complete the task.

### Data Analysis

The students' answers were compared with the predetermined nursing diagnoses of the instructors in terms of numbers and correctness. The nursing diagnoses were grouped in accordance with Gordon's Functional Health Patterns, and the numbers and percentages of nursing diagnoses were calculated for descriptive data analysis.

## Results

### Student Characteristics

The research population consisted of 32 first year students at the end of the 14-week clinical practical in the fundamentals of nursing at a nursing school department of health sciences in Turkey. All students were female, and their ages were between 18 and 21 years, with a mean age of  $18.8 \pm 0.88$ . Almost half (46.9%) of the students were graduates of Anatolian high schools.

### Identified Nursing Diagnoses

In total, the students were able to determine 15 out of the 18 nursing diagnoses. The highest percentages of diagnoses identified by the students were “disturbed sleep pattern” (81.2%), “nutrition imbalance” (81.2%), “constipation” (78.1%), “chronic pain” (59.4%), and “anxiety” (53.1%). The lowest percentages of diagnoses identified by the students were “risk for trauma,” “powerlessness,” and “impaired social interaction” (6.2%). The diagnoses *ineffective health maintenance*, *ineffective coping*, and *spiritual distress* were identified by none of the students. On the other hand, students made medical diagnoses, considering them as nursing

**Table 1. Distribution of Nursing Diagnoses Determined by Students According to Gordon's Functional Health Patterns**

Nursing diagnoses	n	%
Health perception–health management		
Risk for trauma	2	6.2
Ineffective health maintenance	0	0
Nutritional-metabolic pattern		
Nutritional imbalance–less than body requirements	26	81.2
Impaired skin integrity	16	50.0
Risk for infection	9	28.1
Elimination pattern		
Constipation	25	78.1
Activity-exercise pattern		
Activity intolerance	13	40.6
Self-care deficit syndrome	11	34.4
Mobility, impaired physical	6	18.8
Sleep-rest pattern		
Disturbed sleep pattern	26	81.2
Cognitive-perceptual pattern		
Chronic pain	19	59.4
Self-perception pattern		
Anxiety	17	53.1
Disturbed body image	11	34.4
Fatigue	5	15.6
Powerlessness	2	6.2
Role relationship		
Impaired social interaction	2	6.2
Coping-stress tolerance		
Ineffective coping	0	0
Value-belief		
Spiritual distress	0	0

diagnoses: hypertension (28.1%) and tachycardia (15.6%). The distribution of nursing diagnoses determined by students is visualized and ordered according to the functional health patterns (Table 1).

### Discussion

From a total of 18 predetermined diagnoses by the instructors, the students were able to state 15 diagnoses. Other studies reported similar results about students' most commonly used nursing diagnoses (Erdemir, 2003; Yönt et al., 2009). A study by Abbasoğlu, Hakverdioğlu, and Erdemir (2003) showed that students' most often used nursing diagnoses and interventions in clinical practice were anxiety (59.3%), pain (46%), risk of infection (45.2%), and knowledge deficit (40.5%). Other studies showed similar results, with anxiety and pain as the most often stated nursing diagnoses in clinical practice (Müller-Staub, Lavin, Needham, & van Achterberg, 2006; Müller-Staub et al., 2008). Nevertheless, the present study demonstrates a low ratio of determination per diagnosis for the majority of diagnoses (Table 1). The students were not able to diagnose spiritual distress, ineffective coping, and ineffective health maintenance, and diagnoses such as fatigue, powerlessness, impaired social interaction, and

risk for trauma were stated by few students only (Table 1). Other studies found similar results, and also revealed low percentages of nursing diagnoses use from the health perception, coping-stress tolerance, and value-belief patterns used in practice (Abbasoğlu et al., 2003; Yönt et al., 2009). A high ratio of students identified medical diagnoses/symptoms, such as hypertension and tachycardia, as nursing diagnoses. This reveals students' confusion of medical and nursing diagnoses, and demonstrates students' difficulties in distinguishing between medical diagnoses and nursing diagnoses.

To enhance nursing diagnoses use, authors strongly suggested to focus more on nursing diagnoses and diagnostic reasoning in undergraduate programs (Lunney, 2008; Müller-Staub et al., 2008). The use of actual patient cases and/or case studies is supported in the literature (Lunney, 2009; Müller-Staub, Meer, Briner, Probst, & Needham, 2008).

Hospital settings and policies also influence the use of nursing diagnoses (Müller-Staub, 2007). The fact that the nursing process, including stating nursing diagnoses, is not part of the *Patient Care Program* in Turkish hospitals reveals that nursing diagnoses are underestimated in hospital settings. This fact might be a further reason for the results of this study.

### Implications

The findings from this study indicate that students were knowledgeable regarding commonly used nursing diagnoses. The most often reported nursing diagnoses in the literature pertaining to the functional health patterns *sleep-rest*, *nutritional-metabolic*, *elimination*, *cognitive-perceptual*, and *self-perception* were formulated by first year students participating in this study. However, the study indicates that students were not able to determine nursing diagnoses pertaining to the functional health patterns *health perception*, *role relationship*, and *coping-stress tolerance*. The results also show students' difficulties in distinguishing medical diagnoses from nursing diagnoses.

Educational support could ensure student nurses' experience and participation in solving clients' problems when using nursing diagnoses. The authors recommend that nursing diagnoses from all functional health patterns be given more attention in the nursing curriculum. Applying patient case studies in the form of case studies/vignettes in education is suggested, and further studies on using vignettes are recommended. The authors also suggest that using and evaluating nursing diagnoses during clinical practicals becomes a requirement for clinical education. It is recommended that more time be given to students to state nursing diagnoses in clinical patient care.

Further studies are needed to determine students' abilities in analyzing and identifying nursing diagnoses, including students' abilities to distinguish nursing diagnoses from medical diagnoses. Studies with larger samples including

students from different school years and settings are recommended to contribute to effective teaching methods for nursing diagnoses education.

### Conclusions

Despite the fact that students were at the end of their first semester with only limited experience in clinical practice, they were successful at identifying the majority of commonly used nursing diagnoses as predetermined by their instructors in a validated vignette. Students failed to identify some of the predetermined diagnoses and also identified some medical diagnoses/symptoms as nursing diagnoses. The findings reveal students' lack of familiarity with several NANDA-I diagnoses as ordered by the functional health patterns. These findings might be influenced by a lack of training to get experience in diagnosing patients during the first clinical practical.

### References

- Abbasoğlu, A., Hakverdioğlu, G., & Erdemir, F. (2003). Utilization of nursing diagnosis and interventions by nursing students in clinical practice at Baskent University in Turkey. In N. Oud (Ed.), *ACENDIO 2003* (pp. 113-116). Paris: Hans Huber.
- Carpenito, L. J. (2004). Nursing diagnosis handbook. In F. Erdemir (Ed.), *Hemşirelik Tanıları El Kitabı* (pp. 1-26). Istanbul, Turkey: Nobel Tıp Kitabevi.
- Erdemir, F. (2003). Utilization of nursing diagnosis by nursing students during a pediatric nursing course in Turkey. *International Journal of Nursing Terminologies and Classifications*, 14, 59.
- Gordon, M. (1994). *Nursing diagnosis: Process and application*. St. Louis, MO: Mosby.
- Kaya, N., Babadağ, K., Kaya, H., & Esen, F. (2003). Öğrencilerin NANDA hemşirelik tanımlarını belirleyebilme durumlarının saptanması [Status of the determination of NANDA nursing diagnoses by students]. In F. Erdemir & E. Yılmaz (Eds.), *Hemşirelik Sınıflama Sistemleri* (pp. 179-187). Ankara, Turkey: Başkent Üniversitesi Basın Yayın.
- Lunney, M. (2001). *Critical thinking and nursing diagnosis: Case studies and analyses*. Philadelphia: NANDA-International.
- Lunney, M. (2008). Critical need to address accuracy of nurses' diagnoses. *Online Journal of Issues in Nursing*, 13(1). Retrieved from <http://www.nursingworld.org/search.aspx?SearchPhrase=lunney>
- Lunney, M. (2009). *Critical thinking to achieve positive health outcomes* (2nd ed.). Ames, IA: Wiley-Blackwell.
- Müller-Staub, M. (2007). *Evaluation of the implementation of nursing diagnostics: A study on the use of nursing diagnoses, interventions and outcomes in nursing documentation*. Wageningen, the Netherlands: Ponsen & Looijen.
- Müller-Staub, M., Lavin, M. A., Needham, I., & van Achterberg, T. (2006). Nursing diagnoses, interventions and outcomes—Application and impact on nursing practice: A systematic literature review. *Journal of Advanced Nursing*, 56(5), 514-531.
- Müller-Staub, M., Meer, R., Briner, G., Probst, M. T., & Needham, I. (2008). Erhebung der Patientenzufriedenheit im Notfallzentrum eines Schweizer Universitätsspitals: Vorkommen von Angst, Unsicherheit, Belastung, Schmerz, Atemnot, Übelkeit, Durst und Hunger sowie Zusammenhänge zur Patientenzufriedenheit (Teil 2) [Patient satisfaction in a Swiss university hospital emergency center: Prevalence of anxiety, insecurity, stress overload, pain, dyspnea, nausea, thirst, hunger and correlations with patient satisfaction (Part 2)]. *Pflege*, 21(3), 180-188.
- Müller-Staub, M., Needham, I., Odenbreit, M., Lavin, M. A., & van Achterberg, T. (2008). Implementing nursing diagnostics effectively: Cluster randomized trial. *Journal of Advanced Nursing*, 63(3), 291-301.
- NANDA. (2007). *NANDA-I nursing diagnoses: Definitions and classification 2007-2008*. Philadelphia: Author.
- Yönt, G. H., Khorshid, L., & Eser, I. (2009). Examination of nursing diagnoses used by nursing students and their opinions about nursing diagnoses. *International Journal of Nursing Terminologies and Classifications*, 20(4), 162-168. doi:10.1111/j.1744-618X