



Senior Nursing Students' Achievement of Nursing Program Outcomes and Work Readiness

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Abstract

Aim: The aim of this study is to examine the newly graduated nurses' readiness for work and their perceptions of reaching the program outcomes

Background: Newly graduated nurses realize that they are not competent and self-confident in practice when they start work.

Methods: Senior nursing department students of a foundation university participated in the study. A Socio- Demographic Information Form, The Work Readiness Scale and Students' Perceptions of Achievement of Program Outcomes questionnaires were used to collect data.

Results: The students' work readiness mean score was 333.9 ± 41.8 (min: 0, max: 460), and their mean score of achievement of the program outcomes was 61.03 ± 9.1 (min: 14, max: 70). The students scored lowest on the program outcome is "has the necessary knowledge and skills to fulfill the roles and functions of nursing.

Conclusion: Students' perception of the achievement of the outcomes of the nursing program is good, and their work readiness is at a good level.

Keywords: Nursing Student; Readiness; Program Outcomes; Professional Development; Nursing Education

Abbreviations

ICN: International Council of Nurses; HVS: Health Vocational Schools; CoHE: Council of Higher Education; HVS: Health Vocational Schools; SPAPO: Students' Perceptions of Achievement of Program Outcomes; WRS: Work Readiness Scale.

Introduction

In 2002 the International Council of Nurses (ICN) defined nursing as the autonomous and collaborative care of sick or healthy individuals of all ages, races, ethnicities, groups and

communities and in any setting. Nursing includes health promotion, disease prevention and the care of sick, disabled and dying people. Advocacy, research, health policy and health systems management, patient care and education are important roles of nursing [1]. In Turkey, nursing education takes place as formal education and in face-to-face settings in nursing undergraduate programs within the Faculties of Nursing, Faculties of Health Sciences (FHS) and Health Vocational Schools (HVS) affiliated to the Council of Higher Education (CoHE). Nursing education requires an education system based on theory and clinical practice, supporting students' cognitive, sensory and psychomotor skills. Thus the nursing education process strives to develop clinical

skills as well as theoretical knowledge. Through clinical education students learn by doing, integrating theoretical knowledge and practice. Students develop vocational professionalism, professional competence, communication skills, ability to work cooperatively in teams, and critical thinking and decision-making skills during their theoretical and clinical education [2,3]. Nursing competence is defined as a nurse's ability to effectively demonstrate personal character, professional attitudes, values, and knowledge and skills to fulfill his or her professional responsibilities through practice. A competent nurse should have these qualities and skills and the motivation to provide safe, effective and professional nursing care to his or her patient [4].

Nursing education aims to enable nurses to be competent in clinical practice, employing the skills required by the profession to provide safe care as recommended by international institutions and organizations [5-7]. The knowledge, skills and behaviors that nursing students should be able to demonstrate after completing the education program are expressed as program outcomes. Program outcomes should be consistent with current standards of nursing practice, and nursing schools should develop program outcomes based on a comprehensive and holistic review of professional standards, guidelines, qualifications, and feedback from relevant communities [8]. Program outcomes include competencies and/or concepts that represent the behavior, skills, and knowledge focuses that graduates should acquire.

Evaluation of competency in nursing education has been defined as an important step in professional development, and it has been accepted as a guide to how far nursing schools can achieve the educational goals and learning outcomes [9]. Preparing nursing students to practice safely, competently and compassionately in today's rapidly changing healthcare environment is a challenge. The concept of readiness for work is a relatively new concept and is defined as the degree to which graduates have attitudes and qualities that will prepare them for success in their work life [10]. The literature shows the transition from education to business life is challenging and stressful as well as exciting for nursing students [11-13]. New graduates think that they are not competent enough in practice when they encounter patient loads and nursing workloads specific to the work environment [14]. It is stated that when recent nursing graduates enter the work environment, they do not feel ready for work due to heavy workload, increasing responsibilities, the realities of the hospital environment and not feeling competent [12,14-19]. For this reason, they have difficulty in adapting to the new work environment and they have difficulty in revealing their professional identities due to the lack of clinical experience [20]. Studies indicate that nursing graduates' general readiness for work is not at the

desired level, which leads to an increased attrition rate of nurses and nursing shortages [21,22]. This has an impact on the retention of nursing [23,24]. In studies examining nurses' experiences, it was reported that 33-61% of nurses quit or changed jobs within the first year after graduation [16,25,26]. However, some studies in the literature are more optimistic about the work readiness of nursing students: two studies conducted with senior students in Turkey determined that the majority of students considered themselves competent and self-confident as they transitioned to nursing practice [13,27]. In another study, it was determined that 53% of senior nursing students felt ready to assume professional nursing responsibilities [11].

The degree to which students feel ready to start working in a job after graduation and the areas in which they feel ready vary depending on their countries of origin [13,15,27-30], which is perhaps attributable to cultural differences among countries, educational differences and differences in the value students' communities attach to the nursing profession. In two studies conducted in Turkey, it was observed that the readiness of senior nursing students was good [13,27]. In Güner's study, it was determined that students were confident about theoretical knowledge, but they were worried about clinical skills [13]. In a study conducted in New Zealand, it was found that students felt well prepared [29]. In a study conducted in the Republic of Ireland, it was found that senior nursing students were concerned about readiness for work; they were most concerned about communication, patient management and medication management [30].

Understanding senior nursing students' perception of their readiness for practice is important to better understand the readiness for work of graduate nurses. It is thought that achieving nursing program outcomes, an accepted indicator of the acquisition of nursing knowledge, skills and behaviors, has a significant impact on students' readiness. In Turkey, there are a limited number of studies examining the work-readiness of recent nursing graduates. This study was conducted to fill this void, examining how well recent nursing graduates can achieve their learning outcomes and how ready they feel for professional working life.

Research Questions

- To what extent do senior nursing students achieve program outcomes?
- What is the work readiness of senior nursing students?
- Do the work readiness scale scores of senior nursing students differ according to socio- demographic characteristics?
- Is there a relationship between student work readiness scale scores and their achievement of program outcomes?

Materials and methods

Design and Participants

This descriptive study was conducted with senior nursing students at a foundation university between June 15 and July 15, 2021. In the nursing department where the research was conducted, the spring semester of the fourth year is an intern program that places students in the clinical field for 36 hours a week; in addition, 4-hour case discussions are held once a week about patients the students care for in the clinics. Clinical education is carried out by the educators at the university in cooperation with the clinical nurses. In their last year, students choose an area of practice through the internship system and find many opportunities to practice and gain care experience there through their work in the clinic. In this process, students experience the transition to the nursing profession, albeit partially, and experience clinical practice with teaching staff who are competent in their field. Students have the opportunity to monitor and receive feedback from clinical nurses, educators, and peers. However, due to the Covid-19 pandemic, the 3rd grade clinical applications of the students in the study group were missing, so the final year intern applications were carried out in such a way that they could rotate through all branches, rather than remain within a single branch. Thus, the students had the chance to complete the areas they missed.

This study made no sample selection and included a total of 86 students who were studying in this class and agreed to participate in the research.

Data Collection Tools

Socio-demographic Information Form, The Work Readiness Scale (WRS) and the form Students' Perceptions of Achievement of Program Outcomes (SPAPO) were used as data collection tools in the study.

Socio-demographic information form was prepared by the researchers, and it includes questions about age, gender, high school from which they graduated, whether they have worked in any job before, whether they have worked in a healthcare institution before, and whether they have experience of caring for a person.

The work readiness scale (WRS) developed for different disciplines by Walker A, et al. [31] was revised for nurses and reduced to 46 items [31]. The Turkish validity and reliability of the scale was done by Beyhan TE, et al. [32]. The scale consists of 46 items. The answers to the scale questions are marked between 0-10 points on a chart (0=Strongly Disagree and 10=Strongly Agree). The score that can be obtained from the scale varies between 0-460. A high score on the scale

indicates better readiness for work. The scale consists of four sub-dimensions: work competence, social intelligence, organizational acumen and personal work characteristics. A low score only for the personal work characteristics sub-dimension indicates better work readiness. The Cronbach alpha values of the scale were 0.93 for the work competence sub-dimension, 0.91 for the social intelligence sub-dimension, 0.92 for the organizational acumen sub-dimension, 0.85 for the personal work characteristics sub-dimension, and the general Cronbach alpha value of the scale was 0.93 [32]. In this study, the overall Cronbach alpha value of the scale was 0.91.

Students' perceptions of achievement of program outcomes (SPAPO) form, there are 14 program outcomes of the nursing school where the research was conducted. Program outcomes were created by the school where the research was conducted in line with the Nursing National Core Education Program. Each item is scored between 1 and 5 on a 5-point Likert scale (1 = I strongly disagree, 5 = I strongly agree). The lowest score that can be obtained from the form is 14 and the highest score is 70. High scores obtained from the form correspond to a high level of achievement of program outcomes.

Data Collection

Data collection forms were saved on Google forms and links were sent to the students via WhatsApp. An informed consent form was added to the beginning of the data collection form and the students were asked to complete and return the consent form. Students who did so answered the survey questions.

Ethical considerations: Permission was obtained from the "Non-Interventional Studies Ethics Committee" of the university for the study to be implemented (Date: 28 June, 2021. Decision Number: 06).

Statistical Analysis

The data of the research was analyzed with the Statistical Package for the Social Sciences for Windows (SPSS) 22.0 program. Percentage, frequency, mean and standard deviation were used in the distribution of individual student characteristics. The t-test and ANOVA were used to compare the scores obtained from the WRS scale according to individual student characteristics. SPAPO scores were given as mean and standard deviation. The relationship between WRS and SPAPO was examined by correlation analysis. The significance level of the data was accepted as $p < 0.05$.

Results

A total of 86 students participated in this research. According to the findings; 79.1% (n:68) of the students

participating in the study were female, 10.5% (n=9) of them graduated from health vocational high school, and their mean age was 23.46 ± 2.81 . 89.5% (n=77) of the students stated that they had not worked in a health institution before, 57% of them stated that they had had worked in a job before, and 91.9% (n=79) of them stated that they had not given a long-term care to anyone before. Of the students who participated in the study, 89.5% (n=77) stated that they had not worked

in a health institution before, 57% had worked in a job before, and 91.9% (n=79) had not provided long-term care to anyone before. While 50.0% (n=43) of the students found their nursing education had sufficiently readied them to start working, 67.4% (n=58) of them felt only partially ready to start working. 87.2% (n=75) of the students thought that the Covid-19 pandemic had affected their nursing education.

	n	M	SD	Min	Max
SPAPO	86	61	9.1	14	70
WRS	86	334	42	219	460
WRS - Work Competence	86	164	22	111	200
WRS - Social Intelligence	86	68.9	8.8	39	80
WRS - Organizational Acumen	86	98.6	14	66	120
WRS - Personal Work Characteristics	86	22.6	11	0	80

Table 1: Distribution of students' WRS and SPAPO mean scores.

Students' WRS total score mean was determined to be 333.95 ± 41.87 , work competence sub-dimension mean score of the scale was 164.05 ± 22.11 , social intelligence sub-dimension mean score was 68.98 ± 08.86 , organizational

acumen sub-dimension mean score was 98.61 ± 14.15 , personal work characteristics sub-dimension mean score was 22.66 ± 11.09 . The total mean score of the students' SPAPO was calculated as 61.03 ± 9.10 (Table 1).

Program Outcomes	M	SD
P.O.1. The student has the necessary knowledge and skills to fulfill the roles and functions of nursing	4.1	0.9
P.O.2. The student uses information and care technologies and scientific principles and methods in nursing practices.	4.2	0.9
P.O.3. The student meets the health care needs of the individual, family and society with a holistic and evidence-based approach in line with the nursing process.	4.3	0.8
P.O.4. The student communicates verbally and in writing with the individuals he or she serves and the members of the health care team	4.4	0.8
P.O.5. The student follows and participates in national and international studies on professional development and professional issues.	4.1	0.9
P.O.6. In his or her professional practices, the student acts in accordance with ethical principles and values.	4.6	0.7
P.O.7. The student takes into account the relevant policies, laws and regulations in his or her professional practices.	4.5	0.7
P.O.8. The student uses critical thinking, problem solving and lifelong learning skills in personal and professional development.	4.4	0.7
P.O.9. The student performs nursing practices and studies with colleagues through a team-based approach.	4.5	0.7
P.O.10. In cooperation with the healthcare team and other disciplines, the student takes part in research and projects that will contribute to society.	4.2	0.8
P.O.11. The student takes responsibility in the protection and improvement works by being sensitive to all kinds of social, legal, economic and ecological factors that affect the human being.	4.4	0.7
P.O.12. The student uses leadership and management skills in their professional work and care practice.	4.4	0.7
P.O.13. The student uses training and counseling skills in nursing practice.	4.4	0.7
P.O.14. The student carries out nursing practices by taking into account the safety of the individual/patient, family, society and employees.	4.5	0.8

Table 2: Distribution of students' SPAPO mean scores.

Table 2 shows the mean scores of the students for achieving the program outcomes. Students scored highest on items P.O. 6 (acts in accordance with ethical principles and values), P.O. 9 (performs nursing practices and studies with colleagues through a team-based approach) and P.O. 14 (carries out nursing practices by taking into account the safety of the individual/patient, family, society and employees). Students scored lowest on items P.O.1 (has the necessary

knowledge and skills to fulfill the roles and functions of nursing) and P.O.5 (follows and participates in national and international studies on professional development and professional issues).

There was no statistically significant difference in the WRS scores of the students participating in the study according to their individual characteristics ($p>0.05$).

		The Achievement of Program Outcomes
Work Readiness	r	0.35
	p	0.001
Work competence	r	0.667
	p	0
Social Intelligence	r	0.39
	p	0
Organizational Acumen	r	0.403
	p	0
Personal Work Characteristics	r	-0.158
	p	0.147

Table 3: Comparison of students' WRS score and SPAPO.

A correlation of low-moderate significance was found between the WRS and SPAPO scores of the students participating in the study ($r=0,35$; $p<0.05$). A correlation of positive significance was found between the achievement of learning outcomes and the work competence sub-dimension, a correlation of low-moderate significance was found between the achievement of learning outcomes and the social intelligence sub-dimension ($r=0,39$; $p<0,05$), and a correlation of moderate significance was found between the achievement of learning outcomes and the organizational acumen sub-dimension ($p<0.05$). There was no significant correlation between personal work characteristics sub-dimension and achievement of learning outcomes ($r=-0,15$; $p>0.05$) (Table 3).

Discussion

The complexity and sensitivity of the field of health require that the professionals working in this field are competent and ready for the work. The nurse workforce is the largest component among health services of the professional healthcare workforce and demand for nurses increased worldwide especially during the Covid-19 pandemic [33]. The World Health Organization (WHO) states that an additional 5.7 million nurses will be needed by the year 2030 [34]. However, the literature shows that nurses encounter a number of difficulties when they start working after graduation and experience problems concerning readiness

[35,36]. Nursing programs offer many opportunities for students to develop their theoretical and practical skills [37]. Employers prefer experienced candidates and therefore graduates can experience difficulties searching for a job [38]. Sharma SK, et al. [19] have reported that new graduates encounter a number of difficulties that prevent them from being ready for clinical applications and make them unprepared [35]. Having insufficient communication, leadership and management skills are reported as some of the most common obstacles to the readiness for newly graduated nurses. This study investigated the perceptions of senior nursing students regarding their achievement of the program outcomes of nursing education and how ready they are for working life were investigated. No study conducted in Turkey could be found on this subject in the literature review conducted. The study determined that the senior nursing students' readiness for work was at a good level. The scale does no cut-off value; it is interpreted as high because the score to be obtained from the scale is higher than the average. Senior nursing students' perceptions regarding their achievement of the program outcomes were high. In a study conducted in Saudi Arabia, the readiness of newly graduated nurses is quite close to the results of this study [39]. The study determined that there was a moderately significant correlation between senior nursing students' readiness for work and their perceptions regarding their achievement of program outcomes. A study conducted in Turkey has stated that 57.6% of the students feel quite ready

to work as professional nurses. Güner states that nearly half of the senior students are ready for the profession, and those who think that the educational process and resources are sufficient are more ready for the profession [13]. The international literature shows that

the professional readiness perceptions of senior nursing students are mostly positive [15,29,30]. However, some studies have determined that recent nursing graduates think that they lack the competence and self-confidence demanded by the intensive workloads and patient care responsibilities of the professional work environment [14,16-19,30]. Labrague LJ, et al. [40] stated that the transition from being a nursing student to becoming a graduated nurse could be difficult and cause transition shock, which could have a negative impact on patients, and this was the result of the graduated nurses not being ready to join the workforce [40]. Çınar, et al. reported that although students feel highly competent and self-confident in the transition to the nursing role, nearly half of the students have concerns about the transition to the graduate nurse role [27]. In this study few students stated that they considered themselves sufficiently trained and ready to start working.

In general, most nursing literature defines the practice readiness of nursing graduates as the ability to work autonomously and to practice safe and independently, since they will have the necessary knowledge and skills after completing nursing school [41]. During the study period, due to the Covid-19 pandemic, students faced many barriers to the education process and resources in the education process were not used adequately [42,43]. By March 2020, nursing programs had to rapidly move away from face-to-face classes, simulations, and clinical experiences to distance learning. During the Covid-19 period, both the theoretical and practical aspects of nursing education were affected. Theoretical courses were taught online and clinical applications were suspended for a while. When students went to clinical practice, they had the chance to experience nursing practices with patients in a limited way due to limitations. During this period, nursing students were less interested in their education and communicated less with the school while facing increased workload, social and academic isolation, anxiety about learning, and various logistical problems having to do with the internet and the software infrastructure necessary to complete their school work [44-48]. A study of undergraduate nursing students reported that students experienced high levels of stress, have difficulty in learning online, and miss practical clinical learning opportunities during the Covid-19 period [49]. The majority of the students who participated in this study (87.12%, n=75) stated their nursing education was affected during the Covid-19 period. While 50% of students find the education they have received to be sufficient, 58% feel only

partially ready to begin working. This shows that nurses in the postgraduation period may encounter certain difficulties in the process of adapting to the job. The ineffective use of resources due to the current conditions and the negative experiences of students during the Covid-19 pandemic period may be one of the factors explaining the moderate levels of readiness and the fact that they do not see themselves as sufficient to start working. This result shows that the pandemic has created many challenges in nursing education and students' education may have been disrupted. Education programs may need to focus on supporting students in this challenging process. Powers K, et al. [50] determined that nursing students' work-readiness decreased during the pandemic period compared to the pre-pandemic period [50].

In recent years, as the interest in the health sector has grown, the number of the students enrolling in nursing programs has also increased. However, concerns about the readiness for the job of newly graduated nurses and the output of the program have increased. The students' SPAPO mean scores were found to be high. However, the students scored lowest on having "the necessary knowledge and skills to fulfill the roles and functions of nursing", one of the most significant program outcomes readying students for the profession. The fact that students feel themselves insufficient in knowledge and skills is consistent with the findings of other studies conducted with student groups during the pandemic period. These studies determined that students did not feel ready enough for clinical applications and were afraid of being infected [41-43]. Smith et al.'s study carried out with recent nursing graduates during the pandemic period determined that nurses were afraid of missing important details or doing something wrong while providing patient care [51]. Güner P [13] revealed that the students were sure of their theoretical knowledge, but they did not feel confident about clinical skills [15]. The results of our study showed that recent nursing graduates did not have the competence and self-confidence for intensive workload and patient care. İnangil et al.'s study of nursing department students determined that students perceived their achievement of the program outcomes as low. It has been stated that nursing students perceive their achievement levels to be low because mastery of many program items and a lot of content is required to achieve proficiency and the students are not adequately introduced to these items and content [52]. The study of Çonoğlu and Orgun supports this finding, determining that most students had negative thoughts about their achievement of program outcomes [53].

In our study, students scored highest on the outcomes "acts in accordance with ethical principles and values"; "performs nursing practices and studies with colleagues through a team-based approach"; and "carries out nursing practices by taking into account the safety of the individual/

patient, family, society and employees". Studies have shown that nursing students are sensitive to ethics [54-57] and that nursing students define "helping, respecting and valuing the patient" as the main duty of nursing care [57]. Today, one of the most important and most often emphasized health services issues is patient safety. Although the studies revealed that the knowledge level of nursing students about patient safety is insufficient [58,59], their awareness of patient safety is high [60]. To prevent them from making mistakes in the clinics, students have to work one-on-one with the mentor nurses. This application also improves the student's perception of team collaboration. Okuyan et al. state that their students' attitudes towards teamwork are highly positive [61-64].

Conclusions

In this study, despite all the limitations experienced due to the Covid-19 pandemic, the students' readiness for work and their perception regarding their achievement of program outcomes are at a good level, which is very positive in terms of showing that they are able to achieve the goals and objectives of the program. The pandemic, especially its disruptions in clinical education, may have decreased students' self-confidence in knowledge and skills. It is very important to monitor students' transition from school to professional working life after graduation and to support them in areas where they feel themselves insufficient. It is thought that supporting the development of new graduates will affect their willingness to continue working as nurses and the quality of patient care. At the same time nursing education programs should be prepared for extraordinary situations and should be strengthened academically. Regular program evaluation studies should be carried out and students' achievement of nursing program outcomes should be regularly assessed.

Conflict of Interest Statement

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