

Approaches of National and International Students Studying in the English Nursing Bachelor's Program Regarding Career Planning and Career Future: A Descriptive and Cross-sectional Study

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Abstract

Objectives: This descriptive and cross-sectional study aimed to investigate career planning and career future approaches of national and international students receiving nursing education in English.

Materials and Methods: The study was conducted with nursing undergraduates (n = 148) at a foundation university in Türkiye during the 2023-2024 academic year. Data were collected online through the Participants' Descriptive Characteristics Form and the 28-item Career Future Inventory-Revised (CFI-R). CFI-R consists of five factors, including Career Agency (CA), Negative Career Outlook (NCO), Occupational Awareness (OA), Support (SPT), and Work-Life Balance (WLB).

Results: 41.89% of participants were first-year students, and 61.49% were national students. The mean CFI-R score was 3.70 ± 0.47 , with factor values of $CA = 4.07 \pm 0.52$, $NCO = 2.81 \pm 1.08$, $OA = 3.63 \pm 0.59$, $SPT = 3.99 \pm 0.72$, and $WLB = 3.99 \pm 0.64$. Desire to work in healthcare (n = 75), advice from family members (n = 32), and broad career opportunities globally (n = 15) were the primary reasons for choosing the English nursing program. The most common career plans were working abroad (n = 33), becoming an academic (n = 29), and achieving excellence in their field (n = 23).

Conclusion: This study demonstrates that national and international nursing students have a positive attitude towards their career future and begin to set career goals during their undergraduate years. Career planning aligned with global trends and systems that track pre- and post-graduation career interests may support students. Awareness and skills of nursing students regarding international career orientations can be increased with an intercultural student-centered approach and interdisciplinary models. Multi-centered national and international studies are recommended for further research.

Keywords: career choice, career counselling, nursing students

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Introduction

Nursing is a profession that is grounded in organized scientific knowledge and formal education with an understanding of aesthetics and art (Kaya, 2023). Today's nursing embraces the autonomous and collaborative care of individuals of all ages, whether they are sick or healthy, as well as their families, groups, and communities in all care settings. Nurses promote health, disease prevention, and evidence-based care for patients, people with disabilities, and those at the end of life. The nursing profession is sensitive to society's needs. That requires professionalism and monitoring its members' professional development opportunities (Hill, 2023). Professional development supports curiosity and allows nurses to expand their careers into new areas of expertise, roles, and challenges. Thus, it keeps nurses committed to their profession and motivates them to be excited about future nursing career possibilities (Ni et al., 2023; Weng & Zhu, 2020).

A career is a broad concept that incorporates all employment, roles, responsibilities, and duties throughout people's lives, as well as the events that shape their personal and professional journey (Öztemel, 2022). Within the framework of this career journey, individuals experience various situations related to career satisfaction and their future career prospects. All these factors, both positive and negative, that affect the process play a role in shaping individuals' career planning behaviors (Taş & Aytaç, 2021) enabling them to make professional decisions, advance in their field, gain recognition, take on responsibility, earn respect and better standard of living (Akman Yılmaz et al., 2023). Furthermore, a successful career enhances job satisfaction, productivity, and fosters a positive outlook on the future that makes well-structured career preparation even more crucial. Therefore, career planning requires developing an individual's knowledge, skills, abilities, and motivations, as well as increasing professional awareness, improving attitudes, adapting to change, and utilizing resources effectively (Rottinghaus et al., 2005).

Career competencies—knowledge, skills, attitudes, and abilities—should be emphasized from the student years. This approach enables individuals to achieve professional advancement and fulfill their needs (Akman Yılmaz et al., 2016). Nursing education should not only aim to teach future nurses about the knowledge and skills related to professional practices and enhance their abilities, but also support them in recognizing career opportunities and planning their careers with an awareness throughout their education (Akman Yılmaz et al., 2023; Sönmez et al., 2019). When students are not provided with adequate knowledge and skills in career planning and management during their education, graduates may become educated

unemployed individuals who do not wish to practice their profession, seek job opportunities outside their field, or experience inefficiency, dissatisfaction, negative career future perception and anxiety due to career choices that do not align with their skills. Additionally, they may fail to fully realize their potential, which in turn hinders their contribution to the development of the profession (Özkanan et al., 2022).

The situations outlined above draw attention the necessity to prepare students thoroughly from their undergraduate years onwards (Winters et al., 2018). In this context, nursing curricula must be adjusted to encourage career planning. For this purpose, it would be more efficient first to analyze the students' needs related to career planning and then take targeted actions that align with those needs. Thus, it can help identify the need to evaluate students' perceptions of their professional future, shape the educational process, organize career planning and development activities, and monitor the outcomes of these efforts. (Akman Yılmaz et al., 2016; Rottinghaus et al., 2005; Şen et al., 2021). Although the need for a career-planning curriculum in nursing education is acknowledged, its development and implementation still require improvement. Curricula prepared without student input often lack sufficient instructional content, and placing these programs either in the early years or during the internship period limits its effectiveness. Because, early-stage students may struggle to understand the process, while those in final-year students may experience insufficient guidance due to limited communication between the nursing school and clinical settings (Wei et al., 2020). Therefore, it has been proposed that a student-centered curricula design, continuous career-planning activities with experts in nursing, and establishing sustained counselling and guidance services may help to empower nursing students (Alnajjar & Abou Hashish, 2024; Wei et al., 2020). The relevant literature discusses nursing students' perspectives on career planning courses, how career affects their perception of nursing, career future and nursing image, professional values and career ambitions, and career planning demands (Akman Yılmaz et al., 2023; Çetin Avcı et al., 2019; Shoqirat & Abu-Qamar, 2015; Şen et al., 2021; Waddell et al., 2015). However, it has been found that there are no studies examining career planning and future views of nursing students studying in a language other than their native language. In this regard, the study aims to examine the career planning and career future of national and international students studying nursing in English. Given the expectations from today's nurses and increasing impact of nursing profession at a global level (White et al. 2015), this study will establish a groundwork regarding preferences and interests of national and international nursing students. Moreover, it is anticipated that the study will raise awareness regarding career

planning and counselling processes in multinational nursing education and guide improving practices related to this field. Thus, continuous professional development processes of future nurses may also be supported.

Materials and Methods

Study Design

This study was conducted as a descriptive and cross-sectional study. The following questions have been addressed in the study:

1. What are the attitudes of students in the English undergraduate nursing program towards their career future?
2. What are the reasons for students choosing the English nursing program?
3. What are the opinions of students in the English undergraduate nursing program regarding their future career planning?

Study Sample

Purposive sampling was employed to determine the study sample. In this respect, the study population consisted of all national and international students in the English nursing program at a foundation university in Istanbul, Türkiye, that offers nursing education in English, during the 2023-2024 academic year. In calculating the sample size, the number of nursing students actively enrolled in the program during the academic year ($N = 240$) was considered. The calculation was performed with a medium effect size ($d = 0.5$), a 95% confidence level ($1 - \alpha$), and a 95% test power ($1 - \beta$) using the Raosoft Sample Size Calculator (Raosoft, 2024). A total of 148 participants were calculated as the minimum sample size. The inclusion criteria were: a) Being enrolled in the English nursing program at the university, b) Proficiency in reading and writing English, and c) Volunteering to participate in the study. The study completed with 148 participants. In the power analysis conducted after the research, the effect size of the research was calculated as $d=0.5$ and the power of the research ($1 - \beta$) was calculated as 98% at a 95% confidence level ($1 - \alpha$). Based on these results, it was concluded that the research sample was sufficient.

Information on the Study Setting

Higher education institutes in Türkiye accept national and international students depending on quotas set by the Council of Higher Education (CoHE). International students can attend English-only departments for standardized instruction. National and international

students receive education within quotas in these departments. The foundation university in Istanbul, Türkiye, where the research was conducted, offers an English-taught nursing program.

The Career Planning Course has been added to the program's curriculum. This course offers 2 hours of theoretical lectures per week, taught by a faculty member with CoHE-recognized English competence and a doctoral degree in nursing. The course covers the basics of career planning, professionalism, and values in nursing, including the stages of career planning, challenges, resume preparation, and interview techniques, as well as entrepreneurship, innovation, continuous development after graduation, nursing career opportunities, and sharing national and international career experiences from various fields of nursing. Non-nursing experts are also invited, depending on the subject, to create a multidisciplinary environment.

Data Collection Tools

The Participants' Descriptive Characteristics Form and the Career Future Inventory-Revised (CFI-R) were used to collect data for the study. The questions in the data collection tools were transferred to Google Forms, and a survey link was created. The survey link was shared in students' social media communication groups, including WhatsApp, Teams, and Instagram. *The Participants' Descriptive Characteristics Form* consisted of the questions, including sociodemographic information, reasons for choosing the English nursing program, and participants' thoughts on future career planning.

The Career Future Inventory-Revised tool was first developed in 2005 as the Career Future Inventory (CFI). Rottinghaus et al (2012) revised the tool. Accordingly, the CFI-R aims to evaluate individuals' positive attitudes towards career planning, general outcome expectations, and perceptions of career compatibility. It has a 5-point Likert scale for rating: 1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree nor Disagree, 4 = Agree, 5 = Strongly Agree. The CFI-R consists of 28 items and five factors. The scope of the factors is as a) Career agency (CA): Perceived capacity for self-reflection and forethought to intentionally initiate, control, and manage career transitions (10 items, Cronbach's alpha coefficient = 0.88), b) Negative career outlook (NCO): Negative thoughts about career decisions and belief that one will not achieve favorable career outcomes (4 items, Cronbach's alpha coefficient = 0.77), c) Occupational awareness (OA): Perceptions of how well an individual understands job market and employment trends (6 items, Cronbach's alpha coefficient = 0.80), d) Support (SPT): Perceived emotional and instrumental support from family and friends in pursuing career goals (4 items, Cronbach's alpha coefficient = 0.77) and e) Work-life balance (WLB): Ability to

understand and manage responsibilities to others across multiple life roles (4 items, Cronbach's alpha coefficient = 0.75). University students from various language backgrounds participated in developing the original tool in English. The inventory has no cut-off point, and evaluation relies on average scores (Rottinghaus et al., 2012). Since the study included international students and the nursing program provided education entirely in English, the original CFI-R content was used with permission from the responsible author. In this study, Cronbach's alpha coefficients were calculated for each item and factor to assess internal consistency (Tavakol & Dennick, 2011). The values obtained ranged from 0.79 to 0.89 in the current study.

Data Collection

The data were collected online via a Google Forms survey. During the data collection, consent was obtained from all students who voluntarily participated (n = 148) in the study. Accordingly, the Informed Volunteer Consent Form was integrated into the survey link, and participants were required to read and agree to it before proceeding to the data collection tools. Students who read the consent form and agreed to participate marked the "I agree to participate in the study" option. Those who did not select this option were unable to access the survey questions. The data collection process was held between June 15 and 30, 2024, during the Spring Semester of the 2023-2024 academic year.

Statistical Analysis

SPSS Statistics for Windows, Version 28.0 (IBM Corp., 2021) was used for the data analysis. Descriptive statistics, including frequency, percentage, mean, median, and standard deviation, were examined for the participants' characteristics. The Kolmogorov–Smirnov test was employed to assess the normal distribution of continuous numerical data. It was determined that the data exhibited normal distribution (Kolmogorov–Smirnov test, $p = 0.576$). Accordingly, parametric tests (Student's t-test and ANOVA) were performed for quantitative data that demonstrated a normal distribution (Mishra et al., 2019).

Ethical Consideration

The ethics committee approval of the study was obtained from the Istanbul Medipol University Social Sciences Scientific Research Ethics Committee on June 3, 2024, with the decision number 77. Written permission was taken from the students who participated in this study through Google Forms.

Results

Participants' Descriptive Information

The mean age of the participants was 20.78 ± 2.81 years. Among the participating students, 79.05% (n = 117) were female, 41.89% (n = 62) were first-year students, 61.49% (n = 91) were national students, 45.95% (n = 68) were recipients of a 50% scholarship, 73.65% (n = 109) had not received career counselling before choosing nursing as their career path, 64.87% (n = 96) had taken a Career Planning Course, and 54.17% (n = 52) of those found the taken course helpful (Table 1).

Table 1. Participants' Descriptive Information (n = 148)

Descriptive characteristics	n	%
Gender		
Female	117	79.05
Male	31	20.95
Country status		
National	91	61.49
International	57	38.51
Admission type to the program		
50% ÖSYM scholarship	68	45.95
Individual payment	51	34.46
100% ÖSYM scholarship	24	16.22
Scholarships from other countries' organizations	5	3.38
Educational year		
1 st year	62	41.89
2 nd year	46	31.08
3 rd year	27	18.24
4 th year	13	8.78
Receiving a professional career counselling		
Yes	39	26.35
No	109	73.65
Taking a career planning course within the curriculum		
Yes	96	64.87
No	52	35.14
Opinions on the impact of the career planning course on career planning skills (n = 96)		
Useful	52	54.17
Partially useful	23	23.96
Neutral	14	14.58
Not useful	7	7.29
	Mean \pm SD	Min-Max
Age	20.78 \pm 2.81	17-38

n: Number of participants, %: Percentage, SD: Standard deviation, Min: Minimum, Max: Maximum, ÖSYM: Student Selection and Placement Center

The Career Future Inventory-Revised Scores

The overall mean CFI-R score was 3.70 ± 0.47 . The mean scores for the sub-dimensions were found as follows: Career Agency (CA) = 4.07 ± 0.52 , Negative Career Outlook (NCO) = 2.81 ± 1.08 , Occupational Awareness (OA) = 3.63 ± 0.59 , Support (SPT) = 3.99 ± 0.72 , and

Work-Life Balance (WLB) = 3.99 ± 0.64 (Table 2). The items with the high scores in each domain were as follows: “I understand my work-related interests” (CA = 4.24 ± 0.65), “I doubt my career will turn out well in the future” (NCO = 3.10 ± 1.24), “I understand how economic trends affect career opportunities available to me” (OA = 3.97 ± 0.82), “My family is there to help me through career challenges” (SPT = 4.14 ± 0.83), and “Balancing work and family responsibilities is manageable” (WLB = 4.03 ± 0.72) (Table 2).

Table 2. The Career Future Inventory-Revised Factors and Items Scores (n = 148)

Factors and items	Mean \pm SD	95% CI (Mean)	
		Upper	Lower
Factor 1. Career Agency score	4.07 \pm 0.52	4.16	3.99
I can perform a successful job search	4.12 \pm 0.67	4.23	4.01
I can adapt to change in the world of work	4.16 \pm 0.72	4.27	4.04
I understand my work-related interests	4.24 \pm 0.65	4.34	4.13
I am aware of priorities in my life	4.20 \pm 0.77	4.33	4.08
I can establish a plan for my future career	4.10 \pm 0.74	4.22	3.97
I am aware of my strengths	3.98 \pm 0.84	4.12	3.84
I am in control of my career	3.81 \pm 0.75	3.93	3.69
I will successfully manage my present career transition process	4.00 \pm 0.70	4.11	3.89
I understand my work-related values	4.20 \pm 0.66	4.30	4.09
I can overcome potential barriers that may exist in my career	3.93 \pm 0.83	4.06	3.79
Factor 2. Negative Career Outlook score	2.81 \pm 1.08	2.99	2.64
I doubt my career will turn out well in the future	3.10 \pm 1.24	3.30	2.90
It is unlikely that good things will happen in my career	2.70 \pm 1.27	2.90	2.49
I lack the energy to pursue my career goals	2.66 \pm 1.24	2.86	2.46
Thinking about my career frustrates me	2.78 \pm 1.28	2.99	2.58
Factor 3. Occupational Awareness score	3.63 \pm 0.59	3.73	3.53
I am good at understanding job market trends	3.72 \pm 0.93	3.87	3.57
I keep up with trends in at least one occupation or industry of interest to me	3.81 \pm 0.87	3.95	3.67
I keep current with job market trends	3.51 \pm 0.97	3.67	3.35
I keep current with changes in technology	3.85 \pm 0.89	3.99	3.70
I understand how economic trends affect career opportunities available to me	3.97 \pm 0.82	4.11	3.84
I do not understand job market trends (R)	2.93 \pm 1.14	3.11	2.74
Factor 4. Support score	3.99 \pm 0.72	4.10	3.87
My family is there to help me through career challenges	4.14 \pm 0.83	4.27	4.00
I receive all the encouragement I need from others to meet my career goals	3.85 \pm 1.03	4.02	3.69
Others in my life are very supportive of my career	3.96 \pm 0.89	4.10	3.82
Friends are available to offer support in my career transition	4.00 \pm 0.74	4.12	3.88
Factor 5. Work-life Balance score	3.99 \pm 0.64	4.10	3.89
I am good at balancing multiple life roles such as worker, family member, or friend	3.99 \pm 0.78	4.11	3.86
I am very strategic when it comes to balancing my work and personal lives	3.96 \pm 0.82	4.09	3.83
Balancing work and family responsibilities is manageable	4.03 \pm 0.72	4.14	3.91
I can easily manage my needs and those of other important people in my life	4.00 \pm 0.77	4.12	3.88
Total CFI-R score	3.70 \pm 0.47	3.77	3.62

SD: Standard deviation, CI: Confidence interval, CFI-R: Career Future Inventory-Revised, R: Reverse-coded item

Based on participants' descriptive characteristics, the total mean CFI-R scores of national students (3.78 ± 0.47 , $p = 0.007$) and those receiving a 50% scholarship (3.81 ± 0.47 ,

$p = 0.034$) were statistically significantly higher. Regarding the sub-dimensions, scores of the following domains were statistically significantly higher: CA: 4th-year students (4.28 ± 0.41 , $p = 0.010$), OA: National students (3.73 ± 0.56 , $p = 0.007$) and 50% scholarship students (3.77 ± 0.58 , $p = 0.018$), SPT: Female students (4.06 ± 0.67), $p = 0.022$), 50% scholarship students (4.15 ± 0.62 , $p = 0.044$) and 4rd-year students (4.14 ± 0.55 , $p = 0.045$), and WLB: 4th-year students (4.19 ± 0.38 , $p < 0.001$) and students taking the Career Planning Course (4.07 ± 0.52 , $p = 0.047$) (Table 3).

Reasons for Choosing the English Nursing Program and Opinions on Future Career Planning

The study participants were asked about their reasons for choosing the English nursing program, as well as their expectations and career goals for the future. They were able to answer more than one option. The most frequent responses given by both national and international students regarding their career choices were a desire to work in the healthcare field ($n = 75$), advice from family members to choose it ($n = 32$), and the perception that it offers a broad career opportunities globally ($n = 15$). Regarding future career plans, the most frequent responses were working abroad ($n = 33$), becoming an academic ($n = 29$), and achieving excellence in their field ($n = 23$). 14 participants stated that they do not have any career plan (Table 4).

Table 3. The Career Future Inventory-Revised Factors and Total Scores by the Participants' Descriptive Information (n = 148)

Descriptive Characteristics	n	CA	NCO	OA	SPT	WLB	CFI-R Total
		Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD
Gender							
Female	117	4.08 ± 0.48	2.81 ± 1.05	3.62 ± 0.60	4.06 ± 0.67	3.98 ± 0.65	3.71 ± 0.47
Male	31	4.05 ± 0.67	2.82 ± 1.22	3.68 ± 0.56	3.73 ± 0.82	4.03 ± 0.60	3.66 ± 0.48
<i>t</i>		0.285	-0.068	-0.510	2.316	-0.380	0.505
<i>p</i>		0.776	0.946	0.611	0.022*	0.705	0.615
Country status							
National	91	4.12 ± 0.51	2.95 ± 1.11	3.73 ± 0.56	4.06 ± 0.70	4.03 ± 0.71	3.78 ± 0.47
International	57	4.00 ± 0.54	2.59 ± 1.01	3.47 ± 0.61	3.86 ± 0.73	3.93 ± 0.52	3.57 ± 0.44
<i>t</i>		1.431	1.968	2.734	1.658	0.952	2.732
<i>p</i>		0.155	0.051	0.007*	0.099	0.343	0.007*
Admission type to the program							
50% ÖSYM scholarship ¹	68	4.14 ± 0.50	2.93 ± 1.17	3.77 ± 0.58	4.15 ± 0.62	4.06 ± 0.69	3.81 ± 0.47
Individual payment ²	51	4.01 ± 0.56	2.58 ± 1.02	3.43 ± 0.62	3.84 ± 0.76	3.93 ± 0.54	3.56 ± 0.46
100% ÖSYM scholarship ³	24	4.05 ± 0.55	2.99 ± 0.92	3.65 ± 0.51	3.78 ± 0.83	3.95 ± 0.77	3.68 ± 0.43
Scholarships from other countries' organizations ⁴	5	3.92 ± 0.31	2.75 ± 1.09	3.63 ± 0.38	4.15 ± 0.38	3.95 ± 0.27	3.68 ± 0.31
<i>F</i>		0.753	1.278	3.456	2.774	0.437	2.968
<i>p</i>		0.523	0.284	0.018*	0.044*	0.727	0.034*
<i>Bonferroni</i>				1>3>4>2	1>4>2>3		1>3=4>2
Educational year							
1 st year ¹	62	4.14 ± 0.47	2.71 ± 1.07	3.61 ± 0.60	4.05 ± 0.66	4.05 ± 0.55	3.71 ± 0.43
2 nd year ²	46	4.09 ± 0.61	2.92 ± 1.24	3.78 ± 0.62	4.06 ± 0.74	4.11 ± 0.56	3.79 ± 0.53
3 rd year ³	27	3.79 ± 0.45	2.97 ± 0.85	3.48 ± 0.56	3.64 ± 0.81	3.56 ± 0.87	3.49 ± 0.46
4 th year ⁴	13	4.28 ± 0.41	2.58 ± 0.93	3.51 ± 0.43	4.14 ± 0.55	4.19 ± 0.38	3.74 ± 0.28
<i>F</i>		3.959	0.764	1.796	2.741	5.855	2.671
<i>p</i>		0.010*	0.516	0.151	0.045*	< 0.001*	0.050
<i>Bonferroni</i>		4>1>2>3			4>2>1>3	4>2>1>3	
Receiving a professional career counselling							
Yes	39	4.14 ± 0.49	2.90 ± 1.07	3.71 ± 0.52	3.99 ± 0.71	4.01 ± 0.58	3.75 ± 0.36
No	109	4.05 ± 0.54	2.78 ± 1.09	3.60 ± 0.62	3.99 ± 0.72	3.99 ± 0.66	3.68 ± 0.50
<i>t</i>		-0.954	-0.625	-0.980	-0.007	-0.221	-0.819
<i>p</i>		0.341	0.533	0.329	0.994	0.825	0.414
Taking a career planning course within the curriculum							
Yes	96	4.09 ± 0.53	2.80 ± 1.14	3.64 ± 0.59	4.02 ± 0.69	4.07 ± 0.52	3.72 ± 0.47
No	52	4.04 ± 0.52	2.84 ± 0.98	3.61 ± 0.61	3.93 ± 0.77	3.85 ± 0.81	3.65 ± 0.46
<i>t</i>		-0.643	0.213	-0.260	-0.672	-2.006	-0.867
<i>p</i>		0.521	0.832	0.795	0.503	0.047*	0.387
Opinions on the impact of the career planning course on career planning skills (n = 96)							
Useful	52	4.13 ± 0.44	2.76 ± 1.12	3.56 ± 0.61	4.01 ± 0.69	4.02 ± 0.50	3.69 ± 0.46
Partially useful	23	3.96 ± 0.76	3.23 ± 0.97	3.78 ± 0.58	4.03 ± 0.66	4.12 ± 0.58	3.83 ± 0.54
Neutral	14	4.03 ± 0.36	2.30 ± 1.08	3.58 ± 0.44	4.20 ± 0.43	4.02 ± 0.51	3.63 ± 0.33
Not useful	7	4.39 ± 0.49	2.68 ± 1.58	3.88 ± 0.63	3.68 ± 1.12	4.36 ± 0.50	3.80 ± 0.54
<i>F</i>		1.350	2.111	1.234	0.890	0.966	0.687
<i>p</i>		0.263	0.104	0.302	0.449	0.412	0.562

*p < 0.05, n: Number of participants, SD: Standard deviation, CI: Confidence interval, p: p-value, t: Student t-test, F: ANOVA, CFI-R: The Career Future Inventory-Revised, CA: Career Agency, NCO: Negative Career Outlook, OA: Occupational Awareness, SPT: Support, WLB: Work-life Balance, ÖSYM: Student Selection and Placement Center

Table 4. Reasons for Choosing the English Nursing Program and Opinions on Future Career Planning

	National students	International students	Total
Reasons for choosing the English nursing program*			
Desire to work in the healthcare field	41	34	75
Advice from family members	22	10	32
Offers a broad career opportunities globally	10	5	15
Finding a job is easy	8	3	11
Nursing is my childhood dream	5	4	9
University entrance exam score is convenient only for nursing	5	0	5
Obtaining a visa is easy	5	1	6
Total	91	57	148
Thoughts on future career planning**			
Working abroad	25	8	33
Becoming an academic	22	7	29
Achieving excellence in their field	14	9	23
Not having a plan yet	9	5	14
Becoming a specialized nurse	5	8	13
Earning a good income	5	5	10
Not considering working as a nurse	4	5	9
Gaining new skills and continually developing	0	8	8
Helping people through volunteer projects	7	1	8
Doing my job with passion	3	0	3
Working in management roles	2	1	3
Starting my own business	0	2	2
Working in the Ministry	0	1	1
Total	96	60	156

* Number of answers: 148, ** Number of answers: 156

Discussion and Conclusion

This study examined the career planning and prospects of national and international foreign nursing students. The overall mean CFI-R and subdimension scores showed that students scored three or higher in all categories (CA, OA, SPT, and WLB) except for the NCO factor. Since the evaluation was conducted on a 1-5 Likert scale, these results related to CFI-R can be inferred to indicate that the scores are at a satisfactory level, considering that the majority of participants were first-year students at the beginning of their educational journey.

Upon examining the related literature, no studies on nursing students' career futures using the CFI-R were found. On the other hand, the results of this study show similarities with the data obtained in the CFI-R development study. In the CFI-R study, Rottinghaus et al. (2012) included 348 undergraduate psychology students (freshmen, 79.6%; sophomores, 14.4%; juniors, 3.4%; and seniors, 2.6%) in the CFI-R development study. Although that study's participants were not nursing students, they received same level of scores regarding the CFI-R sub-dimensions (SPT, CA, WLB, OA, and NCO), and their educational year order was similar to that of the participating students in this study. Whilst not the same career assessment tool with the same questions and sub-dimensions, there are studies conducted on nursing

students using the previous Career Future Inventory (CFI). This first CFI instrument was developed by Rottinghaus, Day and Borgen (2005) to assess positive career planning attitudes. The CFI consisted of a total of 25 items and 3 sub-dimensions (Career Adaptability, Career Optimism and Perceived Knowledge) by using the 5-point Likert scale evaluation. Some questions on this inventory are similar to the questions in the CFI-R; however, the conceptual framework of the examined categories and the number of questions differ. Even common or contrasting inferences about similar ideas cannot be made, this study's overall mean CFI-R score was used to compare nursing students' general tendencies. A study conducted at a Turkish state university involving final-year nursing students (n = 175) reported a similar overall CFI scores (Sönmez et al., 2019) that aligns with this current study. Given the aforementioned findings, students had favorable thoughts about career planning, outcome expectations, and adaptability in this study.

The study suggested that the higher CA and WLB scores of 4th-year students may be due to their spending more time in clinical areas for professional courses and internships, as well as their greater focus on preparing for the transition to professional working life compared to other year groups. Female students and those on 50% scholarships may have higher SPT scores because their families encourage them to pursue nursing, believing that it is a female-dominated profession with good job prospects. According to recent data from the international (World Health Organization-WHO, 2019) and national (Council of Higher Education, 2025; Republic of Türkiye Ministry of Health, 2025) reports, nursing profession constitutes the majority of the female workforce in the WHO regions, nurses hold the largest share in the overall distribution of healthcare personnel and nearly 80 percent of undergraduate nursing students in Türkiye are female.

In the study, among the responses from national and international students, family advice and the perception of broad career opportunities globally stand out as reasons for choosing nursing in English. Regarding future career planning expectations, working abroad and becoming an academic were the most common responses, particularly among national students. The reason behind this thought could be that, with the increasing international mobility and demand for health professionals in recent years (Tosunöz & Nazık, 2022), and it is anticipated that English-language nursing education will contribute to this process. These findings are not surprising. Additionally, considering a notable presence of international students was observed alongside with national students both student groups recognize studying nursing in English as an opportunity to work internationally. The reasons for choosing nursing

and career goals expressed by the participants of this study show both similarities and differences compared to findings from other studies.

A descriptive and cross-sectional study conducted among national nursing students enrolled in all class levels (n = 570) at a state university in Türkiye, the most prominent career goals among students were working in a public hospital (n = 313), followed by becoming an academician (n = 169), working abroad (n = 133), and becoming a specialized nurse (n = 115) (Akman Yılmaz et al., 2023). Another study in Türkiye with a similar methodology among third-year and fourth-year nursing students (n = 324) from a state university, reported that reasons for choosing nursing were liking the profession (n = 122), having more job opportunities (n = 95), having enough university exam scores for nursing (n = 42), and choosing nursing due to family advice (n = 38) (Çetin Avcı et al., 2019). In a study conducted with first, second, and third-years nursing students (n = 308) in Morocco, the choice of nursing as the first preference (n = 158), satisfaction with the chosen career (n = 270), and the intention to migrate after graduation (n = 152) were answered affirmatively. In contrast, the intention to consider changing professions was answered negatively (n = 231). The study also found that social and economic factors have a significant influence on career choice. Among the social factors, family support (n = 233) and, among the economic factors, the very low risk of unemployment and the profession offering a stable and secure future (n = 254) were found to be important (Ait Ali et al., 2024).

Recently, the mobility of international human resources, particularly highly educated and qualified employees, has increased due to concerns such as earning a higher income and enjoying a better standard of living than in their home countries, access to advanced technology, and leading a stable life. This trend mainly involves the movement of nurses from developing to developed countries (Tosunöz & Nazik, 2022). The Organisation for Economic Co-operation and Development (OECD) reported that the number of foreign-educated nurses had increased by over 20% accounting for more than 7% of the global nursing workforce. This means that foreign-born and foreign-educated nurses will play a significant role in strengthening the nursing workforce in OECD regions (OECD, 2021). Therefore, understanding today's nursing students' career choice criteria, attitudes, and goals regarding their career future and plans is crucial (Tosunöz & Nazik, 2022). Among the items with the highest scores in the CFI-R factors, the statement "I understand how economic trends affect career opportunities available to me" highlights awareness of students on global factors.

A significant proportion of participants in the study stated that they had taken the career planning course and found it useful. The preparation and implementation of a curriculum for career planning courses, aligned with global trends and expectations for future nurses (Conroy, 2018; Hassmiller & Wakefield, 2022), will be essential in preparing nursing students for their future career planning. Curriculum and counselling that addresses nursing students' career planning challenges can also facilitate improvements in career planning courses. Thus, encouraging good professional attitudes and beliefs might motivate students. If the results of this study are evaluated along with the relevant literature, it can be stated that the nursing students in this study generally held a positive attitude towards their career future. Career perspectives also emphasize the need for nursing to evolve and adapt its philosophy to meet the demands of modern settings (Gassas & Salem, 2022). The data from this study on career choice criteria and future career planning can enhance the understanding of this process. Thus, future nurses can provide exceptional patient care while achieving job satisfaction and ongoing professional development in their future careers.

This study highlights the career planning approaches and career future of nursing students who receive education in a foreign language outside their native country. It was observed that students have a positive attitude towards their career future, and that their future goals begin to shape their career aspirations during their student years, representing the first stage of their career path. Since students have not yet been introduced to the healthcare sector, identifying their career planning needs and providing counselling before graduation can prepare them for successful and satisfying careers in the ever-changing healthcare environment. Tracking students' career trends before and after graduation in nursing education institutions may help graduates transition into the workforce and continue their professional development. The data obtained in this study may be useful in understanding and supporting global career orientations. In this context, a student-centred approach can be employed, with the following as key components: self-assessment, introducing international career opportunities, developing intercultural interview skills, mentoring, rotations in different fields of expertise, and encouraging international exchange programmes alongside development of interdisciplinary models by working with professionals from other disciplines. Thus, awareness of national and international students can be increased while strengthening career planning skills at international perspective.

Limitations

There are a few limitations in this study. Although the sample size was calculated to be sufficient, the study was conducted in a single center, which may not fully represent the diversity of nursing students in other states and at foundation universities. Another limitation is that the English nursing program at the university where the study was conducted has a quota that limits international enrollment, making it difficult to obtain a comparable number of international students to national students. As a result, the perspectives of international students may be overlooked. Finally, since the data were collected based on voluntary participation through an online survey, it may hinder the drawing of precise conclusions about the students' future career perceptions and cause self-selection bias. It is recommended that the aforementioned limitations be taken into account when interpreting the study's findings.

Implications for Future Studies

Future research should focus on including a more diverse group of nursing students from different institutions, regions, and countries to increase the generalizability of the results. Qualitative studies could offer deeper insights into the motivations and challenges students encounter during their career planning processes. National and international multi-center studies involving diverse student groups on career prospects would provide valuable insights. Well-designed, long-term studies that track students' career trajectories over time can reveal how their perceptions and plans evolve as they progress through their education and enter the profession. These studies can also assess how they achieve their individual professional development goals and career expectations after graduation, offering further support through a more in-depth understanding of the long-term impact of career planning. Furthermore, conducting interdisciplinary observational and randomised controlled studies which include various interventions (educational, motivational, cultural, organisational, etc.) along with incentives that encourage participation could contribute to the field of career development in healthcare.

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References

- Ait Ali, D., Ncila, O., Ouhhamou, S., Rizzo, A., Chirico, F., & Khabbache, H. (2024). Motivations driving career choices: Insights from a study among nursing students. *SAGE Open Nursing*, 10, 23779608241255876. <https://doi.org/10.1177/23779608241255876>
- Akman Yılmaz, A., İlçe, A., Can Çicek, S., Yüzden, G. E., & Yiğit, Ü. (2016). The effect of a career activity on the students' perception of the nursing profession and their career plan: A single-group experimental study. *Nurse Education Today*, 39, 176–180. <https://doi.org/10.1016/j.nedt.2016.01.021>
- Akman Yılmaz, A., Coşkun Palaz, S., Yiğit, Ü., Gençer Şendur, E., Bulut, M., & İlçe, A. (2023). Hemşirelik öğrencilerinin kariyer planlamaya ilişkin gereksinimleri [Nursing students' requirements for career planning]. *Sağlık Bilimleri Üniversitesi Hemşirelik Dergisi (University of Health Sciences Journal of Nursing)*, 5(2), 83–92. <https://doi.org/10.48071/sbuhemsirelik.1219938>
- Alnajjar, H. A., & Abou Hashish, E. A. (2024). Exploring the effectiveness of the Career Guidance and Counseling Program on the perceived readiness for the job market: A lived experience among nursing students. *Frontiers in Public Health*, 12, 1403730. <https://doi.org/10.3389/fpubh.2024.1403730>
- Conroy, T. (2018). Factors influencing the delivery of the fundamentals of care: Perceptions of nurses, nursing leaders and healthcare consumers. *Journal of Clinical Nursing*, 27(11-12), 2373–2386. <https://doi.org/10.1111/jocn.14183>
- Çetin Avcı, S., Işık, G., Egelioglu Cetişli, N., Üşümez, D., Şencandan, B., & Bektaş, C. (2019). Hemşirelik öğrencilerinin profesyonel değerleri ve kariyer planları [Professional values and career plans of nursing students]. *Sağlık Bilimleri ve Meslekleri Dergisi (Journal of Health Sciences and Professions)*, 6(2), 256–265. <https://doi.org/10.17681/hsp.441835>
- Gassas, R., & Salem, O. (2022). Factors affecting nurses' professional values: A comprehensive integrative review. *Nurse Education Today*, 118, 105515. <https://doi.org/10.1016/j.nedt.2022.105515>
- Hassmiller, S., & Wakefield, M. K. (2022). The future of nursing 2020–2030: Charting a path to achieve health equity. *Nursing Outlook*, 70(6), 1–9. <https://doi.org/10.1016/j.outlook.2022.06.007>
- Hill, B. (2023). RCN's new definition of nursing reflects changes in health care. *British Journal of Nursing*, 32(19), 918. <https://doi.org/10.12968/bjon.2023.32.19.918>
- IBM Corp. (2022). *IBM SPSS Statistics for Windows* (Version 28.0) [Computer software]. Armonk, NY: IBM Corp.
- Kaya, N. (2023). Science, art, and nursing. *CURARE - Journal of Nursing*, 1, 38–42. <https://doi.org/10.26650/CURARE.2023.006>
- Mishra, P., Pandey, C. M., Singh, U., Gupta, A., Sahu, C., & Keshri, A. (2019). Descriptive statistics and normality tests for statistical data. *Annals of Cardiac Anaesthesia*, 22(1), 67–72. https://doi.org/10.4103/aca.ACA_157_18
- Ni, Y. X., Li, L., & Li, J. P. (2023). Development and psychometric evaluation of the Career Growth Scale for nurses. *Asian Nursing Research*, 17(4), 200–207. <https://doi.org/10.1016/j.anr.2023.08.001>
- Organisation for Economic Co-operation and Development. (February 21, 2021). *International migration and movement of nursing personnel to and within OECD countries - 2000 to 2018: Developments in countries of destination and impact on countries of origin* (OECD Health Working Papers No. 125). OECD Publications. <https://doi.org/10.1787/b286a957-en>
- Özkanan, A., Acar, O. K., & Çıragöz, M. B. (2022). Kariyer yönetimine biçilen değer: Üniversitelerin kariyer merkezleri üzerine bir inceleme [The value attempted to be given to career management: A research on the career centers at universities]. *Bilecik Şeyh Edebalı Üniversitesi Sosyal Bilimler Dergisi*, 7(1), 1–18. <https://doi.org/10.33905/bseusbed.987983>
- Öztemel, K. (2022). *Kariyer geliştirme ve planlama [Career development and planning]*. (4. Baskı).
- Raosoftware. (2024). *Raosoftware Sample Size Calculator*. <http://www.raosoftware.com/samplesize.html>. Date of access: April 4, 2024.
- Republic of Türkiye Ministry of Health General Directorate of Health Information Systems. (2025). *Health Statistics Yearbook 2023* (Ministry of Health Publication No: 1302). Retrieved from <https://dosyasb.saglik.gov.tr/Eklenti/50208/0/siy2023ingilizce31012025pdf.pdf>. Date of access: March 1, 2025.
- Rottinghaus, P. J., Day, S. X., & Borgen, F. H. (2005). The Career Futures Inventory: A measure of career-related adaptability and optimism. *Journal of Career Assessment*, 13(1), 3–24. <https://doi.org/10.1177/1069072704270271>
- Rottinghaus, P. J., Buelow, K. L., Matyja, A., & Schneider, M. R. (2012). The Career Futures Inventory–Revised: Measuring dimensions of career adaptability. *Journal of Career Assessment*, 20(2), 123–139. <https://doi.org/10.1177/1069072711420849>

- Shoqirat, N., & Abu-Qamar, M. Z. (2015). From placement to employment: Career preferences of Jordanian nursing students. *Nurse Education in Practice*, 15(5), 366–372. <https://doi.org/10.1016/j.nepr.2015.04.004>
- Sönmez, B., Önal, M., & Yıldız, G. (2019). Hemşirelik son sınıf öğrencilerinin kariyer değerleri ve kariyer geleceği arasındaki ilişkinin belirlenmesi [Determining the correlation between career values and career future of the fourth-year nursing students]. *Sağlık Bilimleri ve Meslekleri Dergisi*, 6(1), 127–135. <https://doi.org/10.17681/hsp.415119>
- Şen, S., Özilek, S., & Öz, E. N. (2021). Hemşirelik öğrencilerinde kariyer geleceği ile hemşirelik mesleğine yönelik imaj algısı arasındaki ilişkinin belirlenmesi [Determining the relationship between career future and image perception of nursing profession in nursing students]. *Sağlık ve Hemşirelik Yönetimi Dergisi*, 8(1), 21–30. <https://doi.org/10.5222/SHYD.2021.62408>
- Taş, A., & Aytac, T. (2021). *Kariyer geliştirme ve planlama: Kuram yöntem uygulama [Career development and planning: Theory method practice]*. (1. Baskı).
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 2, 53–55. <https://doi.org/10.5116/ijme.4dfb.8dfd>
- Tosunöz, İ. K., & Nazik, E. (2022). Career future perceptions and attitudes towards migration of nursing students: A cross-sectional multicenter study. *Nurse Education in Practice*, 63, 103413. <https://doi.org/10.1016/j.nepr.2022.103413>
- Waddell, J., Spalding, K., Canizares, G., Navarro, J., Connell, M., Jancar, S., Stinson, J., & Victor, C. (2015). Integrating a career planning and development program into the baccalaureate nursing curriculum: Part I. Impact on students' career resilience. *International Journal of Nursing Education Scholarship*, 12, 162–173. <https://doi.org/10.1515/ijnes-2014-0035>
- Wei, L. Z., Zhou, S. S., Hu, S., Zhou, Z., & Chen, J. (2021). Influences of nursing students' career planning, internship experience, and other factors on professional identity. *Nurse Education Today*, 99, 104781. <https://doi.org/10.1016/j.nedt.2021.104781>
- Weng, Q., & Zhu, L. (2020). Individuals' career growth within and across organizations: A review and agenda for future research. *Journal of Career Development*, 47(3), 239–248. <https://doi.org/10.1177/0894845320921951>
- White, J., Gunn, M., Chiarella, M., Catton, H., & Stewart, D. (2025). Renewing the definitions of “nursing” and “a nurse” (Final project report, June 2025). International Council of Nurses.
- Winters, J. M., Wang, H., Duwel, L. E., Spudich, E. A., & Stanford, J. S. (2018). Developing a backup plan: Implementing a career-planning course for undergraduate biology majors. *Journal of Microbiology & Biology Education*, 19(3), 19.3.91. <https://doi.org/10.1128/jmbe.v19i3.1449>
- World Health Organization. (2019). Gender equity in the health workforce: Analysis of 104 countries. Health workforce working paper 1 (WHO/HIS/HWF/Gender/WP1/2019.1). License: CC BY-NC-SA 3.0 IGO. Retrieved from <https://iris.who.int/handle/10665/311314>. Date of access: March 20, 2025.
- Yüksek Öğretim Kurumu (Council of Higher Education). (2025). 2023-2024 Öğretim Yılı Yükseköğretim İstatistikleri [2023-2024 Academic Year Higher Education Statistics]. Retrieved from <https://istatistik.yok.gov.tr/>. Date of access: February 20, 2025.