

How Does the COVID-19 Pandemic Affect Nursing Students' Career Choices? A Quantitative Study

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ABSTRACT

Aims: The purpose of this study investigated how the COVID-19 pandemic affected nursing students' career choices.

Methods: The study population consisted of 306 students from the Faculty of Nursing (n=234) and the Faculty of Health Sciences (n=72). The sample consisted of 227 students. Data were collected online using a descriptive characteristics questionnaire and the Nursing Career Decision Scale.

Results: Students had a mean Nursing Career Decision Scale score of 100.08. Students with working mothers had higher Nursing Career Decision Scale scores than those with non-working mothers. Being a first-time university students had higher Nursing Career Decision Scale scores than those who had being university before. Those who did not plan to change their nursing department had higher Nursing Career Decision Scale scores than those who thought about changing their department (p<.05). The pandemic affected students' career choices in general and encouraged them to pursue careers in nursing in particularly (p<.05).

Conclusion: In this study results showed that the variables of "faculty," "mother's employment status," "being a first-time university student," and "considering changing department of nursing" significantly affected students' Nursing Career Decision Scale scores (p<.05).

Keywords: COVID-19; career choice; nursing student

Covid-19 Pandemi Süreci, Hemşirelik Öğrencilerinde Meslek Seçimini Nasıl Etkiledi? Kantitatif Çalışma

ÖZET

Amaç: Bu çalışmanın amacı, COVID-19 pandemisinin hemşirelik öğrencilerinin kariyer seçimlerini nasıl etkilediğini araştırmaktır.

Yöntem: Araştırmanın evrenini Hemşirelik Fakültesi (n=234) ve Sağlık Bilimleri Fakültesi'nden (n=72) 306 öğrenci oluşturmuştur. Örneklem 227 öğrenciden oluşmaktadır. Veriler, tanımlayıcı özellikler anketi ve Hemşirelik Meslek Seçimi Ölçeği kullanılarak çevrimiçi olarak toplanmıştır.

Bulgular: Öğrencilerin ortalama Hemşirelik Meslek Seçimi Ölçeği puanı 100.08'di. Anneleri çalışan öğrencilerin, anneleri çalışmayanlara göre Hemşirelik Meslek Seçimi Ölçeği puanları daha yüksekti. İlk kez üniversiteye başlayan öğrencilerin daha önce üniversiteye başlayanlara göre Hemşirelik Meslek Seçimi Ölçeği puanları daha yüksekti. Hemşirelik bölümünü değiştirmeyi düşünmeyenlerin Hemşirelik Meslek Seçimi Ölçeği puanları, bölüm değiştirmeyi düşünenlere göre daha yüksekti (p<.05). Pandemi, genel olarak öğrencilerin meslek seçimlerini etkiledi ve onları hemşirelik alanında kariyer yapmaya teşvik etti (p<.05).

Sonuç: Bu çalışmanın sonuçları, "fakülte", "annenin çalışma durumu", "ilk kez üniversite öğrencisi olma" ve "hemşirelik bölümünü değiştirmeyi düşünme" değişkenlerinin, öğrencilerin Hemşirelik Meslek Seçimi Ölçeği puanlarını anlamlı olarak etkilediğini göstermiştir (p<.05).

Anahtar Kelimeler: COVID-19; kariyer seçimi; hemşirelik öğrencisi

A novel coronavirus (nCoV-19) that emerged in Wuhan/China at the end of 2019 has been responsible for the current COVID-19 pandemic. It has been the most attention-getting event of 2020. Most, if not all countries, were caught unprepared by it. The virus spread rapidly, while administrations were having a tough time grasping the gravity of the situation. The World Health Organization (WHO) classified COVID-19 as a pandemic on March 11, 2020 (1). The pandemic has dramatically affected and continues to affect our lives medically, socially, professionally, politically, economically, mentally, physically, and educationally (2, 3).

Working actively during pandemics is a challenge in itself (4). The COVID-19 pandemic has reminded us that we urgently need to strengthen the global health workforce (1). Nurses make up the largest workforce in healthcare and are on the frontline of patient care in times of crisis (5). As put by Dr. Tedros Adhanom Ghebreyesus, WHO Director-General, "Nurses are the backbone of any health system. Today, many nurses find themselves on the frontline in the battle against COVID-19" (5). What is more, WHO declared 2020 as the "International Year of the Nurse and the Midwife," highlighting the significance of the profession during the pandemic (6).

Nurses are responsible for caring for patients on a day-to-day basis. Students who would like to pursue careers in nursing are expected to be interested and enthusiastic about the profession and make informed decisions based on the facts and future of the profession and the healthcare system (7, 8). People devote about one-third of their lives to their jobs. Career choice is a critical aspect of life because it may open up new doors of opportunity or wedge them more firmly shut. Career choice is a complex process because it is affected by various factors. Choosing a career also means choosing a lifestyle and standards of living (9-11). Studies before the pandemic categorized the factors affecting nursing students' choice of the profession into four: internal, external, sociodemographic/economic, and interpersonal. Internal factors are willingness to help others and a particular interest in healthcare. External factors are a successful career, professional reputation, and autonomy. Sociodemographic/economic factors are gender, financial rewards, and job security. Interpersonal factors are influences of family and professional members (7, 12-14).

Outbreaks are global health crises that have led to administrative and lifestyle changes throughout history. Outbreaks profoundly affect all aspects of life, including economy, politics, education, mental health, etc. (2). The success of preventive measures depends on the

cooperation among all parties involved (citizens, healthcare workers, and institutions). All healthcare professionals have been working tirelessly since the onset of the pandemic (15). Nurses provide hands-on care and treatment for both COVID-19 patients and other patients. They are more likely to contract the virus because they are exposed to it as they care for those in need (16). According to the International Council of Nurses (October 20, 2020), more than 1,500 nurses in 44 countries and more than 20,000 healthcare workers worldwide died from COVID-19 (17). By the nature of their profession, nurses are aware of the risk of infection and worried about infecting their families (18).

Outbreaks enable us to better understand the skills that are fundamental to health (19). The pandemic has changed people's habits, priorities, expectations, and perspectives in its entirety. Healthcare professionals, especially nurses, who are in close contact with patients in high-risk settings during the pandemic may have second thoughts about their career choices. The global fight against the pandemic has reminded us all of the importance of health-related professions. Therefore, it is important to determine the impact of the pandemic on career choices. Although earlier studies have looked into the factors affecting nurses' career choices, no research has investigated the impact of the pandemic on nurses' career choices. Therefore, this study focused on in what way the pandemic affected nursing students' career choices. The purpose of this study was to investigate the impact of the pandemic on nursing students' career choices. This study was concerned with answering the following research questions:

Research question 1: What factors encourage students to pursue careers in nursing?

Research question 2: How does the COVID-19 pandemic affect nursing students' career choices?

METHODS

Study Design and Sample

This descriptive research was conducted in the 2020-2021 academic year. The study population consisted of 306 first-year students from the Faculty of Nursing (n=234) and the Faculty of Health Sciences (n=72) of a university south of Turkey. No sampling was performed. All volunteers were included in the sample (n=227; 74.18%).

Data Collection

The data were collected online (Google forms) using a descriptive characteristics questionnaire and the Nursing Career Decision Scale between 15 and 29 October 2020. The researchers informed all students of the purpose, procedure, and confidentiality of the study. All students read

an e-consent form, and those who volunteered gave informed consent before they filled out the forms.

Data Collection Tools

The Descriptive Characteristics Questionnaire: The descriptive characteristics questionnaire was based on a literature review conducted by the researchers. It consisted of 16 items on faculty, age, gender, parents' education, employment, and income status, participant's conscious choice of university and department, considering changing department of nursing, having tested positive for COVID-19, knowing someone who had tested positive for COVID-19, and the effect of the pandemic on career choices in general and choosing the nursing profession in particular (20-22).

The Nursing Career Decision Scale (NCDS): Scale was developed by Zysberg and Berry to determine the factors affecting students' career choices (23). The scale was adapted to Turkish by Önlü and Saraçoğlu (24). It consists of 17 items and two subscales: vocational congruency (11 items) and survival (six items). The items are scored on a Likert-type scale converted into a 0-100 score, with a higher score indicating a higher effect on career choice. The total score and subscale scores are the sum score divided by the number of items. The scale is not a diagnostic measure, and the score range does not signify anything. The total scale and the subscales "vocational congruency" and "survival" have a Cronbach's alpha of 0.77, 0.63, and 0.79, respectively. The total scale had a Cronbach's alpha of 0.77 in this study.

Data Analysis

The data were analyzed using Statistical Analysis Software (SAS) and R at a significance level of .05 and a confidence interval of 95%. The descriptive data were analyzed using number, percentage, mean, and standard deviation. Cronbach's alpha coefficient was calculated to determine the internal consistency of the NCDS. Skewness and kurtosis coefficients were used for normality testing. The mean and median values were similar, and the skewness and kurtosis coefficients ranged from -1.5 to +1.5, indicating that the data were normally distributed (Figure 1). A multivariate analysis of variance (MANOVA) was used to reduce Type I error. An Analysis of Covariance (ANCOVA) was used to determine the effect of covariates. Box's test for equivalence of covariance matrices yielded $p > 0.05$, suggesting the equality of the group covariance matrices. Therefore, Wilks's lambda distribution was used for test statistics.

RESULTS

Demographic Characteristics

Of participants, 179 (78.9%) were the students of the Faculty of Nursing, 162 (71.4%) were women, 97 (42.7%) had mothers with a primary school degree, 89 (39.2%) had fathers with a primary school degree, 200 (88.1%) had non-working mothers, and 149 (65.6%) had working fathers. One hundred and three families (45.4%) had a monthly income of 2000-3999 TL. Ninety-six participants (42.3%) lived in the city center. The majority of the participants ($n=205$, 90.3%) were first-time university students. More than half the participants ($n=132$; 58.1%) listed nursing department as their first, second, third, or fourth choice. More than half the participants ($n=146$; 64.3%) did not consider changing department of nursing. The majority of the participants ($n=206$; 90.7%) had never tested positive for COVID-19. However, more than half the participants ($n=136$; 59%) knew someone (a family member, friend, acquaintance, neighbor, etc.) who had tested positive for COVID-19. More than half the participants ($n=129$; 56.8%) stated that the pandemic did not affect their career choices in general. One hundred and twenty-three participants (54.2%) stated that the pandemic did not affect their career choice in nursing in particular (Table 1).

Nursing Career Choice

After the outliers were removed, participants had a total NCDS score of 100.08 ± 23.66 (Min= 25; Max=151). They had a mean "vocational congruency" and "survival" subscale score of 69.85 ± 21.62 (Min= 0; Max=110) and 30.23 ± 9.02 (Min= 3; Max=51), respectively (Table 2).

Multivariate Analysis of Variance for NCDS Total Mean Scores

Box's test for equivalence of covariance matrices yielded $p > 0.05$, suggesting the equality of the group covariance matrices. Therefore, Wilks's lambda distribution was used for test statistics. The results showed that the variables of "faculty," "mother's employment status," "being a first-time university student," and "considering changing department of nursing" significantly affected participants' NCDS scores ($p < .05$). In other words, participants from the faculty of nursing had higher NCDS scores than those from the faculty of health sciences ($p < .045$). Participants with working mothers had higher NCDS scores than those with non-working mothers ($p < .024$). The first-time university students had higher NCDS scores than second bachelor's degree students ($p < .015$). Participants who considered changing department of nursing had higher NCDS scores than those who did not consider changing department of nursing ($p < .000$). The pandemic affected participants' career choices in general and encouraged them to pursue careers in nursing in particular (Table 3).

Table 1: Demographic Characteristics and Career Choice (n=227)			
Demographic Characteristics	Mean±SD		
Age	18.98 ± 1.05		
		N	%
Faculty	Faculty of nursing	179	78.9
	Faculty of health sciences	48	21.1
Gender	Woman	162	71.4
	Man	65	28.6
Mother's education (degree)	Illiterate	37	16.3
	Literate	22	9.7
	Primary school	97	42.7
	Secondary school	31	13.7
	High school	31	13.7
	Bachelor's or higher	9	4.0
Father's education (degree)	Illiterate	5	2.2
	Literate	18	7.9
	Primary school	89	39.2
	Secondary school	42	18.5
	High school	45	19.8
	Bachelor's or higher	28	12.3
Mother's employment status	Employed	28	11.9
	Unemployed	200	88.1
Father's employment status	Employed	149	65.6
	Unemployed	78	34.4
Monthly family income (TL)	Less than 2000	75	33.0
	2000-3999	103	45.4
	4000-5999 TL or more	49	21.6
Place of residence	City center	96	42.3
	District	77	33.9
	Town/village	54	23.8
Earlier college experience	First time	205	90.3
	Second time (internal/external transfer)	22	9.7
Nursing department preference order	1-4 th	132	58.1
	5-8 th	32	14.1
	9-12 th	24	10.6
	13-16 th	17	7.5
	17-20 th or higher	22	9.7
Considering changing department of nursing	Yes	81	35.7
	No	146	64.3
Having tested positive for COVID-19	Yes	21	9.3
	No	206	90.7
Knowing someone (family member, friend, acquaintance, neighbor, etc.) who had tested positive for COVID-19	Yes	136	59.9
	No	91	40.1
The impact of the COVID-19 pandemic on career choice	Positive	43	18.9
	Negative	18	7.9
	Undecided	37	16.3
	None	129	56.8

The impact of the COVID-19 pandemic on choosing the nursing profession	Positive	43	18.9
	Negative	22	9.7
	Undecided	39	17.2
	None	123	54.2

Note.SD=Standard Deviation; TL=Turkish lira

Table 2: NCDS Total and Subscale Scores (n=227)

Nursing Career Decision Scale and subscales	Mean ± SD	Min-Max
Vocational congruency (0-110)	69.85 ± 21.62	0-110
Survival (0-60)	30.23 ± 9.02	3-51
Total (0-170)	100.08 ± 23.66	25-151

Note. SD=Standard Deviation; NCDS= Nursing Career Decision Scale

Table 3: Multivariate Tests for NCDS Total Score (n=227)

Demographic Characteristics	F	p
Age	.724	.630
Faculty	4.111	.045*
Gender	.714	.400
Mother's education (degree)	.519	.762
Father's education (degree)	.759	.581
Mother's employment status	5.181	.024*
Father's employment status	.958	.329
Monthly family income (TL)	1.222	.297
Place of residence	.743	.477
Family type	.309	.579
Earlier college experience	6.364	.015*
Considering changing department of nursing	27.691	.000*

Note. NCDS= Nursing Career Decision Scale
 $\eta^2=.316$
Observed Power= .702
Degree of Freedom= 22
*p < .05

Covariance analysis for NCDS total score and some variables

This study also investigated whether the covariates of "having tested positive for COVID-19" and "knowing someone (a family member, friend, acquaintance, neighbor, etc.) who had tested positive for COVID-19" affected participants' career choices. Although most participants stated that the pandemic had no impact on their career choices in general and their choice of the nursing profession in particular (Table 1), those who stated the otherwise caused a significant difference in NCDS scores. The covariance analysis results showed that the pandemic affected participants' career choices in general ($p < .027$) and encouraged them to pursue careers in nursing in particular ($p < .039$) (Table 4).

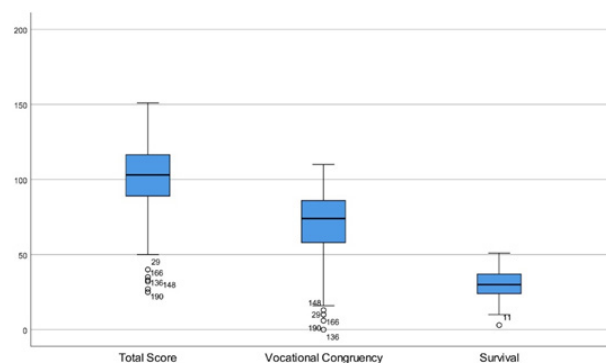


Figure 1: Normally distributed

DISCUSSION

Since the onset of the pandemic, people on social media platforms and TV channels have talked about how vital nursing is and why the world needs more nurses than ever (25). Multiple newspapers have also covered how the pandemic has affected students' choice of department (26). These positive developments make nursing more visible and attractive. Research also shows that students are more interested in nursing and use social and traditional media platforms to learn more about it (13, 27). This paper investigated how the pandemic affected nursing students' career choices. Participants had quite high total NCDS and "vocational congruency" subscale scores. We think that this is because nurses have been among the most sought-after employees since the onset of the pandemic and will continue to be so in the near future, and students know it too. Participants' mean "survival" subscale score was the same as their total mean NCDS score. On the contrary, earlier studies have reported low total NCDS and "vocational congruency" subscale scores (10, 21). Therefore, our results point to the positive effect of the pandemic on students' career choices. Our participants had twice as high "vocational congruency" score as "survival" score, suggesting that students who choose to pursue careers in nursing consider themselves fit for the profession.

Table 4: Covariance Tests for NCDS Total Score and Variables (n=227)

Variables	Status	Mean ^a	F	p
The impact of the COVID-19 pandemic on choosing the nursing profession	Positive	105.314	1.824	.039*
	Negative	94.432		
	Undecided	98.410		
	None	98.957		
The impact of the COVID-19 pandemic on career choice	Positive	114.653	1.940	.027*
	Negative	97.908		
	Undecided	94.706		
	None	96.019		

Note. NCDS= Nursing Career Decision Scale
 a. Covariates in the model are evaluated at the following values: Having tested positive for COVID-19 = 1.9075, knowing someone (family member, friend, acquaintance, neighbor, etc.) who had tested positive for COVID-19 = 1.4009.
 *p < .05

Our results showed that the variables of “faculty,” “mother’s employment status,” “being a first-time university student,” and “considering changing department of nursing” significantly affected participants’ NCDS mean scores. In other words, participants from the faculty of nursing had higher NCDS mean scores than those from the faculty of health sciences. This may be because the faculty of nursing is in the city center and is harder to get into than the faculty of health sciences. However, some researchers reported that the place of residence did not affect NCDS scores (28). Based on our result, we can state that the students of the faculty of nursing higher awareness and readiness concerning career choice.

There was no significant difference in NCDS scores between participants with and without working fathers. However, their scores differed by mothers’ employment status. Participants with working mothers had higher NCDS scores than those with non-working mothers. This may be because working mothers who are more involved in homeschooling are more likely to influence their children’s career decisions and encourage them to get into nursing school. Ogunyewo et al. also found that working parents influenced their children’s career decisions more than non-working parents did (13). However, some studies found no difference in NCDS scores between students with and without working parents (28, 29).

Participants admitted to university during the pandemic had higher “vocational congruency” subscale scores than those who had had university experience before and decided to study nursing as their second degree. We think that first-time university students had the opportunity to learn more about the nursing profession during the pandemic,

and therefore, explored more career options and made more informed decisions about the university they wanted to go to and the department they wanted to study.

Participants who considered changing department of nursing had significantly higher NCDS scores than those who did not considering changing department of nursing. More than half the participants listed nursing as their top choice department. We can state that the students who get into nursing during the pandemic choose the profession willingly and are content with it and determined to practice it. Our result is consistent with the literature (7, 9, 14, 20, 21, 28).

The pandemic is believed to affect first-year students’ career choices because of the rising demand for healthcare services and healthcare workers since its onset. The image of the nursing profession has become a valued career choice for people. Although most participants stated that the pandemic had no impact on their career choices in general and their choice of the nursing profession in particular, those who stated the otherwise caused a significant difference in NCDS scores. In other words, the pandemic has positively affected the participants’ career choices in general and encouraged them to pursue careers in nursing in particular. Having tested positive for COVID-19 or knowing someone (a family member, friend, acquaintance, neighbor, etc.) who had tested positive for COVID-19 might also have contributed to the difference in NCDS scores. Cerit et al. found that nursing students with positive attitudes towards the profession had higher “vocational congruency” scores than those with negative attitudes (30). Studies before the pandemic reported lower NCDS scores than what we found (21, 31). This difference can be

accounted for by the pandemic, which has improved the image of the nursing profession worldwide.

CONCLUSION

The pandemic is still growing, and possible mutations are a constant threat to global health. Although there is no going back to “old normal,” universities have to continue their academic programs. The pandemic has dealt a blow to most professions, but one of its unexpected benefits has been the global recognition of the nursing profession. It has also affected first-year students’ career choices in general and encouraged them to pursue careers in nursing in particular. Students who willingly choose the nursing profession are likely to provide better care and pay much more attention to public health in the future. The increased demand for nurses worldwide shows that the profession is finally getting the recognition that it deserves.

LIMITATIONS

This study is limited to the study findings of nursing students from two faculties. The results are sample-specific, and therefore, cannot be generalized to the whole population. However, this is the first study to look into the impact of the pandemic on nursing students’ career choices. Therefore, further research with a larger sample is recommended to learn more about the subject.

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Conflicts of Interest

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Ethics Approval

The study was approved by the Akdeniz University Faculty of Medicine Clinical Research Ethics Committee (Decision Number: 823, Date:21.10.2020).

Author Contributions

All authors contributed to the study conception and design. Material preparation, data collection and analysis were performed by GAS, RDI and EK. The first draft of the manuscript was written by GAS and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

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