

# Work Motivation in Nurses Providing Nursing Services to Patients with COVID-19: A Descriptive Study

## COVID-19'lu Hastalara Hemşirelik Hizmeti Sunan Hemşirelerde İş Motivasyonu: Tanımlayıcı Bir Çalışma

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**ABSTRACT Objective:** In the study, it was aimed to examine the work motivation level of nurses and the factors affecting work motivation during the coronavirus disease-2019 (COVID-19) pandemic. **Material and Methods:** This descriptive study was conducted with 110 nurses providing healthcare services to patients diagnosed with COVID-19 in a university hospital during the pandemic. Research data were collected using an online survey between September 2021 and December 2021. The survey consisted of “the socio-demographical and working characteristics of nurses”, “Nurses Job Motivation Scale (NJMS)”, and “the importance level of factors affecting work motivation”. **Results:** The mean score of the NJMS of the nurses during the pandemic was 60.17±9.19. The motivation of the nurses who chose the profession because of their “love of the profession” was significantly high ( $p<0.05$ ). The views of nurses on the “suitability of the profession for them” changed negatively during the pandemic compared to the before pandemic ( $p<0.05$ ). The work motivation of the nurses whose opinions were changed negatively was significantly low ( $p<0.05$ ). There was a significant increase in the NJMS scores in parallel with the increase in the importance score of the factors assuming responsibility, getting authority, opportunity to display creativity, openness to innovations, and participation in decisions ( $p<0.05$ ). **Conclusion:** The results of the research showed that the work motivation of the nurses during the pandemic process was high, although not at the maximum level.

**Keywords:** Nursing; motivation; work motivation; pandemic; COVID-19

**ÖZET Amaç:** Araştırmada, koronavirüs hastalığı-2019 [coronavirus disease-2019 (COVID-19)] pandemisinde hemşirelerin iş motivasyon düzeyi ve iş motivasyonunu etkileyen faktörlerin incelenmesi amaçlandı. **Gereç ve Yöntemler:** Tanımlayıcı tipteki bu araştırma, pandemi bir üniversite hastanesinde COVID-19 tanılı hastalara sağlık hizmeti sunan 110 hemşire ile gerçekleştirildi. Araştırma verileri Eylül 2021-Aralık 2021 tarih aralığında çevrim içi anket kullanılarak toplandı. Anket, “hemşirelerin sosyodemografik ve çalışma özellikleri”, “Hemşire İş Motivasyon Ölçeği” ve “iş motivasyonunu etkileyen faktörlerin önem düzeyi” bölümlerinden oluşmakta idi. **Bulgular:** Hemşirelerin pandemi sürecinde Hemşire İş Motivasyon Ölçeği puan ortalaması 60,17±9,19 idi. “Meslek sevgisi” nedeniyle mesleği seçen hemşirelerin motivasyonu anlamlı düzeyde yüksek idi ( $p<0,05$ ). Hemşirelerin “mesleğin kendilerine uygunluğu” konusundaki görüşleri pandemi döneminde pandemi öncesine göre olumsuz yönde değişim gösterdi ( $p<0,05$ ). Görüşü olumsuz yönden değişen hemşirelerin iş motivasyonu puanları anlamlı düzeyde düşük idi ( $p<0,05$ ). Sorumluluk üstlenme, yetki alma, yaratıcılık sergileme fırsatı, yeniliklere açıklık ve kararlara katılım faktörlerinin önem puanındaki artışa paralel olarak iş motivasyonu puanlarında da anlamlı bir artış vardı ( $p<0,05$ ). **Sonuç:** Araştırma sonuçları pandemi sürecinde hemşirelerin motivasyonun maksimal seviyede olmasa da yüksek olduğunu gösterdi.

**Anahtar Kelimeler:** Hemşirelik; motivasyon; iş motivasyonu; pandemi; COVID-19

Coronavirus disease-2019 (COVID-19) is an infectious disease caused by severe acute respiratory syndrome-coronavirus-2, declared a pandemic by the World Health Organization on March 11, 2020.<sup>1-3</sup> The COVID-19 pandemic, which has been spreading

rapidly around the world, causes an increase in morbidity and mortality with each passing day.<sup>4,5</sup> Nurses are one of the closest and most effective healthcare team members to COVID-19 patients from the day they are hospitalized. As such, it can be said that

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nurses are among the most important health professionals in the fight against COVID-19.

A high level of work motivation of nurses will affect their productivity, efficiency, and quality of care. Work motivation can be defined as an emotional response developed by the employee as a result of the evaluation of their work and work environment.<sup>6</sup> At the same time, it refers to the level of meeting the physical, mental and social needs of the employees in line with their expectations.<sup>7</sup> For this reason, work motivation is one of the important conditions for employees to be successful, happy, and productive.<sup>6,8</sup>

Work motivation is important in any profession. However, factors such as heavy working conditions, irregular working hours, and low wages in the nursing profession can cause a decrease in work motivation. Low work motivation can lead to problems such as decreased work efficiency, leaving the profession, or early retirement.<sup>6</sup> The work motivation of the employees may vary between occupational groups, as well as between countries, regions, and institutions in the same occupational group.<sup>9,10</sup> In the literature, there has been increasing concern globally about the work motivation of nurses due to their important role in the quality of care of patients. The source of this concern is the potential impact of low motivation on nurses leaving the profession and, more importantly, on the quality and safety of patient care.<sup>10,11</sup> At the same time, work motivation is closely related to work environment, organizational commitment, professional commitment, work stress, patient satisfaction, and patient-nurse ratios.<sup>10</sup>

Work motivation is affected by internal and external factors. In the studies, it was observed that the work motivation of nurses was affected by age, marital status, the way they express their anger, voluntarily choosing a profession, working time in the profession, meeting expectations, working environment and conditions, relations with managers and colleagues, rigid working conditions, uncertainties in roles, and contracted/permanent working status.<sup>12,13</sup> In another study, it was mentioned that salary contributes the most to work motivation, followed by factors related to institutional variables.<sup>8</sup>

Nurses' work motivation has a direct impact on quality care, while work dissatisfaction is related to a

sustained loss of motivation for the team, and decreased patient safety and satisfaction.<sup>14</sup> Investigating the motivation of nurses who care for patients with COVID-19 can contribute to identifying related problems, planning possible solutions, and thus improving the quality of care. The work of nurses is always essential. In the event of a pandemic, their exposure often increases as their work becomes even more necessary and critical. The pandemic is continuing and it will not seem to end with new variants. We have thought that this descriptive research, which was conducted to determine the nurse's work motivation and the factors affecting work motivation during the pandemic, will raise awareness by bringing the problems experienced by these professionals to the agenda.

## MATERIAL AND METHODS

This current research of the descriptive type aimed to determine the work motivation and influencing factors of nurses who care for COVID-19 patients during the pandemic. The research questions in this study are as detailed below.

- Nurses who worked in COVID-19 units;
  - What is the level of work motivation?
  - Does work motivation differ according to the sociodemographic characteristics of nurses?
  - Does work motivation differ according to the working conditions of nurses?
  - Does work motivation differ according to their views towards their profession?
  - Does work motivation differ according to the importance of the factors affecting work motivation?

The research was carried out in a university hospital in İzmir. The hospital where the research was conducted is a healthcare institution that provides health services in the tertiary level category in the west of our country and provides intensive healthcare services to patients with a diagnosis of COVID-19 during the COVID-19 pandemic. The universe of the research consisted of nurses providing healthcare services to patients diagnosed with COVID-19 in this university hospital. Approximately 120 nurses have worked in the COVID-19 units during the pandemic. No sample selection was made in the study, and all nurses who voluntarily supported the study were in-

cluded in the study. Research data were collected between September 2021 and December 2021. During the pandemic, 110 nurses working in all clinics and intensive care units where patients with a diagnosis of COVID-19 were admitted participated in the study.

## DATA COLLECTION

A questionnaire form as a data collection tool was used in the study. The questionnaire form, which was introduced in detail below, was composed of three parts:

- Part I (nurses' socio-demographic and working characteristics): This section included the questions such as nurse's age, gender, marital status, having children and the age of the child(s), education level, the reason for choosing the profession, years of experience in the profession, views on the suitability for the profession before and during the pandemic, living together at home with individuals over the age of 65, living together at home with an individual with a chronic illness, being in the risk group for COVID-19, working hours per week during the COVID-19 pandemic, the number of patients provided with daily nursing service, and becoming sick with COVID-19. The form was created by the researchers in line with the literature.

- Part II [Nurses Job Motivation Scale (NJMS)]: The NJMS was developed by Engin and Çam in 2016. The scale consisted of 25 questions in a triple Likert type scored as "1: I totally disagree, 2: I partially agree" and "3: I agree". The highest score that can be obtained from the scale is 75, and the lowest score is 25. An increase in the score obtained from the scale indicates an increase in the work motivation of the nurses. In the validity study of the scale, Cronbach's alpha value was found to be 0.84. Permission was obtained to use the scale.<sup>15</sup>

- Part III (importance level of factors affecting work motivation): There are 12 statements including adequate pay, work safety, social insurance, positive social relationships at work, assuming responsibility, getting authority, doing meaningful work, in-service training, opportunity to display creativity, openness to innovation, participation in decisions, and physical working environment to determine the order of importance of the factors affecting the work motivation

of nurses. A numerical scale with numbers from 1 (least important) to 10 (most important) was used. The thesis titled "Motivation of Healthcare Personnel and Related Research" was used to create this section.<sup>16</sup>

Data were collected through an online survey application. The online survey link was delivered to the nurses via the social communication tool. The completed questionnaires were sent to the system by the researchers and the data set was created.

## ETHICAL CONSIDERATIONS

This current research was conducted in line with the Principles of the Declaration of Helsinki. In the online questionnaire form, the participant was informed about the purpose of the research, confidentiality, voluntariness, and withdrawal. In addition, the form was required to mark a statement declaring voluntary participation. Permission was obtained for the NJMS to be used in the collection of research data during the planning phase of the study.

In order to carry out the research, permission was obtained by the COVID-19 Scientific Research Evaluation Commission under the Turkish Republic Ministry of Health General Directorate of Health Services (2021-02-08T14\_02\_03). In the follow-up, the permissions of the Non-Interventional Clinical Studies Ethics Review Board (date: March 4, 2021; no: 0101) and the institution (Health Directorate E-90953153-772.02) were obtained.

## DATA ANALYSIS

The data were analyzed by using SPSS 20.0 Software (IBM SPSS Statistics, IBM Corp., USA). The differences and relationships between dependent and independent variables were provided by one-way analysis of variance, independent sample t-test, chi-square test, Kruskal-Wallis H test, and Mann-Whitney U test. Pearson correlation test was used in the relationship analysis.  $p < 0.05$  value was used for statistical significance in relation or difference analysis.

## RESULTS

In this current research of descriptive type, 80.9% of the nurses were female, 40.9% of married, and 35.5% of had children. The rates of nurses with high school

or associate's degree and bachelor's degree were 15.45% and 70.91%, respectively (Table 1). The proportions of nurses with children aged 1 to 6, 7 to 12, and 13 to 18 years old were 35.90%, 48.72%, and 48.72%, respectively (data not shown).

The mean age of the nurses was  $35.49 \pm 7.97$ , and the mean of experience in the profession was  $9.73 \pm 9.41$  years. The means of duration of duty in the COVID-19 unit, working hours per week, and the number of patients provided with daily nursing ser-

**TABLE 1:** Distribution of the nurses' sociodemographic, work characteristics, and views towards the profession.

Variables		n	%	
Gender	Female	89	80.9	
	Male	21	19.1	
Marital status	Married	45	40.9	
	Single	65	59.1	
Having children	Yes	71	64.5	
	No	39	35.5	
Education level	High school (n=6) and associate degree (n=11)	17	15.45	
	Bachelor's degree	78	70.91	
	Master degree	15	13.64	
Living together at home with individuals over the age of 65	Yes	30	27.3	
	No	80	72.7	
Living together at home with an individual with a chronic illness	Yes	45	40.9	
	No	65	59.1	
*Being in the risk group for COVID-19	Yes	14	58.21	
	No	96	60.46	
Becoming sick with COVID-19 (community sourced)	Yes	20	18.2	
	No	90	81.8	
Becoming sick with COVID-19 (occupational exposure)	Yes	52	47.3	
	No	58	52.7	
Reason for choosing the nursing profession	Examination system	Yes	55	50.0
		No	55	50.0
	Having night and day shifts	Yes	19	17.3
		No	91	82.7
	Family's request	Yes	50	45.5
		No	60	54.5
	Role model nurse	Yes	19	17.3
		No	91	82.7
	Employment opportunity	Yes	63	57.3
		No	47	42.7
	Love the profession	Yes	58	52.73
		No	52	47.27
Nurses' views on the suitability for the profession before the pandemic	Very suitable	13	11.8	
	Suitable	58	52.7	
	Partially suitable	32	29.1	
	Unsuitable	7	6.4	
Nurses' views on the suitability for the profession during the pandemic	Very suitable	13	11.8	
	Suitable	42	38.2	
	Partially suitable	38	34.5	
	Unsuitable	17	15.5	
The reason for the change of nurses' views on the suitability for the profession	Risk of transmitting COVID-19 to my family or close relatives	Yes	9	8.19
		No	101	91.81
	The inability to spare time for their families due to workload and tiredness	Yes	6	5.46
		No	104	94.54
	Frequent change of unit due to need	Yes	2	1.8
		No	108	98.2
	Inability to find financial compensation despite heavy working conditions	Yes	4	3.6
		No	106	96.4
	The psychological burden caused by the death of young patients	Yes	1	0.9
		No	109	99.1

\*Pregnancy n=1. Presence of chronic disease n=14. Use of immunosuppressive drugs n=2.

vice were  $10.37 \pm 7.45$  months,  $59.27 \pm 22.63$  hours, and  $9.59 \pm 10.07$  patients (Table 2).

52.73% of the nurses preferred their profession because of their love of the profession. Rates of nurses who thought that their profession was suitable for them before and after COVID-19 were 52.7% and 38.2% respectively. Among the reasons for the change in nurses' views towards their profession were frequently unit changes, the risk of transmitting the disease to their family or relatives, and the inability to spend time with their families due to workload and tiredness (Table 1).

The mean score of the NJMS during the pandemic was  $60.17 \pm 9.19$  (minimum: 30; maximum: 73) (data not shown). The mean scores of the importance level of factors affecting work motivation ranged from  $4.08 \pm 3.69$  to  $6.65 \pm 3.11$  ("1: at least important" to "10: the most important") (Table 2).

The mean score of the NJMS did not differ significantly according to gender, marital status, having of children, education level, being in the risk group for COVID-19, getting sick with COVID-19, and living together at home with individuals over the age of

65 or with a chronic illness ( $p > 0.05$ ). The mean of the NJMS who reported the role of the factor "a love of the profession" in choosing a profession was  $62.31 \pm 8.27$ , and  $57.79 \pm 9.64$  for those who did not. This difference was significant ( $p < 0.05$ ) (Table 3).

Before and during the pandemic, nurses' views on the suitability for the profession changed significantly. In the periodic comparison of nurses' views, 19 of the 58 nurses who described their views on their profession as suitable before the pandemic changed their views of partially suitable or unsuitable during the pandemic process (Table 4). The mean scores of the NJMS who had "changed negatively" and "changed positively or did not change" their views towards the profession during the pandemic compared to before the pandemic were  $56.96 \pm 9.36$  and  $61.22 \pm 8.94$ , respectively. The difference between both means was statistically significant ( $p < 0.05$ ) (Table 5).

Age, years of experience in the profession, months of experience at COVID-19 units, hours worked per week, and the number of patients provided with daily nursing service did not have a significant effect on work motivation ( $p > 0.05$ ). There

**TABLE 2:** The mean of nurses' sociodemographic and work characteristics and scores of the importance level of factors affecting work motivation.

Sociodemographic and work variables	$\bar{X}$	SD
Age	35.49	7.97
Years of experience in the profession	9.73	9.41
Duration of duty in the COVID-19 unit (month)	10.37	7.45
Working hours per week	59.27	22.63
Number of patients provided with daily nursing service	9.59	10.07
The factors affecting work motivation		
■ Adequate pay	4.08	3.69
■ Work safety	4.95	3.52
■ Social insurance	4.94	3.42
■ Positive social relationships at work	5.70	3.33
■ Assuming responsibility	6.21	3.18
■ Getting authority	5.65	3.17
■ Doing meaningful work	6.65	3.11
■ In-service training	5.12	3.25
■ Opportunity to display creativity	5.40	3.28
■ Openness to innovation	5.85	3.29
■ Participation in decisions	5.84	3.15
■ Physical working environment	5.48	3.52

Significance scores of factors affecting work motivation: "1: at least important"; "10: the most important"; SD: Standard deviation.

**TABLE 3:** Distribution of the mean scores of the NJMS according to their individual characteristics.

Variables			Mean of score		Significance
			$\bar{X}$	SD	
Gender	Female		60.29	9.49	*U=866.500; p=0.604
	Male		59.67	7.95	
Marital status	Married		61.04	10.16	t=0.827; p=0.410
	Single		59.57	8.47	
Having children	Yes		59.36	12.14	t=-1.004; p=0.318
	No		64.90	7.06	
Education level	High school and associate degree		62.47	9.31	**H=3.261; p=0.196 9.16
	Graduate			59.35	
	Postgraduate		61.87	9.14	
Living together at home with individuals over the age of 65	Yes		59.13	8.78	t=0.747; p=0.470
	No		60.57	9.36	
Living together at home with an individual with a chronic illness	Yes		58.84	9.07	t=-1.265; p=0.208
	No		61.09	9.23	
Being in the risk group for COVID-19	Yes		58.21	12.02	U=-1.265; p=0.518
	No		60.46	8.74	
Getting sick with COVID-19 (community sourced)	Yes		60.57	8.88	U=807.500; p=0.473
	No		58.40	10.52	
Getting sick with COVID-19 (occupational exposure)	Yes		60.56	8.18	t=0.954; p=0.342
	No		59.82	10.06	
Factors affecting the choice of profession	Examination system	Yes	59.06	10.12	t=1.280; p=0.203
		No	61.29	8.09	
	Having night and day shifts	Yes	58.95	11.56	U=854.500; p=0.937
		No	60.43	8.67	
	Family's request	Yes	59.62	10.43	t=-1.004; p=0.318
		No	60.63	8.07	
	Role model nurse	Yes	58.50	12.07	U=712.000; p=0.784
		No	60.57	8.62	
	Employment opportunity	Yes	59.19	9.08	t=0.303; p=0.195
		No	61.49	9.25	
	Love the profession	Yes	62.31	8.27	t=-2.626; p=0.010
		No	57.79	9.64	

\*Mann-Whitney U; \*\*Kruskal-Wallis H; NJMS: Nurses Job Motivation Scale; SD: Standard deviation.

**TABLE 4:** Comparison of the nurses' views on the suitability for the profession before and during the pandemic.

		During the pandemic								Significance
		Unsuitable		Partially suitable		Suitable		Verysuitable		
		n	%	n	%	n	%	n	%	
Before pandemic	Unsuitable	6	5.5	1	0.9	0	0.00	0	0.00	$\chi^2=123.198$ p=0.000
	Partially suitable	5	4.5	24	21.8	2	1.8	1	0.9	
	Suitable	6	5.5	13	11.8	37	33.6	2	1.8	
	Verysuitable	0	0.00	0	0.00	3	2.7	10	9.1	

Pearson chi-square.

**TABLE 5:** Distribution of the mean scores of the NJMS among nurses who had a change of views about the profession compared to before the pandemic.

Variables		Mean of score			Significance
		n	$\bar{X}$	SD	
Changed of the negative direction	"Very suitable" views changed as "suitable" (n=3)	27	56.96	9.36	U*=813.00; p=0.033
	"Suitable" views changed as "partially suitable" (n=13)				
	"Suitable" views changed as "unsuitable" (n=6)				
	"Unsuitable"				
Changed of the positive direction or did not change	"Partially suitable" views changed as "Unsuitable" (n=5)	83	61.21	8.94	
	"Unsuitable" views changed as "partially suitable" (n=1)				
	"Partially suitable" views changed as "suitable" (n=2)				
	"Partially suitable" views changed as "very suitable" (n=1)				
	"Suitable" views changed as "very suitable" (n=2)				
	Did not change (n=77)				

\*Mann-Whitney U; NJMS: Nurses Job Motivation Scale; SD: Standard deviation.

**TABLE 6:** The distribution of the correlation between the score of NJMS and independent variables.

Variables		Pearson correlation	Significance
Age		0.042	0.661
Years of experience in the profession		0.006	0.954
The month of experience at COVID-19 units		0.005	0.957
Hours worked per week		0.050	0.601
Number of patients provided with daily nursing service		0.050	0.605
The factors affecting work motivation	Adequate pay	0.010	0.918
	Work safety	0.100	0.299
	Social insurance	0.106	0.270
	Positive social relationships at work	0.186	0.052
	Assuming responsibility	0.211	0.027
	Getting authority	0.230	0.016
	Doing meaningful work	0.148	0.124
	In-service training	0.157	0.101
	Opportunity to display creativity	0.241	0.011
	Openness to innovation	0.268	0.005
	Participation in decisions	0.263	0.005
	Physical working environment	0.182	0.058

NJMS: Nurses Job Motivation Scale.

was a significant increase in scores of NJMS in parallel with the increase in the importance score of the factors assuming responsibility, getting authority, opportunity to display creativity, openness to innovations, and participation in decisions ( $p < 0.05$ ) (Table 6).

## DISCUSSION

Nurses, who are at the forefront of the fight against the COVID-19 epidemic, are working under difficult

conditions during the pandemic process. Nurses may be faced with a dilemma about the suitability of their profession as they try to balance their work and private lives and protect their own health during the pandemic.<sup>17</sup> In this difficult period, practices to increase the motivation of nurses can increase the quality of care by increasing work satisfaction.<sup>18,19</sup> In this respect, it is important to look at and analyze the effects of the epidemic on the work motivation and motivation factors of nurses.

In this current descriptive type study, the work motivation of the nurses was found to be above the medium level. Sperling found that the work motivation of the nurses was good during the pandemic.<sup>20</sup> In related studies, the rate of nurses with good work motivation was between 53.5% and 67.2%.<sup>19,21</sup> This high level of nurse motivation in our study and other studies may be related to nurses' work commitment or love for their profession. The result determined in our study, the fact that the NJMS of those who prefer the profession because of their love of the profession were high strengthened our opinion. Despite the intense work stress and risk of the pandemic process, we can say that nurses continue their duties, being aware of their great responsibilities. Recent studies in the literature report that nurses experience significant personal risks and emotional burdens during the pandemic, but still show a strong commitment to providing care.<sup>20,22,23</sup>

In our study, the rates of nurses who expressed their profession as very suitable and partially suitable for themselves before the COVID-19 pandemic decreased during the COVID-19 pandemic. In addition, the rate of nurses who stated that the nursing profession was not suitable for them increased during the pandemic compared to before the pandemic period. In the study, nurses attributed the reason for the change in nurses' positive attitudes towards their profession during the pandemic to factors such as being a source of the spread of COVID-19 to the family, frequent unit changes, not being able to spend time for family, busy working hours and a heavy workload. Similar results in related studies conducted around the world were in line with our results. Increased workload, longer working hours, a more stressful work environment, inadequate medical and protective supplies, and deteriorating social relationships can negatively affect professional commitment.<sup>23-28</sup> A survey among nurses in the United State, conducted before the COVID-19 pandemic and in March 2020, indicates that the rate of nurses who reported wanting to find new work in march doubled.<sup>29</sup> In a comprehensive United Kingdom survey conducted in April 2020, 60% of nurses report being professionally dissatisfied and depressed.<sup>30</sup> Similarly, in a study conducted in Israel in 2021, it was seen that

nurses who care for COVID-19 patients had lower professional satisfaction than other nurses.<sup>22</sup> As result of another study conducted in Egypt in 2021 was determined that three-quarters of the nurses (75.2%) had high-stress levels, more than half (51.0%) reported a low level of satisfaction, and approximately 24.8% wanted to leave nursing during the COVID-19 pandemic.<sup>31</sup>

According to this current study results, we can say that the weekly working hours of nurses and the high number of patients provided with daily nursing services affect work motivation negatively. In the literature, similar to our study, results were obtained regarding the increase in the workload and weekly working hours of nurses during the pandemic.<sup>22,31</sup> During the COVID-19 pandemic, nurses are under heavy workload conditions. Despite the high patient-nurse ratio and nurse shortage, working with personnel-protected equipment and removing personnel-protected equipment at least twice a day created difficult working conditions for nurses.<sup>32</sup> In a study conducted during the pandemic period, a significant relationship was found between the nurses' performance in handling the coronavirus (COVID-19) case and their motivation and workload. The workload is part of work environments, an important factor in care intention, and is also associated with decreased job satisfaction and motivation and increased intention to quit nursing.<sup>33,34</sup>

The variables such as the total working time in the COVID-19 units, the weekly working time, the number of patients provided with daily nursing service, living together at home with individuals over the age of 65 and a chronic illness, having COVID-19 as a result of community or occupational exposure did not affect work motivation. In this context, it can say that the nurses did not compromise their professional motivation despite the stress, perceived risk, emotional load, and feelings of insufficient support and protection in the workplace in relation to their strong commitment to their profession. One study found that while providing care during the pandemic was highly stressful and came with personal risks, they appear highly motivated and often uncompromising in their obligation to treat patients.<sup>23</sup>



Work motivation is a key to revealing and increasing nurse satisfaction and job performance. Accordingly, factors have become essential tools for influencing work motivation among nurses, changing and shaping nurses' work behaviors and outcomes. In our research, the relationship between the importance level of external motivational factors such as adequate pay, work safety, social insurance, positive social relationships at work, assuming responsibility, getting authority, doing meaningful work, in-service training, opportunity to display creativity, openness to innovation, participation in decisions and physical working environment for nurses the work motivation of nurses was examined. The work motivation increased in parallel with the increase in the importance of the factors such as assuming responsibility, getting authority, displaying creativity, openness to innovations, and participation in decisions. Regarding extrinsic work motivation factors, it includes many external stimuli present in working conditions. A lot of evidence has been reported that work motivation is enhanced and maintained among employees by maintaining positive workplace construction and work supervision. Appreciation, orientation, tasks, communication, responsibilities, policies and procedures, teamwork, and staff development are considered stronger external factors that affect the nurse's motivation to work.<sup>18,20,35</sup> It is very important to recognize the factors affecting the work motivation of the nurse, promote the positive factors, and provide a plan to eliminate the negative ones.

According to these findings, we can consider it a promising and pleasing development for the future of the profession that nurses prioritize developments that will support professional development, even in times such as the pandemic that impose a heavy burden on nurses physically and psychologically. Improving these factors in clinics may contribute to the increase in work motivation of nurses. We should increase the awareness of all health institutions about the factors that increase the motivation of nurses.

## LIMITATIONS

The fact that the study was conducted in a single center limits the generalization of the research results.

Another limitation was that self-report measures were used to gather the data.

## CONCLUSION

In this descriptive study, the work motivation of nurses who care for COVID-19 patients and the factors affecting their work motivation were determined. Based on the research results, during the COVID-19 pandemic, although the level of work motivation of the nurses was high, it was not at the maximum level. Nurses' individual characteristics such as age, gender, marital status, educational status, and having children were not significantly effective on work motivation. Becoming sick with COVID-19 from occupational or social exposure did not significantly affect work motivation. Work motivation was significantly higher in nurses who chose the profession because of a "love of the profession". Compared to before the pandemic, the views of nurses about finding the profession suitable for them during the pandemic period changed negatively. Motivational factors such as adequate pay, work safety, getting authority, participation decisions, and physical working environment were moderately important for nurses. However, the motivation of the nurses who found the factors of assuming responsibility, opportunity to display creativity, openness to innovation, and participation in decisions as important as levels were also significantly higher.

As a result of the study, it was seen that the nurses were at their duty without reducing their motivation, being aware of their responsibilities during the epidemic process. The fact that nurses receive support and appreciation from their colleagues and other segments of society will enable them to work with gratitude, increase their potential and courage, and provide a quality service. In addition, considering that work-life balance is very important, a healthy working environment should be created for nurses to ensure this balance. Motivational instruments should be developed not only to increase financial opportunities but also to improve work and life conditions such as increasing professional satisfaction, improving status, and organizing leisure and entertainment activities. Nurses' professional opportunities such as promotion in their work, getting authority, and get-

ting higher education should be arranged and rewarding mechanisms should be developed.

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### Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or mem-

bers of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

### Authorship Contributions

**Idea/Concept:** Ayşe Akbiyik; **Design:** Ayşe Akbiyik, Perihan Çetin, Birgül Aydın, Fatma İncekara Aydın, Yasemin Tokem; **Control/Supervision:** Ayşe Akbiyik; **Data Collection and/or Processing:** Fatma İncekara Aydın; **Analysis and/or Interpretation:** Ayşe Akbiyik; **Literature Review:** Ayşe Akbiyik, Perihan Çetin; **Writing the Article:** Ayşe Akbiyik, Perihan Çetin, Birgül Aydın; **Critical Review:** Ayşe Akbiyik, Perihan Çetin, Birgül Aydın, Fatma İncekara Aydın, Yasemin Tokem.

## REFERENCES

- Al Hasan SM, Saulam J, Kanda K, Hirao T. The novel coronavirus disease (COVID-19) outbreak trends in mainland China: a joinpoint regression analysis of the outbreak data from January 10 to February 11, 2020. Bull World Health Organ. 2020;17. [Link]
- Pan J, Yao Y, Liu Z, Li M, Wang Y, Dong W, et al. Effectiveness of control strategies for coronavirus disease 2019: a SEIR dynamic modeling study. Medrxiv. [Link]
- World Health Organization [Internet]. © 2022 WHO [Cited: June 31, 2021]. Coronavirus disease 2019 (COVID-19) situation report-60[EB/OL]. Available from: [Link]
- Cascella M, Rajnik M, Aleem A, Dulebohn SC, Di Napoli R. Features, Evaluation, and Treatment of Coronavirus (COVID-19). 2022. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022. [PubMed]
- Zhou F, Yu T, Du R, Fan G, Liu Y, Liu Z, et al. Clinical course and risk factors for mortality of adult inpatients with COVID-19 in Wuhan, China: a retrospective cohort study. Lancet. 2020;395(10229):1054-62. Erratum in: Lancet. 2020;395(10229):1038. Erratum in: Lancet. 2020;395(10229):1038. [Crossref] [PubMed] [PMC]
- Durmuş S, Günay O. Hemşirelerde iş doyum ve anksiyete düzeyini etkileyen faktörleri [Factors affecting job satisfaction and anxiety levels in the nurses]. Erciyes Tıp Dergisi. 2007;29(2):139-46. [Link]
- Duxbury ML, Armstrong GD, Drew DJ, Henly SJ. Head nurse leadership style with staff nurse burnout and job satisfaction in neonatal intensive care units. Nurs Res. 1984;33(2):97-101. [Crossref] [PubMed]
- Wang Y, Liesveld J. Exploring job satisfaction of nursing faculty: theoretical approaches. J Prof Nurs. 2015;31(6):482-92. [Crossref] [PubMed]
- Lu H, While AE, Barriball KL. Job satisfaction among nurses: a literature review. Int J Nurs Stud. 2005;42(2):211-27. [Crossref] [PubMed]
- Lu H, Zhao Y, While A. Job satisfaction among hospital nurses: A literature review. Int J Nurs Stud. 2019;94:21-31. [Crossref] [PubMed]
- Roelen CA, Magerøy N, van Rhenen W, Groothoff JW, van der Klink JJ, Pallesen S, et al. Low job satisfaction does not identify nurses at risk of future sickness absence: results from a Norwegian cohort study. Int J Nurs Stud. 2013;50(3):366-73. [Crossref] [PubMed]
- Akgöz S, Özçakır A, Kan İ, Tombul K, Altınsoy Y, Sivrioğlu Y. Uludağ üniversitesi sağlık uygulama ve araştırma merkezi'nde çalışan hemşirelerin mesleki doyumları [The professional satisfaction of nurses employing in health, application and research center (SUAM) of Uludağ University]. Türkiye Klinikleri Journal of Medical Ethics. 2005;13(2):86-96. [Link]
- Yıldız N, Kanan N. Yoğun bakım ünitelerinde çalışan hemşirelerde iş doyumunu etkileyen faktörler [The factors that affect job satisfaction in nurses working in the intensive care units]. Yoğun Bakım Hemşireliği Dergisi. 2005;9(1):8-13. [Link]
- Bacha AM, Grassiotto Oda R, Gonçalves SP, Higa R, Fonsechi-Carvasan GA, Machado Hda C, et al. Job satisfaction of nursing staff in a university hospital. Rev Bras Enferm. 2015;68(6):1130-8. English, Portuguese. [Crossref] [PubMed]
- Engin E, Çam MO. Hemşire iş motivasyonu ölçeği: geçerlik güvenirlik [The nurses job motivation scale: validity and reliability]. Ege Üniversitesi Hemşirelik Fakültesi Derg. 2016;32(3):1-13. [Link]
- Aslanadam B. Sağlık personelinin motivasyonu ve buna ilişkin Araştırma [Yüksek lisans tezi]. Dokuz Eylül Üniversitesi; İzmir: 2011. [Erişim tarihi: 31 Haziran 2021]. Erişim linki: [Link]
- Tural S, Meechamnan C, Kunaviktikul W. Challenging times: ethics, nursing and the COVID-19 pandemic. Int Nurs Rev. 2020;67(2):164-7. [Crossref] [PubMed] [PMC]
- Gunawan NPIN, Hariyati RTS, Gayatri D. Motivation as a factor affecting nurse performance in Regional General Hospitals: A factors analysis. Enferm Ciin. 2019;29:515-20. [Crossref]
- Zainaro MA, Ridwan R, Isnainy UCAS. Motivation and workload of nurses with nurse performance in handling events of corona virus (Covid-19). J Aisyah J Ilmu Kesehatan. 2021;6(4):673-80. [Crossref]
- Sperling D. Ethical dilemmas, perceived risk, and motivation among nurses during the COVID-19 pandemic. Nurs Ethics. 2021;28(1):9-22. [Crossref] [PubMed] [PMC]
- Maydınar DD, Keraman B, Listati E. The relationship of work motivation with nurse performance. Hospital Manag Stud J. 2021;1(2):30-6. [Crossref]
- Savitsky B, Radomislensky I, Hendel T. Nurses' occupational satisfaction during Covid-19 pandemic. Appl Nurs Res. 2021;59:151416. [Crossref] [PubMed] [PMC]
- Miawati T, Tukiran M, Anggorodi R. Work engagement in nurses during the Covid-19 pandemic: a literature review. Journal of Industrial Engineering & Management Research. 2021;2(4):131-7. [Link]

24. Salazar de Pablo G, Vaquerizo-Serrano J, Catalan A, Arango C, Moreno C, Ferre F, et al. Impact of coronavirus syndromes on physical and mental health of health care workers: Systematic review and meta-analysis. *J Affect Disord.* 2020;275:48-57. [[Crossref](#)] [[PubMed](#)] [[PMC](#)]
25. Ehrlich H, McKenney M, Elkbuli A. Protecting our healthcare workers during the COVID-19 pandemic. *Am J Emerg Med.* 2020;38(7):1527-8. [[Crossref](#)] [[PubMed](#)] [[PMC](#)]
26. Juan Y, Yuanyuan C, Qiuxiang Y, Cong L, Xiaofeng L, Yundong Z, et al. Psychological distress surveillance and related impact analysis of hospital staff during the COVID-19 epidemic in Chongqing, China. *Compr Psychiatry.* 2020;103:152198. [[Crossref](#)] [[PubMed](#)] [[PMC](#)]
27. Goldfarb N, Grinstein-Cohen O, Shamian J, Schwartz D, Zilber R, Hazan-Hazoref R, et al. Nurses' perceptions of the role of health organisations in building professional commitment: Insights from an Israeli cross-sectional study during the COVID-19 pandemic. *J Nurs Manag.* 2021;29(5):1102-10. [[Crossref](#)] [[PubMed](#)]
28. Duran S, Celik I, Ertugrul B, Ok S, Albayrak S. Factors affecting nurses' professional commitment during the COVID-19 pandemic: A cross-sectional study. *J Nurs Manag.* 2021;29(7):1906-15. [[Crossref](#)] [[PubMed](#)] [[PMC](#)]
29. Wolters Kluwer [Internet]. © 2021 Wolters Kluwer N.V. and/or its subsidiaries. [Cited: June 31, 2021]. Measuring the impact of COVID-19 on work satisfaction and professional growth in nursing. Available from: [[Link](#)]
30. Senek M, Robertson S, Ryan T, King R, Wood E, Taylor B, et al. Determinants of nurse work dissatisfaction-findings from a cross-sectional survey analysis in the UK. *BMC Nursing.* 2020;19(1):1-10. [[Crossref](#)] [[PubMed](#)] [[PMC](#)]
31. Said RM, El-Shafei DA. Occupational stress, job satisfaction, and intent to leave: nurses working on front lines during COVID-19 pandemic in Zagazig City, Egypt. *Environ Sci Pollut Res Int.* 2021;28(7):8791-801. [[Crossref](#)] [[PubMed](#)] [[PMC](#)]
32. Huang L, Lin G, Tang L, Yu L, Zhou Z. Special attention to nurses' protection during the COVID-19 epidemic. *Crit Care.* 2020;24(1):120. [[Crossref](#)] [[PubMed](#)] [[PMC](#)]
33. Lee SE, MacPhee M, Dahinten VS. Factors related to perioperative nurses' job satisfaction and intention to leave. *Jpn J Nurs Sci.* 2020;17(1):e12263. [[Crossref](#)] [[PubMed](#)]
34. Sharif Nia H, Arslan G, Naghavi N, Sivarajan Froelicher E, Kaveh O, Pahlevan Sharif S, et al. A model of nurses' intention to care of patients with COVID-19: Mediating roles of job satisfaction and organisational commitment. *J Clin Nurs.* 2021;30(11-12):1684-93. [[Crossref](#)] [[PubMed](#)] [[PMC](#)]
35. Alhakami IY, Baker OG. Exploring the factors influencing nurse's work motivation. *Iris J Nurs Care.* 2018;1(1):1-12. [[Crossref](#)]