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# Nurse Collaboration and Work Stress in Nurses Working at A University Hospital

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### ABSTRACT

Objective: This study was carried out as a descriptive study to evaluate the level of collaboration between nurses, the level of work stress and the factors affecting it in nurses working in a university hospital. Materials Methods: A sample of the study was composed of nurses working at a university hospital who wanted to participate in the study. The research was conducted between June-August 2020. The study was completed with 228 nurses who agreed to participate in the study. Data collection tools of the study were applied via Google form to participants using the "Introductory Information Form", "Work Stress Scale" and "Nurse-Nurse Collaboration Scale". Results: The average score of the nurse - nurse collaboration scale was 48.21±9.10; the average score of the work stress scale was 2.54±0.57. In addition, a moderately positive statistically significant association was found between the nurse-nurse collaboration scale score averages and the work stress scale score averages (Pearson correlation: 0.554, p=0.001). Conclusion: Today, with the increase in chronic diseases and the complexity of health care services, work and team cooperation have become important issues in the areas where health care services are provided. Excess work and lack of team collaboration are factors affecting both employee and patient satisfaction. Empowering nurses in the management of work stress and increasing cooperation between nurses; It is thought that it will help to manage the difficulties experienced in this regard more effectively. Keywords: Collaboration, Work Stress, Nursing.

# Bir Üniversite Hastanesinde Çalışan Hemşirelerde Hemşireler Arası İş Birliği ve İs Stresi

# ÖΖ

Amac: Bu calısmada bir üniversite hastanesinde calısan hemsirelerde hemsireler arası is birliği ve is stresi düzevleri ile bu düzevleri etkileyen faktörlerin değerlendirilmesi amaçlanmıştır. Yöntem: Araştırmanın örneklemini bir üniversitesi hastanesinde çalışan hemşirelerden araştırmaya katılmak isteyenler oluşturmuştur. Araştırma Haziran-Ağustos 2020 tarihleri arasında yürütülmüştür. Çalışma araştırmaya katılmayı kabul eden 228 hemşire ile tamamlanmıştır. Araştırmanın veri toplama araçları, "Tanıtıcı Bilgi Formu" "İş Stresi Ölçeği", "Hemşire-Hemşire İş birliği Ölçeği" kullanılarak katılımcılara Google form üzerinden uygulanmıştır. Bulgular: Hemşireler arası iş birliği ölçek toplam puan ortalamaları 48.21±9.10; iş stresi ölçek puan ortalamaları 2.54±0.57 olarak bulunmuştur. Ayrıca hemşire'- hemşire iş birliği ölçek puan ortalamaları ile iş stresi ölçek puan ortalamaları arasında orta derecede pozitif yönde istatistiksel olarak anlamlı düzeyde ilişki tespit edilmiştir. Sonuç: Günümüzde kronik hastalıkların artışı, sağlık bakım hizmetlerinin daha kompleks hale gelmesi ile sağlık bakım hizmetlerinin verildiği alanlarda iş stresi ve ekip iş birliği önemli konular haline gelmiştir. İş stresinin fazlalığı ve ekip iş birliğinin azlığı hem çalışan hem de hasta memnuniyetini etkileyen faktörlerdendir. Hemşirelerin iş stresinin yönetimi konusunda güçlendirilmelerinin ve hemşireler arası iş birliğinin artırılmasının; bu konuda yaşanan güçlüklerin daha etkili bir şekilde yönetilmesine yardımcı olacağı düşünülmektedir.

Anahtar Kelimeler: İş birliği, İş Stresi, Hemşirelik.

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BAUN Sağ Bil Derg 2022 OPEN ACCESS https://dergipark.org.tr/tr/pub/balikesirsbd This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License Nursing is a profession that develops from the past to the present and renews itself with the changing and undertakes the most important task in health care services. It is responsible for protecting and improving the health of the individual, family and community and improving health by providing optimal care in case of illness; consists of science and art (Karadağ, 2002; Tan et al., 2012; Yıldırım and Durmuş, 2018). Nurses, who have an important place in the health care team providing health care services, have the opportunity to interact with the patient 24 hours a day, 7 days a week, and they have intense relations with the patients they care for. Communications with patients and their relatives, as well as with the healthcare team, are extremely important. Employees working happily and peacefully in the workplace environment also increases the efficiency of the work done (Tinaz, 2011). The coronavirus (Covid-19) epidemic, which started in China in December 2019 and continues today, has affected health workers both psychologically and physiologically (Aslan, 2020; Bao et al., 2020). While the physical effects of pandemics are devastating and deadly, the psychological reactions that occur during the epidemic also have very long-lasting results (Taylor, 2019). The workload and work stress of health professionals are increasing significantly (Tuncay et al., 2020). Long working hours, worsening working conditions, stigmatization towards healthcare professionals, increase in the number of patients per nurse, shortage of materials and personnel, lack of social opportunities, responsibility to care for terminally ill patients, increase in society's expectations and concerns have also greatly affected the resilience of employees (Alçelik et al., 2005; Atasoy and Yorgun, 2013; Kirilmaz, 2016). The fear, anxiety, panic, insecurity and intense stress experienced in the COVID-19 pandemic affect employees badly; causes feelings such as burnout, depression, anxiety and helplessness (Tinaz, 2011; Wang, 2020). In addition to these, work-related stress decreases the job satisfaction by reducing the productivity and motivation of the employees (Sünter et al., 2006).

For this reason, cooperation in the nursing profession, which works with colleagues for a long time during the day before and after the pandemic, is an undeniable reality (Bott et al., 2015). The cooperation and teamwork of nurses is an important factor in the timely, on-site, sequential and safe delivery of care and treatment (Weinstein, 2003). Therefore, "Nurse-Nurse Collaboration" is very important to reduce medical errors, improve patient care, reduce work stress, and increase nurses' job satisfaction (Temuçin, et al., 2018; Yıldırım and Durmuş, 2018). Nurse-nurse cooperation; It is a very important determinant during patient handover or shift change, in the communication process and in times of crisis (Yıldırım and Durmuş, 2018). Work stress can affect nurses' relationships with each other, critical thinking and problem-solving skills, and job satisfaction (Sayılan and Boğa, 2018). In this direction, in this study, it was aimed to evaluate the cooperation between nurses and the level of work stress and the factors affecting it in nurses working in a university hospital.

#### **Research questions**

• What is the nurse-nurse collaboration level of nurses?

• What is the work stress level of nurses?

• What are the factors affecting the collaboration and work stress levels of nurses?

#### MATERIALS AND METHODS

This study was carried out as a descriptive study in order to evaluate the level of collaboration between nurses, the level of work stress and the factors affecting it in nurses working in a university hospital. The universe of the research consists of 890 nurses working in the hospital. The sample, on the other hand, was calculated as 208 nurses, with a 90% confidence interval and a 5% margin of error, with a known universe sampling method. The research was carried out between June and August 2020 and was completed with 228 nurses who wanted to participate in the research.

## **Data collection**

The data collection tools of the research were applied to the participants online via Google form by the researchers. *Introductory information form:* Introductory information form created by the researchers. It includes data such as gender, age, marital status, number of children, educational status, working status, working unit, years of work in the unit worked, the status of choosing the unit of work herself and satisfaction with the unit worked

*Work stress scale (WSS):* It is a 5-point Likert-type scale consisting of 15 questions included in the works of Baltaş and Baltaş (1992) (1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = almost always). In the evaluation process of the scale, the total score is divided by 15 and the individual's scale score average is calculated (A=3,5-4,0; B=1, 0-1,3; C=1,4-1,9; D=2,0-2,5; E=2,6-3,1; F=3,2-3,4). A, B, E and F are considered as stress levels that can affect productivity and threaten health. An increase in the scale score indicates an increase in work stress. The Cronbach Alpha value of the scale was found to be 0.84 by Baltaş and Baltaş (1992), and the Cronbach Alpha value was determined as 0.84 in this study.

*Nurse-nurse collaboration scale (NNSC:* The validity and reliability of the scale, which consists of 35 items and five sub-dimensions, was made by Temuçin et al. (2019). Subscales are management (7 items), communication (8 items), sharing process (8 items), coordination (5 items) and professionalism (7 items). The increase in the total score obtained from the scale, which is a four-point Likert type scale, indicates that the collaboration between nurses is good. The Cronbach Alpha reliability coefficient for the whole of the original scale was 0.89, and it was determined as 0.90 in this study.

#### Statistical analysis

SPSS 21.0 (SPSS Inc., Chicago, IL, USA) package program was used in the analysis of the data. Descriptive statistics are expressed as percentage, mean, standard deviation, and minimum-maximum values. The conformity of the data to the normal distribution was made with the Kolmogorov Smirnov test. Mann Whitney U test and Kruskal Wallis test were used for statistical analysis because the data did not conform to normal distribution. "p<0.05" was accepted as an indicator of statistical significance.

## Ethical consideration

In order to carry out the research; Ethics Committee approval with the number 05 dated 09.05.2020 from the ethics committee of a university and institutional permission from the institution where the research will be applied was obtained and then the study started. In addition, informed consent forms were obtained from the nurses included in the study via the online Google form.

## RESULTS

When the introductory data of the nurses were analyzed, 87.7% (n=200) were female, 58.8% (n=134) were between

the ages of 20-30, 50.9% (n=116) were single. 84.2% (n=192) of nurses have bachelor's degree. In addition, 43.4% (n=99) of the nurses were working as regular staff, 48.2% (n=110) were working as intensive care nurses, 51.8% (n=18) of them had worked in the unit between 0-3 years. 75% (n=171) did not choose the unit they worked for, and 75.4% (n=172) were satisfied with the unit they worked in (See Table 1.). NNSC total score averages were 48.21 $\pm$ 9.10; WSS total score averages were found to be 2.54 $\pm$ 0.57 (Table 2.)

Introductory Information		n	%
Gender	Woman	200	87.7
Gender	Man	28	12.3
	20-30	134	58.8
Age	31-40	77	33.8
	41 and above	17	7.5
	Married	109	47.8
Marital status	Single	116	50.9
	Other	3	1.3
	0	142	62.3
NT	1	50	21.9
Number of children	2	32	14.0
	3	4	1.8
	Associate degree	6	2.6
Educational status	Bachelor's degree	192	84.2
	Graduate	30	13.2
	Regular	99	43.4
Working status	Contractual	129	56.6
	Clinical nurse	97	42.5
Working unit	Intensive care nurse	110	48.2
9	Head nurse	21	9.2
Years of work in the unit worked	0-3 years	118	51.8
	4-7 years	32	14.0
	8 years and over	78	34.2
	Yes	57	25.0
The status of choosing the unit of work herself	No	171	75.0
	Yes	172	75.4
Satisfaction with the unit worked	No	56	24.6

# Table 1. Nurses' introductory information (n=228).

#### Table 2. Nurse-nurse collaboration scale mean scores and work stress scale mean scores.

Scale and Subscales	Min	Max	Mean	Standard deviation
Conflict Management Subscale	4	10.00	6.06	1.31
Communication Subscale	5	13.00	8.84	1.34
Sharing Process Subscale	4	14.00	8.25	2.18
Coordination Subscale	5	17.00	10.01	2.65
Professionalism Subscale	8	27.00	15.03	4.40
Nurse-Nurse Collaboration Scale-Total Score	29	74.00	48.21	9.10
Work stress Scale Total-Score	1	3.87	2.54	0.57

In addition, a moderately positive and statistically significant relationship was found between the NNSC score averages and the WSS mean score (Spearman's rho:0.532, p=0.001). Table 3 shows the results of the comparison of NNSC and subscales mean scores and WSS mean scores with the descriptive data. It was determined that there was no statistically significant difference between the NNSC and its subscales according to the education level of the nurses, the number of children and the choice of the unit they worked for. (p>0.05). When the gender of the nurses and the NNSC score averages were compared; It was determined that female nurses' "Communication" subscale mean score was higher than that of men, and this difference was statistically significant (p<0.05). When the NNSC mean scores of the nurses were compared according to their marital status; It was seen that the "Conflict Management", "Coordination" and "Professionalism" subscale mean scores of those who were single were "Coordination", "Sharing Process",

higher than those who were married, and this difference was statistically significant (p<0.05). It was determined nurses' that "Professionalism" subscale and NNSC score averages of nurses differed statistically significantly according to age (p<0.05). In the paired analyzes conducted to determine which group caused this difference, it was determined that the "Sharing Process" (Z=-0.531, p=0.011), "Coordination" subscales (Z=-2.171, p=0.030) and NNSC score averages of the nurses in the 20-30 age group (Z=-2.686, p=0.007) was found to be higher than that of nurses aged 41 and over (p<0.05). In addition, it was determined that the "Professionalism" (Z=-2.464, p=0.014) subscale and NNSC score averages (Z=-2.230, p=0.026) of nurses in the 20-30 age group were higher than those in the 31-40 age group (p<0.05). It was determined that the sub-dimensions of "Conflict", "Sharing Process", "Coordination", "Professionalism" and NNSC score averages of contracted nurses were higher than those of regular employees, and this difference was statistically significant (p<0.05). A statistically significant difference was found between "Sharing "Coordination", nurses' Process", "Professionalism" subscale and NNSC score averages according to the place of work. In the dual analyzes conducted to determine which group caused this difference, it was found that the "Sharing Process"(Z=-3.325, p=0.001; Z=-3.637, p=0.001), "Coordination" (Z=-3.323, p=0.001; Z=-3.077, p=0.001) subscales and

NNSC score averages of the nurses working as clinical nurses and intensive care nurses were higher than those of the nurses in charge; It was observed that the "Professionalism" (Z=-3.325, p=0.011) subscale mean scores of those working as intensive care nurses were higher than those of the nurses in charge. A statistically significant difference was found between nurses' "Sharing Process", "Coordination", "Professionalism" subscales and NNSC score averages according to the year of work in the unit. In the paired analyzes carried out to determine which group caused this difference, it was determined that the NNSC score averages of the nurses who worked for 0-3 years were higher than those of the nurses who worked for 8 years and above (Z=-2.752, p=0.006; Z=-2.869, p=0.004; Z=-1.981, p=0.048; Z=-2.614, p=0.009). It was determined that there was no statistically significant difference between the WSS according to the nurses' gender, number of children, education level, place of work, and whether they chose the unit they worked for (p<0.05). WSS mean score of single nurses was higher than that of married nurses; It has been determined that contracted nurses are higher than regular nurses, and nurses who are not satisfied with the unit they work are higher than those of dissatisfied nurses, and this difference is statistically significant (p<0.05). A statistically significant difference was found in the mean WSS scores of the nurses according to age. In the paired analyzes carried out to determine from which group this difference originated, it was determined that the mean WSS scores of the nurses in the 20-30 age group were higher than those of the nurses aged 41 and over, and this difference is statistically significant (Z=-2.547, p=0.011). A statistically significant difference was found between the WSS score averages of the nurses according to the working year in the unit they worked in (p<0.05).

Introductory In	formation	Conflict Management Subscale	Communicatio n Subscale	Sharing Process Subscale	Coordination Subscale	Professionalism Subscale	NNSC TOTAL	WSS TOTAL
Gender	Woman Man	Z=-0.791 p=0.429	Z=-2.359 <b>p=0.018</b> *	Z=-0.034 p=0.973	Z=-0.592 p=0.554	Z=-0.995 p=0.320	Z=-0.908 p=0.364	Z=-0.791 p=0.429
Age	20-30 31-40 41 and above	<i>X</i> <sup>2</sup> =2.767 <b>p=0.013</b> *	$X^2 = 1.339$ p=0.720	<i>X</i> <sup>2</sup> =10.849 <b>p=0.013</b> *	$X^2 = 6.024$ p=0.110	<i>X</i> <sup>2</sup> =10.231 <b>p=0.017</b> *	<i>X</i> <sup>2</sup> =10.193 <b>p=0.017</b> *	$X^2 = 12.6$ 5 <b>p=0.005</b> *
Marital status	Married Single	Z=-1.625 <b>p=0.044</b> *	Z=-1.273 p=0.203	Z=-0.79 p=0.429	Z=-3.201 <b>p=0.001**</b>	Z=-2.301 <b>p=0.021</b> *	Z=-3.214 <b>p=0.001**</b>	Z=-2.010 <b>p=0.044</b> *
Number of children	0 1 2 and above	$X^2 = 0.132$ p=0.717	$X^2 = 0.807$ p=0.369	$X^2 = 0.054$ p=0.816	$X^2 = 0.362$ p=0.547	$X^2 = 0.362$ p=0.547	$X^2 = 4.081$ p=0.130	$X^2 = 4.73$ 9 p=0.094
Educational status	Associate degree Bachelor's degree Graduate	X <sup>2</sup> =0.001 p=0.970	<i>X</i> <sup>2</sup> =0.001 p=0.976	<i>X</i> <sup>2</sup> =0.782 p=0.377	<i>X</i> <sup>2</sup> =0.007 p=0.933	<i>X</i> <sup>2</sup> =0.085 p=0.771	X <sup>2</sup> =0.064 p=0.800	$X^2 = 0.49$ 3 p=0.482
Working status	Regular Contractual	Z=-3.299 <b>p=0.001</b> **	Z=-1.754 p=0.079	Z=-4.683 <b>p=0.001</b> **	Z=-3.715 <b>p=0.001</b> **	Z=-4.094 <b>p=0.001</b> **	Z=-4.796 <b>p=0.001**</b>	Z=-3.188 <b>p=0.001</b> **
Working unit	Clinical Nurse Intensive Care Nurse Head Nurse	X <sup>2</sup> =3.216 p=0.200	<i>X</i> <sup>2</sup> =4.827 p=0.089	<i>X</i> <sup>2</sup> =13.404 <b>p=0.001</b> **	<i>X</i> <sup>2</sup> =11.242 <b>p=0.004</b> *	<i>X</i> <sup>2</sup> =6.030 <b>p=0.049</b> *	<i>X</i> <sup>2</sup> =10.886 <b>p=0.004</b> **	$X^2 = 5.54$ 0 p=0.063
Years of work in the unit worked	0-3 Years 4-7 Years 8 Years and over	$X^2 = 3.216$ p=0.084	$X^2 = 4.827$ p=0.089	<i>X</i> <sup>2</sup> =13.404 <b>p=0.001</b> **	<i>X</i> <sup>2</sup> =11.242 <b>p=0.004</b> **	<i>X</i> <sup>2</sup> =6.030 <b>p=0.049</b> *	<i>X</i> <sup>2</sup> =10.886 <b>p=0.004</b> **	X <sup>2</sup> =5.54 0 p=0.063
The status of choosing the unit of work herself	Yes No	Z=-0.131 p=0.896	Z=-1.682 p=0.495	Z=-0.015 p=0.988	Z=-1.704 p=0.088	Z=-1.141 p=0.254	Z=-1.210 p=0.495	Z=-0.338 p=0.736
Satisfaction with the unit worked	Yes No	Z=-0.288 p=0.773	Z=-3.718 <b>p=0.001</b> **	Z=-7.234 <b>p=0.001**</b>	Z=-5.030 <b>p=0.001**</b>	Z=-7.894 <b>p=0.001**</b>	Z=-7.569 <b>p=0.001**</b>	Z=-6.975 <b>p=0.001</b> **

# Table 3. Comparison of nurse-nurse collaboration scale and subscale mean scores and work stress scale mean scores with descriptive data.

\*p<0.05, \*\*p<0.01

## DISCUSSION

Nurses, who are one of the most important members of the healthcare team, can feel tired both physiologically and psychologically due to their intense work schedule. Nurses can feel stronger and more motivated by increasing cooperation among themselves, performing their duties and responsibilities more effectively, approaching the problems encountered with a solution-oriented approach and supporting each other in team cooperation (Yeşiltaş and Güven, 2016). However, it is known that the workload and work stress of healthcare workers are increasing day by day (Baltas and Baltas, 1992). It is thought that with the increase in professional collaboration, the team can work more efficiently and more effectively, and this will contribute to the quality of patient care and increase patient satisfaction. It was seen that the level of collaboration between nurses were above the medium level, and their work stress levels were at the most favorable stress level in terms of health and productivity. In addition, a moderate positive relationship was found between the collaboration between nurses and work stress. In Uludag's (2019) study investigating the relationship between work stress and motivation, it was determined that there was a significant and inverse relationship between work stress and motivation. In the study conducted by Celik and Karaca (2017), the effect of the motivation level of nurses on teamwork was evaluated. According to the results of the study, it was determined that there was a significant relationship between the motivation level of nurses and teamwork. It is known that lowlevel stress increases work motivation and work efficiency, while high-level stress reduces an individual's work ability and motivation. It is seen that the work stress level of the nurses participating in the study is at a level that will increase their productive work, and this strengthens the collaboration. It is thought that a good level of collaboration between It was determined that female nurses' communication scores were higher than male nurses. In the study of Ylitörmänen et al. (2019) conducted by Norwegian and Finnish nurses to compare the perceptions of care and collaboration between nurses, it was stated that male participants' communication scores were lower than female participants in both countries. In the study of Al-Hamdan et al. (2021), in which they examined the relationship between emotional intelligence and nurse-nurse collaboration, it was observed that male participants (female participant: 195 male participants: 116) had a higher communication score than female participant. It is thought that the low number of male nurses participating in the study in our study also affected this result. On the other hand, it is thought that the characteristics such as motherhood, collaboration, and being able to express their feelings and thoughts more easily due to being a woman may have contributed to their being higher than male nurses by reflecting on their communication scores.

It was observed that the nurses' collaboration scores in the 20-30 age group were higher than the nurses in the older age group. In a study similar to our findings, Adıgüzel et al. (2011) stated that the professionalism level of nurses in the 26-30 age group in business life was significantly higher than the professionalism level of the nurses in other groups. These data suggest that nurses who have recently graduated are younger than others, their knowledge is up-to-date, and therefore their motivation to work can increase the level of collaboration between nurses.

It was observed that the conflict management, collaboration and professionalism scores of the single nurses were higher than the married ones. Similar to our study findings, Göriş et al. (2014) stated in their study that the professional values scale scores of single nurses were higher than those of married ones. This finding shows that marital status can positively or negatively affect situations that are important in business life, such as conflict management, collaboration, and professionalism. It is thought that the responsibility and burden of being married and having children are reflected in areas such as crisis management in business life, professionalism and working in collaboration.

It was determined that the conflict, sharing process, collaboration, professionalism, and NTSC scores of the contracted nurses were higher than those of the regular employees. This finding suggests that since the job guarantee of contracted employee is lower than that of regular employees, they increase their performance in business life, and this may be reflected in conflict, sharing process, collaboration, professionalism and NNSC scores.

The sharing process, collaboration and NNSC scores of the nurses working as clinical nurses and intensive care nurses were higher than those of the nurses in charge; It was observed that the professionalism scores nurses will positively affect both the quality of care and patient and employee satisfaction.

of those working as intensive care nurses were higher than those of the nurses in charge. Similar to this finding, in the study conducted by Durmuş et al. (2018), it was determined that the collaboration scores of intensive care nurses were higher than the nurses working in other units. Working as a clinical nurse and intensive care nurse requires mutual interaction, strong collaboration. Especially when the patient group and care process of intensive care nurses are evaluated, it is a desired and expected situation that the sharing process, collaboration and professionalism scores are high. It is thought that this result will positively affect the quality of care, the collaboration of the team and patient satisfaction. The fact that the sharing process, collaboration and NNSC scores of the head nurses are low compared to the others suggests that the number of head nurses participating in the research is less than the others and the difference brought about by the duties, authorities, and responsibilities of the head nurses.

It has been determined that the sharing process, collaboration, professionalism and NNSC scores of nurses working for 0-3 years are higher than those of 8 years and above. This finding is surprising, and the fact that new nurses are more collaborative; It is thought that their efforts to perform at a high level may have contributed to the motivation of being new to the profession and being up to date in their knowledge. In the study conducted by Ylitörmänen et al. (2019), it was stated that, like our findings, nurses with more than ten years of work experience had lower conflict management scores than nurses with less than four years of work experience, but higher collaboration and professionalism scores.

It was determined that the work stress scores of the single nurses participating in the study were higher than those of the married ones. Similarly, in the study of Çankaya (2020) in which she evaluated the effect of work stress on the intention to leave, it was stated that the work stress perceptions of single nurses were higher than those of married nurses. In this respect, considering that single nurses meet their vital responsibilities at an individual level, it is thought that the fact that they may be affected more negatively from job loss in financial terms may increase work stress.

It was determined that the work stress scores of nurses in the 20-30 age group were higher than those of the nurses aged 41 and over. Similarly, in the study of Tuna and Baykal (2013) in which they examined work stress and its affecting factors in oncology nurses, it was stated that the levels of work stress may be high due to the fact that nurses under the age of 24 have just entered the business life and have little experience. When the literature is examined, there are also studies showing that nurses under the age of 30 have high levels of work stress due to the fact that they have just started to work (Najimi et al., 2012; Yılmaz et al., 2021). The fact that nurses who worked for 0-3 years in our study had higher work stress scores than those who worked for 8 years or more also supports this finding.

The work stress scores of the contracted nurses compared to the regular nurses; It was determined that the nurses who were not satisfied with the unit they worked in were higher than the nurses who were satisfied. Although contracted nurses have the same duties, authorities, and responsibilities as regular nurses, it is thought that their low financial and social rights may increase their work stress. It is thought that work stress may be high due to the decrease in the work motivation of the personnel who are not satisfied with the unit.

This study is single-center. Since the data collection tools applied to nurses represent nurses' self-reports, this study can only be generalized to this sample group.

#### CONCLUSION

There was no difference between the levels of collaboration among nurses according to the education level of the nurses, the number of children and the choice of the unit they worked for. It was determined that the level of collaboration between nurses was high among nurses who were female and in the age group of 20-30, working as clinical nurse and intensive care nurse, and working years between 0-3 years. In addition, conflict management, collaboration and professionalism scores of single nurses were higher than those of married ones. There was no difference in

#### REFERENCES

- Adıgüzel, O., Tanrıverdi, H., Özkan, DS. (2011). Mesleki profesyonellik ve bir meslek mensupları olarak hemşireler örneği. *Yönetim Bilimleri Dergisi*, 9(2), 235-260.
- Alçelik, A., Deniz, F., Yeşildal, N., Mayda, A. S., Ayakta Şerif B. (2005). AİBÜ tıp fakültesi hastanesinde görev yapan hemşirelerin sağlık sorunları ve yaşam alışkanlıklarının değerlendirilmesi. TSK Koruyucu Hekimlik Bülteni, 55-65.
- Al-Hamdan, Z. M., Alyahia, M., Al-Maaitah, R., Alhamdan, M., Faouri, I., Al-Smadi, A. M.,
- Bawadi, H. (2021). The relationship between emotional intelligence and nurse–nurse collaboration. *Journal* of Nursing Scholarship, 53,5. https://doi.org/10.1111/jnu.12687
- Aslan, R. (2020). Tarihten günümüze epidemiler, pandemiler ve covid-19. *Ayrıntı Dergisi*, 85.
- Atasoy, A., & Yorgun, S. (2013). Sağlık çalışanlarında iş gerilimi. Sağlıkta Performans ve Kalite Dergisi, 71-88. https://dergipark.org.tr/tr/pub/spkd/issue/29272/313

432 A Baltas 7 (1992) Stras va basacitma vallar

- Baltaş, A., Baltaş, Z. (1992). Stres ve başaçıkma yolları, Remzi Kitabevi, İstanbul
- Bao, Y., Sun, Y., Meng, S., Shi, J., Lu, L. (2020). 2019nCoV epidemic: address mental health care to empower society. *The Lancet*, 395(10224), e37-e38. https://doi.org/10.1016/S0140-6736(20)30309-3

the levels of work stress of the nurses according to gender, number of children, education level, place of work and choosing the unit of work. On the other hand, it has been observed that the work stress levels of the nurses who are married, in the 20-30 age group, who work under contract and who are not satisfied with the unit they work in, are higher. Execution of health care services requires team collaboration, effective communication skills, control of work stress and a positive working atmosphere. In this direction, nurses should be strengthened to work in team collaboration, both in undergraduate education and in-service training. In addition, it is recommended to provide trainings that increase their awareness in terms of factors that determine cooperation such as effective communication skills, conflict management, professionalism, collaboration.

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#### **Conflict of Interest**

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

### **Author Contributions**

**Plan, design:** GD, GS; **Material, methods and data collection:** GD, GS; **Data analysis and comments:** GD, GS; **Writing and corrections:** GD, GS.

- Bott, M., Shang, J., Ma, C. (2015). Linking unit collaboration and nursing leadership to nurse outcomes and quality of care. *Journal of Nurse Administration*, 45,435-442. https://doi.org/10.1097/NNA.00000000000229
- Çankaya, M. (2020). Hastane çalışanlarındaki iş stresinin işten ayrılma niyeti üzerindeki etkisi. Business And Management Studies An International Journal, 8(1):121-143.

https://doi.org/10.15295/bmij.v8i1.1389

- Çelik, A., Karaca, A. (2017). Hemşirelerde ekip çalışması ve motivasyon arasındaki ilişkinin ve etkileyen faktörlerin değerlendirilmesi. *Hemşirelikte Eğitim ve Araştırma Dergisi*, 14(4), 254-263. https://doi.org/10.5222/HEAD.2017.254
- Durmuş, S.Ç., Ekici D., Yildirim A. (2018). The level of collaboration amongst nurses in turkey. International Nursing Review, 65(3), 450-458. doi: 10.1111/inr.12440.
- Göriş, S., Kılıç, Z., Ceyhan, Ö., Şentürk, A. (2014). Hemşirelerin profesyonel değerleri ve etkileyen faktörler. *Psikiyatri Hemşireliği Dergisi*, 5(3), 137-142. https://doi.org/10.5505/phd.2014.74046.
- Karadağ, A.(2002). Meslek olarak hemşirelik. Anadolu Hemşirelik ve Sağlık Bilimleri Dergisi, 5(2).

- Kırılmaz, H. Y. (2016). Sağlık çalışanlarında psikososyal risk faktörlerini belirlemeye yönelik bir araştırma. Uluslararası Kültürel ve Sosyal Araştırmalar Dergisi (UKSAD), 66-82. Retrieved from https://dergipark.org.tr/tr/pub/intjcss/issue/25850/27 2499
- Najimi, A., Moazemi Goudarzi, A. ve Sharifirad, G.H. (2012). Causes of work stress in nurses: A crWSSsectional study. *Iranian Journal of Nursing and Midwifery Research*, 17(4): 301-305.
- Sayılan, A. A., Boğa, SM. (2018). Hemşirelerin iş stresi, iş yükü, iş kontrolü ve sosyal destek düzeyi ile tıbbi hataya eğilimleri arasındaki ilişkinin belirlenmesi. *Hemşirelikte Araştırma Geliştirme Dergisi, 20*(1), 11-22
- Sünter, A.T., Canbaz, S., Dabak, Ş., Öz, H., Pekşen, Y. (2006). Pratisyen hekimlerde tükenmişlik, işe bağlı gerginlik ve iş. *Genel Tıp Dergisi*, 9-14.
- Tan, M., Polat, H. & Akgün Şahin, Z. (2012). Hemşirelerin çalışma ortamlarına ilişkin algılarının değerlendirilmesi. Sağlıkta Performans ve Kalite Dergisi, 67-78. Retrieved from https://dergipark.org.tr/tr/pub/spkd/issue/29275/313 450
- Taylor, S. (2019). *The psychology of pandemics: preparing* for the next global outbreak of infectious disease, Cambridege Scholar Publishing.
- Temuçin, E., Dolu, İ., Kargın, M. (2018). Hemşire-hemşire işbirliği ölçeği'nin geçerlik ve güvenirliği: klinikte çalışan hemşire örneklemi. Sağlık Bilimleri ve Meslekleri Dergisi, 1-7. https://doi.org/10.17681/hsp.379895
- Tınaz, P. İşyerinde psikolojik taciz (Mobbing). İstanbul: Beta Yayınları, 2011.
- Tuna, R. ve Baykal, Ü. (2013). Onkoloji hemşirelerinde iş stresi ve etkileyen faktörler. Florence Nightingale Hemşirelik Dergisi, 21(2): 92-100. Retrieved from https://dergipark.org.tr/tr/pub/fnjn/issue/9010/11244

1

- Tuncay, F., Koyuncu, E., Özel, Ş. (2020). Pandemilerde sağlık çalışanlarının psikososyal sağlığını etkileyen koruyucu ve risk faktörlerine ilişkin bir derleme . *Ankara Medical Journal*, 488-501. https://doi.org/1 0.5505/amj.2020.02418
- Uludağ, G. (2019). İş stresi ve motivasyon ilişkisine yönelik bir alan araştırması. *Adıyaman Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, (33), 411-439. https://doi.org/10.14520/adyusbd.605567
- Wang, C P. R. (2020). Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (covid-19) epidemic among the general population in china. *International Journal* of Environmental Research and Public Health, 17. https://doi.org/10.3390/ijerph17051729
- Weinstein, S.A. (2003). Enhancing nurse-physician collaboration: A staff innovation. *Journal of Nursing Administration*, 193-195. https://doi.org/10.1097/00005110-200304000-00001

- Yeşiltaş, A., Gül, İ. (2016). Hemşirelerin çalışmak için tercih ettikleri birimler ve tercih nedenleri. Mehmet Akif Ersoy Üniversitesi Sağlık Bilimleri Enstitüsü Dergisi, 4(2), 74-87. Retrieved from https://dergipark.org.tr/tr/pub/maeusabed/issue/2754 2/289779
- Yıldırım, A. & Çelik Durmuş, S. (2018). Hemşireler arası işbirliği. Sağlık ve Hemşirelik Yönetim Dergisi, 210-216. https://doi.org/10.5222/SHYD.2018.210
- Ylitörmänen, T., Kvist, T., Turunen, H. (2019). Perceptions on nurse–nurse collaboration among registered nurses in finland and norway. *Scandinavian Journal Of Caring Sciences*, 33(3), 731-740.
- https://doi:10.1111/scs.12669. Yılmaz, F. T., Yıldız, A., Çevik, A. (2021). Hemşirelerin iş stresi ile damgalama eğilimleri arasındaki ilişki. *Pearson Journal Of Social Sciences*, 6(12),190-203. http://dx.doi.org/10.46872/pj.256.