

The Effect of Nurse-Nurse Collaboration Level on Job Satisfaction

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Abstract

BACKGROUND/AIMS: Nurse-nurse collaboration has an effect on job satisfaction and reducing the intention to resign by strengthening the professional image of nursing and developing a harmonious working environment in which collaboration can occur. The aim of this study was to investigate the effect of the level of collaboration between nurses on their job satisfaction.

MATERIAL AND METHODS: This is a cross-sectional descriptive study using the self-reporting surveys of 362 nurses. The data were collected by the Minnesota Satisfaction Questionnaire (MSQ) and Nurse-Nurse Collaboration Scale (NNCS). The Kruskal-Wallis and Mann-Whitney U tests, Pearson's product moment correlation, and regression analysis were used in the statistical analysis of the data.

RESULTS: The mean NNCS and MSQ scores of the nurses were 2.78 ± 0.44 (1–4) and 3.10 ± 0.63 (1–5), respectively. According to the results of the statistical analysis, a significant, positive and moderate relationship was found between the overall NNCS and its subscales and the overall MSQ and its subscales ($p < 0.001$).

CONCLUSION: Nurse-nurse collaboration is one of the important factors affecting job satisfaction among nurses. Collaboration and job satisfaction of nurses are affected by various factors, including educational level, clinic at which they work, duration of professional experience, availability of people to support them in the work environment, and presence of problems experiences with other staff. Increasing the levels of collaboration will reduce the individual and organizational negative effects of job dissatisfaction.

Keywords: Nursing, collaboration, communication, job satisfaction

INTRODUCTION

Health services are offered in various settings that require health professionals to collaborate.¹ The word collaboration originates from the Latin word 'collaborate', which means working together for a common goal.² In the context of nursing, collaboration is defined as "a relational process between colleagues who share similar professional values, philosophy, socialization, and experience".³ Collaboration is a common decision-making and

communication process among healthcare professionals. This process requires advanced skills related to trust, respect, self-awareness, and conflict resolution, as well as constructing non-hierarchical relationships based on knowledge and expertise in which power is shared.⁴ Intra-professional collaboration is a complex, interpersonal and occupational factor that does not spontaneously occur. Nursing is a profession that requires teamwork focusing on achieving safe results for patients and nurses.⁵ Nurse-nurse collaboration is an essential component

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of high-quality health care and patient safety.^{6,7} Inadequate communication and collaboration in care planning can lead to job dissatisfaction, medical errors, preventable injuries, economic losses, and even deaths.⁷⁻¹⁰

Collaboration and job satisfaction in health services are vital for maximizing the potential of human resources.¹¹ Colleague solidarity affects the quality of care, healthy work environments, patient safety, intention to resign, and job satisfaction.¹²⁻¹⁵ Job satisfaction is a multi-dimensional broad concept covering employees' perceptions of their jobs with different aspects, the degree of how much they love their jobs, job characteristics, and work environment.¹⁶ Job satisfaction is defined as the harmony between individual's needs and expectations and their work experience.¹⁷ Effective inter-professional relationships will strengthen the professional voice and image of nursing, while contributing to the adequate supervision and mentoring practices of newly graduated nurses and ensuring the sharing of information and development of a harmonious working environment in which future collaboration can emerge.^{7,13,18}

Collaboration is a fundamental strategy for improvement, problem solving, and innovation in the health system,¹⁹ and nurses are the key to the effective functioning of this system. Thus, it is extremely important to increase the job satisfaction levels of nurses to provide effective nursing care, improve patients' perceptions of quality of care, improve relationships with patients and achieve sufficient nursing workforce.¹¹ For this purpose, a new culture of collaboration should be developed, combining the unique strengths of each discipline with the goal of high-quality patient care.²⁰

In the literature, there are only a limited number of studies on nurse-nurse collaboration.^{10,21-26} In Turkey, no study was found that determined the effect of nurse-nurse collaboration on job satisfaction. Therefore, the current study investigated the effect of the level of collaboration between nurses on their job satisfaction.

Research Questions

1. What is the collaboration and job satisfaction levels of nurses?
2. Are there differences between the level of nurse-nurse collaboration and job satisfaction and the introductory characteristics of nurses?
3. Is there a relationship between nurse-nurse collaboration and the job satisfaction?

MATERIALS AND METHODS

Study Design and Sample

This descriptive and relationship-seeking study was conducted with 362 nurses working at a training and research hospital

(500–1,000 beds) and a public hospital (500–1,000 beds) in Turkey. The sample response rate was 60.6%. A higher percentage of respondents could not be reached due to institutional and individual reasons (working hours, being on leave, etc.). The data were collected through face-to-face interviews with nurses who signed the consent form after being informed about the study in line with the principle of voluntariness. Individuals who did not respond to all the items in the scales and those that did not agree to participate were excluded from the study.

Data Collection Tools

An introductory form, the Nurse-Nurse Collaboration Scale (NNCS) and the Minnesota Satisfaction Questionnaire (MSQ) were used as data collection tools.

Introductory Information Form

Introductory information form consists of 14 questions prepared by the researchers considering the literature to obtain information about the nurse's age, gender, marital status, educational status, working style, total working years in the institution and profession, satisfaction with the unit they are in, and willingness to choose the nursing profession.

The Nurse-Nurse Collaboration Scale (NNCS)

NNCS was originally developed by Dougherty and Larson²¹ and the validity and reliability study of the Turkish version was undertaken by Durmuş and Yıldırım²². The scale consists of 26 items based on a four-point Likert type (strongly disagree-1 point, strongly agree-4 points) under the following five subscales: problem solving (three items), communication (five items), shared process (five items), coordination (three items), and professionalism (10 items). An increase in the total score obtained from the scale indicates that communication between nurses is good. The Cronbach α reliability coefficient was found to be significant, being higher than 0.93 for the overall scale and higher than 0.70 for the subscales (0.75, 0.71, 0.80, 0.78, and 0.93 for problem solving, communication, shared process, coordination, and professionalism, respectively). For this study, the Cronbach's alpha value was calculated to estimate the internal consistency and showed a value of 0.93. The Cronbach α reliability coefficient was found for the subscales (0.85, 0.77, 0.83, 0.86, and 0.91 for problem solving, communication, shared process, coordination, and professionalism, respectively). The cut-off point of the scale was determined as 2.5.

The Minnesota Satisfaction Questionnaire (MSQ)

The MSQ developed by Dawis and his colleagues and adapted to Turkish by Baycan²⁷, is a five-point Likert-type instrument consisting of items that reveal intrinsic and extrinsic satisfaction factors. The general satisfaction score is calculated by dividing the sum of the points obtained from the items by 20. The intrinsic satisfaction score is obtained by dividing the sum of

the points obtained from the items that constitute the intrinsic factors (items 1, 2, 3, 4, 7, 8, 9, 10, 11, 15, 16, and 20) by 12 while the extrinsic satisfaction score is found by dividing the sum of the scores obtained from the items containing extrinsic factors (items 5, 6, 12, 13, 14, 17, 18, and 19) by 8. The Cronbach α reliability coefficient was found to be significant 0.90 for the overall scale. For this study the Cronbach's alpha value was calculated to estimate the internal consistency and showed a value of 0.91.

Data Collection

The data started to be collected after obtaining the necessary permission from the relevant institution, and the study was conducted between September and November 2018. The data were collected by the face-to-face interview technique. Each interview took 5 to 10 minutes.

Statistical Analysis

The data were analyzed using the SPSSWIN 21.0 statistical program (IBM, SPSS Inc.). The statistical significance level was set at $p < 0.05$. In the analysis of the data, descriptive analyses (number, percentage, mean, and standard deviation) were used to determine the personal and professional characteristics of the nurses (age, gender, education, units at which nurses worked, duration of occupational experience, support from other staff, problems with other staff). Parametric (independent samples t-test) or non-parametric (Kruskal-Wallis and Mann-Whitney U) tests were used to compare the measurements obtained from the NNCS and MSQ subscales according to the personal and professional characteristics of the participants. A post-test analysis was undertaken using the Duncan technique. Finally, correlation and regression analysis were used to determine the predictive power of the NNCS scale for the MSQ scale score. Regression analysis assumptions were confirmed before analysis. There is a linear relationship between dependent and independent variables and continuous variables, deliver no significant outliers, residual (error) were significant, almost normally distributed. After the assumptions, the regression model was established after the conditions were met and simple linear regression analysis was performed in SPSS.²⁸

Ethical Considerations

Written permission was obtained for the research from the Non-Interventional Clinical Research Ethics Committee of Balıkesir University (decision number: 2018/141, date: 25.07.2018). To conduct the research, institutional permission was also received from the institutions where the study will be conducted. The permission for the use of the scales was obtained by email.

RESULTS

Of the nurses participating in the study, 82.6% (n=299) were women, 63.8% (n=231) were married, 58.0% (n=210) had

bachelor's degrees, 95.3% (n=345) worked at the public hospital, 57.2% (n=207) had an income lower than the average national product, 82.9% (n=300) had a rotating work schedule (day and night shifts), 87.3% (n=316) stated that they were satisfied with the institution at which they worked, and 77.1% (n=279) commented that they willingly chose their profession.

The mean total NNCS score of the nurses was 2.78 (0.44). The highest and lowest mean subscale scores were observed in the professionalism and problem-solving subscales, respectively (Table 1). The mean total MSQ score was calculated as 3.1 (0.63), and the mean score of the intrinsic satisfaction subscale was 3.3 (0.63), which was higher than that of the extrinsic satisfaction subscale (Table 1).

In this study, some demographic and professional characteristics of the nurses were analyzed based on their mean scores from the two scales, and inter-group comparisons were undertaken (Table 2). During the analysis, a statistically significant difference was observed in the nurses' scores between the NNCS problem solving subscale and having problems with collaboration; between the communication subscale and professional experience and having problems in communication and collaboration in the workplace; between the shared process subscale and education level, workplace, and receiving support and experiencing problems in communication and collaboration in the workplace; and lastly between the professionalism subscale and overall scale and receiving support in communication and collaboration in workplace ($p < 0.05$). Similarly, there was a significant difference in the nurses' scores between the MSQ intrinsic satisfaction subscale and receiving support and experiencing problems in communication and collaboration in the workplace, and between the extrinsic satisfaction subscale and the clinic at which the nurses worked ($p < 0.05$).

The nurses' total scores in the scales were analyzed using the Kolmogorov-Smirnov normality test and found to be normally

Table 1. NNCS and MSQ mean scores (n=362)

Subscales	Mean (SD)	Min-max value
Problem solving	2.67 (0.62)	1–4
Communication	2.72 (0.51)	1–4
Shared process	2.76 (0.51)	1–4
Coordination	2.85 (0.61)	1–4
Professionalism	2.89 (0.53)	1–4
NNCS total	2.78 (0.44)	1–4
Intrinsic satisfaction	3.30 (0.63)	1–5
Extrinsic satisfaction	2.81 (0.75)	1–5
MSQ general satisfaction	3.10 (0.63)	1–5

NNCS: Nurse-Nurse Collaboration Scale, MSQ: Minnesota Satisfaction Questionnaire, SD: standard deviation, min: minimum, max: maximum, n: number.

Table 2. Comparison of the NNCS and MSQ mean scores according to the sociodemographic characteristics of nurses (n=362)

Characteristics	NNCS							MSQ			
	Problem solving	Communication	Shared process	Coordination	Professionalism	NNCS total	Intrinsic satisfaction	Extrinsic satisfaction	MSQ total		
Education	Associate degree ¹ (n=135)	2.66 (0.58)	2.72 (0.48)	2.84 (2.42)	2.87 (0.54)	2.93 (0.45)	2.80 (0.34)	3.31 (0.67)	2.77 (0.82)	3.09 (0.67)	
	Bachelor's degree ² (n=210)	2.71 (0.62)	2.73 (0.52)	2.73 (0.54)	2.84 (0.64)	2.88 (0.58)	2.78 (0.49)	3.31 (0.61)	2.85 (0.70)	3.13 (0.60)	
	Postgraduate degree ³ (n=17)	2.23 (0.80)	2.57 (0.53)	2.51 (0.68)	2.80 (0.66)	2.81 (0.48)	2.58 (0.50)	3.19 (0.71)	2.58 (0.77)	2.95 (0.69)	
	Test statistics (KW)	0.053	0.155	0.050 ^{*(1-3)}	0.767	0.661	0.107	0.624	0.394	0.560	
Units at which nurses worked	Clinics ¹ (n=106)	2.74 (0.61)	2.74 (0.49)	2.81 (0.51)	2.89 (0.65)	2.89 (0.57)	2.81 (0.46)	3.30 (0.68)	2.89 (0.73)	3.13 (0.65)	
	Emergency ² (n=32)	2.63 (0.49)	2.63 (0.36)	2.57 (0.49)	2.81 (0.50)	2.83 (0.41)	2.69 (0.30)	3.42 (0.62)	3.10 (0.68)	3.29 (0.54)	
	Operating theatre ³ (n=19)	2.45 (0.61)	2.58 (0.79)	2.53 (0.57)	2.73 (0.59)	2.63 (0.50)	2.58 (0.48)	3.50 (0.57)	3.08 (0.65)	3.33 (0.59)	
	Test statistics (KW)	0.273	0.479	0.029 ^{*(1-2)}	0.767	0.193	0.102	0.375	0.004 ^{*(2-4)}	0.60	
The duration of occupational experience	≤10 years (n=190)	2.66 (0.62)	2.78 (0.48)	2.80 (0.50)	2.89 (0.62)	2.93 (0.52)	2.81 (0.44)	3.32 (0.64)	2.81 (0.78)	3.12 (0.65)	
	≥ 11 years (n=172)	2.68 (0.63)	2.65 (0.52)	2.71 (0.52)	2.81 (0.59)	2.85 (0.54)	2.74 (0.44)	3.28 (0.63)	2.80 (0.72)	3.09 (0.62)	
	Test statistics (MU)	0.534	0.021	0.183	0.181	0.633	0.198	0.689	0.925	0.727	
	Nurse ¹ (n=284)	2.69 (0.59)	2.74 (0.49)	2.78 (0.47)	2.88 (0.57)	2.91 (0.51)	2.80 (0.42)	3.33 (0.63)	2.81 (0.73)	3.12 (0.63)	
Support from other staff	Physician ² (n=35)	2.68 (0.78)	2.71 (0.63)	2.80 (0.62)	2.87 (0.83)	2.96 (0.65)	2.80 (0.59)	3.41 (0.59)	2.96 (0.80)	3.23 (0.63)	
	Supervisor nurse-manager ³ (n=25)	2.54 (0.74)	2.58 (0.46)	2.67 (0.64)	2.62 (0.65)	2.69 (0.60)	2.62 (0.48)	3.04 (0.62)	2.57 (0.86)	2.85 (0.63)	
	Other ⁴ (n=18)	2.44 (0.66)	2.58 (0.48)	2.48 (0.63)	2.68 (0.57)	2.79 (0.49)	2.60 (0.38)	2.98 (0.66)	2.74 (0.80)	2.88 (0.64)	
	Test statistics (KW)	0.222	0.211	0.047 ^{*(1-4, 2-4)}	0.172	0.021 ^{*(1-3, 2-3)}	0.004 ^{*(1-3, 1-4, 2-3, 2-4)}	0.020 ^{*(1-3, 1-4, 2-3, 2-4)}	0.351	0.057	

Table 2. Continued

Characteristics	NNCS					MSQ				
	Problem solving	Communication	Shared process	Coordination	Professionalism	NNCS total	Intrinsic satisfaction	Extrinsic satisfaction	MSQ total	
Nurse ¹ (n=216) (n=48)	2.45 (0.62)	2.52 (0.50)	2.61 (0.57)	2.69 (0.60)	2.74 (0.53)	2.60 (0.45)	3.30 (0.80)	2.71 (0.91)	3.06 (0.78)	
Physician ² (n=166)	2.67 (0.64)	2.72 (0.45)	2.76 (0.47)	2.91 (0.61)	2.93 (0.45)	2.80 (0.41)	3.22 (0.62)	2.72 (0.76)	3.02 (0.63)	
Supervisor nurse- manager ³ (n=63)	2.65 (0.59)	2.79 (0.58)	2.73 (0.55)	2.78 (0.68)	2.88 (0.64)	2.77 (0.50)	3.36 (0.60)	2.93 (0.67)	3.19 (0.57)	
Other ⁴ (n=85)	2.80 (0.58)	2.78 (0.52)	2.86 (0.50)	2.89 (0.52)	2.92 (0.57)	2.85 (0.44)	3.42 (0.57)	2.94 (0.69)	3.23 (0.58)	
Test statistics (KW)	0.040 ^{*(1-2, 1-4)}	0.020 ^{*(1-2, 1-3, 1-4)}	0.045 ^{*(1-4)}	0.198	0.103	0.026	0.198	0.115	0.124	
Total (n=362)	2.67 (0.62)	2.72 (0.51)	2.76 (0.51)	2.85 (0.61)	2.89 (0.53)	2.78 (0.44)	3.30 (0.63)	2.81 (0.75)	3.10 (0.63)	

*: Mann-Whitney U test, ^{1,2,3,4}: subcategories to demographic characteristics, NNCS: Nurse-Nurse Collaboration Scale, MSQ: Minnesota Satisfaction Questionnaire, n: number.

distributed (p>0.05). The relationships between the two scales were examined using Pearson’s product-moment correlation analysis. According to the results of the statistical analysis performed for this purpose, the overall NNCS scale and its subscales had a significant, positive and moderate relationship with the overall MSQ and its subscales (Table 3).

In this study, the predictive power of the level of collaboration between nurses in job satisfaction was investigated. For this purpose, regression analysis was done and the results (F_{NNCS-MSQ} = 55.601) were found to be statistically significant at the p<0.001 level (Table 4). The results of regression analysis being significant show that the relationship between the NNCS and MSQ score was linear and statistically significant.

When Table 4 is examined, it is seen that the level of collaboration between the nurses was a significant predictor of their overall job satisfaction [R=0.366, R²=0.131, F (1.360)=55.601, p<0.001]. It can be stated that 13.1% of the total variance related to general job satisfaction could be explained by the level of nurse-nurse collaboration. According to the results of the regression analysis, the regression equation for predicting job satisfaction is as follows:

$$\text{MSQ General Satisfaction} = (1.654) + (0.523) \times \text{NNCS total}$$

DISCUSSION

There are only a limited number of studies investigating nurse-to-nurse collaboration in Turkey.^{23,25} In these studies, it has been shown that nurses in Turkey are in collaboration with their colleagues above the expected minimum level, but this is still not sufficient for nursing profession. Similarly, this study determined that the level of nurse-nurse collaboration was moderate, and the highest level of collaboration was observed in professionalism and the lowest in problem solving. The problem-solving ability of nurses plays an important role in detecting and solving problems, increasing their job satisfaction, strengthening their communication ability, increasing the satisfaction of individuals receiving health care, and increasing the quality of care. Therefore, it is important to strengthen the problem-solving skills of nurses. Some researchers have shown that most nurses have positive perceptions and attitudes toward collaboration and they have high scores in communication and professionalism subscales.^{26,29,30} In contrast, Petersen et al.³¹ reported that there was inadequate collaboration and communication between nurses, and concrete information and professional identities were replaced by prejudices.

In this study, differences were found in the nurses’ total scores of collaborations according to their personal and professional characteristics. While this study revealed no significant difference in the level of collaboration according to the educational status of the nurses, Durmuş et al.²³ reported that nurses with

Table 3. Relationship between the measurements obtained from the Nurse-Nurse Collaboration Scale and the Minnesota Satisfaction Questionnaire (n=362)

Scales/sub scales	MSQ general satisfaction r;p	Intrinsic satisfaction r;p	Extrinsic satisfaction r;p
NNCS total	0.366* 0.000	0.382* 0.000	0.287* 0.000
Problem solving	0.301* 0.000	0.269* 0.000	0.293* 0.000
Communication	0.273* 0.000	0.295* 0.000	0.203* 0.000
Shared process	0.289* 0.000	0.331* 0.000	0.191* 0.000
Coordination	0.327* 0.000	0.350* 0.000	0.245* 0.000
Professionalism	0.263* 0.000	0.282* 0.000	0.198* 0.000

P-values of the statistically significant correlation coefficients are shown in bold.

NNCS: Nurse-Nurse Collaboration Scale, MSQ: Minnesota Satisfaction Questionnaire, r: Pearson's correlation coefficient, *p<0.001, n: number.

Table 4. Results concerning the effect of nurse-nurse collaboration on job satisfaction

Dependent variable: MSQ General Satisfaction Score

Independent variables	β	SEB	SDβ	t	p-value
Constant	1.654	0.198		8.364	0.000
NNCS total	0.523	0.070	0.366	7.457	0.000

R=0.366/R²=0.134/adjusted R²=0.131, F_(1,360)=55.601, p=0.000.

NNCS: Nurse-Nurse Collaboration Scale, MSQ: Minnesota Satisfaction Questionnaire, SE: standard error, SD: standard deviation.

bachelor's degrees had higher scores in problem solving, coordination, professionalism, and collaboration compared to those with associate degrees. Concerning the unit at which the nurses worked, the shared process subscale scores were higher in those that worked at clinics than those working at other units of the hospital. In contrast, Durmuş et al.²³ found a difference in all subscales according to the departments at which the nurses worked. The shared process subscale score may have been higher in clinics since the functioning, procedures, and processes differ in each unit of the hospital, and nurse-nurse collaboration is even more important in clinics for the proper functioning of the system. In this study, the mean communication subscale score of the nurses with less than 10 years of professional experience was higher than those with experience of 11 years or more. As the duration of professional experience increases, it is expected to see an increase in the mean communication subscale score; therefore, this opposite result may be related to the nurses experiencing a higher level of burnout with the increasing number of working years.

Nurses are expected to collaborate with patients, colleagues, and other members of the healthcare team not only for the benefit of patients but also for the satisfaction of

healthcare providers.¹⁹ Nurse-nurse collaboration necessitates understanding and knowledge on how nurses perceive each other and what factors promote good collaboration. The relationship between nurse-nurse collaboration is an essential factor for a healthy work environment. The hospital workforce environment has been recognized as an important factor for nurse satisfaction and patient care quality and inadequate communication and lack of collaboration continue to disempower nurses and hinder improvement of workforce conditions.³² It is stated that the relationship between nurse-nurse collaboration and nurses' job satisfaction should be investigated since it is a less studied subject and nurse insufficiency is an important issue in modern health services.³³ It has also been suggested a significant positive linear and moderate relationship between the overall nurse collaboration and job satisfaction and it can be stated that 13.1% of the total variance related to general job satisfaction could be explained by the level of nurse-nurse collaboration. Collaboration variable is an important predictor of job satisfaction variable, but it is important to repeat the measurements in larger samples and with different models because the low effect level was determined according to the determination

coefficient determined in the regression analysis. Studies have shown that nurse-nurse collaboration and colleague solidarity affect nurses' job satisfaction.^{24-26,34} Almost et al.³⁵ determined that a conflict management style using collaboration and reconciliation has a direct and positive effect on nurse job satisfaction, while Purpora and Blegen¹⁵ showed that the peer relationship scores were significantly correlated with nurses' job satisfaction. Being productive in the workplace and helping colleagues positively affect the performance in the workplace, whereas intra-professional hostility, poor colleague support, and lack of helpful behavior cause serious psychological stress and low job satisfaction.³⁶ According to the results of the current research, good increased collaborative practices can provide a higher level of job satisfaction among nurses. The study is an important result in that it shows that the level of nurse-nurse collaboration affects the job satisfaction of nurses and can guide the planning of interventions that will increase job satisfaction. With the introduction of nurse assistants in Turkey, further research and arrangements on intra-professional collaboration will be required in the following years.

Limitations of the Study

There are some limitations in this study. Research results, located in the Marmara region of Turkey is valid for two hospital staff nurses and the answers to the questions on the forms depended on the nurse's own statements. It is recommended that in-depth studies on nurse-nurse collaboration and influencing factors should be investigated in larger and different samples.

CONCLUSION

According to the results of this research, the level of nurse-nurse collaboration is one of the important factors affecting nurses' job satisfaction. Collaboration and job satisfaction among nurses are also affected by some personal and professional factors, such as educational status, workplace, duration of professional experience, support in the work environment, and problems in the work environment. Increasing the level of collaboration between nurses will reduce the negative effects of individual and organizational factors on their job dissatisfaction. In this regard, the following recommendations are made: improving shared goals among nurses, creating organizational policies that will support collaboration and increase the interaction between nurses working in different units and sectors, increasing the time nurses spend together, creating democratic work environments, emphasizing collaboration and communication skills during nursing education, increasing intra-professional collaboration as well as interprofessional collaboration of administrative nurses, creating healthy work environments to support intrinsic satisfaction, and developing outcome measures to evaluate collaboration.

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MAIN POINTS

- The highest and lowest mean subscale scores were observed in the professionalism and problem-solving subscales, respectively.
- The mean score of the internal satisfaction subscale is higher than the external satisfaction subscale.
- Professional experience time affects communication. Those with more than 11 years of experience have higher average communication sub-scale.
- Getting support from physicians in the workplace affects process sharing, professionalism and the level of nurse-nurse collaboration and supports intrinsic motivation.
- The level of nurse-nurse collaboration is one of the important factors affecting nurses' job satisfaction.

ETHICS

Ethics Committee Approval: Ethics committee approval (Balıkesir University Clinical Trials Ethics Committee, decision no: 2018/141 date: 25.07.2018) and institutional permissions were obtained.

Informed Consent: The participants were informed about the study verbally and in writing, and their written consent to participate was obtained.

Peer-review: Externally peer-reviewed.

Authorship Contributions

Concept: A.K., Ö.D., Design: A.K., Ö.D., S.K., Supervision: A.K., Data Collection and/ or Processing: A.K., Ö.D., S.K., Analysis and/ or Interpretation: Ö.D., Literature Search: A.K., Ö.D., S.K., Writing: A.K., Ö.D., S.K., Critical Review: A.K., Ö.D., S.K.

DISCLOSURES

Conflict of Interest: The authors declare no conflict of interest.

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