

# Determination of Psychological Capital Levels of Nurses

## Hemşirelerin Psikolojik Sermaye Düzeylerinin Belirlenmesi

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### ABSTRACT

**Objective:** In the study, it was aimed to determine the psychological capital levels of nurses.

**Methods:** The descriptive study was conducted with 138 nurses working in a training and research hospital. Data were collected with Personal Information Form and Psychological Capital Scale. Descriptive analyses, independent groups t test, Anova test and Pearson correlation test were used in the analysis of data.

**Results:** The total score of the Nurses' Psychological Capital Scale was found to be 105.11±12.97. When looking at the sub-dimensions of the scale, the highest average score was calculated as "self-efficacy" score average of 28.06±4.81, and the lowest average score was calculated as "optimism" score average of 23.18±3.39. As a result of the study, a statistically significant difference was found between positive psychological capital level and marital status, total professional years, working time in the institution, number of shifts per month, department worked, working status, weekly working hours and working style ( $P<.05$ ).

**Conclusion:** This study revealed that nurses' psychological capital levels were generally high. The highest score was observed in the self-efficacy sub-dimension, while the lowest was observed in the optimism sub-dimension. Significant relationships were found between psychological capital and some demographic and professional variables. These findings show that regular monitoring of nurses' psychological capital and consideration of the influencing factors can contribute to improvements in areas such as workload management, working hours and shift planning. The findings obtained can provide significant contributions in terms of nursing management, human resources practices and vocational training programs.

**Keywords:** Nursing, motivation, positive, psychology, mental health

### ÖZ

**Amaç:** Çalışmada, hemşirelerin psikolojik sermaye düzeylerinin belirlenmesi amaçlanmıştır.

**Yöntemler:** Tanımlayıcı tipte olan çalışma, bir eğitim araştırma hastanesinde çalışmakta olan 138 hemşire ile yapılmıştır. Veriler, "Kişisel Bilgi Formu ve Psikolojik Sermaye Ölçeği" ile toplanmıştır. Verilerin analizinde tanımlayıcı analizler, bağımsız gruplarda t testi, Anova testi ve Pearson korelasyon testi kullanılmıştır.

**Bulgular:** Hemşirelerin Psikolojik Sermaye Ölçeği Toplam puan ortalaması 105.11±12.97 olarak bulunmuştur. Ölçek alt boyutlarına bakıldığında en yüksek puan ortalaması öz-yeterlilik alt boyutunda olup puanı ortalaması 28.06±4.81, en düşük puan ortalaması iyimserlik alt boyutunda ve puanı ortalaması 23.18±3.39 bulunmuştur. Çalışma sonucunda olumlu psikolojik sermaye düzeyi ile medeni durum, meslekte toplam çalışma yılı, kurumda çalışma süresi, aylık nöbet sayısı, çalışılan bölüm, çalışma statüsü, haftalık çalışma saati ve çalışma biçimi açısından istatistiksel açıdan anlamlı farklılık saptanmıştır ( $P<.05$ ).

**Sonuç:** Bu çalışma, hemşirelerin psikolojik sermaye düzeylerinin genel olarak yüksek olduğunu ortaya koymuştur. En yüksek puan öz-yeterlilik, en düşük ise iyimserlik alt boyutunda gözlenmiştir. Psikolojik sermaye ile bazı demografik ve mesleki değişkenler arasında anlamlı ilişkiler saptanmıştır. Bu bulgular, hemşirelerin psikolojik sermayesinin düzenli izlenmesinin ve etkileyen faktörlerin göz önünde bulundurulmasının; iş yükü yönetimi, çalışma saatleri ve nöbet planlaması gibi alanlarda yapılacak iyileştirmelere katkı sağlayabileceğini göstermektedir. Elde edilen bulgular, hemşirelik yönetimi, insan kaynakları uygulamaları ve mesleki eğitim programları açısından önemli katkılar sunabilir.

**Anahtar Kelimeler:** Hemşirelik, motivasyon, pozitif, psikoloji, ruh sağlığı

Geliş Tarihi/Received 05.05.2024  
Revizyon Talebi/Revision Requested 10.12.2024  
Son Revizyon/Last Revision 15.12.2024  
Kabul Tarihi/Accepted 17.02.2025  
Yayın Tarihi/Publication Date 31.05.2025

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Cite this article: Yaşayacak A, Tokur Kesgin M. Determination of Psychological Capital Levels of Nurses. *J Nursology*. 2025;28(2):167-176. doi:

10.17049/jnursology.1478643



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## INTRODUCTION

Psychological capital is a construct composed of various features related to the emergence and development of individuals' positive qualities, and it consists of four subcomponents: hope, optimism, self-efficacy, and resilience.<sup>1,2</sup> Hope reflects the self-motivation required to achieve goals even when faced with challenges. Optimism involves the perception and belief in a positive outlook toward both the present and the future. Self-efficacy refers to an individual's self-confidence in their duties to carry out tasks and cope with challenges. Resilience denotes the capacity to withstand difficulties and setbacks.<sup>3</sup> Psychological capital aims to promote employees' success and well-being<sup>4</sup>, and individuals with high psychological capital are known to report lower levels of job stress.<sup>5</sup> Studies conducted with nurses have demonstrated that psychological capital has positive effects on variables such as job satisfaction, work engagement, performance, job-related happiness, coping with difficulties, burnout prevention, and both physical and psychological well-being.<sup>2,6-9</sup>

Psychological capital is significantly associated with the individual's demographic characteristics and both internal and external environmental conditions. Studies have shown that psychological capital tends to be higher among males, individuals with undergraduate degrees, experienced employees, and healthcare professionals in managerial positions.<sup>1,7,10-12</sup> However, Tang et al.<sup>13</sup>, in their study conducted with nurses, found no significant relationship between psychological capital and gender, marital status, employment status, or income level. These findings suggest that psychological capital is a complex construct influenced by multiple factors.

Nursing is a profession based on communication and assistance with individuals. In this regard, strong psychological capital serves as an effective resource for nurses in coping with the challenges they face. Psychological capital not only enhances nurses' performance, motivation, and service quality but also, when combined with a healthy work environment, strengthens work engagement.<sup>11,14</sup> Elderly cancer patients who receive care from nurses with high psychological capital report higher levels of satisfaction. In addition, work engagement has been found to mediate the relationship between psychological capital and patient satisfaction.<sup>15</sup> Furthermore, another study suggests that improving environmental factors influencing psychological capital levels may enhance work engagement.<sup>11</sup> The fact that psychological capital can be developed and managed through training enables it to be enhanced through

targeted interventions. Therefore, assessing the level of psychological capital among nurses is important for guiding future research and forming a foundation for evidence-based initiatives. Strengthening nurses' psychological capital is of great importance for enabling them to cope effectively with the challenges they face in their professional practice. Psychological capital is not only a key factor directly influencing nurses' mental health, but also plays a decisive role in job satisfaction, professional motivation, and the quality of patient care. Therefore, assessing the psychological capital levels of nurses working in healthcare institutions is considered a vital step toward enhancing both their professional performance and the quality of care delivered to patients. This approach may contribute significantly to the healthcare system by providing a healthier and more productive work environment for nurses.

Strengthening nurses' psychological capital not only supports their individual and professional development but may also contribute to improving the organizational structure of healthcare institutions. In this context, it may be important to plan internal rotations and other institutional changes based on nurses' levels of psychological capital.

## AIM

This study aims to determine the psychological capital levels of nurses.

## Research questions/hypothesis

The following questions were sought in this study:

- What are the psychological capital levels of nurses?
- Are there significant differences between the introductory characteristics of nurses (gender, marital status, age, years of service, title, education level) and the level of psychological capital?

## METHODS

### Features and Place of The Study

The study was conducted at a public university hospital located in the province of Bolu between November 1, 2021, and February 28, 2022, during the global COVID-19 pandemic.

### Participants

The study population comprised 310 nurses from a public university hospital (total N = 391), excluding those on sick or maternity leave during the data collection period. The sample size was calculated using the GPower 3.1.9.4 software.<sup>16</sup> Independent samples t-test was selected as the statistical analysis to compare the means of two independent groups. Regarding the effect size, the analysis

by Kuşçu Karatepe et al.<sup>7</sup> concerning “nurses' psychological capital levels in relation to their working status” utilized mean and standard deviation values, yielding an effect size of 0.636.<sup>7</sup> As a result of the calculation conducted with a significance level of  $\alpha = 0.05$ , a power of 0.95, and a two-tailed test, the required sample size was determined to be 132. To account for potential data loss due to incomplete or missing surveys, 138 participants were included in the study. Participants were selected using the simple random sampling method.

### Data Collection Tools

**Personal Information Form:** Based on the scientific literature, the researchers developed a 14-item form to collect personal and professional information about nurses.<sup>2,7,17</sup>

**Psychological Capital (PsyCap) Measure:** The scale, originally developed by Luthans et al.<sup>18</sup>, was adapted into Turkish by Çetin and Basım.<sup>19</sup> It consists of a total of 24 items distributed across four sub-dimensions: self-efficacy, hope, optimism, and psychological resilience. The scale is a 6-point Likert-type instrument. Higher scores indicate a higher level of psychological capital. The sub-dimensions of the scale are measured by the following items: optimism (items 1, 9, 11, 14, 18, 19), psychological resilience (items 5, 7, 8, 10, 13, 22), hope (items 2, 6, 12, 17, 20, 24), and self-efficacy (items 3, 4, 15, 16, 21, 23). Items 1, 8, and 11 are reverse-scored. The total Cronbach's alpha coefficient of the adapted scale was reported as 0.91. The coefficients for the sub-dimensions were 0.67 for optimism, 0.81 for hope, 0.68 for psychological resilience, and 0.85 for self-efficacy.<sup>19</sup> In the present study, the total Cronbach's alpha coefficient was found to be 0.86, with sub-dimension values of 0.63 for optimism, 0.74 for hope, 0.78 for psychological resilience, and 0.87 for self-efficacy (Table 1).

### Data Collection Method

Survey forms were initially administered online due to the global pandemic. Participation was limited to individuals who read the study information and selected the checkbox indicating “I agree to participate in the study.” As the pandemic situation improved during the data collection period, the remaining data were gathered through face-to-face interviews. Prior to data collection, nurses were provided with detailed information about the study.

### Statistical Analysis

The data were analyzed using the SPSS version 26 (IBM SPSS Corp., Armonk, NY, USA). To assess the distribution of the data, skewness and kurtosis values between -2.5 and +2.5 were considered acceptable.<sup>20,21</sup> It was determined

that the skewness and kurtosis values indicated a normal distribution, and the histogram also supported the assumption of normality. Descriptive statistical analyses (frequency, percentage, mean, standard deviation), the independent samples t-test, one-way ANOVA, and Pearson correlation test were used to analyze the data. A p-value of <.05 was considered statistically significant.

### Ethical Considerations

Ethical approval for the study was obtained from the Clinical Research Ethics Committee of Bolu Abant İzzet Baysal University (Date: 04.05.2021, Decision No: 2021/121). Written permission was also obtained from the institution where the research was conducted. Informed consent was obtained in writing from all participants by having them complete the informed consent form.

### RESULTS

Table 1 shows the results of the reliability analysis of the psychological capital scale, skewness and kurtosis values, standard deviation and data related to the scale and its sub-dimensions. The overall Cronbach's alpha value of the Psychological Capital Scale used in the study was determined to be 0.86. The Cronbach's alpha values for the sub-dimensions were as follows: self-efficacy 0.87, hope 0.74, psychological resilience 0.78, and optimism 0.63 (Table 1).

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Table 2 shows the comparison of participants' demographic characteristics with the mean scores of the Psychological Capital Scale and its sub-dimensions.

The mean age of the nurses was 30.00±7.43 years; 57.2% (n=79) were married, and 71.7% (n=99) held a bachelor's degree. The average total duration of professional experience was 10.00±7.03 years, while the average duration of employment at the current institution was 6.00±4.80 years. Among the participants, 42% (n=58) were working in intensive care units, and 62.3% (n=86) were employed as ward nurses. It was found that 37% (n=51) of the nurses worked more than 60 hours per week, and 30.4% (n=42) reported having 6–10 shifts per month. Additionally, 68.1% were engaged in shift work. A majority of the nurses (68.8%) reported having chosen their profession willingly, and 75.4% were satisfied with communication among colleagues (Table 2).

**Table 1. The results of the reliability analysis of the Psychological Capital Scale and its sub-dimensions and normal distribution (n=138)**

Scale and Sub-Dimensions	Min-Max	$\bar{x} \pm SS$	Standard Error	Skewness	Kurtosis	Cronbach's Alpha
Psychological Capital	47-136	105.11 $\pm$ 12.97	1.10	-0.801	2.390	0.86
Self-efficacy	9-36	28.06 $\pm$ 4.81	0.41	-0.546	0.730	0.87
Hope	12-36	27.65 $\pm$ 3.93	0.33	-0.643	1.615	0.74
Optimism	13-31	23.18 $\pm$ 3.39	0.28	-0.223	0.224	0.63
Resilience	12-33	26.21 $\pm$ 3.55	0.30	-1.082	2.223	0.78

Min; Minimum, Max; Maximum,  $\bar{x}$ ; Mean, SD; Standard Deviation

According to Table 2, no statistically significant differences were found between the Psychological Capital Scale and its subdimensions in relation to gender, educational status, willingness to choose the profession, satisfaction with communication among colleagues, or willingness to participate in psychological activities ( $P > .05$ ). However, a significant difference was observed between the self-efficacy subdimension and gender ( $P < .05$ ) (Table 2).

When the age variable was evaluated, the psychological capital levels of nurses in the 20–29 age group (100.64 $\pm$ 11.77) were found to be significantly lower than those of nurses in the 30–39 and 40–59 age groups ( $F(2)=8.073$ ;  $P<.01$ ). Married nurses had significantly higher psychological capital levels compared to single nurses ( $t(136)= -2.985$ ,  $P<.01$ ).

**Table 2. Comparison of participants' demographic characteristics with the mean scores of the Psychological Capital Scale and its sub-dimensions (n=138)**

Descriptive Characteristics Test; df; P; Post Hoc	n (%)	Psychological Capital $\bar{x} \pm SD$	Self-efficacy $\bar{x} \pm SD$	Hope $\bar{x} \pm SD$	Optimism $\bar{x} \pm SD$	Resilience $\bar{x} \pm SD$
<b>Age</b> $\bar{x} \pm SD=30.00 \pm 7.43$						
20-29 years (1)	65(47.1)	100.64 $\pm$ 11.77	26.43 $\pm$ 4.70	26.70 $\pm$ 3.57	22.18 $\pm$ 3.27	25.32 $\pm$ 3.64
30-39 years (2)	45(32.6)	109.35 $\pm$ 11.83	29.71 $\pm$ 3.96	28.60 $\pm$ 4.15	24.11 $\pm$ 3.35	26.93 $\pm$ 3.14
40-59 years (3)	28(20.3)	108.67 $\pm$ 14.34	29.21 $\pm$ 5.23	28.32 $\pm$ 4.00	24.03 $\pm$ 3.20	27.10 $\pm$ 3.61
Test; df; P		<b>F=8.073; 2; .001**</b> 1<2-3	<b>F=7.881; 2; .001**</b> 1<2-3	<b>F=3.725; 2; .027*</b> 1<2	<b>F=5.732; 2; .004**</b> 1<2-3	<b>F=4.012; 2; .020*</b> 1<2-3
<b>Gender</b>						
Female	126(91.3)	105.53 $\pm$ 13.07	28.34 $\pm$ 4.74	27.73 $\pm$ 3.96	23.18 $\pm$ 3.46	26.26 $\pm$ 3.58
Male	12(8.7)	100.75 $\pm$ 11.40	25.08 $\pm$ 4.75	26.83 $\pm$ 3.66	23.25 $\pm$ 2.66	25.58 $\pm$ 3.34
Test; P		MWU=575; Z=-1.369 .171	<b>MWU=478</b> <b>Z=-2.105</b> .035*	MWU=676; Z=-0.607; .544	MWU=725; Z=-0.235; .814	MWU=667; Z=-0.674; .500
<b>Educational status</b>						
High school	6(4.3)	98.16 $\pm$ 6.64	24.83 $\pm$ 2.56	25.66 $\pm$ 1.86	22.83 $\pm$ 3.76	24.83 $\pm$ 2.31
Associate degree	19(13.8)	105.36 $\pm$ 10.82	28.10 $\pm$ 4.18	28.05 $\pm$ 3.65	23.78 $\pm$ 3.73	25.42 $\pm$ 2.77
Bachelor's degree	99(71.7)	105.32 $\pm$ 13.65	28.22 $\pm$ 5.08	27.52 $\pm$ 4.11	23.11 $\pm$ 3.23	26.46 $\pm$ 3.74
Postgraduate degree	14(10.2)	106.28 $\pm$ 12.80	28.28 $\pm$ 4.19	28.85 $\pm$ 3.43	23.07 $\pm$ 4.19	26.07 $\pm$ 3.51
Test; df; P		f=0.617; 3; .605	f=0.944; 3; .421	f=1.048; 3; .374	f=0.238; 3; .869	f=0.784; 3; .505
<b>Marital status</b>						
Single	59(42.8)	101.40 $\pm$ 12.03	27.01 $\pm$ 4.39	26.69 $\pm$ 3.55	22.47 $\pm$ 3.26	25.22 $\pm$ 3.72
Married	79(57.2)	107.88 $\pm$ 13.02	28.84 $\pm$ 4.99	28.36 $\pm$ 4.07	23.72 $\pm$ 3.41	26.94 $\pm$ 3.25
Test; df; P		<b>t=-2.985; 136;</b> <b>.003**</b>	<b>t=-2.241; 136;</b> <b>.027*</b>	<b>t=-2.517;</b> <b>136; .013*</b>	<b>t=-2.160; 136;</b> <b>.033*</b>	<b>t=-2.901;</b> <b>136; .004**</b>
<b>Total years of professional experience</b> $\bar{x} \pm SD= 10.00 \pm 7.03$						
1-4 years (1)						
5-9 years (2)	36(26.1)	98.41 $\pm$ 10.99	26.08 $\pm$ 4.68	26.33 $\pm$ 3.16	21.38 $\pm$ 2.32	24.61 $\pm$ 4.17
10-14 years (3)	31(22.5)	102.51 $\pm$ 12.47	26.83 $\pm$ 4.21	26.51 $\pm$ 4.28	23.12 $\pm$ 3.71	26.03 $\pm$ 3.17
15-19 years (4)	33(23.9)	108.66 $\pm$ 11.85	29.21 $\pm$ 4.59	28.69 $\pm$ 3.52	24.06 $\pm$ 3.79	26.69 $\pm$ 2.97
$\geq 20$ years (5)	25(18.1)	109.12 $\pm$ 15.12	29.52 $\pm$ 5.45	28.64 $\pm$ 4.80	23.80 $\pm$ 2.98	27.16 $\pm$ 3.65
	13 (9.4)	113.15 $\pm$ 7.53	30.76 $\pm$ 3.05	29.46 $\pm$ 2.29	24.92 $\pm$ 3.09	28.00 $\pm$ 2.04
Test; df; P		<b>F=5.915; 4; .001**</b> 1<3-4-5; 2<5	<b>F=4.504; 4; .002**</b> 1<5; 2<5	<b>F=3.569; 4; .008**</b> 1<3-5; 2<5	<b>F=4.542; 4; .002**</b> 1<3-5	<b>F=3.500; 4; .009**</b> 1<5

**Table 2. Comparison of participants' demographic characteristics with the mean scores of the Psychological Capital Scale and its sub-dimensions (n=138) (Continued)**

Descriptive Characteristics Test; df; P; Post Hoc	n (%)	Psychological Capital $\bar{x} \pm SD$	Self-efficacy $\bar{x} \pm SD$	Hope $\bar{x} \pm SD$	Optimism $\bar{x} \pm SD$	Resilience $\bar{x} \pm SD$
<b>Duration of employment at current institution</b> $\bar{x} \pm SD = 7.00 \pm 4.80$						
1-5 years (1)	64(46.4)	100.09 $\pm$ 13.63	26.23 $\pm$ 5.16	26.82 $\pm$ 4.07	22.06 $\pm$ 3.12	24.96 $\pm$ 4.10
6-10 years (2)	36(26.1)	105.80 $\pm$ 12.59	28.41 $\pm$ 4.63	27.30 $\pm$ 4.15	23.36 $\pm$ 3.88	26.72 $\pm$ 2.83
11-15 years (3)	33(23.9)	112.48 $\pm$ 7.28	30.63 $\pm$ 2.43	29.15 $\pm$ 2.98	24.87 $\pm$ 2.64	27.81 $\pm$ 2.24
16-20 years (4)	5 (3.6)	115.80 $\pm$ 5.01	32.00 $\pm$ 3.24	30.80 $\pm$ 1.92	25.20 $\pm$ 2.28	27.80 $\pm$ 2.28
Test; df; P		F=9.359; 3; .001**	F=8.621; 3; .001**	F=3.929; 3; .010*	F=6.338; 3; .001**	F=6.027; 3; .001**
		1<3-4, 2<3-4	1<3-4	1<3-4, 2<4	1<3	1<3
<b>Number of monthly shifts</b> $\bar{x} \pm SD = 6.00 \pm 4.30$						
None (1)	20(14.5)	109.35 $\pm$ 16.99	29.50 $\pm$ 5.87	28.40 $\pm$ 4.81	24.60 $\pm$ 3.93	26.85 $\pm$ 3.95
1-5 shifts (2)	39(28.3)	110.35 $\pm$ 10.92	29.58 $\pm$ 4.07	28.97 $\pm$ 3.57	24.46 $\pm$ 2.97	27.33 $\pm$ 3.08
6-10 shifts (3)	42(30.4)	101.66 $\pm$ 11.40	26.54 $\pm$ 4.50	26.76 $\pm$ 3.68	22.47 $\pm$ 2.60	25.88 $\pm$ 3.33
11-15 shifts (4)	37(26.8)	101.21 $\pm$ 12.03	27.40 $\pm$ 4.76	26.86 $\pm$ 3.73	21.89 $\pm$ 3.68	25.05 $\pm$ 3.74
Test; df; P		F=5.415; 3; .002**	F=3.722; 3; .013*	F=3.050; 3; .031*	F=5.967; 3; .001**	F=3.068; 3; .030*
		3-4<1, 3-4<2	3<1, 3-4<2	3-4<2	3-4<1, 3-4<2	3-4<2
<b>Unit of employment</b>						
Internal clinics (1)	17(12.3)	99.41 $\pm$ 12.19	26.17 $\pm$ 5.10	25.88 $\pm$ 3.12	22.64 $\pm$ 2.99	24.70 $\pm$ 3.70
Surgical clinics (2)	22(15.9)	102.90 $\pm$ 10.79	27.27 $\pm$ 3.90	26.18 $\pm$ 3.72	23.54 $\pm$ 3.12	25.90 $\pm$ 2.99
Intensive care units (3)	58(42.0)	104.31 $\pm$ 11.90	27.65 $\pm$ 4.36	27.58 $\pm$ 3.39	22.86 $\pm$ 3.56	26.20 $\pm$ 3.53
Other (4)	41(29.8)	109.80 $\pm$ 14.62	29.85 $\pm$ 5.34	29.26 $\pm$ 4.50	23.68 $\pm$ 3.48	27.00 $\pm$ 3.69
Test; df; P		F=3.329; 3; .022*	F=3.244; 3; .024*	F=4.860; 3; .003**	F=0.687; 3; .561	F=1.770; 3; .156
		1-2-3<4	1-2-3<4	1-2-3<4		
<b>Working status</b>						
Service nurse (1)	86(62.3)	101.10 $\pm$ 11.06	26.86 $\pm$ 4.41	26.72 $\pm$ 3.37	22.19 $\pm$ 3.15	25.32 $\pm$ 3.48
Responsible nurse (2)	20(14.5)	114.05 $\pm$ 8.28	30.55 $\pm$ 4.03	29.60 $\pm$ 2.52	25.60 $\pm$ 2.74	28.30 $\pm$ 2.12
Polyclinic nurse (3)	7(5.1)	115.71 $\pm$ 4.99	32.42 $\pm$ 2.99	31.57 $\pm$ 2.37	23.85 $\pm$ 1.86	27.85 $\pm$ 1.86
Other (4)	25(18.1)	108.80 $\pm$ 17.19	29.00 $\pm$ 5.61	28.20 $\pm$ 5.53	24.48 $\pm$ 3.70	27.12 $\pm$ 4.08
Test; df; P		F=9.677; 3; .001**	F=6.489; 3; .001**	F=6.390; 3; .001**	F=8.201; 3; .001**	F=5.641; 3; .001**
		1<2-3	1<2-3	1<2-3	1<2-4	1<2-3
<b>Weekly working hours</b> $\bar{x} \pm SD = 57.00 \pm 23.07$						
40 hours (1)	34(24.6)	112.35 $\pm$ 10.79	30.41 $\pm$ 3.94	29.05 $\pm$ 3.93	24.97 $\pm$ 2.93	27.91 $\pm$ 2.63
41-50 hours (2)	36(26.1)	106.25 $\pm$ 15.13	28.36 $\pm$ 5.45	28.00 $\pm$ 4.42	23.55 $\pm$ 3.85	26.33 $\pm$ 3.77
51-60 hours (3)	17(12.3)	101.05 $\pm$ 8.58	26.29 $\pm$ 4.35	26.64 $\pm$ 2.95	22.35 $\pm$ 1.99	25.76 $\pm$ 2.88
>60 hours (4)	51(37.0)	100.84 $\pm$ 11.81	26.88 $\pm$ 4.48	26.80 $\pm$ 3.63	22.01 $\pm$ 3.22	25.13 $\pm$ 3.77
Test; df; P		F=6.779; 3; .001**	F=4.911; 3; .003**	F=2.809; 3; .042*	F=6.252; 3; .001**	F=4.577; 3; .004**
		2-3-4<1, 4<2	3-4<1	3-4<1	3-4<1, 4<2	3-4<1
<b>Working style</b>						
Day (1)	33(23.9)	111.81 $\pm$ 14.24	30.06 $\pm$ 4.97	29.33 $\pm$ 4.44	24.78 $\pm$ 3.21	27.63 $\pm$ 3.44
Night (2)	11(8)	103.18 $\pm$ 15.95	27.36 $\pm$ 4.86	26.63 $\pm$ 4.94	23.00 $\pm$ 3.57	26.18 $\pm$ 4.16
Shift (3)	94(68.1)	102.98 $\pm$ 11.39	27.44 $\pm$ 4.61	27.18 $\pm$ 3.47	22.64 $\pm$ 3.29	25.71 $\pm$ 3.42
Test; df; P		F=6.231; 2; .003**	F=3.877; 2; .023*	F=4.245; 2; .016*	F=5.147; 2; .007**	F=3.715; 2; .027*
		2-3<1	3<1	2-3<1	3<1	3<1
<b>Choosing the profession willingly</b>						
Yes	95(68.8)	105.90 $\pm$ 12.14	28.20 $\pm$ 4.70	27.85 $\pm$ 3.64	23.29 $\pm$ 3.00	26.55 $\pm$ 3.39
No	43(31.2)	103.37 $\pm$ 14.64	27.76 $\pm$ 5.10	27.20 $\pm$ 4.53	22.95 $\pm$ 4.16	25.44 $\pm$ 3.81
Test; df; P		t=1.063; 136; .290	t=0.487; 136; .627	t=0.374; 136; .376	t=0.545; 136; .587	t=1.719; 136; .088
<b>Satisfaction with communication among colleagues</b>						
Satisfied	104(75.4)	105.66 $\pm$ 13.67	28.25 $\pm$ 4.93	27.93 $\pm$ 4.11	23.15 $\pm$ 3.45	26.32 $\pm$ 3.60
Not satisfied	34(24.6)	103.44 $\pm$ 10.55	27.50 $\pm$ 4.45	26.79 $\pm$ 3.22	23.29 $\pm$ 3.26	25.85 $\pm$ 3.43
Test; df; P		t=0.866; 136; .388	t=0.787; 136; .433	t=1.471; 136; .144	t=-0.208; 136; .835	t=0.673; 136; .502
<b>Willingness to participate in any psychological intervention</b>						
Yes	54(39.1)	104.64 $\pm$ 13.65	27.94 $\pm$ 4.90	27.40 $\pm$ 4.04	23.20 $\pm$ 3.59	26.09 $\pm$ 3.76
No	84(60.9)	105.41 $\pm$ 12.58	28.14 $\pm$ 4.78	27.80 $\pm$ 3.87	23.17 $\pm$ 3.28	26.28 $\pm$ 3.43
Test; df; P		t=-0.339; 136; .735	t=-0.235; 136; .814	t=-0.584; 136; .560	t=0.042; 136; .966	t=-0.310; 136; .757

$\bar{x}$ ; Mean, SD; Standard Deviation, t; Independent samples t-test, F; One-way analysis of variance (ANOVA), MWU; Mann-Whitney U test, df; Degree of freedom

\*  $P < .05$ , \*\*  $P < .01$



Nurses with 1–4 years of professional experience ( $98.41 \pm 10.99$ ) had significantly lower mean psychological capital scores ( $F(4)=5.915$ ;  $P<.01$ ). Similarly, the mean psychological capital scores of nurses with 1–5 years ( $100.09 \pm 13.63$ ) and 6–10 years ( $105.80 \pm 12.59$ ) of institutional experience were found to be significantly lower ( $F(3)=9.359$ ,  $P<.01$ ).

In the study, nurses who did not work night shifts or had 1–5 night shifts per month were found to have significantly higher mean psychological capital scores ( $F(3)= 5.415$ ;  $P<.01$ ). Nurses working in other units (such as emergency and outpatient clinics) ( $109.80 \pm 14.62$ ) had significantly higher psychological capital scores compared to those working in internal medicine, surgical units, and intensive care units ( $F(3)= 3.329$ ;  $P<.05$ ). No statistically significant differences were observed between the optimism and resilience subdimensions and the unit of employment ( $P>.05$ ). Nurses working in inpatient units

( $101.10 \pm 11.06$ ) had significantly lower psychological capital scores ( $F(3)= 9.677$ ;  $P<.01$ ). Moreover, nurses working 40 hours per week ( $112.35 \pm 10.79$ ) demonstrated significantly higher psychological capital scores ( $F(3)=6.779$ ;  $P<.01$ ). A significant difference was also found in terms of work schedules ( $F(2)=6.231$ ;  $P<.01$ ), with day-shift nurses ( $111.81 \pm 14.24$ ) having significantly higher psychological capital scores (Table 2).

As shown in Table 3, psychological capital was positively and moderately correlated with age ( $r= 0.37$ ), total years of professional experience ( $r= 0.38$ ), and duration of employment at the institution ( $r= 0.45$ ), with statistical significance ( $P<.01$ ). Psychological capital was negatively and moderately correlated with the monthly number of shifts ( $r= -0.30$ ,  $P<.01$ ), and negatively and weakly correlated with weekly working hours ( $r=-0.24$ ,  $P<.01$ ) (Table 3).

**Table 3. Relationship between the Psychological Capital Scale and its sub-dimensions and some Introductory Variables<sup>a</sup> (n=138)**

Variables	1	2	3	4	5	6	7	8	9	10
1. Psychological Capital	1									
2. Self-efficacy	0.87**	1								
3. Hope	0.88**	0.74**	1							
4. Optimism	0.67**	0.40**	0.46**	1						
5. Resilience	0.83**	0.63**	0.67**	0.44**	1					
6. Age	0.37**	0.33**	0.28**	0.32**	0.29**	1				
7. Total professional years	0.38**	0.34**	0.29**	0.32**	0.30**	0.93**	1			
8. Working period in the institution	0.45**	0.43**	0.33**	0.36**	0.35**	0.61**	0.64**	1		
9. Monthly number of shifts	-0.30**	-0.25**	-0.24**	-0.30**	-0.21*	-0.50**	-0.50**	-0.39**	1	
10. Weekly working hours	-0.24**	-0.19*	-0.17*	-0.24**	-0.19*	-0.37**	-0.35**	-0.29**	0.52**	1

<sup>a</sup>Pearson correlation was used. The interpretation criteria for the correlation coefficient ( $r$ ) were as follows: low (0–0.29), moderate (0.30–0.69), and high ( $\geq 0.70$ ).<sup>22</sup>

\* $P<.05$ , \*\* $P<.01$

## DISCUSSION

In this study, the psychological capital levels of nurses were determined, and their relationships with demographic characteristics were examined. The mean psychological capital score of nurses was found to be  $105.11 \pm 12.97$  (Table 1). This value is higher than the averages reported in other studies ( $79.18 \pm 11.17$ ),<sup>5</sup> ( $95.21 \pm 17.75$ ),<sup>23</sup> ( $99.99 \pm 18.30$ )<sup>13</sup>, and ( $97.45 \pm 10.78$ )<sup>14</sup>. A study involving different professional groups found that nurses had higher levels of psychological capital, resilience, hope, and optimism compared to lawyers, and higher levels of resilience and optimism compared to physicians.<sup>24</sup> These findings highlight that, despite challenging working conditions, nurses exhibit high motivation and resilience.

The findings of this study reveal that there are different relationships between the psychological capital levels of nurses and their demographic characteristics. It is believed that the dynamics of the work environment and the individual characteristics of the participants play a decisive role in the interpretation of these relationships. For instance, the lower levels of psychological capital among younger nurses may be attributed to their lack of experience and underdeveloped capacity to cope with professional challenges. Similarly, the higher scores of married nurses may be related to the strength of their social support systems. Conditions in the work environment, differences in workload across units, and individual professional experiences may contribute to variations in psychological capital levels.

In this study, the highest mean score in the sub-dimensions of the scale was found to be "self-efficacy" ( $28.06 \pm 4.81$ ), while the lowest mean score was found to be "optimism" ( $23.18 \pm 3.39$ ) (Table 1). Similar results have been reported in other studies.<sup>7,25</sup> High self-efficacy scores in nurses suggest that they have a high level of self-confidence, while low optimism scores indicate a lower level of positive thinking. This finding may be associated with the challenges faced in the profession and the impacts of the global pandemic period.<sup>26</sup> Enhancing all dimensions of psychological capital may increase positive thinking and improve the ability to cope with stressful situations.<sup>6,11</sup> Furthermore, it has been suggested that psychological capital and its constituent elements not only help individuals to achieve greater success in their work but also provide them with more confidence and increase their job satisfaction and commitment by fostering positive thinking.<sup>27</sup>

In this study, no statistically significant difference was found between the psychological capital levels of nurses and variables such as gender, education level, choice of profession, satisfaction with communication with colleagues, and willingness to participate in any psychological activity ( $P > .05$ ) (Table 2). The findings suggest that the psychological capital levels of nurses may develop independently of these factors. There are varying results in the scientific literature regarding similar variables. While some studies have found a significant difference between psychological capital levels and gender or education level, others have reported no significant differences.<sup>1,7,11-13</sup> These discrepancies may be attributed to factors such as differences in the participant groups and their personal characteristics, the culture of the institutions where they work, and the effects of the global pandemic.

In the present study, it was found that younger nurses, particularly those under the age of 30, had lower levels of psychological capital (Table 2). In a study conducted by Yıldız and Örüçü<sup>1</sup>, individuals aged 32–45 and those aged 46 and above were found to have higher levels of psychological capital compared to those aged 18–31. Similarly, another study reported higher psychological capital among nurses aged 29–34.<sup>7</sup> In contrast to these findings, some studies have shown no statistically significant differences in psychological capital scores across different age groups.<sup>11,12,25</sup> Despite the varying results, the present study identified a moderately positive correlation between age and psychological capital ( $r = 0.37$ ;  $P < .01$ ) (Table 3). This may be attributed to the accumulation of knowledge and experience, the development of professional skills, and increased

exposure to problem-solving situations as individuals age, all of which may contribute to higher psychological capital. On the other hand, the relatively limited professional experience of younger nurses, their lower exposure to challenging situations, and thus underdeveloped resilience may explain their lower levels of psychological capital.<sup>14</sup>

The results of this study demonstrated that married nurses exhibited higher levels of psychological capital compared to their single counterparts (Table 2). This difference may be attributed to the broader social support networks commonly available to married individuals, including the emotional support provided by family members, which may enhance their capacity to cope with stress.<sup>24</sup> In the setting where the study was conducted, the ability of married nurses to maintain a more structured lifestyle and achieve a better work-life balance may have also contributed to these findings. Furthermore, the need for single participants to face professional challenges independently may have adversely impacted their psychological capital levels. The existing literature presents inconsistent findings regarding the relationship between marital status and psychological capital. While some studies have reported higher psychological capital among married nurses, others have found no statistically significant differences.<sup>7-11-13,24</sup> Since this study did not include questions related to parenthood, future research should consider exploring variables such as whether nurses have children, the number of children, and the extent of spousal support.

It was found that nurses with a total professional experience of 10 years or more had significantly higher scores in psychological capital, self-efficacy, optimism, and resilience (Table 2). Consistent with these findings, previous studies have also reported that nurses with more than 10 years of professional experience tend to exhibit higher levels of psychological capital.<sup>1,7,13,25</sup> Similarly, in a study conducted by Türesin Tetik and Köse<sup>24</sup>, nurses with six or more years of experience demonstrated higher levels of overall psychological capital, self-efficacy, hope, resilience, and optimism. These findings suggest that longer professional tenure has a positive impact on psychological capital. This may be attributed to the accumulation of professional knowledge and clinical experience over time. Furthermore, the repeated exposure to workplace challenges fosters the development of problem-solving skills, enhances self-confidence, and strengthens resilience. Additionally, it has been suggested that nurses may develop greater patience, positivity, and resilience as a result of their professional experience.<sup>25</sup>

It was observed that nurses who had been working in the institution for a longer period (11–20 years) had higher average psychological capital scores (Table 2). Similarly, a previous study reported that employees with more than 26 years of tenure within the same institution demonstrated higher levels of psychological capital.<sup>1</sup> However, some studies in the literature have found no statistically significant difference between institutional tenure and psychological capital scores.<sup>7,25</sup> Extended duration of employment within an institution may enhance employees' sense of belonging and organizational commitment. Supporting this view, another study identified a positive relationship between psychological capital, job satisfaction, and commitment to work.<sup>28</sup>

It was determined that nurses who had fewer shifts and worked during the day had a higher average psychological capital score (Table 2). Previous studies have similarly reported that nurses working during the day tend to have higher levels of psychological capital compared to those working night shifts, and a negative correlation has been observed between the number of night shifts monthly and psychological capital levels.<sup>25,28,29</sup> It has been suggested that this may be attributed to the fact that night-shift nurses receive less positive feedback regarding their performance and are less frequently rewarded. Positive feedback, in particular, has been emphasized as a crucial factor in enhancing self-efficacy.<sup>25</sup> Furthermore, working a shift system may negatively impact various aspects of personal life, such as the ability to establish and maintain routines or make long-term plans. The disruption of sleep patterns and increased fatigue associated with continuous night shifts may also adversely affect psychological capital.

It was found that the mean psychological capital score of nurses working in internal medicine, surgical units, and intensive care units was lower compared to nurses in other units (Table 2). No significant differences were observed in the dimensions of optimism and resilience based on the department in which they worked. Previous studies have also reported that there was no significant difference between the department in which nurses worked and their level of psychological capital.<sup>7,11,28,30</sup> Possible explanations for this difference in the present study may include the high patient load, long-term patient stays, and the predominance of chronic diseases in these units. Additionally, the increased frequency of invasive procedures in these units may not only contribute to higher workloads but also place additional strain on nurses' psychological resilience.

It has been found that the mean scores of psychological capital, self-efficacy, hope, optimism, and resilience are lower in nurses working as ward nurses compared to those working in responsible and outpatient clinic positions (Table 2). The scientific literature indicates that nurses in responsible, expert, and managerial roles tend to exhibit higher levels of psychological capital.<sup>7,25,28</sup> One study suggests that the self-confidence associated with the managerial positions held by nurse managers may contribute to this outcome.<sup>25</sup> Conversely, a study by Tang et al.<sup>13</sup> found no significant difference between status and psychological capital.<sup>13</sup> Working as a ward nurse may have a detrimental effect on psychological capital due to factors such as prolonged and intensive patient interaction, caregiving burden, experiencing compassion fatigue, and shift-based work schedules. Moreover, it has been suggested that nurse managers, due to their extensive clinical and managerial experience and the high levels of responsibility they bear in the hospital setting, are likely to experience a greater sense of purpose and enhanced job engagement. This, in turn, may contribute to a stronger desire for career advancement, higher job commitment, and greater job satisfaction.<sup>28</sup>

It was determined that nurses working 50 hours or more per week had lower mean scores in psychological capital, self-efficacy, optimism, and resilience (Table 2). A review of the literature revealed that the relationship between weekly working hours and psychological capital or its sub-dimensions has not been widely investigated. However, in the current study, a weak and negative correlation was identified between weekly working hours and psychological capital and its components (Table 3). These findings suggest that longer working hours may result in nurses spending more time in the hospital environment. This situation may contribute to increased stress levels, accompanied by negative emotional states such as fatigue and burnout. Moreover, prolonged and uninterrupted work hours may exacerbate the imbalance between family, social, and professional life. The inability of nurses to engage in alternative personal or social activities due to their demanding work schedules may also negatively impact their psychological capital.

### Study Limitations

This study was conducted with nurses employed at a university hospital; therefore, the findings are specific to this institution and may not be generalizable to other healthcare settings. Due to the timing of the study during the COVID-19 pandemic, data were collected through both online and face-to-face surveys. The combined use of these two data collection methods may have



introduced variability in the process and affected the consistency of responses. Additionally, since the data were based on self-reported questionnaires, the results reflect participants' subjective evaluations and may be influenced by individual perceptions. The descriptive design of the study further limits the ability to establish causal relationships.

This study examined the psychological capital levels of nurses and the factors influencing them. The findings indicated that the mean psychological capital scores were generally in line with the existing literature; however, varying associations were observed with certain demographic and occupational variables. Higher levels of psychological capital were found among nurses who were married, had longer tenures in the profession and institution, had fewer shifts and weekly working hours, and worked daytime schedules. It is recommended to address and mitigate the factors that negatively influence psychological capital and to foster supportive work environments. Future research should adopt a multifactorial approach to comprehensively assess other potential determinants of psychological capital and its sub-dimensions.

**Etik Komite Onayı:** Etik kurul onayı Bolu Abant İzzet Baysal Üniversitesi Klinik Araştırmalar Etik Kurulu'ndan (Tarih: 04.05.2021, Sayı: 2021/121) alınmıştır.

**Bilgilendirilmiş Onam:** Katılımcılardan onam alınmıştır.

**Hakem Değerlendirmesi:** Dış bağımsız.

**Yazar Katkıları:** Fikir- AY; Tasarım- AY; Denetleme- MTK; Kaynaklar- AY; Veri Toplanması ve/veya İşlemesi- AY; Analiz ve/veya Yorum- MTK; Literatür Taraması- AY; Yazıyı Yazan- AY; Eleştirel İnceleme- AY; Diğer -AY.

**Çıkar Çatışması:** Yazarlar, çıkar çatışması olmadığını beyan etmiştir.

**Finansal Destek:** Yazarlar, bu çalışma için finansal destek almadığını beyan etmiştir.

**Ethics Committee Approval:** Ethics committee approval was obtained from Bolu Abant İzzet Baysal University Clinical Research Ethics Committee (Date: 04.05.2021, Number: 2021/121)

**Informed Consent:** Informed consent of the participants was obtained.

**Peer-review:** Externally peer-reviewed.

**Author Contributions:** Concept -AY; Design- AY; Supervision-MTK; Resources- AY; Data Collection and/or Processing- AY; Analysis and/or Interpretation- MTK; Literature Search- AY; Writing Manuscript- AY; Critical Review- MTK; Other- AY.

**Conflict of Interest:** The authors have no conflicts of interest to declare.

**Financial Disclosure:** The authors declared that this study has received no financial support.

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