

## Original Article

# The Relationship Between Professional Self-Efficacy Levels of Surgical Nurses and Their Attitudes Towards Evidence-Based Nursing

**Seyma Yurtseven, RN, PhD**

Nurse, Cukurova University Faculty of Medicine Balcali Hospital Adana, Turkey

**Hamide Sisman, PhD**

Department of Abdi Sutcu Vocational School of Health Services, Cukurova University, Adana, Turkey

**Correspondence:** Seyma Yurtseven, RN, PhD, Nurse, Cukurova University Faculty of Medicine Balcali Hospital Adana, Turkey. e-mail: ssumer01@hotmail.com

### Abstract

**Aim:** This study was conducted to determine the relationship between the professional self-efficacy levels of surgical nurses and their attitudes towards evidence-based nursing.

**Methods:** The population of the study, which was conducted using a descriptive and correlational design, consisted of nurses (n=180) working in the surgical clinics of a university hospital in the Mediterranean region between March and June 2024. The sample of the study consisted of 162 (88%) nurses who were actively working during the study period and accepted to participate in the study. The data were collected by using the "Personal Information Form", "Nursing Profession Self-Efficacy Scale" and "Attitude Toward Evidence-Based Nursing Scale" after the nurses were informed about the study and their verbal consent was obtained. Descriptive statistics and correlation analysis were used to evaluate the data. Ethics committee approval and institutional permission were obtained to conduct the study.

**Results:** It was found that the professional self-efficacy levels of surgical nurses were good (mean=67.4±9.6) and their attitudes towards evidence-based nursing were moderate (mean= 44±5.3). In addition, a statistically low, positive and significant relationship was found between professional self-efficacy levels and attitudes towards evidence-based nursing ( $r=0.212$ ,  $p<0.001$ ).

**Conclusion:** Professional self-efficacy levels of surgical nurses positively affect their attitudes towards evidence-based nursing practices.

**Keywords:** Surgical nursing, evidence-based nursing, professional self-efficacy.

### Introduction

Occupational self-efficacy is self-efficacy in a specific area for the tasks assigned to the profession (Bargsted, 2019; Caruso, 2016). It refers to individuals' beliefs and confidence in their ability to fulfill occupational tasks, challenges and stress. Those with high professional self-efficacy have more motivation to face professional problems (Sun & Li, 2020; Guo, 2017).

Nurses can fulfill the responsibilities expected of them only if they are competent in professional knowledge and skills (Notarnicola et al., 2018; Tiryaki Sen 2019).

Therefore, in order to be successful in their profession, nurses should improve their professional competencies and use the knowledge produced in their daily practice (Fukada, 2018; Guner Kucukkaya, 2010; Arseven, 2016). In order for nurses to take an effective place in the health system of the future, it is necessary to define the professional competencies expected from them and evaluate them at certain intervals. In addition, it is also very important to determine the factors affecting the professional competencies of nurses and to conduct studies to improve them (Feliciano, 2019; Nilsson, 2018; Notarnicola, 2018). It is inevitable that

surgical nurses who use evidence-based practices, which are recommended to be preferred in order to ensure standardization of care for patients, along with innovation, professionalism and high self-efficacy attitudes in nursing care, will achieve success in perioperative care (Muhtaroglu, 2023; Mahmoud, 2017; Petre, 2017). There is a general consensus that self-efficacy of professionals is an important determinant of performance. When the perceived self-efficacy of nursing professionals is low, their professional practices may fall below evidence-based practice recommendations (Carusa, 2016). The obstacle defined in front of evidence-based practice is that many clinicians think that they do not have the professional self-efficacy equipped to implement in the environment and lack of knowledge on the subject (Chang, 2011; Leal-Costa, 2020).

Those with high professional self-efficacy fulfill their jobs successfully and have high job satisfaction (Bargsted, 2019; Lu, 2020). Therefore, nurses with high self-efficacy not only improve their professional practical skills, but also have the power to improve the quality of care (Caruso, 2016). Increasing evidence-based practices in nurses also supports clinical decision-making and self-efficacy levels. In addition, patient outcomes, nurse autonomy and job satisfaction increase with evidence-based practices (Gandhi, 2018; Boswell, 2020). Today, it is noteworthy that there are a limited number of studies in the literature describing the relationship between the professional self-efficacy levels of surgical nurses and their attitudes towards evidence-based nursing (Muhtaroglu, 2023; Leal-Costa, 2020).

### **Method**

The Statement for Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) was used for reporting the research (Babaoglu, 2021).

**Purpose and Type of Research:** This descriptive and correlational study was conducted to examine the relationship between surgical nurses' professional self-efficacy levels and their attitudes towards evidence-based nursing.

**Population and Sample:** The population of the study consisted of 180 nurses working in

surgical clinics and intensive care units. The sample of the study consisted of 162 nurses who met the criteria and volunteered to participate in the study within the relevant date range planned for the study. No sampling calculation was made in the study and 88% of the universe was reached.

### **Inclusion Criteria:**

- Volunteering to participate in the study,
- Working as a nurse in a surgical unit for at least 6 months or more.

**Data Collection Tools:** The data of the study were collected by using the "Patient Descriptive Form", "Nursing Profession Self-Efficacy Scale" and "Scale of Attitude Towards Evidence-Based Nursing".

**Personal Information Form:** The form, which was created by the researchers in line with the literature, consists of 11 questions questioning the age, gender, education, duration of professional experience, the unit they work in, the duration of working in the profession, the duration of working in the surgical unit, the activities related to post-graduation development and the use of evidence-based practice in patient care (Vicdan, 2019; Muhtaroglu, 2023; Caliskan, 2020).

**Nursing Profession Self-Efficacy Scale (NPSES):** The scale was developed by Caruso et al. to assess the professional self-efficacy of nurses. A Turkish validity and reliability study was conducted by Vicdan and Tastekin in 2017. The questions of the scale, which consists of 16 items and 2 sub-dimensions in 5-point Likert type, are scored as "5- strongly agree, 4- agree, 3- undecided, 2- disagree, 1- strongly disagree" and all of them are positive. The first sub-dimension of the scale is Quality of Care (items 1-9), and the second sub-dimension is Professional Situations (items 10-16). Kacaroglu Vicdan and Tastekin reported the reliability coefficients of the scale as Cronbach alpha=0.82 for the Quality of Care sub-dimension, Cronbach alpha=0.82 for the Professional Situations sub-dimension and Cronbach alpha=0.87 for the total scale. The higher the score on the scale, the higher the level of professional self-efficacy (Vicdan, 2019). In this study, the reliability coefficients of the scale were found as Cronbach alpha = 0.93 for the Quality of Care sub-dimension,

Cronbach alpha = 0.85 for the Professional Situations sub-dimension and Cronbach alpha = 0.93 for the total scale.

**Scale of Attitudes Toward Evidence-Based Nursing:** The Scale of Attitudes Toward Evidence-Based Nursing was developed by Ruzafa-Martinez et al. A Turkish validity and reliability study was conducted by Ayhan and Kocaman in 2013. The scale consists of 15 items and three sub-dimensions. Eight of the items are positive (items 1, 2, 5, 7, 9, 11, 13 and 14) and seven are negative (items 3, 4, 6, 8, 10, 12 and 15). The scale was prepared according to a five-point Likert scale (1=Not at all agree, 2=Disagree, 3=Somewhat agree, 4=Agree, 5=Fully agree). In the Turkish adaptation of the scale, the total score was calculated as Cronbach  $\alpha=0.90$  (Ayhan, 2013). In the present study, the total score was found to be Cronbach's  $\alpha=0.62$ .

#### **Attitude Towards Evidence-Based Nursing Scale Subscales**

**Beliefs and Expectations about Evidence-Based Nursing Subdimension;** includes items related to nurses' beliefs and expectations about the benefits of evidence-based nursing in clinical studies. This subscale includes items 1, 2, 7, 9, 11, 13, 14. In the study, Cronbach's  $\alpha=0.77$  was found in the beliefs and expectations sub-dimension.

**The Evidence-Based Practice Intention Subdimension;** includes items related to nurses' behaviors or intentions to implement evidence-based practices, perceived barriers, workload and the use of time allocated for education for evidence-based nursing. This sub-dimension includes items 3, 5, 6, 12. In the study, the intention to practice sub-dimension was found to be Cronbach's  $\alpha=0.65$ .

**The Emotions Related to Evidence-Based Nursing Subdimension;** includes items related to the level of importance given to evidence-based nursing and the feelings of self-evaluation of the benefits obtained from the realization of evidence-based nursing in clinical practice and the realization of evidence-based nursing in practice. This sub-dimension includes items 4, 8, 10 and 15 (Ayhan, 2013). In the study, the Emotions sub-dimension was found as Cronbach's  $\alpha=0.78$ .

**Data Collection:** The research data were collected between March and June 2024 from nurses working in surgical clinics (general surgery, ear, nose, nose and throat, urology, plastic and reconstructive surgery, orthopedics, thoracic, cardiovascular and pediatric surgery) and surgical intensive care units (general surgery, neurosurgery, reanimation and anesthesia, cardiovascular surgery intensive care) of a hospital. Nurses working in surgical clinics who met the sampling criteria and agreed to participate in the study were met and informed about the purpose of the study. Then, verbal consent was obtained from the nurses and the Patient Identification Form, Nursing Profession Self-Efficacy Scale and Attitude Towards Evidence-Based Nursing Scale were collected by the researcher by face-to-face interview method. The collection process of each questionnaire took approximately 15-20 minutes.

**Data Analysis:** The data obtained were evaluated using SPSS 22 (Statistical Package of Social Science). Cronbach  $\alpha$  coefficients were calculated to estimate the internal consistency of the scales at each time point. In addition to descriptive statistics, Pearson's bivariate correlations were used to analyze the relationship between nurses' self-efficacy and evidence-based practices. Correlation coefficients ( $\rho$ ) were interpreted as 00-0.30 very weak, 0.30-0.50 weak, 0.50-0.70 moderate, 0.70-0.90 strong and 0.90-1.00 very strong correlation (Lafci, 2022). The results were evaluated at  $p<0.05$  significance level.

**Ethical Dimension:** In order to conduct the study, approval from the ethics committee of Cukurova University (Decision no: 142/13 Date: 08/03/2024) and necessary institutional permissions were obtained from the hospital where the study was conducted. The surgical nurses included in the study were informed about the research, the purpose of the research was explained, and their verbal and written consents were obtained. The study was conducted in accordance with the principles of the Declaration of Helsinki.

#### **Results**

The mean age of the surgical nurses was  $33\pm7$  years, the mean duration of employment was  $12\pm7$  years, and the mean duration of

employment in the surgical unit was  $2\pm 2$  years. 80.9% of the nurses were female, 48.1% were undergraduate graduates, and 79% were working in surgical clinics. It was found that 54.3% of the surgical nurses participated in scientific activities, 30.2% in research, 38.9% in professional research, 54.3% in evidence-based practice and 35.2% in professional publications (Table 1).

The mean scores of the surgical nurses were  $39.5\pm 5.6$ ,  $28\pm 4.4$ , and  $67.4\pm 9.6$  for the quality of care, occupational dimension, and total scale scores, respectively. It was determined that the surgical nurses' mean score of beliefs and expectations in the sub-dimensions of the EBNAQ was  $24.6\pm 3.7$ , the mean score of implementation intention was  $11.3\pm 2.3$ , the mean score of emotions was  $8\pm 3$ , and the mean total score of the scale was  $44\pm 5.3$  (Table 2).

A statistically significant relationship was found between engaging in scientific activity and the quality of care, professional situations sub-dimensions and total scale score average ( $p<0.05$ ). A statistically significant relationship was found between participating in the study and the quality of care, professional situations sub-dimensions and total scale score average ( $p<0.05$ ). A statistically significant relationship was found between professional research and the quality of care and professional situations sub-dimensions ( $p<0.05$ ). A statistically significant relationship was found between professional publication and the professional situations sub-dimension and the total score average of the scale ( $p<0.05$ ). A statistically significant relationship was found between evidence-based practice and the quality of care and professional status sub-dimensions ( $p<0.05$ ) (Table 3).

It was found that there was a statistically significant relationship between engaging in scientific activity and the belief and emotions sub-dimensions ( $p<0.05$ ). It was found that there was a statistically significant

relationship between participating in the research and the belief and emotions sub-dimensions ( $p<0.05$ ). It was determined that there was a statistically significant relationship between doing professional research and the average score of the belief subscale ( $p<0.05$ ). A statistically significant relationship was found between professional publication and the belief subscale score average ( $p<0.05$ ). A statistically significant relationship was found between evidence-based practice and belief and emotions subscale score averages ( $p<0.05$ ) (Table 4).

When the relationships between the professional self-efficacy status of surgical nurses and their attitudes towards evidence-based nursing were examined, it was found that there was a statistically significant, positive, low-level relationship between the total score of 'NPSES' and the total score of 'EBNAQ' ( $r=0.212$ ,  $p<0.001$ ). While a statistically significant relationship was found between the quality of care sub-dimension of the NPSES scale and the beliefs and expectations ( $r=0.401$ ,  $p=0.00$ ), intention to practice ( $r=0.967$ ,  $p=0.00$ ), and emotions ( $r=0.272$ ,  $p=0.00$ ) sub-dimensions of the EBNAQ scale, no significant relationship was found between the total scale score ( $r=0.143$ ,  $p=0.06$ ). While a statistically significant relationship was found between the professional situations sub-dimension of the NPSES scale and the beliefs and expectations ( $r=0.377$ ,  $p=0.00$ ) sub-dimension and the total score of the scale ( $r=0.263$ ,  $p=0.00$ ), no significant relationship was found between the implementation intention ( $r=0.060$ ,  $p=0.44$ ) and emotions ( $r=0.153$ ,  $p=0.05$ ) sub-dimensions. While a statistically significant relationship was found between the total score of the NPSES scale and the beliefs and expectations ( $r=0.403$ ,  $p=0.00$ ), emotions ( $r=0.222$ ,  $p=0.00$ ) sub-dimensions and the total score of the scale ( $r=0.212$ ,  $p=0.00$ ), no significant relationship was found between the implementation intention sub-dimension ( $r=0.055$ ,  $p=0.49$ ).

**Table 1. Demographic Data of Surgical Nurses (n=162)**

<b>Variables</b>	<b>X ± SD</b>	<b>Min-Max</b>
<b>Age</b>	<b>33±7</b>	<b>22-55</b>
Length of Professional Experience (years)	12±7	1-37
Length of Experience in Surgical Unit (years)	2±2	1-12
	<b>n</b>	<b>%</b>
<b>Gender</b>		
Female	131	80.9
Male	31	19.1
<b>Education</b>		
High School	73	45.1
Bachelor's Degree	78	48.1
Postgraduate	11	6.8
<b>Working Unit</b>		
Surgical Clinic	128	79
Surgical Intensive Care Unit	34	21
<b>Participation in Scientific Activities</b>		
Yes	88	54.3
No	74	45.7
<b>Participation in Research</b>		
Yes	49	30.2
No	113	69.8
<b>Participation in Professional Research</b>		
Yes	63	38.9
No	99	61.1
<b>Evidence-Based Practice</b>		
Yes	88	54.3
No	74	45.7
<b>Professional Publication</b>		
Yes	57	35.2
No	105	64.8

\* Data are expressed as number (n) and frequency (%).

**Table 2. NPSES and EBNAQ Scale Scores of Surgical Nurses**

<b>Nursing Professional Self-Efficacy Scale (NPSES)</b>	<b>X ± SD</b>	<b>Min-Max</b>
Quality of Care	39.5±5.6	12-45
Professional Practices	28±4.4	10-35
Total	67.4±9.6	22-80
<b>Evidence-Based Nursing Attitude Scale (EBNAQ)</b>		
Beliefs and Expectations	24.6±3.7	6-30
Intention to Practice	11.3±2.3	7-18
Emotions	8±3	4-19
<b>EBNAQ -Total</b>	<b>44±5.3</b>	<b>29-61</b>

\*Data are expressed as mean (X), standard deviation (SD) and Minimum-Maximum (min-max).

**Table 3. Examining the relationship between surgical nurses' NPSES scores averages and variables**

<b>Variables</b>		<b>Quality of Care</b>	<b>Professional Situations</b>	<b>NPSES- Total</b>
		<b>Mean±SS</b>	<b>Mean±SD</b>	<b>Mean±SD</b>
Scientific Activity	Yes (1)	4±1	29±4	69±8
	No (2)	3.6±1	28±5	65±11
	Statistical analysis*	t=2.6, p=0.01*	t=2.7, p=0.00*	t=2.4, p=0.01*
	Significant Differences	1>2	1>2	1>2
Participation in Research	Yes (1)	4.2±0.6	30±3.4	71±6.4
	No (2)	3.7±1	27±4.4	66±10.3
	Statistical analysis*	t=3.5, p=0.00*	t=4.4, p=0.00*	t=3.3, p=0.00*
	Significant Differences	1>2	1>2	1>2
Participation in Professional Research	Yes (1)	4±0.8	29.4±4	69±7.7
	No (2)	3.7±1	27.3±4.5	66±10.5
	Statistical analysis*	t=2.0, p=0.04*	t=3.1, p=0.00*	t=1.8, p=0.08
	Significant Differences	1>2	1>2	1>2
Professional Publication	Yes (1)	3.93±0.9	29.3±4	69.3±7.8
	No (2)	3.76±0.9	27.4±4.5	66.3±10.3
	Statistical analysis*	t=1.1, p=0.26	t=2.6, p=0.00*	t=1.8, p=0.04*
	Significant Differences	-	1>2	1>2
Evidence Based Application	Yes (1)	4.1±0.8	29.4±3.5	70.3±6
	No (2)	4±0.8	26.5±4.9	64.9±11.



Statistical analysis*	t=2., p=0.04*	t=3.1, p=0.00*	t=1.8, p=0.08
Significant Differences	1>2	1>2	-

\*p<0.05; t:Independent Sample t Test.

**Table 4. Examining the relationship between surgical nurses' EBNAQ score averages and variables**

Variables		Belief	Intention to Practice	Emotions	EBNAQ - Total
		Mean ±SD	Mean ±SD	Mean ±SD	Mean ±SD
Scientific Activity	Yes (1)	25±3.8	11±2	7.5±2.6	44±4.8
	No (2)	24±3.4	11±2.7	8.7±3.4	44±5.9
	Statistical analysis*	t=2.6, p=0.01*	t=-0.6, p=0.55	t=-2.6, p=0.00*	t=-0.4, p=0.70
	Significant Differences	1>2	-	2>1	-
Participation in Research	Yes (1)	26.7±3	11.1±2.3	6.9±2.7	44.5±5.2
	No (2)	23.7±3.6	11.4±2.4	8.5±3	43.9±5.4
	Statistical analysis*	t=5.2, p=0.00*	t=-0.8, p=0.42	t=-3.1, p=0.00*	t=0.7, p=0.45
	Significant Differences	1>2	-	2>1	-
Professional Research	Yes (1)	25.5±3.2	11±2.2	7.6±2.6	43.9±5
	No (2)	24±3.9	11.5±2.4	8.4±3.2	44.2±6
	Statistical analysis*	t=2.6, p=0.01*	t=-1.1, p=0.25	t=-1.7, p=0.08	t=-0.3, p=0.79
	Significant Differences	1>2	-	-	-
Professional Publication	Yes (1)	26.2±3	11.2±2.3	7.6±2.8	45.1±4.7
	No (2)	24±3.8	11.3±2.4	8.3±3.1	43.5±5.6
	Statistical analysis*	t=4.2, p=0.00*	t=-4.2, p=0.64	t=-1.3, p=0.20	t=1.8, p=0.72
	Significant Differences	1>2	-	-	-
Evidence-Based Practice	Yes (1)	25.9±3.2	11±2	7.3±2.9	44.1±4.7
	No (2)	23.1±3.8	11.6±2.6	8.9±2.9	44±4.8
	Statistical analysis*	t=4.8, p=0.00*	t=-1.5, p=0.14	t=-3.4, p=0.00*	t=1.9, p=0.85
	Significant Differences	1>2	-	2>1	-

\*p<0.05; t:Independent Sample t Test.

**Table 5. The relationship between surgical nurses' NPSES and EBNAQ**

Variables		EBNAQ			
		Beliefs and Expectations Sub-Dimension	Implementation Intention Sub-Dimension	Emotions Sub-Dimension	Total
NPSES	Quality of Care Subscale	<b>r=0.401</b> <b>p=0.00**</b>	<b>r=0.967</b> <b>p=0.00**</b>	<b>r=-0.272</b> <b>p=0.00**</b>	r=0.143 p=0.06
	Professional Situations Subscale	<b>r=0.377</b> <b>p=0.00**</b>	r=0.060 p=0.44	r=-0.153 p=0.05	<b>r=0.263</b> <b>p=0.00**</b>
	Total	<b>r=0.403</b> <b>p=0.00**</b>	r=0.055 p=0.49	<b>r=-0.222</b> <b>p=0.00**</b>	<b>r=0.212</b> <b>p=0.00**</b>

\*\*p<0.01, \*p<0.05, **EBNAQ**: Attitude Scale Towards Evidence-Based Nursing, **NPSES**: Nursing Profession Self-Efficacy Scale, r=Pearson Correlation Test.

## Discussion

The relationship between the professional self-efficacy levels of surgical nurses and their attitudes towards evidence-based nursing is very important in terms of improving the quality of patient care. Studies show that nurses value evidence-based practice but often lack the necessary competences (Yooder, 2022;). In the last two decades, the literature highlights various reasons why assessing and promoting self-efficacy is important for various professional groups (Dos, 2020; Keyko, 2016; Silva, 2022, Cziraki, 2022; Kim, 2020). The relationship between the professional self-efficacy levels of surgical nurses and their attitudes towards evidence-based nursing is examined and discussed with the literature in this section.

In this study, it was found that the professional self-efficacy levels of surgical nurses were good. In a similar thesis study on the subject, it was determined that the professional self-efficacy levels of surgical nurses were good (mean=69.46±10.64) (Muhtaroglu, 2023). There are different studies in the literature showing that the professional self-efficacy levels of nurses are at a good level (Lafci, 2022; Yilmaz, 2018; Genc, 2019; Akdeniz, 2016; Fida, 2016). On the other hand, there are studies reporting that nurses' self-efficacy is at a medium level

(Malak, 2015; Dogan, 2015). Nursing self-efficacy is an important aspect of nursing practice that can affect patient outcomes, job satisfaction, stress level and overall performance. Nurses with high self-efficacy tend to have better coping mechanisms, assume leadership roles and provide patient-centred care. To promote self-efficacy in nursing, nurses can participate in continuing education, set achievable goals, seek feedback from colleagues, and work in a positive work culture (Magon, 2023). It is thought that the development of professional self-efficacy can increase the quality of care provided by nurses by increasing their self-confidence. This increase may enable nurses to use their knowledge and skills more effectively and may have positive results in patient care processes.

It is emphasised that the opportunity for professional development of nurses participating in scientific studies and meetings related to nursing and the opportunity to reflect the new knowledge they have acquired to their practices are factors that increase their professional self-efficacy (Vicdan, 2020). In this study, in parallel with the literature, a statistically significant relationship was found between participation in scientific activities and quality of care, professional conditions sub-dimensions and total scale mean score. A different study



revealed a positive relationship between work-life balance, work-life quality, absenteeism and job satisfaction of nurses and emphasised the importance of balancing nursing activities to increase overall job satisfaction and quality (Hassan Helaly, 2022). The overlap of these findings shows that nurses' participation in professional scientific activities is affected by various factors such as educational levels, professional roles and work-life balance. It can be said that these factors make important contributions to the quality of services provided in health care environments and the professional development processes of nurses. In addition, these findings can be interpreted that the current attitudes of nurses may also affect their level of participation in scientific meetings. This suggests that nurses' attitudes towards scientific activities may play a critical role in updating and improving their professional knowledge and skills.

In the field of nursing, there is a lack of studies to determine the relationship between professional self-efficacy levels and attitudes toward evidence-based nursing. Similarly, a study on the subject shows that nurses working in surgical departments have positive attitudes towards evidence-based nursing and the effect of the working environment on the perceptions of nurses (Asi Karakas, 2021). Therefore, promoting a supportive environment, providing adequate training, and integrating evidence-based practices into nursing education are vital for nurses to improve their attitudes and competences in evidence-based practices (Yusshy, 2018). It is thought that improvement in professional self-efficacy may contribute to more effective and reliable care processes by synergising with evidence-based attitudes of nurses. In this context, strengthening the professional roles of nurses can be at the centre of strategies to promote evidence-based practices. Increasing the professional competences of nurses may improve the quality of health services by facilitating their access to evidence-based knowledge and integrating this knowledge into clinical practices. Therefore, strengthening professional roles can be considered as a critical strategy for the dissemination of

evidence-based practices at both individual and institutional levels.

Nurses with high self-efficacy can not only improve their professional nursing practice skills, but also improve the quality of nursing care (Caruso, 2016). In the study, it was found that there was a low, positive and significant relationship between the total score of the Nursing Profession Self-Efficacy Scale and the total score of the Attitude Towards Evidence-Based Nursing Scale. These results are consistent with the findings of different studies in the literature. Similar to the results obtained, it is stated in the studies that nurses with high self-efficacy levels are more likely to use evidence-based practices during care (Muhtaroglu, 2023; Kristensen, 2015; Atli, 2023; Karakoc, 2020). The results of both this study and other studies show that there is a relationship between the professional self-efficacy levels of nurses and their use of evidence-based practices while providing care to their patients (Muhtaroglu, 2023; Boswell, 2020; Atli, 2023). The findings obtained reveal that improving the professional self-efficacy levels of surgical nurses is critical for them to use evidence-based practices effectively in patient care. These results show that increasing the professional confidence and competence of nurses can support the process of adoption and implementation of evidence-based practices. Therefore, improving the attitudes of surgical nurses towards evidence based practice and their implementation skills can be considered as a priority target within the framework of professional development strategies.

**Limitations:** This study has several limitations that need to be recognised. The study was conducted only with nursing professionals working in surgical units in a single hospital. A study covering more provinces and hospitals may enrich the results, as well as strengthen or weaken the results obtained.

**Conclusions:** The findings of the study show that the professional self-efficacy levels of surgical nurses are generally high, and the professional self-efficacy of surgical nurses who take an active role in scientific studies is even higher. In addition, a positive and

significant relationship was found between the professional self-efficacy levels of surgical nurses and their attitudes towards evidence-based nursing, albeit at a low level. These findings indicate that professional development of nurses can positively affect their attitudes and behaviors towards evidence-based practices. In line with the results of the study, it is recommended that both individual efforts and institutional support should be increased to strengthen the professional self-efficacy of surgical nurses and their attitudes towards evidence-based nursing. This support may contribute to the more effective use of evidence-based practices in health care by facilitating nurses' access to scientific knowledge and expanding their professional development opportunities.

## References

- Akdeniz Uysal, D. (2016). Examination of the relationship between nurses' self-efficacy levels and involving parents in care (Master's thesis). Mersin University Institute of Health Sciences, Mersin, Turkey.
- Arseven, A. (2016). Self-efficacy: A concept analysis. *Journal of Turkish Studies*, 11(19), 63–80.
- Asi Karakas, S., Sahin Altun, O., Polat, H., & Ozturk, Z. (2021). Examination of evidence-based nursing attitudes and the relationship with professional self-concept in nurses working in a psychiatric hospital. *Perspectives in Psychiatric Care*, 57(3), 1425-1432.
- Atli, R. (2023). Determination of the relationship between nurses' professional self-efficacy and attitudes towards evidence-based nursing (Master's thesis). Ataturk University Institute of Health Sciences, Erzurum, Turkey.
- Bargsted, M., Ramírez-Vielma, R., & Yeves, J. (2019). Professional self-efficacy and job satisfaction: The mediator role of work design. *Revista de Psicología del Trabajo y de las Organizaciones*, 35(3), 157-163.
- Boswell, C., Ashcraft, A., Long, J., Cannon, S., DiVito-Thomas, P., & Delaney, T. (2020). Self-efficacy: Changing the tide of evidence-based practice. *Worldviews on Evidence-Based Nursing*, 17(2), 129-135.
- Caruso, R., Pittella, F., Zaghini, F., Fida, R., & Sili, A. (2016). Development and validation of the nursing profession self-efficacy scale. *International Nursing Review*, 63(3), 455-464.
- Chang, A. M., & Crowe, L. (2011). Validation of scales measuring self-efficacy and outcome expectancy in evidence-based practice. *Worldviews on Evidence-Based Nursing*, 8(2), 106-115.
- Cziraki, K., Wong, C., Kerr, M., & Finegan, J. (2020). Leader empowering behaviour: Relationships with nurse and patient outcomes. *Leadership in Health Services*, 33, 397–415.
- Dogan Ayaz, S. (2015). Nurses' exercise behaviors, self-efficacy levels, and related factors. *Anatolian Journal of Nursing and Health Sciences*, 18(4), 287-295.
- Dos Santos, L. M. (2020). Stress, burnout, and low self-efficacy of nursing professionals: A qualitative inquiry. *Healthcare*, 8(4), 424.
- Feliciano, E. E., Boshra, A. Y., Mejia, P. C. G., Feliciano, A. Z., Maniago, J. D., Alsharyah, H. M., Malabanan, M. C., & Osman, A. (2019). Understanding Philippines nurses' competency in the delivery of healthcare services. *Journal of Patient Care*, 5(1), 1-6.
- Fida, R., Laschinger, H. K. S., & Leiter, M. P. (2018). The protective role of self-efficacy against workplace incivility and burnout in nursing: A time-lagged study. *Health Care Management Review*, 43(1), 21-29.
- Fukada, M. (2018). Nursing competence: Definition, structure, and development. *Yonago Acta Medica*, 61, 1-7.
- Gandhi, S., Poreddi, V., Nikhil, R. S., Palaniappan, M., & Math, S. B. (2018). Indian novice nurses' perceptions of their role in caring for women who have experienced intimate partner violence. *British Journal of Nursing*, 27(10), 559-564.
- Genc, L. (2019). The role of self-efficacy in the effect of time management on patient care attitudes in nurses (Master's thesis). Istanbul Okan University Institute of Health Sciences, Istanbul, Turkey.
- Guner Kucukkaya, P. (2010). Evidence-based practice in psychiatric nursing. *Journal of Psychiatric Nursing*, 1(3), 128–132.
- Hassan Helaly, S., Ismail Ali, H., Abdel Ghafar Ali, K., Mohammed Aysha, Z., & Elgharib Mohamed Mostafa Eldiasty, N. (2022). Effect of nursing activities on the quality of work-life balance, absenteeism, and job satisfaction among nurses at intensive care units. *Egyptian Journal of Health Care*, 13(1), 2011-2029.
- Vicdan, A. K., & Tastekin, A. (2019). Adaptation of the nursing profession self-efficacy scale into Turkish. *Acibadem University Journal of Health Sciences*, 3, 504-510.
- Karakoc-Kumsar, A., Polat, S., & Afsar-Dogruso, L. (2020). Determining attitudes of nurses toward evidence-based nursing in a university hospital sample. *Florence Nightingale Journal of Nursing*, 28(3), 268-274.

- Keyko, K., Cummings, G. G., Yonge, O., & Wong, C. A. (2016). Work engagement in professional nursing practice: A systematic review. *International Journal of Nursing Studies*, 61, 142–164.
- Kim, A. Y., & Sim, I. O. (2020). Mediating factors in nursing competency: A structural model analysis for nurses' communication, self-leadership, self-efficacy, and nursing performance. *International Journal of Environmental Research and Public Health*, 17(18), 6850.
- Kristensen, N., Nymann, C., & Konradsen, H. (2015). Implementing research results in clinical practice: The experiences of healthcare professionals. *BMC Health Services Research*, 16, 1-10.
- Lafci, D., & Tas, G. (2022). The effect of nurses' self-efficacy perception and creative personality traits on their innovative behaviors. *Mersin University Journal of Health Sciences*, 15(2), 337-351.
- Leal-Costa, C., Tirado Gonzalez, S., Ramos-Morcillo, A. J., Ruzafa-Martínez, M., Diaz Agea, J. L., & van-der Hofstadt Román, C. J. (2020). Communication skills and professional practice: Does it increase self-efficacy in nurses? *Frontiers in Psychology*, 11, 1169.
- Lu, M., Zou, Y., Chen, X., Chen, J., He, W., & Pang, F. (2020). Knowledge, attitude, and professional self-efficacy of Chinese mainstream primary school teachers regarding children with autism spectrum disorder. *Research in Autism Spectrum Disorders*, 72, 101513.
- Magon, A., Conte, G., Dellafiore, F., Arrigoni, C., Baroni, I., Brera, A. S., & Caruso, R. (2023). Nursing profession self-efficacy scale—Version 2: A stepwise validation with three cross-sectional data collections. *Healthcare*, 11(5), 754.
- Mahmoud, A. S., & Mohamed, H. A. (2017). Critical thinking disposition among nurses working in public hospitals at Port-Said Governorate. *International Journal of Nursing Sciences*, 4(2), 1–7.
- Malak Akgun, B. (2015). Examining the emotional labor, emotional self-efficacy, and burnout levels of nurses in the context of emotional habitus (Doctoral dissertation). Hacettepe University Institute of Health Sciences, Ankara, Turkey.
- Muhtaroglu, P. (2023). The relationship between the professional self-efficacy levels of surgical nurses and their attitudes towards evidence-based nursing (Master's thesis). Trakya University Institute of Health Sciences, Edirne, Turkey.
- Nilsson, J., Engstrom, M., Florin, J., Gardulf, A., & Carlsson, M. (2018). A short version of the nurse professional competence scale for measuring nurses' self-reported competence. *Nurse Education Today*, 71, 233-239.
- Notarnicola, I., Stievano, A., De Jesus Barbarosa, M. R., Gambalunga, F., Iacorossi, L., Petrucci, C., Pulimeno, A., Rocco, G., & Lancia, L. (2018). Nurse competence scale: Psychometric assessment in the Iranian context. *Annali Di Igiene*, 30(6), 458-469.
- Pétre, B., Gillain, N., Jacqmin, N., Adriaenssens, J., Vandenbosch, K., & Gillet, P. (2017). Perception of Belgian nurses about evidence-based clinical practice implementation: A focus group study. *Acta Clinica Belgica: International Journal of Clinical and Laboratory Medicine*, 73(2), 110–118.
- Silva, G. O., Oliveira, F. S. E., Coelho, A. S. G., Cavalcante, A. M. R. Z., Vieira, F. V. M., Fonseca, L. M. M., Campbell, S. H., & Aredes, N. D. A. (2022). Effect of simulation on stress, anxiety, and self-confidence in nursing students: Systematic review with meta-analysis and meta-regression. *International Journal of Nursing Studies*, 133, 104282.
- Tiryaki Sen, H., Alacam, B., & Ozturk Yildirim, T. (2019). Education of nurse managers from past to present. *Journal of Health and Nursing Management*, 1(6), 70-78.
- Welsh, D. (2014). Self-efficacy measurement and enhancement strategies for medical-surgical clinical nurses. *Medsurg Nursing*, 23(6), 371-374.
- Yilmaz Kocak, M., & Buyukyilmaz, F. (2019). Examination of nurses' self-efficacy perceptions and problem-solving skills. *Journal of Academic Research in Nursing*, 5(3), 169-177.
- Yilmaz, E., Cecen, D., Aslan, A., Kara, H., Kizil Togac, H., & Mutlu, S. (2018). Attitudes towards evidence-based nursing of nurses working in surgical clinics and perceptions of barriers to using research. *Journal of Education and Research in Nursing*, 15(4), 235-241.
- Yoder, L. H., Cengiz, A., Hinkley, T., Hertel, R. A., Gallagher-Ford, L., & Koshy Thomas, B. (2022). Medical-surgical nurses' EBP beliefs and competencies. *Worldviews on Evidence-Based Nursing*, 19(2), 149-159.
- Yusshy, K., Herliani, H., Harun, H., Setyawati, A., & Kusman, I. (2018). Self-efficacy and the competency of nursing students toward the implementation of evidence-based practice. *Jurnal Ners*, 13(1), 635.