

ORIGINAL RESEARCH PAPER

SELF-EFFICACY AMONG NURSING PERSONNEL IN PEDIATRIC HOSPITALS

Magdalene Lyberopoulou, Maria Polikandrioti, Afrodite Zartaloudi, Chrysoula Dafogianni, Eleni Evagelou, Angeliki Stamou, Ioannis Koutelekos

Postgraduate Study Program Applied Clinical Nursing, specializations: "Pediatric Nursing", Department of Nursing, University of West Attica, Athens, Greece

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Abstract

Introduction: Self-efficacy is an important factor that influences an individual's behavior, emotions, decision-making, and ability to cope with difficulties. It refers to the belief that a person is capable of organizing and carrying out the actions necessary to achieve specific goals. It also affects motivation, thoughts, emotions, and overall behavior. Pediatric nurses' self-efficacy contributes to higher-quality, safer, and more effective child care while also supports nurses' professional satisfaction and development.

Aim: The aim of the present study was to explore the levels of self-efficacy among nursing personnel working in pediatric hospitals and to examine its association with their demographic characteristics.

Material and Methods: The study included nursing personnel from pediatric hospitals in Greece. Data were collected through the General Self-Efficacy Scale (GSE) which included participants' characteristics. The level of statistical significance set at $p < 0.05$.

Results: The levels of self-efficacy among 232 nursing personnel (197 women and 35 men) were moderate to high (Mean=29.26, SD=4.9). Self-efficacy was significantly associated with age ($p=0.001$), choice of profession ($p=0.023$), years of total professional experience ($p=0.001$), years of experience in a pediatric hospital ($p=0.013$), and employment status ($p=0.001$).

Conclusions: Demographic and occupational characteristics are associated with self-efficacy. Education and empowerment strategies can further strengthen self-efficacy and improve holistic pediatric care.

Keywords: Self-efficacy, pediatric hospital, nurses, General Self-Efficacy Scale

Corresponding author: Magdalene Lyberopoulou, e-mail: acn23009@uniwa.gr

1. INTRODUCTION

Self-efficacy plays a crucial role in our lives, influencing our behavior, emotions, decision-making, and overall course. According to Bandura (1997), self-efficacy determines how we think, feel, act, and endure difficulties. Self-efficacy refers to an individual's confidence in their ability to organize and successfully carry out the actions necessary to achieve specific goals. According to Bandura (1997), self-efficacy influences an individual's thinking, emotions, motivation, and behavior.^{1,2}

Self-efficacy is described through four main sources: a) personal experiences of success: previous successes improve self-efficacy, while failures can reduce it, b) indirect experience or observation of models: supervision of successful individuals with similar characteristics can improve self-efficacy, c) verbal persuasion: positive encouragement from others can strengthen belief in one's abilities, and d) physiological and emotional states: stress, fatigue and negative emotions can affect self-efficacy.^{1,2}

Self efficacy is associated with benefits in many domains.³⁻¹⁰ In terms of educational settings, individuals with high self-efficacy create a positive learning environment and encourage their students.³ In professional careers, individuals with high self-efficacy are more oriented towards demanding tasks, manage challenges with confidence, and maintain high levels of job satisfaction.⁴ Also, individuals with high self-efficacy are more resilient in difficulties and recover quickly from failures.^{5,6} In social relationships, people with high self-efficacy are more sociable and have better conflict management.⁹ Self-efficacy also affects parenting behavior, since parents with increased self-efficacy are more supportive of their children.¹⁰ In well-being, individuals with increased self-efficacy experience a healthier lifestyle, with better eating habits, physical exercise, and avoidance of harmful habits.⁷ In mental health and resilience, increased self-efficacy is associated with lower levels of anxiety and depression, as individuals feel they have control over situations.^{1,2,5} While, in chronic diseases, self-efficacy empowers individuals in pain management and better treatment compliance.⁸

Self-efficacy for nurses plays an important role in their professional performance, career, mental resilience and the quality of care provided. Nurses with increased self-efficacy are able to manage stressful situations, are open to lifelong learning and continuous professional development, and make immediate and correct decisions, so that they are flexible to the demands of the profession.¹¹⁻¹⁵

The aim of the present study was to explore the levels of self-efficacy among nursing personnel working in pediatric hospitals and to examine its association with their demographic characteristics.

2. MATERIAL AND METHODS

2.1. Study sample

In this single-center cross-sectional study, were enrolled 232 nursing personnel working in pediatric hospitals in Athens (35 men and 197 women) between July to October 2025. Convenience sampling was employed for participant recruitment.

2.2. Inclusion and exclusion criteria

The inclusion criteria in the study were: (a) age over 20 years, (b) ability to understand the Greek language, and (c) at least one year of experience in a pediatric hospital/department. Nurses not working in a pediatric setting were excluded from the study.

2.3. Data collection procedure

Data collection was conducted through face-to-face interviews using a structured questionnaire developed for the purposes of this study. Completion of the questionnaires required approximately 20–25 minutes and was mainly carried out when participants were not engaged in patient care activities.

2.4. Research Instrument

Participants' Characteristics

In the study the following participants' characteristics were recorded: gender, age, marital status, number of children, educational level, choice of nursing profession, years of work experience as a nurse (total) and in pediatric hospitals, employment status, job position, and department of employment.

Assessment of Self-Efficacy

General self-efficacy was assessed using the General Self-Efficacy Scale (GSE), developed by Ralf Schwarzer and Matthias Jerusalem. The scale consists of 10 items that reflect an individual's general belief in their ability to cope effectively with challenging and unexpected situations and to achieve goals despite difficulties. Participants rated each item on a four-point Likert scale (1=Not at all true, 2=Hardly true, 3=Moderately true, 4=Exactly true). The total score ranges from 10 to 40 (sum of responses), with higher scores indicating higher levels of self-efficacy and lower scores indicating reduced confidence in one's ability to cope effectively with demanding situations. The scale does not include reverse-coded items, facilitating score calculation. The GSE has been widely used internationally and validated across various cultural contexts, demonstrating high internal consistency and satisfactory validity. In the present study, reliability was assessed using Cronbach's alpha ($\alpha=0.831$), indicating good internal consistency.^{16,17}

2.5. Ethical Considerations

The study was approved by the Scientific Council of the public Pediatric Hospitals and conducted in accordance with the Declaration of Helsinki. Nurses participated after being informed

about the purpose of the study, while their written informed consent was obtained.

2.6 Statistical Analysis

Categorical variables are presented as frequencies and percentages, while continuous variables are presented as mean, standard deviation, median, and interquartile range where appropriate. Normality of quantitative variables was assessed using the Kolmogorov-Smirnov test and graphically with histograms and Q-Q plots. Kruskal-Wallis, Mann-Whitney were used to examine associations between self-efficacy scores and participants' characteristics. Statistical significance was set at $p < 0.05$. All analyses were conducted using SPSS version 28 (SPSS Inc., Chicago, IL, USA).

3. RESULTS

3.1. Sample Description

A total of 232 nurses participated in the study, the majority of whom were women (84.9%), while men accounted for 15.1% of the sample.

Regarding age, the largest proportion of participants belonged to the 41–50 years age group (33.2%), followed by those aged 31–40 years (28.4%) and ≤ 30 years (25.0%), while 13.4% were over 50 years old.

In terms of marital status, 43.1% of the nurses were married, 34.9% were single, 11.6% were divorced, and 10.3% reported cohabitation.

The majority of participants (56.5%) had no children, while 22.4% had two children, 19.8% had one child, and only 1.3% had more than two.

Regarding educational level, more than half of the participants (56.9%) were graduates of tertiary education, while 23.3% had completed postgraduate studies. Additionally, 19.4% had secondary education.

Table 1: Demographic characteristics of participants (n=232)

	n (%)
Gender	
Male	35(15.1%)
Female	197(84.9%)
Age (years)	
≤ 30	58(25.0%)
31–40	66(28.4%)
41–50	77(33.2%)
>50	31(13.4%)
Marital Status	
Married	100(43.1%)
Single	81(34.9%)
Divorced	27(11.6%)
Widowed	0(0.0%)
Cohabiting	24(10.3%)
Number of Children	
0	131(56.5%)
1	46(19.8%)
2	52(22.4%)
>2	3(1.3%)
Educational Level	
Secondary education	45(19.4%)
Tertiary education	132(56.9%)
Postgraduate studies	55(23.7%)

With respect to the choice of the nursing profession, for 37.9% it was their first choice, while for 30.6% it was their second choice. Smaller proportions reported it as their third (15.5%), fourth (3.0%), or a lower-priority choice (12.9%).

In terms of professional experience, 38.4% of participants had less than 10 years of total work experience, 32.3% had 10–20 years, and 29.3% had more than 20 years.

Similarly, regarding experience in pediatric hospitals, 31.9% had 1–5 years of experience, while notable proportions were

also observed in the categories of >20 years (24.1%), 6–10 years (22.4%), and 11–20 years (21.6%).

The majority of participants were permanent staff (61.2%), while 19.4% were auxiliary staff, 9.1% were employed through programs, and 6.0% were trainees in pediatric nursing.

Regarding department of employment, the largest proportion worked in pediatric medical departments (40.5%), followed by surgical departments (21.1%), emergency departments (15.1%), intensive care units (ICU) (9.5%), other departments (7.3%) and neonatal intensive care units (NICU) (6.5%).

Table 2: Occupational characteristics of participants (n=232)

	n(%)
Choice of Nursing Profession	
1st choice	88(37.9%)
2nd choice	71(30.7%)
3rd choice	36(15.5%)
4th choice	7(3.0%)
>4th choice	30(12.9%)
Years of Work Experience as a Nurse (total)	
<10	89(38.4%)
10–20	75(32.3%)
>20	68(29.3%)
Years of Work Experience in a Pediatric Hospital	
1–5	74(31.9%)
6–10	52(22.4%)
11–20	50(21.6%)
>20	56(24.1%)
Employment Status	
Permanent	142(61.2%)
Auxiliary staff	45(19.4%)
Employment program	21(9.1%)
Pediatric nursing trainee	14(6.0%)
Other	10(4.3%)
Department of Employment	
Pediatric medical department	94(40.5%)
Surgical department	49(21.1%)
ICU	22(9.5%)
NICU	15(6.5%)
Emergency Department	35(15.1%)
Other	17(7.3%)

3.2. Description of the Self-Efficacy Scale

Table 3 presents the description of the total self-efficacy score of the participating nurses, as measured by the General Self-Efficacy Scale (GSE). The mean total score was 29.26

(SD=4.9), while the median was 29.0 with an interquartile range of 25.5–34.0. The reliability index (Cronbach's α) was 0.831, indicating good internal consistency of the scale in the present sample. Overall, the levels of self-efficacy among

nurses can be characterized as moderate to high, given that the mean score is above the midpoint of the theoretical range of the scale.

Table 3: Description of the self-efficacy questionnaire score (n=232)

	Cronbach α	Mean (SD)	Median (IQR)
General Self-Efficacy Scale (GSE) (Range: 10-40)	0.831	29.26(4.9)	29.0(25.5-34.0)

3.3. Association between Self-Efficacy and Participants' Characteristics

Table 4 presents the association between self-efficacy and characteristics of participants.

No statistically significant association was observed between self-efficacy and gender ($p=0.088$), marital status ($p=0.586$), number of children ($p=0.140$), educational level ($p=0.286$), or department of employment ($p=0.532$).

In contrast, age showed a statistically significant association with self-efficacy ($p=0.001$), with older nurses (>50 years) demonstrating higher levels of self-efficacy (Mean=32.23, SD=4.3) compared to younger age groups.

Additionally, a statistically significant association was found regarding the choice of the nursing profession ($p=0.023$), with nurses who had selected the profession as their first choice

exhibiting higher levels of self-efficacy (Mean=30.35, SD=5.2) compared to those who had selected it as a lower-priority option.

Total years of work experience as a nurse were also significantly associated with self-efficacy ($p=0.001$), with nurses having more than 20 years of experience showing higher scores (Mean=31.09, SD=4.6). Similarly, years of experience in a pediatric hospital showed a significant association ($p=0.013$), with self-efficacy increasing as years of experience increased, with nurses having more than 20 years of experience showing higher scores (Mean=31.09, SD=4.6).

Finally, employment status was significantly associated with self-efficacy ($p=0.001$), with permanent staff demonstrating higher levels (Mean=30.37, SD=5.0), while lower scores were observed among nurses through employment programs (Mean=26.05, SD=3.9).

Table 4: Association between self-efficacy and characteristics of participants (n=232)

	Self-Efficacy (GSE)		p-value
	Mean (SD)	Median (IQR)	
Gender			0,088
Male	30.23(5.8)	32.0(25.0-35.0)	
Female	29.09(4.7)	29.0(26.0-33.0)	
Age (years)			0,001
≤ 30	27.53(4.3)	27.0(24.0-30.0)	
31–40	29.35(4.6)	29.5(25.0-33.0)	
41–50	29.30(5.3)	29.0(26.0-34.0)	
>50	32.23(4.3)	34.0(30.0-35.0)	
Marital Status			0,586
Married / Cohabiting	29.32(5.1)	30.0(25.0-34.0)	
Single	28.94(4.3)	28.0(26.0-32.0)	
Divorced	29.96(5.8)	28.0(25.0-37.0)	
Number of Children			0,140
0	28.70(4.8)	28.0(25.0-32.0)	
1	30.04(4.9)	31.0(26.0-34.0)	
>1	29.95(5.0)	29.0(26.0-34.0)	

	Self-Efficacy (GSE)		p-value
	Mean (SD)	Median (IQR)	
Educational Level			0,286
Secondary education	29.11(5.1)	29.0(24.0-33.0)	
Tertiary education	28.95(4.9)	28.5(25.0-33.0)	
Postgraduate studies	30.13(4.6)	32.0(26.0-34.0)	
Choice of Nursing Profession			0,023
1st choice	30.35(5.2)	32.0(26.5-34.5)	
2nd choice	28.90(4.6)	29.0(25.0-33.0)	
3rd choice	27.89(4.2)	26.5(24.0-31.0)	
>3rd choice	28.70(4.9)	28.0(25.0-32.0)	
Years of Experience as a Nurse (total)			0,001
<10	28.30(4.3)	28.0(25.0-32.0)	
10–20	28.75(5.4)	29.0(25.0-33.0)	
>20	31.09(4.6)	32.0(27.5-34.0)	
Years of Experience in a Pediatric Hospital			0,013
1–5	28.27(4.7)	27.0(24.0-32.0)	
6–10	28.62(4.1)	28.0(25.0-32.0)	
11–20	29.62(5.6)	31.0(26.0-34.0)	
>20	30.86(4.8)	32.0(26.5-35.0)	
Employment Status			0,001
Permanent	30.37(5.0)	31.5(27.0-34.0)	
Auxiliary staff	28.18(4.4)	27.0(25.0-32.0)	
Employment program	26.05(3.9)	27.0(24.0-27.0)	
Pediatric nursing trainee	27.86(3.7)	27.5(24.0-30.0)	
Other	27.20(2.9)	27.5(25.0-30.0)	
Department of Employment			0,532
Pediatric department	28.85(4.9)	30.0(25.0-33.0)	
Surgical department	29.31(5.8)	30.0(25.0-35.0)	
ICU / NICU	29.89(3.2)	29.0(28.0-32.0)	
Emergency Department / TEI	30.17(4.9)	29.0(27.0-32.0)	
Other	28.18(5.2)	26.0(24.0-34.0)	

4. DISCUSSION

The levels of self-efficacy among nursing personnel were moderate to high. This is an encouraging finding as nurses with higher levels of self-efficacy manage to recognize and utilize the advantages provided by a supportive nursing practice environment.¹⁸ Higher levels of self-efficacy may enhance nurses' confidence in handling clinical situations, supporting more effective decision-making and contributing to greater professional satisfaction. A strong belief in one's capabilities can also help nurses manage the demands and challenges encountered in everyday clinical practice, allowing them to respond more effectively to patients' needs. This is particularly relevant in pediatric nursing, where the ability to adapt to complex and

unpredictable situations is essential for maintaining high-quality and patient-centered care.¹⁹ Individuals with higher self-efficacy are also more likely to feel control of situations and to approach demanding tasks with greater confidence, increasing their ability to achieve successful outcomes.²⁰ Healthcare authorities across different countries recognize nurses' self-efficacy as an important aspect of effective healthcare delivery. Understanding the factors that influence nurses' ability to perform their professional responsibilities is important for optimizing hospital resources and ensuring the provision of appropriate and effective care to pediatric patients.²⁰

Older nurses (>50 years), those with more years of experience in a pediatric department and in total nursing care

demonstrated higher levels of self-efficacy. Self-efficacy can change as a result of learning, experience, and feedback.¹⁸ One possible explanation for the higher levels of self-efficacy observed among older nurses is their accumulated professional experience and the behavioral changes developed throughout their careers. According to Bandura's concept of reciprocal determinism, the individual, the environment, and behavior continuously interact, with self-efficacy playing a central role in this dynamic process. Professional development is therefore viewed as a continuous and reciprocal process in which beliefs, emotions, environmental influences, and behaviors interact and reinforce one another. Behavioral change is not based solely on rules or instructions but also requires confidence in one's abilities, exposure to positive role models, and practical experiences that provide successful and observable outcomes. These experiences can progressively strengthen self-efficacy and contribute to greater professional confidence and self-esteem.^{20,21}

In addition, total years of work experience as a nurse and years of experience in a pediatric hospital showed a significant association with self-efficacy. This finding may reflect both theoretical and practical healthcare knowledge that contribute to the development of self-efficacy. As nurses acquire greater knowledge and develop their professional skills through experience, they become better equipped to respond effectively to clinical demands, which may consequently reinforce their sense of self-efficacy. Moreover, specialized knowledge, particularly in childcare, may further enhance nurses' confidence by enabling them to perform their professional responsibilities more effectively. Experience should not, however, be understood simply as the number of years spent in practice since, it involves continuous learning, reflection, and the adaptation of knowledge and skills through exposure to real clinical situations. Through this ongoing process, nurses can refine their clinical judgment, learn from different professional practices, and develop greater confidence in their ability to respond effectively to patient needs.²⁰

Participants who had selected the nursing profession as their first choice reported higher levels of self-efficacy. Nurses' motivation can substantially influence their professional engagement, initiative, and willingness to invest effort in achieving desired outcomes. A reciprocal relationship may exist between motivation and self-efficacy, as strong motivation encourages individuals to mobilize their abilities and persist in pursuing their goals, while increased self-efficacy may further reinforce motivation and professional performance. Social support and positive verbal feedback represent important sources through which individuals can strengthen their confidence in their capabilities. Within nursing practice, motivation to provide care is important because it may enhance nurses' commitment

to professional responsibilities and contribute to the delivery of higher-quality care.^{20,21}

Finally, higher levels of self-efficacy was shown among participants with permanent employment status. This finding may be attributed to the working environment. Drawing on Social Identity Theory, when employees perceive themselves as steady members of an organization, the sense of belonging contributes to the development of self-concept. This sense of affiliation can strengthen organizational identification and encourage more positive attitudes and constructive workplace behaviors. However, differences in employment status between temporary and permanent employees may lead to variations in their levels of organizational identification and their engagement in counterproductive work behaviors. In multi-employment contexts, temporary employees may have a stronger intention to leave because their employment is generally associated with a predetermined and limited contract duration. Due to the uncertainty, these employees may be less willing to invest substantial personal resources in developing strong and lasting relationships with the organization.^{21,22} Encouragement from colleagues and supervisors, even when expressed through verbal reinforcement, may strengthen nurses' self-efficacy and promote more effective professional behaviors.²⁰

It is worth noting that the effect of self-efficacy is reducing job burnout and increasing positive emotion.¹⁸⁻²² Moreover, professional self-efficacy significantly predicts parents' perceptions of family-centered care.²³ Last but not least, self-efficacy among nurses is associated to the quality of provided care. The role of the nurse is to identify and meet the physical, psychological, and social needs that the patient is unable to satisfy on their own and considering their perceptions.^{24,25} Nurses who possess self-efficacy respond accurately to patients' needs and symptoms. Nurses' self-efficacy in symptom management influences their confidence in symptom assessment, intervention selection, patient education, and interdisciplinary collaboration.²⁶

Finally, confounding factors should be acknowledged. In this study, most participants were female (84.9%), had a tertiary-level education (56.9%), and were married (43.1%). Though no association was shown however they may affect levels of self-efficacy as Machaly et al.,²⁷ reported higher levels of self-efficacy among female nurses compared with their male counterparts. Similarly, married nurses demonstrate greater self-efficacy than single nurses, while nurses with a bachelor's degree report higher self-efficacy than those holding technical diplomas. One more confounding factor might be resilience as nurses with greater perceived self-efficacy demonstrate higher levels of resilience.^{27,28}

Limitations of the study

Several considerations should be taken into account when interpreting the findings of this study. The cross-sectional nature of the research prevents the establishment of causal relationships with nurses' self-efficacy and characteristics. In addition, the use of convenience sampling may have introduced selection bias and limits the extent to which the findings can be generalized to the wider population of hospital nursing personnel in Greece. Finally, the relatively small sample size should be considered when interpreting the observed associations.

CONCLUSIONS

The levels of self-efficacy among nurses were moderate to high. Self-efficacy was significantly associated with age, choice of profession and professional experience (total and pediatric) and employment status.

Pediatric nurses' self-efficacy has significant utility both for improving the quality of child care and for their development. The findings of this study can be used to develop strategies to support, educate and empower nursing staff, thus contributing to more effective and holistic care of pediatric patients.

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