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ORIGINAL RESEARCH

The Relationship Between Perceived Self-Efficacy and Resilience Among Pediatric Nurses in Eastern Province of Saudi Arabia

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Purpose: This study examines the relationship between the perceived levels of resilience and self-efficacy among a selected sample of pediatric nurses working in the Eastern province of Saudi Arabia.

Patients and Methods: A descriptive, cross-sectional, correlational design was used. A total of 99 pediatric nurses from two governmental hospitals in the Eastern Province of Saudi Arabia completed an online survey which included two standardized measures: The Brief Resilience Scale (BRS) and the General Self-Efficacy Scale (GSE).

Results: The nurses reported an overall moderate resilience level ($M = 19.3$, $SD = 2.6$) and moderate general self-efficacy level ($M = 32.1$, $SD = 4.9$). The Spearman's Correlation test revealed a significant positive correlation between perceived self-efficacy and resilience ($rho = 0.19$, $P < 0.05$). This indicates that pediatric nurses who reported having higher levels of perceived self-efficacy would also have higher levels of resilience.

Conclusion: Nursing plays a vital role in the healthcare system and requires ongoing development. It is essential for nurses to cultivate resilience skills, which are crucial for reducing turnover, burnout, and empathy fatigue.

Keywords: resilience, self-efficacy, pediatric, quantitative, cross-sectional, nursing

Introduction

Nurses provide empathetic care to individuals experiencing pain, loneliness, illnesses, or even death. Consequently, they may face an immense emotional burden, which leads to elevated levels of work stress.[1] Healthcare professionals experience burnout when grappling with elevated stress levels, finding it challenging to cope with the demands of their work environment.[2] Nurses experiencing burnout are prone to develop physical and psychological symptoms, including fatigue, anxiety, depression, and a sense of dissatisfaction with their professional roles.[3] Across the Middle East, nurses reported significant levels of burnout compared to other healthcare workers.[4,5] The prevalence of burnout among nurses in Saudi Arabia was reported as high as 89%.[6] The challenges associated with caring for vulnerable children have been reported to elevate the stress levels among pediatric nurses. These nurses often exhibit a high level of empathy when caring for children and fostering relationships with their families.[7] Furthermore, frequent exposure to distressed —who may be experiencing fear, grief, and anger—adds to the psychological strain on nurses.[8] Studies show that emotional exhaustion is prevalent among pediatric nurses, ranging from 30% to 74%.[9] Nurses in neonatal and pediatric care units appear to suffer higher emotional exhaustion compared to those working in adult care settings.[10]

The ability to tackle professional stressors and daily work challenges requires a set of outstanding skills, including resilience to manage and retrieve from stressors, threats, and adversities.[11] Resilience is a complex and dynamic process by which nurses can cope with workplace stressors, protect themselves from psychological harm, and maintain quality and safe patient care.[12]

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While nurses frequently face poor mental health and burnout, Haldane and Morgan (2021) revealed that politicians and policymakers have rallied around the term "resilience" regarding the ongoing health system response, implying that resilience may heal the ailing workforce.[13] Moreover, novice nurses often experience higher stress due to a lack of confidence and limited clinical experience, making them more vulnerable to emotional exhaustion and anxiety.[14] Conversely, more experienced nurses may face different stressors, such as increased responsibilities, leadership roles, and burnout from prolonged exposure to occupational pressures.[15] Additionally, the level of knowledge and skills a nurse possesses can affect stress levels, as inadequate training or unfamiliarity with complex medical procedures may lead to feelings of incompetence and stress.[16]

Self-efficacy, which is defined as "one's belief in their ability to conduct actions to reach the intended outcome successfully" (p.193),[17] is among the key attributes of resilience in nurses.[12,18] Nurses with increased self-efficacy often have better decision-making and are satisfied with their jobs.[19,20] Many factors are linked to the level of self-efficacy in the nursing profession, such as age, educational status, cross-cultural experiences, and length of experience.[21] Perceived self-efficacy and communication skills were also found to be positively linked, as reported in a study conducted with South Korean hospitalized children, and 218 nurses participated in the study.[20] Therefore, nurses must develop protective skills such as hope, cognitive flexibility, humor, coping skills, and self-efficacy to strengthen their resilience and protect their work and daily lives.[22] Furthermore, evidence from the literature suggests that perceived resilience and self-efficacy are essential subsets for nurses to provide an optimum quality of care to patients by adapting to challenges of everyday life and responding efficiently to the situations they face, particularly among pediatric nurses.[20]

Baluszek et al (2023) conducted a rapid review of healthcare practitioners to examine the relationship between resilience and self-efficacy.[23] They found evidence supporting the hypothesis that resilience and self-efficacy are significantly interdependent, as they have the potential to mutually reinforce and supplement one another. Their research suggests that resilience could potentially be enhanced through the development of self-efficacy. Consequently, self-efficacy could be considered a prerequisite for resilience formation and could be regarded as an essential component of resilience. Raderstorf et al (2020) emphasize the significance of strengthening staff resilience in challenging work environments through enhancing self-efficacy and applying effective coping strategies.[24] This highlights that enhancing self-efficacy can increase staff resilience. On the other hand, few studies have explored the impact of personal factors (eg self-efficacy), and environmental factors on nursing resilience.[25]

According to Li et al (2024), moral distress and moral resilience are important variables affecting nurses' job retention.[26] Interventions should address possibly inappropriate care, ensure proper and consistent truth-telling, foster cohesive healthcare teams, and facilitate competent practice to reduce moral distress and improve resilience.[27] These steps are essential for maintaining nurses' well-being and improving their ability to handle the challenging and stressful conditions that arise in pediatric emergency settings.[27]

Despite the significant emphasis on moral distress, resilience, and self-efficacy, there is a paucity of research that examines the relationship between perceived resilience and self-efficacy in the context of the pediatric nursing workforce in Saudi Arabia. The current study aimed to bridge this gap by describing the levels of perceived self-resilience and self-efficacy and examining their association among a selected sample of pediatric nurses in Saudi Arabia.

Materials and Methods

Study Design

A descriptive cross-sectional, correlational study using an online survey was conducted. The checklist of Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) was used for reporting the current study.

Setting and Participants

Nurses from two governmental hospitals in the Eastern Province of Saudi Arabia were invited to participate in the study. Participants who were working in the pediatric ward or pediatric emergency department, having direct contact with pediatric patients, and working with a permanent contract in the hospital were eligible to participate in this study. Nursing interns who were working in pediatric units and locum nurses in the pediatric wards were excluded. Based on a moderate effect size, power of 0.80, statistical significance of 0.05, and a correlation analysis, a sample size of 84 participants was required.

Data Collection and Procedures

A two-stage recruitment approach was employed to recruit the participants. Initially, a convenience sampling technique was used, and an invitation Email to the study was sent to all eligible nurses in the selected settings through their nursing supervisors. To encourage participation, two follow-up emails were distributed two weeks apart, reminding nurses to complete the survey. However, we did not achieve the required minimum sample size. Two weeks later, we shifted to snowballing, the second recruitment strategy, to enhance participation.[28] Prior to distributing the online survey, a pilot study with seven participants was conducted to assess the readability and understanding of the questionnaire. This pilot study identified a duplicate question, which was subsequently removed from the original survey.

Measures

The online survey consisted of two standardized measures: the Brief Resilience Scale (BRS), the General Self-Efficacy Scale (GSE), in addition to sociodemographic questions including age, gender, educational level, and years of experience.

The Brief Resilience Scale (BRS) is a 6-item scale that measures the individual's ability to bounce back from stress.[29] Responses were rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The total score ranges from 6 to 30. The higher total score indicates a higher level of resilience. The prior psychometric testing of BRS shows good to excellent scale reliability with Cronbach alpha value between 0.7 and 0.9.[30]

The General Self-Efficacy Scale (GSE): is a ten-item scale that is used to measure the individual's perceived self-efficacy.[31] Participants were asked to rate each statement on a scale of 1 to 4 (1: not at all true and 4: exactly true). The total score ranges from 10 to 40. High scores indicate high levels of self-efficacy. Prior psychometric testing of the GSE shows a very good scale reliability with Cronbach alpha of 0.871.[32]

Ethical Considerations

This study was conducted in accordance with the ethical principles of the Declaration of Helsinki. It was approved by the Institute Review Board at Imam Abdulrahman bin Faisal University (IRB-PGS-2021-04-091) and permissions were obtained from the hospitals which participated in the study. The first page of the survey included the Participant Information Sheet (PIS). Upon accepting the invitation to participate in the study, the participants had to tick box relevant statements implying their consent to participate in the study.

Data Analysis

Study data was analyzed using the Statistical Package for Social Sciences (SPSS) version 28. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to describe the nurses' demographics and scores on resilience and self-efficacy scales. Before examining the correlation between resilience and self-efficacy levels, parametric testing assumptions were examined to select the appropriate correlational test.

Results

A total of 99 pediatric nurses completed the online survey. All participants were females (n=99, 100%), between the age of 30–39 years old (n=57, 57.6%). Moreover, almost 66% (n=56) had undergraduate or graduate degrees, and the rest had diplomas. Around half of the nurses (n=40, 40.4%) have been working for 5–10 years, (n=28, 28.3%) for 11–15 years, (n=16, 16.3%) for less than five years, and (n=15, 15.1%) for more than 15 years (see Table 1).

Table 2 illustrates the descriptive statistics, Cronbach's alphas, and Spearman's (*rho)* correlation coefficient of the study variables. Cronbach's alpha of the General Self-Efficacy (GSE) scale was 0.84, which is considered very good reliability measure and consistent with previous studies in the literature (Field 2018). However, the Brief Resilience Scale (BRS) had poor reliability with a Cronbach's alpha of 0.55, which could be due to the limited number of items in the BRS. Short scales of less than 10 items tend to report poor scale reliability. To mitigate this challenge, and to provide a more meaningful reliability measure for short scales, it was recommended that the mean Inter-Item Correlation (IIC) for the items should be reported along the Cronbach Alpha, with an optimal range between 0.2 and 0.4.[33] The means inter-

Table 1 Nurses' Sociodemographic Characteristics

Variables	Frequency	Percentages (%)
Age (years)		
20–29	23	23.2
30–39	57	57.6
40–49	15	15.2
50–59	4	4
Gender		
Male	0	0
Female	99	100
Educational Level		
Diploma	43	43.4
Undergraduate degree	21	21.2
Graduate degree	35	35.4
Years of Experience		
Less than 5	16	16.3
5–10	40	40.4
11–15	28	28.3
More than 15	15	15.1

Note: N= 99.

Table 2 Descriptive Statistics, Cronbach's Alphas, and Spearman's (Rho) Correlation Coefficient of Perceived Self-Efficacy and Resilience

Variables	Cronbach's Alpha	Mean (*SD*)	Min-Max	Spearman's (*rho*)
1. Perceived Self-Efficacy	0.84	32.1(4.9)	10–40	–
2. Perceived Resilience	0.55	19.3(2.6)	6–30	0.19*

Notes: N = 99, *Correlation is significant at the 0.05 (1 -tailed).
Abbreviation: SD, standard deviation.

item Correlation for the Brief Resilience Scale in this study ranged between 0.21 and 0.56 (statistics are not mentioned in the table), which implies moderate internal consistency for the Brief Resilience Scale.

The nurses in the current study reported an overall moderate resilience level (M = 19.3, SD = 2.6, range: 6–30) and a moderate level of general self-efficacy (M = 32.1, SD = 4.9, range: 10–40).

Prior to conducting correlation analysis, A Shapiro Wilk's test (P> 0.05)[34] and a visual inspection of histograms, normal Q-Q plots, and box plots were examined and showed that both resilience and self-efficacy scores were not normally distributed. Therefore, Spearman correlation (*rho*), a non-parametric test, was used to investigate the relationship between resilience and self-efficacy.

The Spearman's Correlation test showed a significant positive correlation between perceived self-efficacy and resilience (rho = 0.19, P < 0.05), indicating that pediatric nurses who reported having higher levels of perceived self-efficacy would also have higher levels of resilience.

Discussion

The aim of this study is to describe perceived self-resilience levels and self-efficacy; in addition, to examining the association between perceived self-resilience and self-efficacy among a sample of pediatric nurses in Saudi Arabia. Our results found a moderate level of self-efficacy. Furthermore, there was a positive correlation between perceived self-efficacy and self-resilience in pediatric nurses in the Eastern Province of Saudi Arabia. Pediatric

and family-oriented societies have also highlighted the importance of the two concepts of self-efficacy and resilience for nurses and other healthcare professionals in various populations and settings.[35–37] The importance in understanding the relationship between resilience and self-efficacy is valuable for creating a positive work environment and preserving nursing professionals in the field; the reinforcement of self-efficacy and resilience has been documented to improve work commitment and job satisfaction in nurses.[38]

Similarly, one study found that most nursing professionals in Saudi Arabia showed medium-to-high resilience coping levels with Brief Resilient Coping with acceptable and reliable psychometric results.[39] Nurses in Saudi Arabia were also found to experience a moderate level of resilience similar to our findings.[40] Although some of the other literature discusses staff nurses self-efficacy and resilience, others examined self-efficacy and resilience for nursing students with mixed results.[41–46] For example, few studies found no statistically significant difference between perceived self-efficacy and resilience in nursing student scores.[46] While others, however, found that nursing students who are educated within the focus of self-efficacy and resilience and had characteristics of these two concepts, and were persistent and academically successful.[45]

Nursing students were found to have a moderate level of self-efficacy and self-care agency.[47] A positive and moderate relationship between the two concepts were found where self-care agency is defined as one's ability to recognize their own needs, through the assessment of personal and environmental resources, to then perform self-care actions to achieve a desired outcome.[47] Self-care and resilience come hand in hand as they are both adaptive behaviors in the areas of social functioning, self-efficacy and somatic health.[37] Other concepts that were studied aside from self-efficacy and resilience included, compassion, work engagement in nurses, general health, identity and care quality that were incorporated and correlated with either self-efficacy or self-resilience.[38,48–50]

Various ways to promote resilience in nurses include, cognitive restructuring, endurance, supporting connections, work-life balance, and resolution; furthermore, understanding the positive relationships between resilience and self-efficacy is helpful in preserving nurse retention within the workplace.[38]

Similar to our study, positive correlations were found between self-efficacy and self-resilience, where one study measured the relationship between resilience and spiritual intelligence with self-efficacy in various specialties.[51] Spiritual intelligence is noteworthy due to the high value it carries within the Saudi Arabian culture. Furthermore, in Taiwan, similarly, the relationship of resilience and self-efficacy on nurses' advanced clinical practice was studied and found nurses who showed high self-efficacy and resilience showed higher levels of advanced clinical practice than other nurses.[52] Despite this significant finding, this study used another version of general self-efficacy with 20 items as well as they used different tool to measure the resilience which is the Dispositional Resilience Scale. However, further research needs to be conducted using the same context to support our findings.

Significant positive correlations between perceived self-efficacy and self-resilience were found in several studies globally as supported by our study.[38–53] Although our study was without a specific framework due to cultural variations. Given that nurses in Saudi Arabia come from various cultural backgrounds. Future studies can focus on more specific concepts such as cultural self-efficacy that embrace cultural diversity and its impact on nursing practice and patient care.[21] Furthermore, another way in explaining the two concepts together lies in viewing self-efficacy/resilience within the Job Demand-Resources model (JD-R model) as a part of the emotional demands, allowing better understanding of job challenges that may have positive impact on self-efficacy. Self-efficacy can assist nurses in addressing challenges and being effective on the job.[38] The JD-R model shows that when the job demands are high and job resources are low, stress and burnout increase and thus when higher emotional demands (ie higher levels of self-efficacy/resilience) are present this may contribute to lowering stress and have a positive influence on the job. For example, one study found statistical significant correlations between self-efficacy, emotional intelligence, nurse–parent partnership, and nursing competency; nursing competency of these nurses was affected by predictors such as emotional intelligence, nurse–parent partnership, work duration in pediatrics, and self-efficacy.[54] Nurses' self-efficacy plays an important role in helping them feel more capable of facing challenges and improving their professional commitment and evaluation of their nursing career emotionally and professionally.[38]

Limitations

The results can be applied to any nurses working in pediatric units, but due to the nature of pediatric units in Saudi Arabia where mainly mothers are accompanying their children, usually the majority of nurses are female; hence the first

limitation of the studied sample were all female nurses. This was unintentional but the nature of pediatric nurses within the Arab and Gulf cultures are female nurse. Second, low Cronbach's alpha was found in one of the scales; this can be explained possibly by the limited number of items in the scale, the inter-relatedness between items was poor or the constructs are heterogeneous. Third, the study was not guided by a model; although the JD-R model and other concepts such as cultural self-efficacy were discussed as they can be useful guides in future studies. The inter-item correlation coefficient for the Brief Resilience scale was somehow moderate. Future studies should examine the psychometric properties of this BRS scale in the context of the Arabic-speaking nursing workforce.

Conclusion

In conclusion, a moderate level of general self-efficacy was found in the sample of pediatric nurses in the Eastern Province of Saudi Arabia. Pediatric nurses who reported having higher levels of perceived self-efficacy also had a higher level of resilience. Nursing is a crucial part of the healthcare system and requires continued development. Although the nature of shiftwork for nurses may make it challenging to attend resilience training, nurses must develop resilience skills crucial to reduce turnover, burnout, and empathy fatigue.[53] An efficient one-day training on resilience gives nurses an accessible way to acquire knowledge and abilities that boost resilience, which can effectively prevent burnout and fatigue in nurses.[53,55]

Additionally, an emotional coaching program for nurses was found to help enhance nurses' emotional management, resilience, and self-efficacy.[56] Researchers also emphasized that strategies in nursing education to enhance and promote resilience are highly recommended prior to entering the nursing profession.[39] Beyond training, fostering a friendly, warm, cooperative, and appreciative work environment can further enhance nurses' performance.[48] Self-efficacy enables nurses to adapt to clinical challenges, which, in turn, can influence and strengthen their resilience.[38]

Disclosure

The author(s) report no conflicts of interest in this work.

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