Prediction of Distress Tolerance Based on Core Self-Evaluations and Self-Efficacy in Paediatric Ward Nurses

A B S T R A C T

Aims Given the important role of nurses in providing care in paediatric wards, where they experience considerable emotional and psychological stress, identifying factors affecting their distress tolerance is essential. Therefore, this study aimed to predict distress tolerance based on core self-evaluations and self-efficacy among nurses working in paediatric wards in Iran, in order to promote their mental health and job performance.

Instrument & Methods This descriptive-correlational study included all nurses working in paediatric wards in North Khorasan Province in 2025. Due to the limited population size, census sampling was used, and 130 nurses participated. Data were collected using the Distress Tolerance Scale (Simons & Gaher, 2005), the Core Self-Evaluation Scale (Judge et al., 2003), and the General Self-Efficacy Scale (Sherer et al., 1982). Validity was confirmed by psychology and nursing experts, and reliability was supported by acceptable Cronbach's alpha coefficients. Data were analysed using descriptive statistics, Pearson correlation, and multiple regression in SPSS version 24.

Findings The findings showed a positive and significant relationship between core self-evaluations and distress tolerance ($p < 0.05$). However, the relationship between self-efficacy and distress tolerance was not significant ($p > 0.05$). Multiple regression analysis also showed that core self-evaluations significantly predicted distress tolerance, whereas self-efficacy did not.

Conclusion Core self-evaluations can effectively predict nurses' distress tolerance, whereas self-efficacy does not appear to play a significant role. Strengthening core self-evaluations may improve nurses' ability to cope with psychological stress and enhance job performance.

Keywords Core self-evaluation, self-efficacy, distress tolerance, paediatric ward nurses

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Introduction

Every profession is accompanied by its own difficulties and pressures; however, some occupations, such as nursing, are among the professions that impose considerable psychological, physical, and social pressures on practitioners (1). The nature of this profession—which includes multiple shifts, dealing with critically ill patients, exposure to physical injuries, and vulnerability to various diseases and epidemics—causes nurses to experience higher levels of occupational stress than other healthcare workers do (2). Among them, paediatric nurses face even greater challenges, as in addition to providing specialized care, they must also engage in effective communication with both their children and their parents .(۳) Human resources, especially in the field of healthcare, are considered the most valuable assets of any organization, and the quality of their performance is directly related to their physical and mental well-being (4). In recent years, positive psychology approaches have shifted from focusing on deficiencies to emphasizing and strengthening positive personality traits such as distress tolerance, self-efficacy, and core self-evaluation .(۵)Distress tolerance is one of the key constructs in the field of mental health and refers to an individual's ability to perceive, accept, and withstand negative emotions without resorting to avoidance strategies (6). Individuals with lower distress tolerance tend to show less resilience when facing stressful situations, whereas those with higher distress tolerance are better able to accept negative emotions and demonstrate more effective coping skills and improved performance (7). Given the stressful nature of the nursing profession, a high level of distress tolerance is a vital factor in preventing job burnout and enhancing performance .Among the related personality traits, core self-evaluation and self-efficacy play significant roles in emotional regulation and increasing distress tolerance. Core self-evaluation is a broad construct that encompasses four personality traits: self-esteem, generalized self-efficacy, internal locus of control, and low neuroticism (8). Individuals with higher core self-evaluations generally perceive themselves as more competent, effective, and valuable and therefore are better able to adapt to and manage stressful situations (9). Studies have shown that higher core self-evaluations are positively associated with job motivation, life satisfaction, better performance, and lower levels of stress .(۱۰) On the other hand, self-efficacy, which originates from Bandura's social-cognitive theory, refers to an individual's belief in their ability to perform tasks and achieve desired outcomes (11). Nurses with higher self-efficacy are generally more flexible under work pressure, perform better in clinical decision-making, and experience less distress .(۱۲)Considering the unique challenges of the nursing profession, particularly in paediatric wards, examining the relationships among core self-evaluations, self-efficacy, and distress tolerance is highly important. Together, these three variables can play crucial roles in improving nurses' mental health, enhancing job productivity, and reducing burnout. Given the necessity of such research and the lack of similar studies in Iran, the present study was conducted with the aim of predicting distress tolerance on the basis of core self-evaluations and self-efficacy among nurses working in paediatric wards in Iran in 2025.

Instrument and methods

This study was conducted with the aim of predicting distress tolerance on the basis of core self-evaluations and self-efficacy among nurses working in paediatric wards in Iran. The present study was descriptive-correlational in design. The statistical population included all nurses working in paediatric wards in North Khorasan Province in 2025. Since the population size was limited, a census sampling method was employed, and a total of 130 nurses participated in the study. The hospitals of North Khorasan Province were selected as the research setting. The research population consisted of all 135 paediatric ward nurses who were working in hospitals in North Khorasan Province in 2025, all of whom completed the questionnaire through a census method. Inclusion criteria: The participants had to be paediatric ward nurses, formally employed at the hospital, have at least 2 years of work experience in the paediatric ward, and be psychologically healthy without any identifiable disorders. The measurement tools used in this study included: The questionnaires used in this study included
the following:

1. Demographic Characteristics Questionnaire: This questionnaire assesses variables such as age and work experience.

2. Core Self-Evaluations Scale (CSES): To measure core self-evaluations, the 12-item scale developed by Judge et al. (2003) was used. The items are rated on a five-point Likert scale ranging from "strongly disagree" to "strongly agree." Higher scores indicate higher core self-evaluations, with total scores ranging from 12 to 60. Items 2, 4, 6, 8, 10, and 12 are reverse scored. The original developers reported an internal consistency reliability of 0.84 and a test–retest reliability of 0.81 (13). Srivastava et al. (2010) reported a Cronbach's alpha of 0.91 for this scale (14). In Iran, Sharyati et al. (2010) confirmed its validity and

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reliability via facial validity, factor analysis, and a Cronbach's alpha of 0.84 in a sample of 200 employees .(۱۵)

3. Sherer's General Self-Efficacy Scale (GSE-17): To measure self-efficacy, the 17-item General Self-Efficacy Scale developed by Sherer et al. (1982) was used. The items are rated on a five-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (5). Certain items (1, 3, 8, 9, 13, and 15) are scored directly, whereas the remaining items are reverse scored. Scores range from 17 to 85. The scale assesses three aspects of behaviour: willingness to initiate behaviour, willingness to expand effort in completing the behaviour, and persistence in the face of adversity. Sherer et al. reported a Cronbach's alpha of 0.86 (16). Construct validity was confirmed via exploratory factor analysis (Woodruff & Cashman, 1993). In Iranian samples, Asgharnajad et al. reported acceptable psychometric properties, with a Cronbach's alpha of 0.83, and Najafi & Fouladchang (2007) reported 0.80.(۱۸ ,۱۷)

4. Distress Tolerance Scale (DTS): Developed by Simons & Gaher (2005), this 15-item self-report scale measures emotional distress tolerance across four subscales: tolerance, absorption, appraisal, and regulation.

Tolerance (items 1, 3, and 5) assesses the ability to endure emotional distress.

Absorption (items 2, 4, and 15) measures the degree of being consumed by negative emotions.

Appraisals (items 6, 7, 9, 10, 11, and 12) evaluate the cognitive appraisal of distress.

Regulations (items 8, 13, and 14) assess efforts to alleviate distress.

The items are rated on a five-point Likert scale from "strongly agree" to "strongly disagree," with item 6 reverse scored. Scores above 45 indicate high distress tolerance, whereas scores below 45 indicate low distress tolerance. The Cronbach's alpha coefficients for the subscales were 0.72, 0.82, 0.78, and 0.70, respectively, and 0.82 for the total scale (19). The psychometric properties of the scale were confirmed in an Iranian population in 2021, with exploratory and confirmatory factor analyses supporting the four-factor structure and reliability reported as 0.98.(۲۰)

The questionnaires were distributed to the nurses after they explained the purpose of the study and emphasized the confidentiality of their responses, and the data were subsequently collected.

The data, including descriptive statistics (mean, standard deviation) and inferential statistics (Pearson correlation coefficient and regression analysis), were analysed via SPSS version 24.

To adhere to ethical principles, nurses were assured that their information would remain confidential and that providing their names was not needed. Written informed consent was obtained from all participating nurses.

Findings

The present study was conducted to predict distress tolerance on the basis of core self-evaluations and self-efficacy among nurses working in paediatric wards in Iran. The mean age of the participants was approximately 28 years, and the majority were female. The mean work experience was 10.5 years, with an age range of 18--58 years. The skewness and kurtosis indices for the clinical variables were less than 2, indicating a normal distribution of the data and the absence of outliers. Additionally, the closeness of the mean and median values for the clinical variables further confirmed the normality of the data. Therefore, the use of Pearson correlation to analyse the relationships between variables was deemed appropriate (Table 1).

Table 1. Descriptive Findings of the Research Variables

	Age	Gender	Work Experience	Distress Tolerance	Self-Efficacy	Core Self-Evaluation (CSE)
Mean	۲۹/۸۹	۱/۵۹	۱۰/۵	47/45	۶۲/۱۴	**۴۷/۱۵**
Median	۲۸	۲	۵	۴۴	۶۲	**۴۷**
Skewness	۱/۵۷	-۰/۳۸	۱۱/۳۵	۰/۷۳	۰/۲۸	**-۰/۵۲**
Kurtosis	۱/۴۸	-۱/۸۸	۱/۲۸	-۰/۰۶	-۰/۰۲	**۲/۶۶**
Minimum	۱۸	۱	۱	۳۰	۵۳	**۳۳**
Maximum	۵۸	۲	۱۴	۶۹	۷۷	**۵۶**

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The correlation findings indicated a positive and significant relationship between core self-evaluations and distress tolerance (r = 0.43, p < 0.01) (Table 2).

Table 2. Correlation Results between Core Self-Evaluation and Distress Tolerance among Paediatric Nurses

	Distress Tolerance	Core Self-Evaluation (CSE)
Distress Tolerance	۱	**۰/۴۳۵**
Core Self-Evaluation (CSE)	۰/۴۳۵	۱

The relationship is statistically significant at the 0.01 level.

Furthermore, a positive and significant relationship was observed between self-efficacy and distress tolerance (r = 0.20, p < 0.05). These results support the study hypotheses regarding the relationships among the variables under investigation (Table 3).

Table 3. Correlation Results between Core Self-Evaluation and Distress Tolerance among Paediatric Nurses

	Distress Tolerance	Self-Efficacy
Distress Tolerance	۱	**۰/۲۰۶**
Self-Efficacy	۰/۲۰۶	۱

The relationship is statistically significant at the 0.01 level.

To examine the predictive role of self-efficacy and core self-evaluations on distress tolerance, multiple regression analysis was conducted. The results indicated that the regression model was statistically significant (F = 2.84, p < 0.05) and that approximately 4% of the variance in distress tolerance was explained by self-efficacy and core self-evaluations (Table 4).

Table 4. Summary of the Regression Model

	R	R^2	SE	F	Durbin watson
Model	۰/۲۰۷	۰/۰۴	۸/۹۹	۲/۸۴	**۲/۴۰**

An examination of the regression coefficients revealed that self-efficacy had a significant role in predicting distress tolerance (Beta = 0.19, p < 0.05), whereas core self-evaluation alone did not have a significant effect (Beta = 0.02, p = 0.79) (Table 5).

Table 5. Hierarchical Regression Coefficients Table

Model		B	STD	Beta	t	Significance
	Constant	۱۷/۳۵	۱۲/۷۴		۱/۳۶	۰/۱۷
۱	Self-Efficacy	۰/۴۰	۰/۲۰	۰/۱۹	۲/۰۱	۰/۰۴
	Core Self-Evaluation (CSE)	۰/۰۶	۰/۲۴	۰/۰۲	۰/۲۶	۰/۷۹

These results indicate that increasing self-efficacy can directly enhance the distress tolerance of paediatric nurses, whereas core self-evaluations alone do not serve as strong predictors. The findings suggest that nurses' individual abilities and beliefs play a significant role in coping with stressful situations and can serve as a foundation for educational and psychological programs aimed at improving occupational resilience.

Discussion

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The findings of the study indicated that the correlation between self-efficacy and distress tolerance was weak and not statistically significant. According to the researcher, this result may be due to the specific characteristics of the paediatric nursing work environment. A high workload and multiple responsibilities may cause the level of self-efficacy—whether high or low—to have little impact on distress tolerance. Researchers believe that under such conditions, even nurses with high self-efficacy may face environmental pressures and heavy workloads that undermine their ability to manage stress.

This finding is consistent with the results of Xu et al. (21). According to the researcher, paediatric nurses exhibit a different pattern due to limited decision-making authority and high job demands, which may explain the weak relationship. The analyses also revealed a positive and relatively strong relationship between core self-evaluations and distress tolerance. From the researcher's point of view, core self-evaluations reflect an individual's perceived control over circumstances and ability to regulate emotions; therefore, individuals with higher core self-evaluations are better able to cope with occupational stress and pressure. This finding is consistent with the results of Shiloh et al. (22). The researcher concluded that core self-evaluation is one of the key factors in enhancing resilience and the ability to cope with occupational distress. Thus, nurses who feel greater control over their environment and believe in their capacity to manage situations demonstrate greater distress tolerance. Regression analysis revealed that both variables could predict distress tolerance; however, the predictive power of self-efficacy was very limited, whereas core self-evaluation was a significant and strong predictor. According to the researcher, this may be attributed to the multidimensional nature of distress tolerance. Perceived control and self-assessment of one's abilities (core self-evaluation) directly influence distress tolerance, whereas self-efficacy—under conditions of high job stress and limited autonomy—has a minor effect. Consistent with previous research, nurses with higher levels of core self-evaluations experience greater perceived control over their circumstances and are better equipped to deal with challenges (23–24). The researcher argues that enhancing core self-evaluations could serve as an effective strategy for increasing resilience and reducing the impact of occupational stress among paediatric nurses. Owing to its unique nature, every research study faces certain limitations that may influence the data collection process and even the outcomes. The present study was no exception and encountered several challenges during its implementation. First, there was limited access to the target population of paediatric nurses, which compelled the researchers to adopt a census sampling method. Second, some participants were unwilling or lacked sufficient time to complete the questionnaires because of their heavy workload, which prevented the participation of the entire statistical population. Third, the rotational working conditions of nurses limit the number of permanent staff in paediatric wards, as many nurses rotate between departments. This factor may have affected the representativeness of the sample. Despite these limitations, the study also has several notable strengths. The use of a census approach allowed the sample to be as representative as possible of the study population. In addition, the quantitative design and use of standardized and validated instruments for measuring self-efficacy, core self-evaluations, and distress tolerance increased the reliability and accuracy of the findings. Taken together, these limitations and strengths provide valuable insights into the relationships among self-efficacy, core self-evaluations, and distress tolerance among paediatric nurses, and they can serve as a foundation for future research. On the basis of these findings and the high workload of paediatric nurses, training workshops and educational programs should be developed to strengthen self-efficacy and individuals' perceptions of their own abilities, thereby improving nurses' productivity and resilience. Furthermore, the implementation of targeted psychological and therapeutic interventions could help reduce occupational stress and job-related pressures. In addition, developing programs and strategies to increase distress tolerance among nurses is strongly recommended, given the crucial role of distress tolerance in managing occupational challenges and promoting mental well-being.

Conclusion

The examination of the hypotheses revealed that core self-evaluations play a significant role in predicting distress tolerance among paediatric nurses, whereas self-efficacy demonstrated only a weak correlation and a limited predictive capacity for this construct. These findings suggest that focusing on core self-evaluations can increase nurses' resilience and their ability to manage intense occupational pressures. Given the demanding and potentially distressing nature of paediatric wards, as well as the acute stress experienced by nurses in these settings, training workshops and educational programs centered on core self-evaluations are recommended. Such programs can emphasize the development of a positive yet realistic self-perception under stressful and crisis conditions, thereby strengthening nurses' capacity to cope with professional challenges. Moreover, promoting effective interaction with children and their parents can help nurses maintain self-confidence and a positive self-image when dealing with the

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