

# Factors Shaping Empathy and Emotional Intelligence in Pediatric Nursing Practice\*

## Çocuk Hemşireliği Uygulamalarında Empati ve Duygusal Zekayı Şekillendiren Etmenler

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\* This article is derived from the master's thesis titled 'The Relationship Between Empathy and Emotional Intelligence Levels in Nurses Working in Pediatric Clinics,' conducted by Merve Oral under the supervision of Prof. Dr. Sibel Küçük at Ankara Yıldırım Beyazıt University, Institute of Health Sciences.

**Cite as:** Oral M, Küçük S. Factors shaping empathy and emotional intelligence in pediatric nursing practice. Journal of Health and Nursing Management. 2025;12(2):238-247. **DOI:** 10.54304/SHYD.2025.79027

### Abstract

**Aim:** This study examined the relationship between empathy and emotional intelligence in pediatric nurses and key influencing factors, such as professional experience, work environment satisfaction, and parenthood.

**Method:** A descriptive, cross-sectional study was conducted with 387 pediatric nurses from two children's hospitals between March 21 and May 1, 2019. Data were collected using the Nurse Descriptive Characteristics Form, the Jefferson Empathy Scale Student Version (JSE-S), and the Trait Emotional Intelligence Questionnaire-Short Form (TEIQue-SF). Statistical analyses included Mann-Whitney U, Kruskal-Wallis, Spearman's correlation, and stepwise regression.

**Results:** A weak but significant positive correlation was found between the JSE subdimension Perspective Taking and the TEIQue subdimensions Well-Being and Emotionality. However, total JSE and TEIQue scores showed no correlation. Regression analysis revealed that having children increased JSE scores by 81.104 points and TEIQue scores by 4.482 points. Professional experience and work environment satisfaction were also key determinants.

**Conclusion:** While total empathy and emotional intelligence scores were not directly correlated, specific subdimensions showed significant relationships. Parenthood and professional experience were factors shaping these attributes. Training programs on emotional intelligence, family-centered care, and workplace support may enhance these qualities, improving patient outcomes and nurse satisfaction.

**Keywords:** Empathy, emotional intelligence, pediatric nursing, patient care.

### Öz

**Amaç:** Bu çalışma, çocuk hastanesinde görevli hemşirelerde empati ve duygusal zeka arasındaki ilişkiyi ve mesleki deneyim, çalışma ortamı memnuniyeti ve ebeveynlik gibi temel etki etmenlerini incelemektedir.

**Yöntem:** 21 Mart - 1 Mayıs 2019 tarihleri arasında iki çocuk hastanesinde görev yapan 387 çocuk hemşiresiyle tanımlayıcı, kesitsel bir çalışma gerçekleştirilmiştir. Veriler, 'Hemşire Tanıtım Formu, Jefferson Empati Ölçeği Öğrenci Versiyonu (JSE-S) ve Kısa Form Duygusal Zeka Özellikleri Anketi (TEIQue-SF)' kullanılarak toplanmıştır. Verilerin analizinde; Mann-Whitney U, Kruskal-Wallis, Spearman korelasyonu ve aşamalı regresyon analizleri yapılmıştır.

**Bulgular:** JSE'nin perspektif alma alt boyutu ile TEIQue'nin iyi oluş ve duygusallık alt boyutları arasında zayıf fakat anlamlı olumlu bir ilişki bulunmuştur. Ancak toplam JSE ve TEIQue puanları arasında ilişki saptanmamıştır. Regresyon analizi, çocuk sahibi olmanın JSE puanını 81.104, TEIQue puanını ise 4.482 artırdığını göstermiştir. Mesleki deneyim ve iş ortamı memnuniyeti de önemli belirleyiciler olarak bulunmuştur.

**Sonuç:** Toplam empati ve duygusal zeka puanları arasında doğrudan bir ilişki bulunmasa da bazı alt boyutlarda anlamlı ilişkiler saptanmıştır. Ebeveynlik ve mesleki deneyim bu özellikleri şekillendirmektedir. Duygusal zeka, aile merkezli bakım ve işyeri desteğine yönelik eğitim programları, hemşirelerin empati ve duygusal zekasını geliştirerek hasta sonuçlarını ve iş doyumunu artırabilir.

**Anahtar Sözcükler:** Empati, duygusal zekâ, pediatri hemşireliği, hasta bakımı.

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**Recieved / Geliş:** 26.02.2025 • **Accepted / Kabul:** 29.08.2025 • **Published Online / Online Yayın:** 31.08.2025

## Introduction

Empathy is a cornerstone of effective healthcare communication, particularly in nursing, as it bridges the emotional gap between patients and their caregivers (Babaii et al., 2021). Patients who receive empathy from their nurses feel valued, understood, and emotionally supported, fostering trust and strengthening therapeutic relationships (Moreno-Poyato and Rodríguez-Nogueira, 2021). Furthermore, empathy enhances patient motivation to collaborate with nurses, contributing to improved health outcomes and increased patient satisfaction (Sedaghati Kesbakhi and Rohani, 2020). In the context of nursing, empathy also enhances satisfaction and professional commitment while decreasing burnout levels (Yue et al., 2022; Zhou, 2025).

The interactions and communication between nurses, patients, and their families are significantly affected by emotions. Emotional intelligence, a core interpersonal skill, ensures secure and empathetic communication (Kosgeroglu et al., 2020; Mariati et al., 2023). Moreover, trustworthy relationships, problem-solving abilities, and creative thinking can be enhanced through emotional intelligence (Sen et al., 2022). Research has shown that high emotional intelligence among nurses positively influences caregiving behaviors (Nightingale et al., 2018). In addition, nurses who are emotionally intelligent experience lower levels of work-related stress and higher levels of self-compassion (Sahin Altun et al., 2020; Turjuman and Alilyani, 2023).

According to the studies on the combined effects of empathy and emotional intelligence in nursing, nurses with higher levels of these traits demonstrate more effective communication with patients and their families (Giménez-Espert and Prado-Gascó, 2018; Hajibabaei et al., 2018). The quality of care provided by these nurses is higher, and this contributes to patient satisfaction to a great extent (Prado-Gascó et al., 2019). High levels of empathy and emotional intelligence are also linked to lower levels of fatigue and burnout in nurses (Beauvais et al., 2017).

As a vulnerable group, children require higher levels of empathy since they may not express their needs effectively (Meng et al., 2020). Additionally, at every developmental stage of childhood, children face unique challenges, making it crucial that nurses apply age-appropriate communication strategies in their care (Alkan and Ozyildiz, 2021). Pediatric clinics are often a source of uncertainty and anxiety, not only for children but also for their families (Canga et al., 2020). Therefore, pediatric nurses hold a crucial responsibility in supporting family-centered care, as they can help families remain united throughout the process. Collaboration between patients, families, and healthcare professionals is promoted through family-centered care, and an empathetic approach towards families reinforces this collaboration while taking emotional needs of both children and their caregivers into consideration (Terp et al., 2021). As a result, the overall healthcare experience for pediatric patients and their families is improved.

Studies carried out on nurses and nursing students have indicated that there is a meaningful relationship between empathy and emotional intelligence. Hajibabaei et al. (2018) reported a positive correlation between empathy and emotional intelligence among nursing students, whereas Beauvais et al. (2017) found that emotional intelligence is specifically associated with positive empathy, and it decreases the feeling of burnout by enhancing compassion satisfaction (Beauvais et al., 2017; Hajibabaei et al., 2018). On the other hand, in the field of pediatric nursing, emotional intelligence has been examined as an integral element, especially in relation to compassion, with a focus on its mediating role between quality of life and care behaviors and its relationship with the safety and quality dimensions of care (Alinejad-Naeini et al., 2024; Gelkop et al., 2022). In these studies, empathy was regarded as an integral dimension of emotional intelligence and an indispensable component of safe and high-quality pediatric care; however, it could not be measured directly. Among the studies present in literature, no research has directly explored the relationship between empathy and emotional intelligence. Therefore, this study was carried out to examine the relationship between empathy and emotional intelligence in pediatric nurses, and to determine the factors that can affect these characteristics.

## Method

**Study Aim and Design:** This study aimed to investigate the relationship between empathy and emotional intelligence in pediatric nurses by employing a descriptive, cross-sectional design to examine the key factors influencing these essential traits.

**Study Questions:** The research sought answers to the following questions:

- Is there a relationship between the empathy and emotional intelligence levels of pediatric nurses?
- What are the empathy and emotional intelligence scores of pediatric nurses?
- What are the factors affecting empathy and emotional intelligence in pediatric nurses?

**Location and Time Period of the Research:** The research was conducted in two children's hospitals located in a metropolitan area between March 21, 2019, and May 1, 2019.

**Population and Sample of the Research:** The sample size was determined using the G\*Power program (Faul et al., 2007), assuming a weak to moderate correlation ( $|p|=0.20$ ) with a two-tailed  $\alpha$  error probability of 0.05 and a power of 0.80. The required sample size was 193, but a larger sample was recruited to enhance the study's statistical power. A total of 412 nurses completed the study. However, due to missing answers in the Descriptive Characteristics Form, the data of 25 nurses were excluded and the research was completed with 387 nurses. A power analysis was conducted for the correlation coefficients included in the study. The sample size was 387, and power calculations were conducted for significant correlations. The power for correlations with a small effect size ( $r=0.10$ ) was found to be around 74.4%, while for moderate correlations ( $r=0.20$  and above), the power was calculated to be over 80%. This can be considered a reason for the lack of significant relationships among variables with low correlation coefficients. However, sufficient power was achieved for significant correlations, and the findings are considered statistically reliable.

**Inclusion criteria:** Pediatric nurses actively working in the selected hospitals, willingness to participate in the study, completion of the study questionnaires.

**Exclusion criteria:** Nurses on sick leave, annual leave, or administrative leave during the data collection period, nurses in training or on temporary assignment.

**Data Collection Tools:** The research data were collected with the Nurse Descriptive Characteristics Form which examined sociodemographics, professional love, and satisfaction; the Jefferson Empathy Scale Student Version (JSE-S version), and the Trait Emotional Intelligence Questionnaire-Short Form (TEIQue-SF). Interviews were conducted with nurses who agreed to participate in the study when the service workload was low and the nurses were available. Nurses working in pediatric clinics who agreed to participate were included in the study. The study did not include nurses who were on sick leave, annual leave, administrative leave, in training, or on assignment.

**Nurse Descriptive Characteristics Form:** The form consisted of 11 questions (three open-ended and eight closed-ended) about the participants' sociodemographic characteristics (age, gender, marital status, having a child, educational status, years of working in the profession and pediatric clinics, unit of work, type of work) and working characteristics (satisfaction with the working environment, liking the profession) (Giménez-Espert & Prado-Gascó, 2018; Kahraman and Hicdurmaz, 2016).

**The Jefferson Scale of Empathy (JSE-S version):** The Jefferson Empathy Scale was used to measure the empathy level of nurses in the study. The scale was developed by Hojat et al. in 2001 to determine the empathy levels of physicians (Hojat et al., 2001). It was adapted for nursing students by Ward et al. in 2009 (Ward et al., 2009). The Turkish validity and reliability study of the adapted scale for nurses and nursing students was conducted by Yanık and Saygılı (Yanık and Saygılı, 2014). This study used the S version of the JSE prepared for nursing students. This self-assessment scale can be completed in 5-10 minutes, has 20 items, and is rated on a 7-point Likert-type scale (1=strongly disagree, 7=strongly agree). The score range of the scale is between 20 and 140 (Hojat et al., 2001; Ward et al., 2009). Higher scores indicate a higher empathic tendency. The Chronbach's alpha value of the scale is 0.77 (Yanık and Saygılı, 2014). The rChronbach's alpha value for this study was 0.54. The scale consists of three subdimensions: Perspective Taking (PT), Compassionate Care (CC), and Standing in the Patient's Shoes (SPS) (Hojat et al., 2001; Ward et al., 2009; Yanık and Saygılı, 2014).

**Trait Emotional Intelligence Questionnaire-Short Form (TEIQue-SF):** The Emotional Intelligence Trait Scale-Short Form (TEIQue-SF) is a scale developed by Petrides and Furnham (2000, 2001) based on their conceptualization of emotional intelligence as a "personal character trait" and was designed to determine individuals' self-perceptions of their emotional competencies (Petrides and Furnham, 2000, 2001). Deniz et al. (2013) conducted the validity and reliability study of the Turkish version. The Chronbach's alpha value of the scale is 0.87 (Deniz et al., 2013), which indicates that individuals with high scores on the total scale have high emotional intelligence trait competencies, and those with low scores have low emotional intelligence trait competencies. The Chronbach's alpha value for this study was 0.62. The scale consists of four subdimensions: Well-Being, Self-Control, Emotionality, and Sociability (Petrides and Furnham, 2000,2001; Deniz et al., 2013).

**Data Collection:** Interviews were conducted with nurses who agreed to participate in the study when the service workload was low and the nurses were available. It took an average of 20 minutes to collect the data. Interviews with the nurses were conducted in the nurses' room or in an examination room that was empty and available at the time, so that participants could answer questions without being disturbed.

**Data Evaluation:** Number, percentage, mean, Mann-Whitney U, Kruskal-Wallis, Spearman rank correlation ( $\rho$ ), and stepwise regression tests were used to evaluate the data. Post-hoc Mann-Whitney U test with Bonferroni correction was applied where significant differences were found in analyses performed with more than two groups. In the tables, similar groups are indicated with similar letters, and the group causing the difference is marked with a different letter. A statistical

significance level of  $p < 0.05$  was accepted (IBM SPSS Statistics 25.0, IBM Corp. Released 2017. IBM SPSS Statistics for Windows, Version 25.0. Armonk, NY: IBM Corp.; and MS-Excel 2016).

**Ethical Aspect of the Research:** Before starting the study, the necessary ethical approval (Ankara Yıldırım Beyazıt University Ethics Committee, 10.10.2018-24) and legal permissions were obtained from two hospitals (05.12.2018-73799008-799 and 29.11.2018-980206329-799). In addition, permission to participate in the study was obtained from the nurses using the Voluntary Consent Form.

**Limitations of the Research:** This study had several limitations that should be considered when interpreting the findings. First, the sample was limited to pediatric nurses from two hospitals, which may restrict the generalizability of the results. Second, data collection relied on self-reported measures, which are subject to social desirability and response biases. Third, the study's cross-sectional design does not allow for causal inferences, as it captures data at a single point in time. Fourth, while the sample size was relatively large, a more diverse population could provide deeper insights into the factors affecting empathy and emotional intelligence. Lastly, the use of only quantitative methods may have limited the ability to explore nuanced, qualitative aspects of nurses' experiences and perceptions. Future research should consider employing longitudinal designs, qualitative methods, and broader sample populations to enhance the understanding and applicability of these findings.

## Results

Among the nurses who participated in the study, 53.5% were between the ages of 19-30, 86.6% were female, 61.2% were married, and 47% had children. A total of 80.1% of the nurses had an associate's/undergraduate degree. Regarding professional experience, 38.8% had worked as a nurse for 0-5 years, 38.8% for 6-15 years, and 61.5% as pediatric nurses. Out of all the participants, 69.3% worked without distinction between day and night shifts, and 80.4% reported that they liked their profession. In contrast, 50.1% stated that they were physically and emotionally dissatisfied with the working environment.

**Table 1. Distribution of Jefferson Empathy Scale (JSE) and Trait Emotional Intelligence Questionnaire (TEIQue) scores according to scale subscale mean scores**

|   | Mean  | SD    | Median | Min; Maks |
|---|-------|-------|--------|-----------|
| <b>Jefferson Empathy Scale (JSE) Scores</b>                       |       |       |        |           |
| <b>Subdimensions</b>  |       |       |        |           |
| Perspective Taking (PT)   | 53.89 | 10.45 | 55.00  | 15; 70    |
| Compassionate Care (CC)   | 22.50 | 7.04  | 21.00  | 8; 47     |
| Standing in the Patient's Shoes (SPS)                             | 7.07  | 2.97  | 7.00   | 2; 14     |
| Total   | 83.46 | 11.27 | 83.00  | 46; 120   |
| <b>Trait Emotional Intelligence Questionnaire (TEIQue) Scores</b> |       |       |        |           |
| <b>Subdimensions</b>  |       |       |        |           |
| Well-Being  | 5.35  | 1.03  | 5.50   | 2.0; 7.0  |
| Self-Control  | 5.00  | 1.20  | 5.00   | 1.3; 7.0  |
| Emotionality  | 5.05  | 0.94  | 5.25   | 2.5; 7.0  |
| Sociability   | 4.95  | 1.18  | 5.00   | 1.8; 7.0  |
| Total   | 5.21  | 1.10  | 5.25   | 2.0; 7.0  |

The nurses scored 53.89 on the PT subdimension, 22.50 on the CC subdimension, and 7.07 on the SPS subdimension of the Jefferson Empathy Scale (JSE), for a total mean score of 83.46 (Table 1). They also scored 5.35 on the Well-Being subscale, 5.00 on the Self-Control subscale, 5.05 on the Emotionality subscale, and 4.95 on the Sociability subscale of the Trait Emotional Intelligence Questionnaire (TEIQue), for a total mean score of 5.21 (Table 1).

Although not included in the table, there was a significant difference ( $p<0.05$ ) between the PT subdimension of the Jefferson Empathy Scale (JSE) and years of employment (0-5 years, and 16 years or more), physical and emotional satisfaction with the work environment, and liking the profession. A significant difference was found between the CC subdimension and gender (male), having a child, and years of working in the nursing profession (16 years or more) ( $p<0.05$ ). There was also a significant difference between CC and age groups ( $\chi^2:7.688$ ;  $p<0.05$ ). As a result of the post hoc pairwise comparison test performed to determine the different groups, the specific groups responsible for the difference could not be determined ( $p<0.05$ ). It was determined that there was a statistically significant difference between the total score of the JSE, and years of working in the nursing profession (16 years or more), and the status of being physically and emotionally satisfied with the working environment ( $p<0.05$ ).

**Table 2. Regression analysis results for the total and subdimensions of the Jefferson Empathy Scale**

| Subdimensions   | B      | SE (B) | $\beta$ | t      | p       |
|---|--------|--------|---------|--------|---------|
| <b>Perspective Taking (PT)</b>  |        |        |         |        |         |
| Having a child  | 53.850 | 1.266  | 0.976   | 42.523 | <0.001  |
| Years of working in the nursing profession (6-15 years)               | -3.295 | 1.488  | -0.043  | -2.214 | 0.028*  |
| Physical and emotional satisfaction with the working environment      | 4.350  | 1.491  | 0.054   | 2.917  | 0.004** |
| $R^2= 0.967$ ; $p=3$ ; Durbin Watson: 0.790; $F=1773.574$ ; $p<0.001$ |        |        |         |        |         |
| <b>Compassionate Care (CC)</b>  |        |        |         |        |         |
| Having a child  | 22.707 | 0.535  | 0.941   | 42.425 | <0.001  |
| Mode of work (night)  | 3.333  | 1.444  | 0.051   | 2.308  | 0.022*  |
| $R^2= 0.923$ ; $p=2$ ; Durbin Watson:0.841; $F=1088.413$ ; $p<0.001$  |        |        |         |        |         |
| <b>(Standing in the Patient's Shoes (SPS))</b>                        |        |        |         |        |         |
| Having a child  | 6.808  | 0.213  | 0.921   | 31.900 | <0.001  |
| $R^2= 0.848$ ; $p=1$ ; Durbin Watson:0.936; $F=1017.608$ ; $p<0.001$  |        |        |         |        |         |
| <b>Total</b>  |        |        |         |        |         |
| Having a child  | 81.104 | 1.327  | 0.955   | 61.110 | <0.001  |
| Years of working in the nursing profession (16 years or more)         | 3.426  | 1.648  | 0.027   | 2.079  | 0.039*  |
| Physical and emotional satisfaction with the working environment      | 3.381  | 1.637  | 0.027   | 2.065  | 0.040*  |
| $R^2= 0.983$ ; $p=3$ ; Durbin Watson:0.726; $F=3541.623$ ; $p<0.001$  |        |        |         |        |         |

$R^2$ : Coefficient of Explanation; p: Number of independent variables

\* $p<0.05$ ; \*\* $p<0.01$

When the regression analysis of the variables, which were found to have a significant difference between the JSE scores was analyzed, it was observed that having a child increased the PT subdimension score by 53.850 points, the CC subdimension score by 22.707 points, the SPS subdimension score by 6.808 points, and the JSE total score by 81.104 points. Years of working in the profession (6-15 years) decreases the PT subscale score by 3.295 points, while increasing years of working in the profession (16 years or more) increased the total score of the JSE by 3.426 points. Being physically and emotionally satisfied with the working environment increased the PT subscale score by 4.350 points and the total score of the JSE by 3.381 points. The CC subdimension scores of nurses working at night increased by 3.333 points (Table 2).

Although not included in the table, there was a significant statistical difference ( $p<0.05$ ) between Trait Emotional Intelligence Questionnaire (TEIQue) subdimensions of Well-Being and age, years of working in the nursing profession (16 years or more), clinic (outpatient/emergency, inpatient clinic), physical and emotional satisfaction with the working environment, and liking the profession. There was a significant difference between the Self-Control subdimension of TEIQue and marital status, having a child, years of working in the nursing profession, and the clinic (outpatient/urgent clinic) ( $p<0.05$ ). There was a significant difference between the Emotionality subdimension of TEIQue and gender (female) and liking the profession ( $p<0.05$ ). There was a significant difference ( $p<0.05$ ) between TEIQue total score and age (40 years and over), clinic (outpatient/emergency), physical and emotional satisfaction with the working environment, and liking the profession.

**Table 3. Regression analysis results of Trait Emotional Intelligence Questionnaire-Short Form (TEIQue) total and subdimensions**

| Subdimensions   | B       | SE (B) | $\beta$ | t      | p                |
|---|---------|--------|---------|--------|------------------|
| <b>Well Being*</b>  |         |        |         |        |                  |
| Age (40 years and over)   | 0.041   | 0.013  | 0.284   | 3.275  | <b>0.001**</b>   |
| Having a child  | 3.328   | 0.499  | 0.604   | 6.673  | <b>&lt;0.001</b> |
| Education (High School)   | - 0.458 | 0.225  | - 0.030 | -2.030 | <b>0.044*</b>    |
| Mode of operation (Daytime)   | 0.364   | 0.162  | 0.038   | 2.254  | <b>0.025*</b>    |
| Love for the profession   | 0.563   | 0.209  | 0.094   | 2.693  | <b>0.008**</b>   |
| $R^2= 0.967$ ; $p=5$ ; Durbin Watson:0.840; $F=1032.038$ ; $p<0.001$  |         |        |         |        |                  |
| <b>Self-Control **</b>  |         |        |         |        |                  |
| Marital status (Married)  | 0.803   | 0.387  | 0.147   | 2.077  | <b>0.039*</b>    |
| Having a child  | 3.899   | 0.422  | 0.736   | 9.236  | <b>&lt;0.001</b> |
| Love for the profession   | 0.595   | 0.241  | 0.103   | 2.472  | <b>0.014*</b>    |
| $R^2= 0.950$ ; $p=3$ ; Durbin Watson:0.898; $F=11.47.033$ ; $p<0.001$ |         |        |         |        |                  |
| <b>Emotionality***</b>  |         |        |         |        |                  |
| Gender (Female)   | 0.471   | 0.203  | 0.084   | 2.313  | <b>0.022*</b>    |
| Having a child  | 4.206   | 0.254  | 0.815   | 16.551 | <b>&lt;0.001</b> |
| Love for the profession   | 0.541   | 0.201  | 0.096   | 2.695  | <b>0.008**</b>   |
| $R^2= 0.963$ ; $p=3$ ; Durbin Watson:0.798; $F=1587.477$ ; $p<0.001$  |         |        |         |        |                  |
| <b>Sociability****</b>  |         |        |         |        |                  |
| Having a child  | 4.405   | 0.223  | 0.874   | 19.731 | <b>&lt;0.001</b> |
| Love for the profession   | 0.580   | 0.244  | 0.106   | 2.382  | <b>0.018*</b>    |
| $R^2= 0.943$ ; $p=2$ ; Durbin Watson:0.853; $F=1509.866$ ; $p<0.001$  |         |        |         |        |                  |
| <b>Total *****</b>  |         |        |         |        |                  |
| Having a child  | 4.482   | 0.226  | 0.827   | 19.820 | <b>&lt;0.001</b> |
| Years of working in the nursing profession (16 years or more)         | 0.427   | 0.162  | 0.052   | 2.628  | <b>0.009**</b>   |
| Years of working in pediatric clinics (6-15 years)                    | 0.374   | 0.163  | 0.051   | 2.296  | <b>0.023*</b>    |
| Love for the profession   | 0.516   | 0.220  | 0.087   | 2.342  | <b>0.020*</b>    |
| $R^2= 0.960$ ; $p=4$ ; Durbin Watson:0.848; $F=1102.063$ ; $p<0.001$  |         |        |         |        |                  |

$R^2$ : Coefficient of Explanation; p: Number of independent variables.

\* $p<0.05$ ; \*\* $p<0.01$

When the regression analysis of the variables found a significant difference between TEIQue scores, it was observed that being 40 years of age or older increased the well-being subdimension score by 0.041. Having a child increased the Well-Being subdimension score by 3.328, the Self-Control subdimension score by 3.899, the Emotionality subdimension score by 4.206, and the total score by 4.482 points. While high school education decreased the Well-Being subdimension score by 0.458 points, daytime employment increased the Well-Being subdimension score by 0.364 points. Loving one's profession increased the Well-Being subscale score by 0.563 points, the Self-Control subscale score by 0.595 points, the Emotionality subscale score by 4.206 points, the Sociability subscale score by 0.580 points, and the total TEIQue score by 0.516 points. The Self-Control subdimension score of married nurses increased by 0.803 points, and the Emotionality subdimension score of female nurses increased by 0.471 points. The total TEIQue score increased by 0.427 points in nurses with 16 or more years of employment in the nursing profession, and by 0.374 points in nurses with 6-15 years of employment in pediatric clinics (Table 3).



**Table 4. The relationship between subscale and total scores of TEIQue and JSE**

|                     | PT                               | CC                              | SPS                             | JSE                             | Well Being                      | Self-Control                    | Emotionality                    | Sociability                     |
|---------------------|----------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| <b>CC</b>           | rho= -0.311<br><b>p&lt;0.001</b> |                                 |                                 |                                 |                                 |                                 |                                 |                                 |
| <b>SPS</b>          | rho= -0.054<br>p= 0.293          | rho= 0.132<br><b>p=0.009**</b>  |                                 |                                 |                                 |                                 |                                 |                                 |
| <b>JSE</b>          | rho= 0.714<br><b>p&lt;0.001</b>  | rho= 0.327<br><b>p&lt;0.001</b> | rho= 0.286<br><b>p&lt;0.001</b> |                                 |                                 |                                 |                                 |                                 |
| <b>Well Being</b>   | rho= 0.286<br><b>p&lt;0.001</b>  | rho= -0.075<br>p= 0.139         | rho= -0.067<br>p= 0.190         | rho= 0.220<br><b>p&lt;0.001</b> |                                 |                                 |                                 |                                 |
| <b>Self-Control</b> | rho= 0.077<br>p= 0.129           | rho= -0.076<br>p= 0.134         | rho= -0.105<br><b>p=0.038*</b>  | rho= -0.003<br>p= 0.948         | rho= 0.444<br><b>p&lt;0.001</b> |                                 |                                 |                                 |
| <b>Emotionality</b> | rho= 0.212<br><b>p&lt;0.001</b>  | rho= -0.090<br>p= 0.078         | rho= -0.047<br>p= 0.356         | rho= 0.141<br><b>p=0.005**</b>  | rho= 0.387<br><b>p&lt;0.001</b> | rho= 0.340<br><b>p&lt;0.001</b> |                                 |                                 |
| <b>Sociability</b>  | rho= 0.048<br>p= 0.343           | rho= -0.042<br>p= 0.407         | rho= -0.101<br><b>p=0.048*</b>  | rho= 0.003<br>p= 0.958          | rho= 0.423<br><b>p&lt;0.001</b> | rho= 0.473<br><b>p&lt;0.001</b> | rho= 0.336<br><b>p&lt;0.001</b> |                                 |
| <b>TEIQue</b>       | rho= 0.218<br><b>p&lt;0.001</b>  | rho= -0.096<br>p= 0.059         | rho= -0.091<br>p= 0.073         | rho= 0.117<br><b>p=0.022*</b>   | rho= 0.577<br><b>p&lt;0.001</b> | rho= 0.561<br><b>p&lt;0.001</b> | rho= 0.441<br><b>p&lt;0.001</b> | rho= 0.579<br><b>p&lt;0.001</b> |

JES: Jefferson Empathy Scale, CC: Compassionate Care, PT: Perspective Taking, SPS: Standing in the Patient's Shoes, Rho: Spearman correlation coefficient.

\*p<0.05; \*\*p<0.01

While a weak, significant positive correlation was found between the JSE's PT subdimension and the TEIQue's Well-Being and Emotionality subdimensions, no correlation was found between the total scores of JSE and TEIQue (Table 4).

## Discussion

This study highlights the key factors influencing empathy and emotional intelligence in pediatric nurses. The findings reveal that parenthood is a significant determinant, with nurses who are parents exhibiting higher scores across all subdimensions of both the JSE and TEIQue. This suggests that personal parenting experiences shape professional behavior, allowing nurses to develop a deeper understanding of the fears, anxieties, and emotional needs of pediatric patients and their families. Understanding such challenges could allow parent nurses to provide more compassionate and family-centered care (Yayan et al., 2020). In addition, parenting improves emotional intelligence traits like self-regulation, emotional awareness, and empathy, thereby fostering more effective communication and trust with patients (Sertakan and Yildirim, 2020).

Previous research has demonstrated that professional experience is also a crucial factor in empathy and emotional intelligence development. Nurses with extensive clinical backgrounds tended to exhibit greater sensitivity to the needs of patients, which is in line with earlier findings suggesting that long-term patient interactions strengthen both emotional awareness and observational skills of nurses (Mazzella Ebstein et al., 2019). However, mid-career nurses, who have 6-15 years of experience, displayed lower perspective-taking scores than their early-career and late-career counterparts. This decline may result from burnout and emotional fatigue, which reduce empathetic engagement (Aslan and Koksak Akyol, 2016). Supporting mid-career nurses through resilience training and stress management programs may help sustain empathy and emotional intelligence throughout their careers.

The study further indicated that the higher the education levels of nurses are, the higher their well-being scores are. This finding is in line with previous studies showing that higher education enhances problem-solving abilities, emotional regulation, and self-awareness, which are critical components of pediatric nursing care (Kahraman and Hicdurmaz, 2016). Furthermore, married nurses were found to possess better self-control skills, possibly thanks to emotional regulation advantages provided by stable relationships (Okumus and Ugur, 2017).

Another critical finding is that physical and emotional satisfaction with the work environment is positively associated with higher empathy scores among nurses. A supportive organizational culture, adequate resources, and collaborative team dynamics may strengthen this attribute and, in turn, benefit both nurses and patients. Additionally, night-shift nurses had higher scores in compassionate care, possibly because they need closer teamwork and interact with patients more directly during night shifts. On the other hand, day-shift nurses displayed higher well-being scores, possibly due to improved work-life balance and more structured schedules.

Love for the nursing profession was also reported to greatly enhance emotional intelligence, which positively affects its subdimensions and overall scores. The increase of job satisfaction, life satisfaction, professional engagement, and reinforcement of positive work behaviors such as adaptability and compassion greatly depend on emotional intelligence (Petrides et al., 2016; Sharma et al., 2023). A supportive work environment enhances these attributes and enables nurses to deal with emotional difficulties effectively and achieve improved patient outcomes.

Although there was no direct relationship between overall empathy and emotional intelligence scores, specific subdimensions demonstrated significant relationships, suggesting that these attributes function as complementary but distinct skills in clinical practice. As emotionally intelligent nurses are likely to be better equipped to express empathy, they can achieve more positive patient care outcomes and greater professional satisfaction (Hajibabae et al., 2018).

## Conclusion and Recommendations

This study highlights the key factors influencing empathy and emotional intelligence in pediatric nurses. Parenthood is accepted as a significant determinant and offers nurses profound insight into what kind of emotional needs patients may have. Professional experience enhances these traits over time, while mid-career challenges like burnout can lead to temporary setbacks. In addition, education and a supportive work environment play crucial roles in promoting emotional well-being and empathy. Although overall empathy and emotional intelligence scores showed no strong relationship, their complementary nature underscores the importance of targeted training. Through programs focusing on emotional intelligence, family-centered care, and workplace stress management, these essential skills can be strengthened. With the help of these programs, healthcare institutions can improve nurse-patient relationships, increase job satisfaction, and enhance outcomes for pediatric patients and their families.

This study offers feasible approaches to enhancing empathy and emotional intelligence in pediatric nurses. Since parenthood was identified as a key determinant, simulation-based training that mimics caregiving experiences is recommended to help develop empathy in non-parent nurses. Additionally, targeted professional development programs, such as resilience workshops and empathy training, are vital for eliminating burnout and maintaining emotional engagement, specifically for mid-career nurses. Improvements in workplace conditions by fostering teamwork, reducing conflicts, as well as creating supportive environments, can further strengthen nurses' emotional well-being and empathy. Including empathy and emotional intelligence in advanced educational curricula and organizing regular workshops on emotional regulation and stress management can equip nurses with essential skills to address clinical challenges effectively. These strategies which collectively promote a nurturing environment may result in better patient outcomes and greater job satisfaction for pediatric nurses.

**Author Contribution:** The authors confirm contribution to the paper as follows; study conception and design: MO, SK ; data collection: MO; analysis and interpretation of results: MO, SK; draft manuscript preparation: MO, SK. All authors reviewed the results and approved the final version of the manuscript.

**Ethics Committee Approval:** Ankara Yıldırım Beyazıt University Ethics Committee approval was obtained (Date: 10.10.2018 - Number: 24).

**Conflict of Interest:** The authors declare that there is no conflict of interest.

**Funding:** The authors declare that the study has no financial support.

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

**Yazarlık Katkısı:** Yazarlar makaleye katkılarını şu şekilde beyan etmektedir; çalışma fikri ve tasarımı: MO, SK; veri toplama: MO; sonuçların analizi ve yorumlanması: MO, SK; aday makalenin hazırlaması: MO, SK. Tüm yazarlar sonuçları gözden geçirdi ve makalenin son halini onayladı.

**Etik Kurul Onayı:** Ankara Beyazıt Üniversitesi Etik Kurulu tarafından onaylanmıştır (Tarih: 10.10.2018 - Karar No: 24).

**Çıkar Çatışması:** Yazarlar herhangi bir çıkar çatışması olmadığını beyan ederler.

**Finansal Destek:** Yazarlar çalışmanın finansman desteği olmadığını beyan ederler.

**Katılımcı Onamı:** Katılımcıların bilgilendirilmiş onamları alınmıştır.



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