

# Assessing the professional quality of life in the context of pediatric care (#92933)

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First submission

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# Assessing the professional quality of life in the context of pediatric care

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**Background.** This study examines the professional quality of life (ProQOL), including compassion satisfaction (CS) and compassion fatigue (CF), burnout (BO) and secondary traumatic stress (STS) among registered nurses in the context of pediatric care. **Methods.** This study utilised a random multistage sampling method and a survey to collect data from 250 participants on personal characteristics, work-related aspects, lifestyle, and professional quality of life. **Results.** The study participants were all female. Only 2.0% were under 25, with 27.2% aged between 25 and 30 years, 24.0% aged between 31 and 35, and 26.4% over 40 years old. The majority, 74%, were non-Saudis. The participants reported low Compassion Satisfaction (CS) and Compassion Fatigue (CF) levels. The CS, Burnout (BO), and Secondary Traumatic Stress (STS) scores were  $3.23 \pm 0.764$ ,  $2.75 \pm 0.68$ , and  $2.69 \pm 0.54$ , respectively. The study found a significant difference in ProQOL level based on factors such as age, nationality, previous experience, department, shift length, overtime work, state of overtime, and salary. **Conclusions.** Working with vulnerable groups poses unique challenges for pediatric nurses. The nationality, salary, and overtime status of nurses were found to be significantly different when compared to CS scores. Additionally, age, department, previous experience, shift length, and overtime work were very different compared to CF scores. However, lifestyle factors did not affect CS and CF scores significantly. **Implications.** To improve their well-being and reduce depression, pediatric nurses should practice self-compassion and utilise available educational resources such as workshops. They should also strive to achieve a work-life balance and adopt healthy habits to reduce CF.

1 **Assessing the Professional Quality of Life in the context of pediatric care.**

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30 **Abstract**

31 **Background.** This study examines the professional quality of life (ProQOL), including  
32 compassion satisfaction (CS) and compassion fatigue (CF), burnout (BO) and secondary  
33 traumatic stress (STS) among registered nurses in the context of pediatric care.

34 **Methods.** This study utilised a random multistage sampling method and a survey to collect data  
35 from 250 participants on personal characteristics, work-related aspects, lifestyle, and  
36 if any ethical committee approval was taken to conduct this study, if taken then mention under methods  
37 professional quality of life.

38 **Results.** The study participants were all female. Only 2.0% were under 25, with 27.2% aged  
39 between 25 and 30 years, 24.0% aged between 31 and 35, and 26.4% over 40 years old. The  
40 majority, 74%, were non-Saudis. The participants reported low Compassion Satisfaction (CS)  
41 and Compassion Fatigue (CF) levels. The CS, Burnout (BO), and Secondary Traumatic Stress  
42 (STS) scores were  $3.23 \pm 0.764$ ,  $2.75 \pm 0.68$ , and  $2.69 \pm 0.54$ , respectively. The study found a  
43 significant difference in ProQOL level based on factors such as age, nationality, previous  
44 experience, department, shift length, overtime work, state of overtime, and salary.

45 **Conclusions.** Working with vulnerable groups poses unique challenges for pediatric nurses. The  
46 nationality, salary, and overtime status of nurses were found to be significantly different when  
47 compared to CS scores. Additionally, age, department, previous experience, shift length, and  
48 overtime work were very different compared to CF scores. However, lifestyle factors did not  
49 affect CS and CF scores significantly.

50 **Implications.** To improve their well-being and reduce depression, pediatric nurses should  
51 practice self-compassion and utilise available educational resources such as workshops. They  
52 should also strive to achieve a work-life balance and adopt healthy habits to reduce CF.

53 **Keywords:** Compassion, Fatigue, Burnout, Pediatric, Nurses

## 54 **Introduction**

55

56           The assessment of the professional quality of life in pediatric care can be challenging due  
57 to the unique needs of children. Pediatric nurses are crucial in providing quality healthcare to  
58 children (Alharbi & Alrwaitey, 2022). The care provided to different age groups, from infants to  
59 adolescents, requires professional management during distinct stages of motor, physical,  
60 emotional, and cognitive development (Alharbi & Alrwaitey, 2023). Nursing care in this context  
61 is challenging but essential for ensuring the best possible outcomes for young patients, especially  
62 when it comes to caring for sick children; it can be emotionally challenging to provide support to  
63 families who are experiencing emotional stress. According to a study by Hernández et al. (2019),  
64 many pediatric nurses have reported moderate-to-high levels of emotional exhaustion,  
65 depersonalisation, and low levels of personal accomplishment.

66           Pediatric nurses work in multidisciplinary teams as they may face ethical dilemmas when  
67 making decisions on behalf of the most vulnerable patient group or encountering child abuse or  
68 severe injuries (Larson et al., 2017). Pediatric nurses need clinical skills, compassion, patience,  
69 and an understanding of child development to navigate these challenges (Alharbi & Alrwaitey,  
70 2023). Compassion is essential to healthcare, especially when treating young patients (Balakhdar  
71 & Alharbi, 2023). A Scoping Review conducted by Sinclair et al. (2020) has identified several  
72 factors associated with compassion in pediatric healthcare. These factors include continuity of  
73 care, effective communication, and care coordination (Sinclair et al., 2020). Developing  
74 relationships and delivering compassionate nursing care are critical when working with pediatric  
75 patients, and providing such care can enhance patients' experiences and outcomes (Sinclair et al.,  
76 2020). It is widely recognised that the nursing profession places great importance on  
77 compassion, as it can significantly affect nurses' physical and psychological well-being

78 positively or negatively (Kase et al., 2018). Exposure to recurring negative situations that require  
79 compassion, whether in a professional setting or a challenging relationship, can result in  
80 compassion fatigue (CF) (Craigie et al., 2016). According to Stamm (2010), CF is a mixture of  
81 physical, emotional, and spiritual exhaustion that arises from providing care for individuals who  
82 are experiencing intense emotional and physical pain. However, caregivers are not always  
83 emotionally distressed by exposure to such situations (Sacco & Copel, 2017). The term  
84 Compassion Fatigue (CF) incorporates two comparable concepts: burnout (BO) and secondary  
85 traumatic stress (STS) (Peters, 2018). Burnout is characterised by a slow onset of emotional  
86 exhaustion, powerlessness, cynicism, and feelings of inadequacy related to one's job (Hunt et al.,  
87 2017). Secondary traumatic stress is a phenomenon that occurs when an individual becomes  
88 exposed to the traumatic experiences of others. Subsequently, they experience stress due to their  
89 desire to help the affected individual (Jenkins & Warren, 2012).

90 Nurses may experience emotional and physical exhaustion, restlessness, avoidance,  
91 anxiety, and fatigue as a result of Burnout (BO) and Secondary Traumatic Stress (STS). BO and  
92 STS can lead to compassion fatigue and may affect the nurse's ability to provide technically  
93 proficient and empathetic care, as per studies conducted by Shoji et al. (2015) and Sorenson et al.  
94 (2016). Simultaneously, working in a stressful environment, such as the medical field, can  
95 expose the individual to BO and STS. Nurses face difficult working conditions every day. Nurses  
96 face various stressors that can cause work-related stress, leading to Compassion Fatigue (CF).  
97 CF is a severe issue that can severely impact the nurses' ability to perform their daily job  
98 activities. Healthcare facilities can benefit by focusing on measures to sustain a competent and  
99 caring nursing staff. A skilled and caring nursing staff is associated with patient satisfaction with



100 nursing care and is considered a predictor of overall patient satisfaction with hospital care (Potter  
101 et al., 2013).

102 Nurses working in paediatrics are at risk of developing compassion fatigue due to  
103 secondary trauma (Berger et al., 2015) as the nurses deal with a population that requires  
104 significant sensitivity, which may increase the difficulty of their job. A similar study involving  
105 paediatric nurses in India indicated high stress in neonatal intensive care units (NICUs) (Amin et  
106 al., 2015). Another study conducted in the USA assessed CF among paediatric nurses and found  
107 lower CS and higher levels of BO, especially among those who had worked more than six years  
108 in paediatric nursing care (Berger et al., 2015), according to a study conducted in Saudi Arabia  
109 (SA) that included 46 nurses who participated in intensive care units, 2.75% suffered from BO  
110 syndrome (Habadi et al., 2018). A study in SA revealed very low CS, indicating an increased  
111 potential for the development of CF. Additionally, the study reported that coping strategies did  
112 not predict CS or CF, and resilience predicted CS and CF among nurses in critical care units  
113 (Alharbi et al., 2020b). A more recent study revealed moderate levels of CS, low levels of BO,  
114 and moderate levels of STS among pediatric nurses (Balakhdar & Alharbi, 2023).

115 Various factors influence pediatric nurses' professional quality of life (ProQOL). The  
116 ProQOL of these nurses is affected by personal-related environmental, work-related  
117 environmental, pediatric-related environmental, and family-related environmental factors  
118 (Balakhdar & Alharbi, 2023). For instance, years of experience had a mixed effect on the level of  
119 CF and CS, according to a study by Kelly et al. (2015). The study surveyed 491 bedside nurses  
120 to explore predictors of CF and CS. Results indicated that as nurses gained work experience,  
121 they were more likely to have higher CF and lower CS.

122 In contrast, Mooney et al. (2017) conducted a study among oncology and intensive care  
123 unit (ICU) nurses to identify factors influencing CF and CS. They found that years of experience  
124 did not impact CS or BO levels but impacted CF, with scores decreasing with increasing years of  
125 experience. In Australia, a study by Jakimowicz et al. (2017) among ICU nurses with a  
126 bachelor's degree examined determinants predicting and contributing to CS and CF. The  
127 findings showed that those with a bachelor's degree had better CS scores than those with lower  
128 degrees (Jakimowicz et al., 2018). According to a study by Helfrich et al. (2017), several work-  
129 related factors were associated with BO. The study investigated the relationships between  
130 primary care staff BO and the staffing and workload on their teams. The study included nurse  
131 care managers, clinical associates and administrative assistants. The overall level of BO was  
132 41%. The strongest correlations in focused analyses were BO and having an entire team,  
133 turnover among co-workers and overcapacity of patient panels. The BO level was 30.1% lower  
134 for participants who cared for a meeting within their capacity and worked on fully staffed teams  
135 with no turnover.

136 A study conducted by Beck et al. (2017) explored the support experience of NICU nurses  
137 after a traumatic event. The findings highlighted the importance of supportive colleagues,  
138 debriefing opportunities, prayer, speaking with a chaplain, and finding peaceful spaces for  
139 reflection. Conversely, ineffective communication, limited resources, unsupportive colleagues,  
140 and poor leadership were identified as factors that increased distress. Another study conducted  
141 by Barr (2017) in New South Wales, Australia, focused on 140 NICU nurses from four different  
142 NICUs. It examined the relationship between work stress, social support, compassion fatigue  
143 (CF), and compassion satisfaction (CS). The results revealed that workplace stress was  
144 associated with CF and CS. CF was predicted by role conflict and role overload, while role

145 ambiguity was an individual predictor of CS. Social support predicted burnout (BO) and CS but  
146 not in the presence of secondary traumatic stress (STS). Individualised social support based on  
147 intimacy predicted BO and CS, and individualised reassurance of worth predicted BO. Overall,  
148 both mediated and moderated social support positively affected CS and STS. CS did not  
149 influence the relationship between work stress and CF. Based on the findings, Barr (2017)  
150 concluded that role ambiguity, work overload, inadequate social support, and lack of  
151 appreciation were predictors within the NICU environment. In a study conducted by Wang et al.  
152 (2020) in China between 2018 and 2020, the impact of working and living conditions on nurses'  
153 compassion, personal well-being, and secondary stress was examined. The study included 1,044  
154 registered nurses from different agencies using the Professional Quality of Life Compassion  
155 Scale (ProQOL). The findings indicated that older married individuals with healthy sleep  
156 routines and sufficient sleep tended to have higher satisfaction with their relationships with  
157 others. Unsatisfied nurses exhibited personal behaviours, such as smoking, that negatively  
158 affected their compassion towards patients.

159         Nurses in Saudi Arabia face risks such as compassion fatigue (CF), burnout (BO), and  
160 secondary traumatic stress (STS). While research on CS and CF as a universal concept continues  
161 to expand, this study focuses specifically on CF and CS among registered pediatric nurses in SA.  
162 Previous studies have highlighted inconsistent findings and a need for more knowledge about the  
163 local context in SA. Understanding the factors contributing to this balance can help institutions  
164 retain nurses, reduce turnover, and create a better work environment. This, in turn, supports  
165 nurses in overcoming CF and enables employers to identify nurses experiencing CF. Assessing  
166 CF and CS among pediatric nurses can shed light on the emotional well-being of nurses in  
167 pediatric departments and provide a foundation for policymakers to improve work environments

168 and enhance CS. The current study highlights CF and CS, highlighting pediatric nurses'  
169 significant challenges. The results help fill the literature gap regarding the impact of CF and CS  
170 on pediatric nurses in SA. Following the conceptual model of ProQOL (Stamm, 2010), this study  
171 examines the differences in CS and CF among pediatric nurses in SA based on socio-  
172 demographic characteristics, work-related factors, and lifestyle patterns. Thus, the present study  
173 investigates CS and CF among pediatric nurses in SA.

## 174 **Materials & Methods**

### 175 *Study Design*

176 The study utilised a cross-sectional descriptive design. The target population included  
177 paediatric nurses working in critical and non-critical paediatric departments. The study occurred  
178 at Alymamh Hospital and King Saud Medical City (KSMC) Hospital. Alymamh Hospital  
179 specialised in maternal and child healthcare, while King Saud Medical City was a more  
180 extensive medical complex. Both hospitals had multiple paediatric departments, including  
181 critical care units, emergency room (ER) and special care units. They also had non-critical care  
182 units, including general surgical and medical wards. The total population of pediatric nurses in  
183 the two hospitals were 745 nurses. In this study, 250 pediatric nurses were included at Alymamh  
184 Hospital (n = 63, 25.2%) and King Saud Medical City (n = 187, 74.8%). All the included 250  
185 nurses had completed the surveys. The study used a random multistage sampling method—a  
186 step-by-step approach to select participants. First, a random sample of clusters was chosen from  
187 two hospitals. Two groups were chosen from each hospital. In the second step, participants were  
188 selected within each set using systematic random sampling. The sample size for each cluster was  
189 determined based on the formula:  $(\text{sample size}/\text{population size}) \times \text{cluster size}$ . As a result, the  
190 target population sizes for the groups were as follows: Alymamh Hospital - 154 nurses in critical

191 units for cluster one, 38 nurses in general units for cluster two; KSMC Hospital - 317 nurses in  
192 critical units for cluster three, 236 nurses in available units for cluster four. Considering a 20%  
193 dropout rate, the final sample consisted of 250 pediatric nurses.

#### 194 ***Instrument***

195 The study included two parts. The first part covered personal characteristics, work-related  
196 aspects (like experience, salary, shift length, overtime arrangements, rota placement), and  
197 lifestyle aspects of nurses (such as hobbies, diet, sleep patterns, smoking, and social life). The  
198 second part was the ProQOL-5, a tool developed by Stamm in 2010. It comprised 30 items  
199 divided into three subscales (CS, BO, and STS). Each subscale had ten questions, scored from 5  
200 (never) to 1 (very often), resulting in scores ranging from 10 to 50. However, items 1, 4, 15, 17,  
201 and 29 were scored opposite (from 5 = never to 1 = very often). The positive factor in ProQOL-5  
202 was CS, while the negative factor was CF (BO and STS). Higher scores on the CS subscale  
203 indicated greater satisfaction, while higher scores on the BO subscale indicated higher risk.  
204 Higher STS subscale scores suggested that a nurse should review their feelings about work and  
205 the work environment and might need to discuss this with a supervisor, colleague, or healthcare  
206 professional. The validity and reliability of the ProQOL have been tested in different situations  
207 and languages. Geoffrion et al. (2019) examined the construct validity of the Professional  
208 Quality of Life (ProQoL) Scale, which measures psychological distress at work and the quality  
209 of work-life. Another study in Australia involving 1615 nurses found strong evidence of  
210 construct validity for the CS and CF scales (Sorenson et al., 2016). A survey by Balakhdar  
211 Alharbi (2023) in Saudi Arabia demonstrated acceptable reliability of the ProQOL tool, with  
212 Cronbach's alpha coefficients of 0.89 for CS, 0.83 for BO, and 0.78 for STS. The ProQOL-5 in

213 this study showed acceptable internal reliability, with Cronbach's  $\alpha$  values of 0.90 for CS, 0.79  
214 for BO, and 0.82 for STS.

### 215 ***Data collection procedure***

216 The initial step was contacting the two hospitals and obtaining official approval for the  
217 study. Subsequently, data were collected using Google to create an online form. The form was  
218 installed on mobile drives like tablets, and it used a force-filling feature to ensure that  
219 participants filled in all the critical fields. The survey was shared with pediatric nurses through a  
220 hyperlink and an informed consent form that needed to be acknowledged before proceeding with  
221 the questionnaire. Researchers visited the clinical area several days a week, met the participants  
222 and asked them to fill out the form on the device. At the same time, researchers waited nearby to  
223 help participants with any questions. Responses from participants were collected over six weeks  
224 from June 2021 to July 2021.

### 225 ***Data analysis***

226 The Statistical Package for the Social Sciences (version 27) was used for data analysis. A  
227 descriptive statistical analysis was conducted to determine the frequency and percentage of the  
228 variables in the study and to understand the distribution of the participants. Bivariate analysis,  
229 specifically one-way analysis of variance (ANOVA), was used to examine significant mean  
230 differences between CS, BO, STS, and other variables. This research considered a mean  
231 difference at the 0.05 level necessary. Additionally, the results indicated that the data exhibited a  
232 normal distribution based on histogram graphs. Following the ProQOL manual, the total scores  
233 were categorised as follows:  $\leq 22$  indicated a low level of ProQOL, 23–41 showed a moderate  
234 level, and  $\geq 42$  indicated a high level (Stamm, 2010).

### 235 ***Ethical considerations***

236 This study was approved by the Institutional Review Board at King Saud University to  
237 conduct the study (H-01-R-053). The researchers followed all ethical standards of the 1964  
238 Declaration of Helsinki and its later amendments or comparable ethical standards. Informed  
239 consent was obtained from all participants included in this study. The authors have permission  
240 from the copyright holders to use this instrument.

## 241 **Results**

### 242 *Descriptive of participants, compassion satisfaction and compassion fatigue*

243 This study included 250 paediatric nurses who worked at two designated hospitals. All the  
244 participants were females; only 2.0% were less than 25 years old, 27.2% were aged 25–30,  
245 24.0% were 31–35, and 26.4% were more than 40. There were 74% non-Saudis. Approximately  
246 46.9% had more than one child, and 10.7% had four or more children. 81.2% of participants had  
247 three years or more experience in paediatric nursing, and 63.2% worked in critical care  
248 departments. 77.2% had previous experience, 25.2% worked 8-hour shifts, and 34.8% worked  
249 overtime. Only 17.6% had a mandatory overtime schedule, and 48.4% had a fixed rota.  
250 Approximately 78.0% of the study participants had 5,000–9,000 SAR salaries. Only 15.2% had  
251 regular sleep patterns, and 38.4% had a healthy diet. Only 22.0% of the study participants  
252 socialised with their friends and family, 72.4% did not have a hobby, and only 2.0% smoked.  
253 The participants' social, work, and lifestyle characteristics are presented in Table 1.  
254 The total mean of CS among the study participants was  $3.23 \pm 76$ , which was relatively low. The  
255 actual mean for BO was  $2.75 \pm 0.68$ , which indicated a low level of BO among the study  
256 participants, and the total mean for STS was  $2.69 \pm 0.54$ , which showed a low level of STS. The  
257 prevalence of CS, BO and STS are presented in Figure 1. The majority of CS among the study

258 participants was 17.20%, BO was 0.0%, and STS was 2.00%. Table 2 shows the mean and  
259 standard deviation of the CS, BO and STS scale items.

### 260 *Relationship among study variables with ProQOL*

261 The relationship between the participants' characteristics, work-related aspects (like  
262 experience, salary, shift length, overtime arrangements, rota placement), lifestyle aspects, and  
263 ProQOL is presented in Table 3. There was a significant mean difference between the ages of  
264 participants and BO. There was a significant mean difference between nationality and CS. The  
265 participants' departments showed a significant mean difference with BO. Also, participants'  
266 previous experience, shift length and overtime work had a substantial relationship with STS. The  
267 state of overtime had a significant mean difference with CS. The participants' salary levels had  
268 significant mean differences with CS only. Finally, there was no meaningful relationship  
269 between practising lifestyle factors and ProQOL Scale scores among the participants.

### 270 **Discussion**

271 The study added to our understanding of CS and CF by examining pediatric nurses from  
272 different backgrounds who work in two major hospitals in Riyadh. The results revealed that  
273 pediatric RNs had relatively low CS, BO, and STS levels. These findings contrast with a recent  
274 study conducted in Makkah, SA, which found that pediatric RNs had moderate levels of CS and  
275 STS (Balakhdar & Alharbi, 2023). However, our results align with the finding of low levels of  
276 burnout in the Balakhdar & Alharbi study, which indicates that pediatric Registered Nurses  
277 (RNs) may encounter similar levels of compassion fatigue CS, BO, and STS in various  
278 scenarios.

279 The current findings in CS differ from similar studies conducted in other nursing  
280 specialities like ICU and ER. A survey by Varadarajan and Rani (2021) revealed a low level of



281 CS among all ICU nurses, regardless of gender or work position. Likewise, a study conducted by  
282 Polat et al. (2020) among nurses in various departments indicated a high level of CS across all  
283 departments. The results of the current study were quite similar to other studies involving  
284 pediatric nurses. Berger et al. (2015) conducted a study in the US with 239 participants and  
285 found that pediatric nurses generally experienced moderate to high levels of CS.

286 Additionally, Roney and Acri (2018) conducted a study which indicated that pediatric  
287 nurses had above-average levels of CS. Another survey by Polat et al. (2020) among nurses in  
288 several departments showed a similar finding: nurses in all departments had a high level of CS. It  
289 appears to be an individual experience that varies among nurses, regardless of gender or  
290 department.

291 In the current study, CF was assessed by measuring the prevalence of BO and STS.  
292 Further analysis of the prevalence of BO among the study participants revealed that, on average,  
293 82.20% of them experienced BO, but they all had a low level. This finding aligns with  
294 Varadarajan and Rani's (2021) study, which found that male and female ICU nurses also had a  
295 low level of BO. Additionally, Roney and Acri (2018) found results similar to our study,  
296 showing that pediatric nurses had slightly lower than average levels of BO. However, the study  
297 by Berger et al. (2015) reported different findings, stating that 29% of pediatric nurses  
298 experienced high levels of BO. Another study by Akman et al. (2016) also reported a high level  
299 of BO among pediatric nurses. In terms of STS prevalence among the participants, 2.0% of the  
300 study sample experienced it. This finding is comparable to Varadarajan and Rani's (2021) study,  
301 where a group of male and female ICU nurses also had a low level of STS.

302 Similarly, Roney and Acri (2018) and our current study found that pediatric nurses had  
303 slightly lower than average levels of STS. However, Berger et al. (2015) reported different

304 results, with 27% of pediatric nurses experiencing high levels of STS, which contrasts with our  
305 study, where only 2.00% had a high level of STS. Nurses' compassion satisfaction and  
306 compassion fatigue vary based on their work settings. Intense work environments can increase  
307 CF, while less demanding work environments can boost CS. Additionally, a supportive work  
308 environment plays a significant role in promoting CS and reducing CF.

309         Certain personal and work-related aspects significantly differed with CS, BO, and STS  
310 among pediatric nurses. Results showed that the participants' age was significantly related to  
311 BO, whereas there was no significant relationship between their age and their CS or STS. These  
312 findings were incongruent with Berger et al. (2015), who found that paediatric nurses older than  
313 40 had a high level of CS, whereas nurses less than 40 had a lower CS and a higher level of BO.  
314 A study by Akman et al. (2016) aimed to determine BO factors among 165 paediatric nurses and  
315 showed different findings. It showed that marital status and older age were associated with a low  
316 level of BO. In the current study, marital status had no association with CS, BO or STS. In the  
317 present study, nationality was associated with CS, where Saudi nurses had a higher CS level than  
318 non-Saudis. In a similar survey of paediatric nurses by Berger et al. (2015), CS was significantly  
319 higher in Caucasians than in other races. The present study associated Certain work-related  
320 factors with CS, BO and STS. Nurses' experiences had no significant relationship with CS, BO  
321 or STS. These findings were incongruent with Berger et al. (2015), in which paediatric nurses  
322 with 4–10 years of experience had a high level of BO, whereas nurses with more than 20 years of  
323 experience had a high level of CS and a low level of BO. Previous studies have demonstrated a  
324 relationship between socio-demographic characteristics, work and lifestyle factors on nurses'  
325 susceptibility to CS and CF (Kelly et al., 2015; Jakimowicz et al., 2017; Mooney et al., 2017;  
326 Wang et al., 2020). In the current study, the paediatric nurses' average CS differed from the

327 findings of similar studies of other nursing specialities, such as ICU and ER. A survey by  
328 Varadarajan and Rani (2021) showed a low level of CS in all ICU nurses, regardless of their  
329 gender or work position.

330 Another interesting finding is that the participants' department has a significant  
331 relationship with BO. Additionally, the participant's previous experience, shift length, and  
332 working overtime had a substantial relationship with the STS. Regarding work-related factors,  
333 overtime and salary were only associated with nurses' CS scores. However, this result was not  
334 similar to results reported in a study by Akman et al. (2016) in which the salary was associated  
335 with nurses' BO levels. In the current study, no lifestyle factors were associated with CS, BO, or  
336 STS. This finding differed from Barr (2017), in which the social support of friends and family  
337 was positively correlated with nurses' CS scores. This finding differed from Aytekin et al.  
338 (2013), who conducted a cross-sectional study involving nurses working in neonatal intensive  
339 care, which showed that poor quality of life correlated with BO. This difference across studies  
340 might be due to the cultural differences or differences in nurses' values that influence their lives  
341 outside of work.

342 The current study was helpful as it contributed new evidence to the existing body of  
343 knowledge on the impact of CS and CF on registered paediatric nurses in SA. Understanding the  
344 factors that affect paediatric nurses' professional quality of life can help healthcare organisations  
345 address CS and CF. This can be done by implementing interventions that enhance support  
346 systems, promote self-care, improve work environments, and provide ongoing training and  
347 education. These training areas may include stress management, emotional well-being, and self-  
348 care. Paediatric nurses can help themselves with CF. First, they should understand CF's causes,  
349 symptoms, and habits to develop strategies for themselves and their colleagues. Second, they

350 should practice self-compassion, which improves well-being and reduces depression. Third, they  
351 should use available educational resources like workshops to learn how to handle CF. Lastly,  
352 nurses should remember to seek work-life balance and adopt healthy habits to reduce CF, as the  
353 American Nurses Association recommends.

#### 354 ***Limitations***

355       Using an online survey platform makes data collection faster and increases the response  
356 rate. Additionally, employing the probability sampling technique and implementing a step-by-  
357 step approach like random multistage sampling can help prevent bias. However, it is essential to  
358 note that there are limitations to the generalizability of these findings. The study utilised a  
359 descriptive cross-sectional design, which means it cannot establish cause-and-effect relationships  
360 or determine the direction of the relationship between variables. Even though the current study  
361 was conducted at two Ministry of Health hospitals, its external validity is limited since the results  
362 do not correspond to what is going on in other hospitals, including hospitals run by the security  
363 forces, hospitals run by the military, and hospitals run by the national guard.

#### 364 **Conclusions**

365  
366       Pediatric nurses face distinctive challenges when working with vulnerable groups. A  
367 relation was found between nurses' nationalities, overtime status, and salaries and a higher CS.  
368 On the other hand, nurses' ages and departments were related to a higher BO. Lifestyle factors  
369 were not found to impact CS or CF among nurses. However, work-related factors, such as  
370 previous experience, shift length, and overtime, were found to have a significant contribution to  
371 STS. Nurses in pediatric areas can take proactive measures to manage CF effectively, such as  
372 understanding CF causes and symptoms, coping strategies through education, and prioritising  
373 their well-being by practising self-compassion to prevent psychosocial issues. In addition, they

374 should take advantage of available educational resources such as workshops and seminars to  
375 enhance their knowledge of CF management.

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**Table 1** (on next page)

TABLES

1 **Table 1:**2 **The participants' social, work and lifestyle characteristics (n=250).**

Socio-demographic factors		<i>N</i>	%
Age	Less than 25 years old	5	02.0%
	25–30 years old	68	27.2%
	31–35 years old	60	24.0%
	36–40 years old	51	20.4%
	More than 40 years old	66	26.4%
Nationality	Saudi	65	26.0%
	Non-Saudi	185	74.0%
Social state	Married with kids	142	56.8%
	Married without kids	40	16.0%
	Not married with kids	8	03.2%
	Not married	60	24.0%
Number of kids	1	36	22.5%
	2	75	46.9%
	3	31	19.4%
	4 or more	18	10.7%
Experience	Less than 1 year	4	1.6%
	1–3 years	43	17.2%
	3 years or more	203	81.2%
Department	Non-critical department	92	36.8%
	Critical department	158	63.2%
Previous experience	Yes	193	77.2%
	No	57	22.8%

Shift length	8 Hours	63	25.2%
	12 Hours	187	74.8%
Working overtime	Yes	87	34.8%
	No	163	65.2%
State of overtime	No. It is mandatory	44	17.6%
	Yes. It is optional	206	82.4%
Rota changing	Yes	129	51.6%
	No	121	48.4%
Salary	5000–9000 SAR	195	78.0%
	10000–14000 SAR	52	20.8%
	More than 14000 SAR	3	1.2%
Sleep Pattern	Regular	38	15.2%
	Irregular	212	84.8%
Eating healthy diet	Yes	96	38.4%
	No	154	61.6%
Frequency of socialising	Always	55	22.0%
	Often	86	34.4%
	Rarely	109	43.6%
Practicing hobbies	Yes	69	27.6%
	No	181	72.4%
Smoking	Yes	5	2.0%
	No	245	98.0%
Sleep Pattern	Regular	38	15.2%
	Irregular	212	84.8%

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13 **Table 2:**

14 **Descriptive of participants ProQOL Scale scores, compassion satisfaction and compassion fatigue**  
15 **(n=250)**

ProQOL Scale	Mean	SD
<b>Compassion Satisfaction</b>		
I get satisfaction from being able to [help] people.	3.60	1.05
I feel invigorated after working with those I [help].	2.95	1.12
I like my work as a [helper].	3.25	1.10
I am pleased with how I can keep up with [helping] techniques and protocols	3.18	1.07
My work makes me feel satisfied.	3.24	1.14
I have happy thoughts and feelings about those I [help] and how I could help them.	3.41	1.06
I believe I can make a difference through my work.	3.23	1.05
I am proud of what I can do to [help].	3.54	1.13
I have thoughts that I am a 'success' as a [helper].	3.33	1.01
I am happy that I chose to do this work.	3.50	1.10
<b>Total</b>	<b>3.23 ± 0.764</b>	
<b>Burnout</b>		
I am happy.	2.77	.94
I feel connected to others.	2.70	1.02
I am not as productive at work because I am losing sleep over traumatic	2.51	1.17

experiences of a person [help].		
I feel trapped by my job as a [helper].	2.57	1.24
I have beliefs that sustain me.	2.88	1.14
I am the person I always wanted to be.	2.76	1.12
I feel worn out because of my work as a [helper].	2.94	1.08
I feel overwhelmed because my case [work] load seems endless.	3.12	1.07
I feel 'bogged down' by the system.	2.92	1.14
I am a very caring person.	2.35	1.05
<b>Total</b>	<b>2.75 ± 0.68</b>	
Secondary Traumatic Stress		
I am preoccupied with more than one person I [help].	3.13	1.01
I jump or am startled by unexpected sounds.	2.75	1.04
I find it difficult to separate my personal life from my life as a [helper].	2.57	1.10
I think that I might have been affected by the traumatic stress of those I [help].	2.56	1.11
Because of my [helping], I have felt 'on edge' about various things.	2.56	1.11
I feel depressed because of the traumatic experiences of the people I [help].	2.70	1.05
I feel as though I am experiencing the trauma of someone I have [helped].	2.58	1.00
I avoid certain activities or situations because they remind me of the frightening experiences of the people I [help].	2.75	1.03
As a result of my [helping], I have intrusive, frightening thoughts.	2.67	1.11
I cannot recall important parts of my work with trauma victims.	2.63	.97
<b>Total</b>	<b>2.69 ± 0.54</b>	

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42 **Table 3:**

43 **Significant difference in the mean between the participants' social, work and lifestyle**

44 **characteristics and ProQOL Scale scores**

Factors	Professional Quality Life					
	CS		BO		STS	
	f	P	f	P	f	P
<b>Socio-demographic</b>						
Age	1.970	.100	5.178	.001*	2.327	.057
Nationality	15.139	.000*	16.120	.363	.037	.848
Marital status	.379	.768	1.068	.363	1.843	.140
Number of kids	1.724	.119	.899	.497	1.333	.246
Experience	.143	.867	1.261	.184	.801	.766
<b>Work related</b>						



Department	.224	.799	1.672	.024*	1.412	.082
Previous experience	1.152	.318	1.062	.388	1.618	.026*
Shift length	2.854	.060	1.174	.260	1.696	.016*
Working overtime	.000	1.000	1.307	.151	1.913	.004*
State of overtime	3.150	.045*	1.053	.399	1.176	.250
Rota changing	1.670	.190	1.748	.016	1.179	.246
Salary	4.046	.019*	.894	.621	.826	.731
<b>Lifestyle related</b>						
Sleep pattern	.023	.977	.949	.554	3.769	.053
Eating healthy Diet	1.755	.175	1.240	.182	.730	.851
Frequency of socialising	1.949	.145	.973	.517	.902	.620
Practicing hobbies	1.199	.303	1.481	.051	1.842	.176
Smoking	.903	.407	1.150	.272	.924	.586

45 *Note: \*Significant at  $p < 0.05$  level.*

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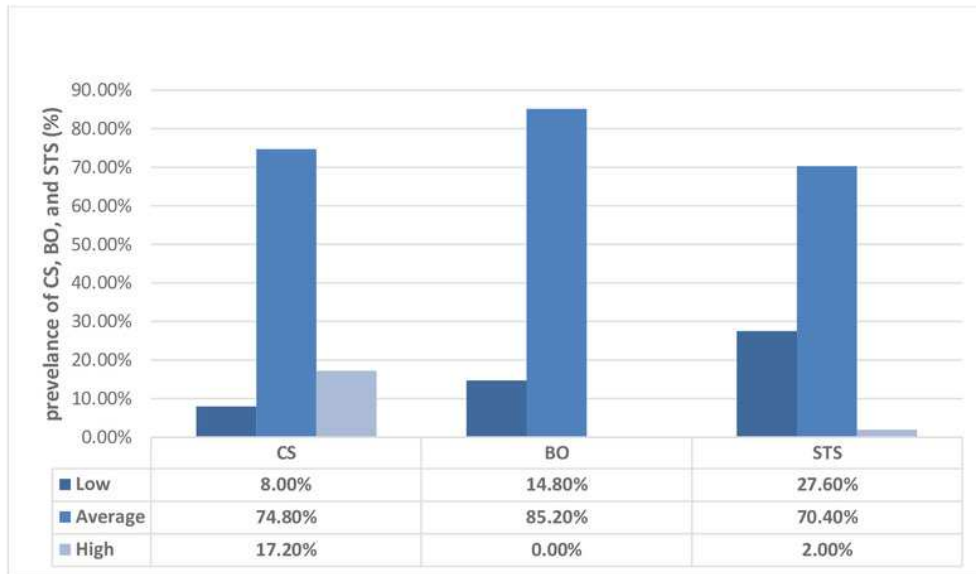
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# Figure 1

FIGURE1



**FIGURE 1:** Prevalence of CS, BO and STS among the study participants.