Assessing Resiliency and Its Relationship with Quality of Work Life in PICU Nurses in Educational Hospitals in Tehran City 2021

Salah Saket Mashkoor\textsuperscript{1}, Parastoo Oujian\textsuperscript{*2}, Manijeh Nourian\textsuperscript{3}, Maliheh Nasiri\textsuperscript{4}

1. Salah, Saket Mashkoor, Msc Student, Student Research Committee, School of Nursing & Midwifery, Shahid Beheshti University of Medical Sciences, Tehran, Iran, email: salfdly95@gmail.com

2. * Parastoo Oujian, Assistant Professor, Department of Psychiatric Nursing and Management, School of Nursing & Midwifery, Shahid Beheshti University of Medical Sciences, Tehran, Iran, Vali-Asr Avenue, Cross of Vali-Asr Avenue and Hashemi Rafsanjani (Neiaiesh) Highway, Opposite to Rajaee Heart Hospital, Tehran, email: p_ojian@yahoo.com, (Corresponding author)

3. Manijeh, Nourian, Associate Professor, Pediatric Nursing Department, School of Nursing & Midwifery, Shahid Beheshti University of Medical Sciences, Tehran, Iran, email: nourianma@gmail.com

4. Maliheh, Nasiri, Assistant Professor, Basic Sciences Department, School of Nursing & Midwifery, Shahid Beheshti University of Medical Sciences, Tehran, Iran, email: malihehnasiri@gmail.com

Abstract

Background: Nursing is one of the professions that are exposed to many stressful sources. Nurses face patients every day grief, mourning and death that few ordinary people face. This high demanding workplace culture results in turnover and dissatisfaction in nurses. Keeping human resource in organization and bringing a quality of work life for them are the priorities of health care organizations.

Objective: Determining resilience and its relationship with the quality of work life of nurses working in pediatric intensive care units in teaching hospitals in Tehran 2021

Methods: A cross sectional study was conducted on 125 nurses from three educational hospitals in Tehran, Iran from May 1st to July 21st 2021. The Quality of Work Life (QWL) Scale, The Connor-Davidson Resilience scale (CD-RISC) questionnaires used. Data analyzed by descriptive statistics and comparison of resiliency and QWL was measured by Pearson using SPSS version 21.

Results: The findings of study showed that resiliency of nurses was moderate (32.18± 0.46), and quality work life was poor (29.4± 0.41). And the resilience was positively correlated with the nurses 'quality of work life (p= 0.001, r = 0.290).
Conclusion: Nurses resiliency had positive correlation with quality of work in the pediatric intensive care units in selected educational hospitals of Universities of Medical Sciences in Tehran.

Key words: Resiliency, Quality of work life, PICU nurses

Introduction

Studies of nurses working in PICU wards have shown that this ward is potentially stressful for nurses and that this stress affects their performance (1, 2). Excessive stress and its consequences increase burnout syndrome and can increase the tendency of nurses to leave the profession (3). There are very few research studies that have examined the relationship between burnout syndrome, mental health and resilience in intensive care nurses, but more studies are needed in this field (4).

Resilience has been defined in various contexts. Some experts have defined resilience as the ability to adapt to a stressful environment and to use problem-solving skills to create this adaptation (5). Resilience is also defined as a human capacity to cope with adversity and return from critical situations with positive experience (4). The process of returning to normal activities after painful experiences is of particular importance to nurses who witness or are involved in the event. Resilience is a coping mechanism that can be learned or enhanced through activities such as cognitive therapy, peer discussion, and group activities with colleagues (6).

Resilience is generally defined as the capacity of an individual or organization to survive and adapt to adversity. This allows people to build supportive relationships with family and friends during stressful times. Given the stressful nature of the nursing environment, resilience is undoubtedly an important factor as a characteristic of a nurse (7).

The results of Flanders et al.'s study showed that by using resilience programs, the psychological effects of emotional stress and secondary stress can be reduced in nurses working in pediatric intensive care units, and consequently the cost of nurses leaving the service can be reduced (7). The need to improve organizational productivity is an important issue in health organizations, and as the largest group of employees, nurses are the main force in this field. Previous research has clearly linked improved hospital productivity to a better quality of working life. The degree to which formal nurses are able to meet their important personal needs through work experience, while simultaneously achieving the goals of the organization, defines the quality of nurses' work life (8).

Quality of work life is one of the variables that has recently been considered by many managers who try to improve the quality of their human resources. Such attention reflects the importance that colleagues give to the quality of work life (9). The concept of quality of work life is related to increasing the dignity of nurses, trust, conflict in organizational issues and the ability to solve their problems and thus the satisfaction and effectiveness of the organization. Also, studies have shown that the quality of work life of nurses is not only related to their working conditions and job satisfaction,
but also depends on their personal life (10), the quality of work life for each person or group of people with similar culture and attitude. It has its own characteristics and the quality of work life of nurses varies from one department to another (11).

Quality of work life means the mental perception and satisfaction of an employee of the physical and mental desirability of his work environment and the extent to which his needs are met through resources, activities and results obtained from involvement and participation in his work environment (9, 12). Walton also defines quality of work life as the reaction of employees to work, especially its essential consequences in satisfying job needs and mental health (10).

High quality of work life is known as the basic premise of empowering human resources required by health systems, so paying attention to the quality of work life of nurses as the largest part of health systems staff is essential and vital. Because understanding and thus improving the quality of work life of the nurse is an important factor in achieving high levels of quality of patient care (13, 14). The quality of work life of nurses is the degree to which nurses are able to satisfy their essential and personal needs by working in medical centers and ultimately achieve organizational goals (13, 15). Studies of nurses in different cities of Iran show that most nurses have a low quality of working life (16-15) and in one study only half of the nurses reported a good quality of working life (15). In the study of Abadi et al. 2019, the results of the study showed that nurses who had a history of leaving the service had a poor quality of working life, which means that nurses with low quality of life do not experience the tendency to leave the profession more. In the same study, it was shown that the working ward of nurses was directly related to the quality of their working life, so that attendance in intensive care, emergency and internal-surgical wards predicts lower rates of quality of working life in nurses (17). Studies show that very little research has been done in the field of nursing in pediatric intensive care units and variables such as resilience and quality of work life in these departments have received little attention in the literature (7).

Because the quality of work life is influenced by occupational and personal factors and strongly depends on the work sector and the environment in which the person works, and on the other hand due to the difficult working conditions of nurses in pediatric intensive care units and the need for investigating the factors affecting the quality of their working life and resilience in this group, the research team decided to conduct a study to investigate the resilience of nurses and its relationship with the quality of work life of nurses in pediatric intensive care units. The aim of this study was to determining resilience and its relationship with the quality of work life of nurses working in pediatric intensive care units in teaching hospitals in Tehran 2021.

Materials and Methods
This Cross-Sectional Design was done on 125 nurses working in PICU in hospitals of Mofid Children's hospital, Hazrat Ali Asghar Hospital and Markaz-e-Tebbi hospital which are affiliated to the Universities of Medical Sciences, Tehran, Iran in 2021. The sampling method was convenience and work full time in PICU at least 6 months of experience in PICU and have Bachelor's degree in nursing and higher. Using the following formula, 125 nurses were obtained.

\[ n \geq \left( \frac{Z_{1-\alpha/2} + Z_{1-\beta}}{0.5 \times \ln\left(\frac{1+r}{1-r}\right)} \right)^2 + 3 \]

\[ r = 0.25 \]
\[ \alpha = 0.05 \Rightarrow Z_{1-\alpha/2} = 1.96 \]
\[ \beta = 0.10 \Rightarrow Z_{1-\beta} = 1.28 \]

\( r \) is the correlation between the variables in nurses, which is considered to be 0.3 based on the reference of Monroe's book. A demographic questionnaire was used to obtain information about participants. The items of it included age, sex, marital status, level of education, and work experience in the pediatric intensive care unit. Quality of working life scale includes 40 items in 6 general subscales of welfare, home and home communication, job and job satisfaction, job control and conditions Work, stress at work and a phrase that reflects the overall quality of life of the individual (not calculated on the basis of average scores and not reported independently). There are 5 Likert options (strongly disagree = 1 strongly agree = 5). The score of minimum scores was 40 maximum scores were 200. Cronbach's alpha instrument in this study was .97. The Connor-Davidson Resilience scale (CD-RISC) comprises of 10 items each rated on a 5-point scale (0–4), with higher scores reflecting greater resilience. The scale was administered to subjects in the following groups: community sample, primary care outpatients, general psychiatric outpatients, clinical trial of generalized anxiety disorder, and two clinical trials of PTSD (Connor and Davidson 2003(. Cronbach's alpha was result 0.84. Permission was granted from the director of the nurse in PICU at the Hospitals of Hazrat Ali Asghar and Mofid in Tehran in 2021. They were also informed that their participation was voluntary and that they could withdraw from the study at any time without providing a reason. The questionnaires were filled anonymously and after getting the consent form. This study is approved by Shahid Beheshti University of Medical Sciences and the ethical code was IR.SBMU.PHARMACY.RFC.1399-334. For Data Analysis: First, the mean and standard deviation of the scores will be determined and Pearson correlation coefficient between scores will be calculated. The regression model will then be used to examine the relationship.
Results

The result showed that the majority (51.2%) of age of the nurse was (31-40 years), (1-5) years of experience (51.2%), majority sex of the nurse was (65.6%) for female, most of the sample are married (55.2%), the majority of educational level for the nurse was bachelor degree (89.6%), the majority of overtime was mandatory (71.2%) and majority the shift work was (84.8%) in circulation. The result showed the means and standard deviation for a Resiliency was moderate (32.8) ± (.46) for 70.4 of participants as shown in the table (1).

Table (1) distributions mean and SD for Resiliency

<table>
<thead>
<tr>
<th>Items</th>
<th>Ms</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are you able to adapt to change</td>
<td>3.9920</td>
<td>.96299</td>
</tr>
<tr>
<td>You have the ability to deal with whatever happens</td>
<td>3.5760</td>
<td>.87311</td>
</tr>
<tr>
<td>Do you believe that coping with stress can make you stronger?</td>
<td>3.2800</td>
<td>.98045</td>
</tr>
<tr>
<td>Will you retreat and retreat after enduring illness or hardship.</td>
<td>2.9600</td>
<td>.83666</td>
</tr>
<tr>
<td>Will you step back and step back after enduring illness or hardship?</td>
<td>2.6720</td>
<td>1.16934</td>
</tr>
<tr>
<td>Can you reach your goals despite the obstacles in your way?</td>
<td>3.2160</td>
<td>1.14711</td>
</tr>
<tr>
<td>Are you able to stay focused under stress?</td>
<td>3.2560</td>
<td>.99112</td>
</tr>
<tr>
<td>Are you easily discouraged after failure and failure?</td>
<td>3.0000</td>
<td>1.01600</td>
</tr>
<tr>
<td>Do you consider yourself a strong and capable person in the face of adversity?</td>
<td>3.4160</td>
<td>1.15831</td>
</tr>
<tr>
<td>Are you able to manage and control your unpleasant emotions?</td>
<td>3.4640</td>
<td>1.17462</td>
</tr>
<tr>
<td><strong>Total Resiliency</strong></td>
<td>32.8</td>
<td>.46</td>
</tr>
</tbody>
</table>

Poor = 1-1.99, Unacceptable = 2-2.99, Moderate = 3 – 3.99 and Good = 4-5.

The result showed (24.18) ± (.41) mean and SD for QWL was poor. Outcome dimension of QWL Work life\home, Work design and Work context were (Moderate), and Work world was (Unacceptable) as explain in table (2).
Table (2) distributions mean and SD for quality of work life.

<table>
<thead>
<tr>
<th>QWL Dimensions</th>
<th>M</th>
<th>SD</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work life\home</td>
<td>3.27</td>
<td>.51</td>
<td>Moderate</td>
</tr>
<tr>
<td>Work design</td>
<td>3.14</td>
<td>.56</td>
<td>Moderate</td>
</tr>
<tr>
<td>Work context</td>
<td>3.08</td>
<td>.47</td>
<td>Moderate</td>
</tr>
<tr>
<td>Work world</td>
<td>2.60</td>
<td>.69</td>
<td>Unacceptable</td>
</tr>
<tr>
<td>Total QWL</td>
<td>24.18</td>
<td>.41</td>
<td>Poor</td>
</tr>
</tbody>
</table>

Poor = 1-1.99, Unacceptable = 2-2.99, Moderate = 3 – 3.99 and Good = 4-5.

The result explain there are significant correlation between QWL and resiliency because p-value less than 0.01. Also found correlation between QWL dimension (Work life\home, Work design) and resiliency because p-value less than 0.01. But not correlation between found correlation between QWL dimension (Work context, Work world) and resiliency because p-value more than 0.05 as explains in table (3).

Table (3) the relationship between QWL and Resiliency in PICU nurses in educational hospitals in Tehran City

<table>
<thead>
<tr>
<th>Dimension QWL</th>
<th>QWL</th>
<th>Work life\home</th>
<th>Work design</th>
<th>Work context</th>
<th>Work world</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resiliency</td>
<td>R</td>
<td>.290**</td>
<td>.410**</td>
<td>.420**</td>
<td>.135</td>
</tr>
<tr>
<td>P-value</td>
<td>.001</td>
<td>.000</td>
<td>.000</td>
<td>.133</td>
<td>.984</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed), R: Correlation Coefficient, Significant ≤0.05

Dissuasion

The aim of this study was to investigate the relationship between QWL and Resiliency in PICU nurses in educational hospitals in Tehran City 2021. The results of the present study show that the majorities (51.2%) of nurses are in age 31-40 and majority nurses had 1-5 years of experience (51.2%). The results of the present study show that the sex of the nurse was (65.6%) for female in the most of the sample are married (55.2%), and only (44.8%) of them are single. The result shown
the educational level for the nurse was bachelor degree (89.6%). Based on the first objective of study “Determining the amount and severity of resilience in nurses working in pediatric intensive care units”, the results showed that resiliency nurses work in PICU was moderate (32.8) and the majority of nurses have problem in to items of scale “Will you retreat and retreat after enduring illness or hardship” and “Will you step back and step back after enduring illness or hardship?”. This result agreement with other studies Öksüz (2019) the result was (moderate) (18), but in Bunga (2020) study the result was in optimum level (19). The difference in findings may be due to different of context and population and different scale. The reason for the moderate result in the current study may be due to the lack of sufficient ability to withstand the obstacles to work in the unit, in addition to the lack of control over the unit due to parents and the environment. Routine PICU practice exposes healthcare professionals to complex clinical dilemmas and challenging outcomes that can cause acute distress and, in some cases, can insidiously undermine personal well-being and effectiveness that may produce low levels of resiliency (20).

Based on the second goal of the study “Determining the quality of work life in PICU nurses in teaching hospitals in Tehran”, the result showed that quality of work life for nurses was poor (24.18). This result agreement with other studies Almalki (21), Said (22), Vega-Escaño results (23), but Elshahat (24) and Kelbisoo (25) found that quality of work life is balanced, good level of life. The reason of the result sometime due to job environment for the nurses working in PICU, and balanced in the work in the institution healthy, and the quality of work. By looking in detail of findings in subscales of QWL, the results showed that in all dimensions, PICU nurses experience moderate to low levels of QWL.

Findings from a few studies conducted in the major cities of Saudi Arabia have indicated that nurses are dissatisfied with their work (Al Juhani (26), El-Gilany (27) and also researchs in Iran is similar to our findings (Chegini (28), Nickeghbal (29) and also the results of a study conducted in Tehran also show that two thirds of nurses are dissatisfied with the quality of their working life and are dissatisfied with most aspects of their working life (30). According to Al Juhani and Kishk, in a survey study conducted in the Al-Madinah region to assess the level of work satisfaction among PHC professionals 52.4% of staff nurses were highly dissatisfied. This dissatisfaction among nurses can have a negative impact on their performance and in turn affect the quality of healthcare outcomes. Furthermore, it can result in a behavioural intention to leave their work, which they may do ultimately.

The dimension workload in QWL was the lowest one between others. In Iran, 80% of people working in the health care system are nurses who have undertaken 80% of the system work. High mental workload has been reported as the main source of stress in nurses and can have a negative
impact on nurses’ behavior, performance, and quality of work life. Workload is a multidimensional, complex concept, and is a subset of cognitive ergonomics, which is a structure for describing the extent of the physical and cognitive resources involved in performing a particular action. High-level workload is recognized as a major concern in health care that can have negative consequences on these services (31), (32) The results of research have shown that the increase in patient mortality has a significant relationship with the increase in nurses’ workload (33) and based on the context of PICU it is predictable that nurses have high rates of workload. Various studies have shown that, in jobs with high mental workload due to fatigue and improper scheduling, people’s ability to learn and work is reduced, memory and thought process are impaired, and irritability appears (34).

Based on the third objective of the study “Determining the relationship between quality of work life and resilience in PICU nurses in teaching hospitals in Tehran”, the findings showed positive significant correlation between total resiliency and quality of work life. This result agreement with other studies such as study of Gerami Nejad (35). The result of that study showed significant correlation between resilience and compassion fatigue (r=-0.44; P=0.001) (35) The results of current study showed that resiliency is significantly correlated to work design and work life/home dimensions of QWL. (20) found that work design and work context had strong relationship with turnover in nurses and also similar findings in the study of Nickeghbal et al. (2020) (29), who found that work load in nurses is not favorable and the experienced low levels of QWL.

The result significant correlation between QWL and resiliency is load of work life lead to low resiliency and increased stress and routine of the work in PICU need intensive work and attention and pressure the neonate family also affect all these causes led to large correlation. Covid-19 pandemic was the major limitation for the researcher to be present with nurses in their wards, so sampling took time longer than predicted. By using convenience sampling the generalizing of the finding should be done carefully.

Conclusion

Nurse Resiliency is a major challenge for many healthcare services and it interacts with the employees’ QWL. The PICU nurses in this study indicated moderate QWL and a low resiliency. There is a significant association between QWL and resiliency of PICU nurses. This information could be used to develop appropriate strategies to improve QWL and to improve the resiliency of PICU nurses.

ACKNOWLEDGEMENTS

www.turkphysiotherrehabil.org
This article was distilled from an MSc thesis of pediatric nursing at Shahid Beheshti University of Medical Sciences (International section). The researchers thank the staff and managers of Mofid Children's and Hazrat Ali Asghar Hospital, and also all participated adolescents and their parents.

Conflicts of Interests
The authors declare no conflicts of interests

Reference


