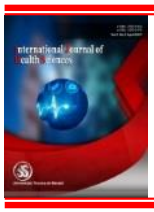

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Compassion Fatigue, Compassion Satisfaction, and Resilience Among Intensive Care Unit Nurses

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Abstract

This research study aimed to identify the level of Compassion Fatigue components, compassion satisfaction among ICU nurses, identify resilience levels and characteristics among ICU nurses. And to determine the association between resilience, Compassion Fatigue components, and compassion satisfaction. The results showed that nurses had a moderate\ average level of compassion satisfaction, a moderate\average level of burnout, and a moderate/average level of secondary traumatic stress. Also, a very low level of resilience, Self-reliance were the most characteristic of resilience. There was an association between the level of compassion satisfaction and income levels and the workplace. Also, there was an association between the level of burnout with income level and marital status. Resilience was associated with the level of resilience in the workplace. The study's results provided awareness about Compassion Fatigue and resilience in ICU nurses and provided practical implications for the need for education, assessment, prevention, and health promotion interventions addressing Compassion Fatigue and burnout among ICU nurses.

Contents

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1 Introduction

On March 11, 2020, the World Health Organization (WHO) declared the novel coronavirus (COVID-19) the outbreak of a global pandemic (WHO, 2020a,b). Rates of infection and, consequently, mortality have risen rapidly, resulting in a worldwide pandemic.

Nursing is regarded as a vital career in health care delivery systems all around the world. The goal of the nursing profession is to support patients empathetically according to their physical, mental, emotional, and spiritual needs (Lombardo & Eyre, 2011). They encounter nurses practising in hospitals with life and death situations and work overload. Nurses work with suffering patients and for long working hours (Milutinović et al., 2012). Nurses may have passionate responses to working with traumatized and suffering individuals, dealing with their families, and comforting them (Wu et al., 2009). If nurses cannot process their feelings and use healthy coping strategies, they can strengthen Compassion Fatigue (Al-Majid et al., 2018; Sorenson et al., 2016).

According to the National institute for occupational safety and health in the USA (NIOSH), the most widespread and costly problem workers face is job stress in the workplace. NIOSH listed several occupations as highly stressful, including nursing. Nurses deal with daily challenges and work-related stressors, such as work overload, long shifts, and staff shortages (Coetzee & Klopper, 2010). In Jordan, Maryan studied the stress level among ICU nurses and found that it was higher than other nurses (Maryan, 2009). It can be explained that ICU nurses manage complex health care needs and care for critically or terminally ill patients. Compassion fatigue causes can be explained by the response of individuals to stressors in their life. Unfortunately, ongoing compassion fatigue negatively impacts workforce health, personal relationships with colleagues, and work performance (Adams et al., 2009).

Compassion fatigue is significantly dangerous in the clinical area, where nurses having a high level of compassion fatigue have higher practice errors, increased patient mortality, and higher infection rates, eventually reducing patient safety and quality of care (Boyle, 2011; Lombardo & Eyre, 2011). Organizations and managers should take responsibility for reducing the likelihood of compassion fatigue in the work environment by establishing an emotionally supportive, physically safe, and respectful work environment that will mitigate intrapersonal and interpersonal stress for the health care workers (Harr, 2013).

Because nurses must cope with stress and adversities daily, they need to develop resilience. From some researchers' point of view, the individual will manage effectively and adapt to workplace stressors when resilience is developed. Thus, the development of resilience can assist nurses in continuing to deliver high-quality care and succeed professionally despite the demanding work environments (Hooper et al., 2010; O'Callaghan et al., 2020). Likewise, resilience helps promote well-being, survive healthily, prevent stress, and prevent turnover and compassion fatigue (Brennan, 2017; Cameron & Brownie, 2010; Patricia Potter et al., 2013).

Due to daily direct contact with patients, nurses face more emotional exhaustion than other health care providers (Zhang et al., 2018). High-stress levels among nurses can result in substance abuse, depression, anxiety, and increased intent to leave the nursing practice (Rushton et al., 2015). Compassion fatigue is significant for healthcare organizations because it will affect nurse retention, intent to stay and turnover, patient satisfaction, and patient safety. Sequentially, it will affect the quality of the care in the organization (Potter et al., 2010).

The literature showed an urgent need to support nurses in becoming resilient to decrease burnout, stress, and compassion fatigue, especially for nurses working in high-intensity areas (Kester & Wei, 2018). Likewise, High levels of resilience among nurses reflected positively on the overall well-being, psychological health, work relationships, professional quality of life, and increased job satisfaction. So, constructing nurses' resilience will support their capacity to handle the effects of emotional exhaustion on their well-being and work (Delgado et al., 2017).

However, understanding resilience in the context of compassion fatigue is limited. Generally, differences in compassion fatigue among Jordanian nurses are critically lacking (Jarrad et al., 2018). Few studies were conducted in Jordan regarding resilience and compassion fatigue, especially among nurses who work in intensive care units. So, this study contributed to advancing knowledge of compassion fatigue and resilience relationships. In addition, the findings of this study may guide nursing administrators to develop programs and support systems to manage compassion fatigue and resilience among their staff, thus will prevent the negative sequences of compassion fatigue and stress (Xie et al., 2021; Sheppard, 2015).

As health care providers, they relate two crucial dimensions to the nursing profession: The first dimension is compassion satisfaction, defined as positive feelings of pleasure related to a well-done job and self-appreciation while assisting others (Sembiring et al., 2022). Also, compassion satisfaction (CS) measures the positive side of caregiving, the experience of good feelings that come from the ability to give help to others. The second dimension is Compassion Fatigue, defined as negative feelings. Compassion fatigue results from minimizing the feelings of compassion toward suffering humans (Bush, 2009; Cocker & Joss, 2016; Steinheiser, 2018).

Compassion Fatigue was developed in 1995 by Figley; he described Compassion Fatigue as a term encompassing two key elements: Burnout and Secondary Traumatic Stress. Burnout comprises feelings such as frustration, anger, and depression in the work environment. In contrast, Secondary Traumatic Stress includes behaviours and emotions that develop in an individual caring for a patient who has experienced a traumatic situation (Flgley, 2013).

Compassion fatigue is significantly dangerous in the clinical area, where nurses with a high Compassion Fatigue level have higher practice errors, increased patient mortality, and higher infection rates, eventually reducing patient safety and quality of care. Therefore, organizations and managers should reduce the likelihood of Compassion Fatigue in the work environment by establishing an emotionally supportive, physically safe, and respectful environment that will mitigate intrapersonal and interpersonal stress for the health care workers (Harr, 2013).

Compassion satisfaction (CS) is a positive aspect of caring for others and doing a job well. They satisfy health care providers who experience compassion satisfaction (CS) with their work and enjoy caring for patients (Stamm, 2010). Compassion satisfaction (CS) will positively affect health workers' physical, mental, and spiritual well-being and motivate them to do their jobs. Components (CS) may be a significant issue in Prevent Compassion Fatigue and Burnout among health care workers (Harr & Moore, 2011).

Resilience plays an influential role in protecting individuals from trauma; it prevents illness and reinforces wellness. With the reinforcement of resilience, health care providers can cope with unfavourable situations better, increasing their capabilities of acclimation and accomplishment (Titler & Everett, 2001; Carayon & Alvarado, 2007). Moreover, the individual will overcome barriers and many negative circumstances when resilience increases. (Dolbier et al., 2010; Kutluturkan et al., 2016). The American Psychological Association defines resilience as ' adapting well in the face of adversity, trauma, tragedy, threats, or significant sources of stress–such as family and relationship problems, serious health problems or workplace, and financial stressors' (American Psychological Association (APA), 2011).

Because nurses must cope with stress and adversities daily, they need to develop resilience. From some researchers' point of view, the individual will cope effectively and adapt to workplace stressors when resilience is developed. Thus, the development of resilience can assist nurses in continuing to deliver high-quality care and succeed professionally despite the demanding work environments. Likewise, resilience helps promote well-being, survive healthily, prevent stress, and prevent turnover and Compassion Fatigue (Brennan, 2017; Cameron & Brownie, 2010; Patricia Potter et al., 2013).

The purposes of this study were to: Estimate the prevalence rates of Compassion Fatigue (CF) and compassion satisfaction (CS) among ICU nurses, identify the association between the level of Compassion Fatigue components and compassion satisfaction among ICU nurses based on demographic characteristics, identify resilience level and variations among ICU nurses, and identify the association between Compassion Fatigue, compassion satisfaction, and resilience (Stewart et al., 1997; Kelly et al., 2019).

2 Materials and Methods

Participants and setting

This descriptive, correlational survey study launched during the COVID-19 pandemic (March to May 2020) was conducted in five hospitals, four in the capital of Jordan (Amman) and one in the north of the country (Irbid). The hospitals represent different health sectors, including the public governmental hospitals (151 Nurses), private hospitals (59 Nurses), and University teaching hospitals (110 Nurses). Study participants were recruited from critical care units within the participating hospitals. The total sample was 320 nurse participants. The study population includes nurses who met the following criteria: registered nurses, both males, and females, with direct patient care as their primary duty, who worked in ICU in the mentioned hospitals, and currently, full-time staff registered nurses with at least six months of experience in the same unit. The study sample size (n = 290) was calculated using the G Power program 3_1 (Franz Faul, Universität Kiel, Germany) at the significance level of .05. The stratified nonrandom sampling method was used to divide the population into subgroups (hospitals), and a predetermined portion of the sample was drawn from each subset. In addition, 10% expected sample attrition and missing data, 350 nurses were invited to participate in the study, and 320 nurses accepted the invitation to join.

Instrumentation

The instrument for data collection consisted of three parts. The first part was a demographic questionnaire, which includes some personal and professional characteristics of nurses such as age, sex, marital status, education background, years of experience, income, presence of children, type of hospital., and their professional expertise.

The second part was ProQOL, version 5, the survey used in the study. Permission to use the ProQOL instrument was granted via the website of the tool's author. The ProQOL survey consists of 3 subscales (compassion satisfaction, burnout, and secondary traumatic stress) used to measure compassion satisfaction and compassion fatigue. Of the three subscales, 2 (burnout and secondary traumatic stress) are components of compassion fatigue, whereas compassion satisfaction is a stand-alone measure (Stamm, 2010). The previous testing9 indicated acceptable levels of internal consistency reliability for each of the subscales; the Cronbach alpha was 0.88 for compassion satisfaction, 0.75 for burnout, and 0.81 for secondary traumatic stress. As recommended by Stamm, for each of the subscales, the Cronbach Alpha was 0.88 for compassion satisfaction, 0.75 for burnout, and 0.81 for secondary traumatic stress. In addition, as recommended by Stamm, selected items from the instrument were individualized for application to the study's target audience. Specifically, the terms help and helper were replaced with the terms care for and caregiver. Also, the phrase trauma victims were replaced with patients and families (Stamm, 2010). Finally, selected items from the instrument were individualized for application to the study's target audience reported here. Specifically, the terms help and helper were replaced with the terms care for and caregiver. Also, the phrase trauma victims were replaced with patients and families (Kistan et al., 2020).

The third part was the Fourteen Items Resilience Scale. The RS–14 items use a seven-point Likert scale to rate the individual evaluation of the item. Respondent's choices range from 1 (strongly disagree) to 7 (strongly agree). Item scores summed to yield a total score ranging from 14 to 98. A score from 14 to 73 shows a low level of resilience, 74 to 90 indicates a moderate level of resilience, and 91 to 98 shows a high level of resilience. Cronbach's alpha reliability of RS-14 ranged from 0.91 to 0.94 (Wagnild, 2009). All the surveys were transcribed to an electronic platform (google forms) for ease of distribution.

Procedures

Before data collection, the study proposal was approved by the Jordan University of Science & Technology and the Ministry of health's ethical committee's institutional review board. Next, researchers were referred to the predetermined hospitals from February 2020 to July 2020. Finally, the hospital CNOs (Chief of Nursing), DON (Director of Nursing), and clinical research representatives granted permission to distribute the survey. Next,

nurses who met the criteria for the study were identified, and all eligible nurses were invited to participate. After informing nurses about the study's purposes, willing nurses were asked to complete the questionnaire and sign a written informed consent form. Participants were also assured that their contribution to the study was entirely voluntary and could be excluded whenever they wished (Amir et al., 2021).

Data analysis

Data were entered and analyzed using the Statistical Package of Social Science (SPSS) version (25). Descriptive analysis will explore the demographic characteristics of the respondents and identify the prevalence and severity of Burnout, Secondary Traumatic Stress, Compassion Satisfaction, and Resilience. Also, the chi-square test was used to determine the association between resilience, compassion satisfaction (CS), and Compassion Fatigue (CF).

3 Results and Discussions

3.1 Results

A total of 350 questionnaires were distributed among nurses, of which 320 questionnaires were completed and returned (response rate of 91%). Most of the participants were females (n=194, 60.6%), most of the participants married (n= 189, 59.1%). Most of the participants had no children (n=163, 50.9%); most we recruited participants in public hospital (n=151, 47.2%). As well, most of the participants had a Bachelor's degree (n=259, 80.9%). The participants ranged from 20 to 30 years (n=198, 61.9%). Regarding years of experience, most participants had 2 to 10 years (n=234, 73.1%). About (n=209, 65.3%) of participants considered the income fair. We present the demographic characteristics of the study participants in table 1.

Table 1
Demographic characteristics of sample (N=320)

Characteristic	Frequency	Percent
Gender		
Male	126	39.4
Female	194	60.6
Age		
20-30	198	61.9
31-50	122	38.1
Do you have children?		
No children	163	50.9
Yes	157	49.1
Marital status		
Single	128	40.0
Married	189	59.1
Divorced	3	9
Education level		
3 Years Diploma	18	5.6
Bachelor's degree	259	80.9
Master's and higher degree	43	13.4

Experience years		
0-1	47	14.7
2-10	234	73.1
Over 10	39	12.2
Workplace		
Public hospital	151	47.2
University teaching hospital	110	34.4
Private hospital	59	18.4
Income level		
Low income	111	34.7
Fair income	209	65.3

ProQOL results (burnout, secondary traumatic stress, and compassion satisfaction level)

Table 2 summarizes the ProQOL scores of participants. Results showed that most nurses had a moderate risk of Burnout 54.7% (n=175). Regarding Secondary Traumatic Stress Levels, 50.9% (n=163) of participants reported a moderate risk of Secondary Traumatic Stress. Also, most participants reported a moderate level of CS (n=173, 54.1%). (As shown in table 2).

Table 2
Professional quality of life components level

Level	Burnout Percent and Frequency	Secondary Traumatic Stress Percent and Frequency	Compassion Satisfaction Percent and Frequency
Low	23.8% n=76	26.6% n=85	23.8% n= 76
Moderate	54.7% n= 175	50.9% n=163	54.1% n=173
High	21.6% n=69	22.5% n= 72	22.2% n=71

Resilience level

Table (3) presents the level of resilience among the participants. 55.9% of the participants reported a low level of resilience (n=179), while 6.3% reported a high level of resilience (n=20).

Table 3
RS-14 scale resilience level

Resilience level	Frequency	Percent
Low	179	55.9%
Moderate	121	37.8%
High	20	6.3%

Association in the Level of CF, Compassion satisfaction and Resilience among ICU Nurses Based on Demographic Characteristics

Achi-square test of independence showed a significant association between income level and burnout level χ^2 (2) = 18.33, P < 0.05. Also, there was a significant association between marital status and burnout level $\chi 2$ (4)

= 11.52, P**< 0.05**. Regarding Secondary Traumatic Stress, scores did not differ significantly by age, marital status, education level, income, experience years, presence of children, and workplace.

A chi-square test of independence showed a significant association between workplace and compassion satisfaction (CS), χ2 (4) = 14.74 and P< 0.05. Also, a significant association was found between income level and compassion satisfaction (CS), χ^2 (2) =8.933, P< 0.05. Regarding resilience, a chi-square test of independence showed a significant association between workplace and resilience, χ^2 (4) = 9.525, P< 0.05. However, a chi-square test of independence showed no significant association between resilience and gender, age, marital status, education level, income, experience years, and presence of children.

Association between Compassion Fatigue (CF), Compassion Satisfaction (CS), and resilience

Pearson's χ^2 test showed a significant association between compassion satisfaction (CS) and resilience levels, χ^2 (4) = 46.20 and P< 0.05. Also, a significant association between burnout and resilience levels was found, χ^2 (4) =33.21, P < 0.05. Regarding Secondary Traumatic Stress and Resilience, no significant association was found, χ^2 (4) = 9.23 and P-value > 0.05.

3.2 Discussion

The primary aim of this study was to determine the compassion satisfaction (CS), Compassion Fatigue (CF), and burnout rates of critical care nurses. Also, identify the levels of resilience and the association between CF, CS, and Resilience. Previous research showed that nurses working with high-acuity patients are exposed to work experiences that place them face higher risks of developing Compassion Fatigue (CF) (Al-Majid et al., 2018). As a result, several studies have used the ProQOL5 to examine the rates of Secondary Traumatic Stress and Burnout among nurses in the intensive care unit.

The findings indicate that 50.9% of respondents reported moderate levels of Secondary Traumatic Stress, while 22.5% reported high to severe levels of secondary stress. Likewise, 54.7% of participants reported moderate levels of burnout, while 21.6% reported high levels of burnout. This reported burden level of Compassion Fatigue (CF) is an essential finding among critical care nurses because it can negatively affect the health of both professionals and their patients (Bride et al., 2007; Kashani et al., 2010; Shanafelt et al., 2002). Therefore, it is crucial to recognize that culturally appropriate support may be needed to deal with caregivers' stress. For example, one review study found that the prevalence of high risk for Compassion Fatigue (CF) among nurses working in critical care units ranged from 7.3% to 40% around the world, suggesting a wide range of values that could be dependent on workplace characteristics or culture (Van Mol et al., 2014).

A different study showed that most participants reported average to low levels on the burnout and Secondary Traumatic Stress subscale (Al Barmawi et al., 2019; Mason et al., 2014; Sacco et al., 2015). This result contradicts the previous study on nurses who perceived significantly higher levels of these two negative aspects (Jarrad et al., 2020). Thus, differences in workplace policies, workloads, the culture of teamwork, and the organizational culture that will help develop or prevent Compassion Fatigue (CF) may explain the variations in Burnout and Secondary Traumatic Stress Levels among nurses.

This study also explored the association between demographic variables and Burnout and Secondary Traumatic Stress scores. We found no statistically significant association among the demographic variables of age, gender, having children, education levels, or years of experience. These findings are consistent with the results reported by Potter et al. (2010), who found no statistical differences in scores on Secondary Traumatic Stress and Burnout scales based on years of healthcare experience, age, and level of education.

Regarding marital status, married nurses have scored higher burnout than single participants. Likewise, income levels scored a significant association with burnout scores. However, the results s are inconsistent with the research conducted by Kim and Yang (Yang & Kim, 2012). One explanation is the life demands of married people here in Jordan, which are higher than unmarried nurses; the living cost is higher than personal income. (Jarrad et al., 2018).

Regarding Compassion Satisfaction (CS), the findings of this study showed that nurses who work in critical care units reported experiencing moderate levels of Compassion Satisfaction (CS). These findings support the literature; various studies said that most nurses in critical care units had an average or moderate level of Compassion Satisfaction (CS) (Al-Majid et al., 2018; Mooney et al., 2017).

Compassion Satisfaction (CS) is significantly associated with the workplace and income. This association comes from the different workplace policies, the flexibility of schedule, supportive managerial practices, motivation environment, teamwork, and organizational culture. Adversely, it may lead to some range in nurses' scores for Compassion Satisfaction (CS). According to Burtson & Stichler (2010), promoting Compassion Satisfaction (CS) among nurses may improve nursing care, increase fostering patient satisfaction, and potentially sustain long-term improvements in patient outcomes (Burtson & Stichler, 2010). However, we found no statistically significant association between Compassion Satisfaction (CS) with age, experience years, education level, and gender.

The findings showed that nurses working in critical care units reported a low resilience level. However, one study said that ICU nurses in the United States had a high level of Resilience (Mealer et al., 2012). Several factors can explain the differences in resilience levels, such as emotional support from colleagues, positive and healthy family relationships, high levels of job satisfaction, and having a positive attitude toward the job (Çam & Büyükbayram, 2017).

In the current study, resiliency emerged as an essential factor significantly associated with burnout levels and Compassion Satisfaction (CS) levels. The study found that ICU nurses' higher resiliency scores predicted higher Compassion Satisfaction (CS) and lower levels of burnout. A result suggests that ICU nurses, who are more resilient, are less likely to experience burnout and more likely to experience Compassion Satisfaction (CS). However, given the cross-sectional design of this study with a self-report questionnaire, these findings require cautious interpretation. Nevertheless, this result supports the literature that found a significant inverse association between Burnout and Resilience. The results show a need to develop or enhance resilience-building strategies to help reduce the adverse effects of Compassion Fatigue (CF) and Burnout (Burnett & Wahl, 2015).

4 Conclusion

Assessing nurses' professional quality of life is necessary before any interventions can be implemented to improve the work environment (Tam et al., 2004). Being a nurse in the ICU environment is a stressful challenge. Nurses in critical care are not involved in healthcare in this setting. This study investigated Compassion Fatigue (CF), Compassion Satisfaction (CS), and Resilience rates among ICU nurses and identified the association between Resilience, Compassion Fatigue (CF), and Compassion Satisfaction (CS) in that population.

Nurses in this study reported moderate levels of Burnout, Compassion Satisfaction (CS), and Secondary Traumatic Stress. The results show an association between Resilience, Burnout, and CS. The current study increased awareness of Compassion Satisfaction (CS) and Compassion Fatigue (CF) components in critical care nurses. So, the problems associated with Compassion Fatigue (CF) are recognized, treated, and prevented. The information from this study and future research in this area can lead to a more holistic approach by nurse managers and institutions to support nurses, especially those in high-stress areas such as critical care departments.

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