# Investigation of Compassion Competence, Risk of Compassion Fatigues, and Burnout Among Multicultural Nurses Caring for COVID-19 Patients in King Abdulaziz Medical City, Jeddah

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## Background:

Since 2019, the world has faced the coronavirus disease (COVID-19) pandemic, a significant public health crisis that continues to be threatening to human life (Huang et al., 2020). Globally, COVID-19 has affected 231 countries including Saudi Arabia with over 710 million confirmed cases and more than 7 million deaths reported. Approximately 15% of cases have developed severe complications with a rate of 3.6 % case fatality (WHO, 2020). Intensive Care Unit (ICU) admission rates due to COVID-19 have fluctuated over time, across different regions, and depending on the prevalence of various variants, with figures reaching as high as 30 to 120 patients per million people (Maslove, et. al 2022).

It was found that most of the critical cases developed respiratory failure, septic shock, and/or multiple organ dysfunction such as Acute Respiratory Distress (ARDs), Acute Kidney Injury (AKI), Cardiac Injury (KI), liver dysfunction and pneumothorax (Shang et al, 2020). In Saudi Arabia, COVID-19 pandemic exhibited three distinct peaks, each characterized by varying clinical presentations and outcomes across the three waves (Salam, et al. 2022). It is estimated in Saudi Arabia that around 5-10% of severe cases require intensive care (Alharbi, Jackson & Usher, 2020). This makes the Health Care Workers (HCWs) particularly those working in ICU facing several challenges including anxiety and stress due to inadequate personal protective equipment, staff shortages, limited of beds and mechanical ventilators availability (Alharbi, Jackson & Usher, 2020). Furthermore, they worried of: (1) a greater potential risk of exposure, (2) extreme workloads, (3) uncertainty of the organizational support if they develop an infection, (4) moral dilemmas and (5) rapidly evolving practice environment that differs greatly from what they are familiar with (Shanafelt, & Trockel 2020).

Although all sources of anxiety may not affect all health care workers, still can weaken the HCWs' confidence and the system of health care delivery. Research evidence indicates that health professionals often face various psychological problems when working in high pressure or high-risk situations such as during a pandemic (Alharbi, Jackson & Usher, 2020; Alharbi, Jackson & Usher, 2019; Kelly & Lefton, 2017). Besides, it has been reported that the COVID-19 pandemic increases depression and anxiety symptoms along with negative impacts on general mental health for the healthcare workers (Vindegaard & Benros, 2020). Nurses being on the frontline of patient care are among the most exposed to workplace stressors while care for COVID-19 patients. This is because they observe patients enduring prolonged suffering and feel powerless to alleviate patients' distress, which in turn negatively affects safety outcomes, patient experience, and compassionate care.

Compassionate care is considered a core principle of nursing practice, emphasizing the importance of delivering high-quality care. (Nijboer & Van der Cinger, 2019). There are many definitions of compassion care that exist in the literature and incorporating a range of elements. For instance, Blomberg and his colleagues (2016) identified four key elements of compassion care. The first one is the moral attribute of a compassionate nurse, which includes wisdom, humanity, love, and empathy. The second one is situational awareness, where the nurse should be aware of the patient's suffering. Responsive action is another key element in which the nurse should participate in the relieving of the patient's suffering. Finally, a relational capacity that aims to build a caring pastoral relationship between the nurse and patients.

Bivins et al. (2017) expanded the compassion care definition to include five elements. A cognitive element, which means understanding what is important to the patients. A volitional element, which means choosing to take action to relieve the suffering. An effective element means imaging what the patients are going through. An altruistic element: means reacting to the patient's needs. A moral element means to not show any pain or distress already being experienced by the patient. Therefore, it is not surprising that compassion is a core to nursing practices as compassion enables nurses to be aware of and understand a patient's suffering and try to alleviate their disquieting.

Many studies describe the characteristics and qualities of a compassionate nurse. These characteristics include connecting with and understanding the patient, awareness of needs/suffering, empathy, communication, body language, patients' involvement, having time for patients, small act (e.g. holding a patient's hand), emotional strength, and professionalism competence (Durkin et al., 2018). Also, studies emphasize that these characteristics should be considered as measurable criteria for a competent nurse. Further, Salmond et al. (2019) argue that nursing is an extremely demanding profession that requires physical, emotional, and spiritual strength. Nurses need to enter their patients' lives during the illness and provide them with needed support with a positive impact. As a result, nurses can have a sense of compassion and satisfaction.

Compassion satisfaction has been described as a positive feeling that nurses experience when they provide care to their patients (Henderson & Jones, 2017). Many factors in the work environment can lead to compassion satisfaction for nurses, such as treating all staff fairly, giving them some control over their workload, rewarding the staff, and the nature of work being undertaken (Henderson & Jones, 2017). Compassion satisfaction is associated with improving patients' outcomes and the quality of patients' care. When the nurse feels positive about their

patients/ families, the health professional team, and their ability to provide better care, therefore better patient outcomes (Salmond et al., 2017). Empirical evidence, however, argues that providing the emotional support and ongoing empathic connection of caring for patients who are suffering has negative consequences on nurses that can lead to compassion fatigue (CF) (Salmond et al., 2017).

Compassion Fatigue (CF) refers to the cumulative negative feelings that may result from providing compassion care and exposure to stress over an extended period, ultimately leading to dysfunction and exhaustion (Cocker& Joss, 2016). CF was described in the early nineties as the loss of compassion because of continued exposure to suffering during work (Figley,1995). Later, CF was defined as secondary traumatic stress (STS) that results from a deep involvement with a primarily traumatized patient (Figley, 2002). In other words, nurses absorb the emotions of the traumatic stress from the patients during the dynamics of a caring relationship with them, which can cause emotional exhaustion (Cocker & Joss, 2016). The signs and symptoms of compassion fatigue could be anxious behaviors, depression, and emotional disturbances (Henderson & Jones, 2017).

Although the compassion fatigue has been reported among nurses who provide direct care in different settings, it is highly experienced among nurses who are working in critical care areas with critically ill patients in life-threatening conditions (Kelly, & Lefton, 2017; Alharbi et al. 2019; Alharbi et al. 2020). Previous research has been carried out to determine the factors that influence compassion and compassion fatigue The studies have identified that education levels and working hours, working unit or specialty, and gender are the factors influencing compassion fatigue (Turen, et al., 2024; Ozan & Polat, 2024; El-Ashry, et al., 2023; Arkan et al., 2020; Alharbi, et al., 2020). Henderson, & Jones, (2017), identified that burnout is associated with work environmental factors such as overcrowding, problems with administration, long shift, high stress, and high patient acuity. Burnout (BO) refers to physical, mental, and emotional exhaustion that results from exposure to occupational stress (Van Mol et al., 2015). Compassion fatigue and burnout can have a severe effect on the organizations as well as on the nurse's well-being. For example, previous studies found that CF and burnout influence the nurse retention rate, patient safety, and patient satisfactions.

The research on the prevalence of compassion fatigue (CF) among critical care nurses shows inconsistent results (Almadani, et al., 2023; Crabtree-Nelson, et al., 2022; Ma, et al., 2022; Alharbi, et al., 2020). Despite burnout is closely related to compassion fatigue, both have a different mechanism. BO is believed to be related to occupational factors, such as workload, autonomy, and rewarding, rather than personal relationships. In contrast, CF is related to ongoing close relationships with patients, which lead to an inability to engage or enter a caring relationship (Cocker& Joss, 2016).

While previous studies have addressed the concept of compassion care, compassion fatigue, and burnout, it remains limitedly assessed among nurses who are caring for COVID-19 patients in Saudi Arabia. It is important that we gain a more understanding of these concepts in its entirety, including an understanding of the experience itself, the risk of compassion fatigue, and risk of burnout during caring of COVID-19 patients. This study aims to provide an understanding for these concepts with nurses and to suggest interventions that can be tried and tested to combat CF and burnout.

**Methods:**

**Aim:**

The main aim of this study is to assess compassion competence, the risk of compassion fatigues, and the risk of burnout among nurses from diverse cultural backgrounds during caring of COVID-19 patients in King Abdulaziz Medical City, Jeddah, Saudi Arabia.

**Participants:**

The population of this study are nurses who worked with patients diagnosed with COVID-19 during the Pandemic in King Abdulaziz Medical City. The total number of nurses who work in the units specified for the COVID-19 (15 units) is 350. A convenient sample from these nurses was included in the study. All the 350 nurses were invited to participate in the study.

Using the Modified Cochran Formula for Sample Size Calculation in Smaller Populations (Barlett, & Higgins, 2001) sample size will be identified. Where n0 is Cochran's sample size recommendation, N is the population size, and n is the new, adjusted sample size.

N=350

n0 = 385

with confidence interval of 5%, the minimum sample size was n = 184 participants.

**Setting:**

This study was conducted at King Abdulaziz Medical City in Jeddah, Ministry of the National Guard. The hospital has 750 bed capacity, provides medical care services for the Saudi Arabian population in the Western Region. It is a JCI accredited hospital. King Abdulaziz Medical City provides an extensive service during the pandemic of COVID-19. There were 15 units in the hospital that were specified only for the care of patients confirmed as COVID-19 positive during the three waves of the pandemic. These units include general units in addition to Intensive care units and Emergency Department. There were 400 Nurses working in these units during the Pandemic.

**Data Collection:**

First: Demographic Characteristics of participants, as age, marital status, nationality, specialty, years of experience.

The second tool is the Compassion Competence Scale by Lee and Seomun (2016) CCS. The CCS is a self-evaluation tool that measures the level of compassion competence as perceived by the nurse. It consists of 17 questions related to the following three subfactors: communication (eight items), sensitivity (five items), and insight (four items). The score for each question ranges from 1 ('strongly disagree') to 5 ('strongly agree'). The total score is calculated as the means of the scores for each question; it ranges from 1 to 5. The reliability of Cronbach's alpha of the scale was 0.91, whereas the subscale communication = 0.88, sensitivity = 0.77 and insight = 0.73.

The third tool is the original version of Compassion Fatigue Self-Test (CFST), which was developed by Figley (1995). The CFST comprises 40 items divided into two subscales: 23 items assess compassion fatigue, and 17 items evaluate the risk of burnout. Responses are measured on a five-point Likert scale, which indicates the frequency of experiences (1 =

rarely/never, 2 = a few times, 3 = not sure/somewhat often, 4 = often, and 5 = very often). Reported internal consistency alphas range from .86 to .94 (Figley,1995; Figley & Stamm,1996). Scoring of the subscale indicated in the below table (Figley,1995).

**Data Analysis:**

Collected data was coded, managed, and analyzed using SPPS version 25. Results were reported in descriptive analysis including frequency, percentages, means, and SD. Inferential analysis also was performed including comparison of groups using t-test correlations and linear regression models was conducted.

**Ethical Consideration:**

This study was approved by IRB of King Abdulla International Medical research center (KAIMRC). The participants in this study were safeguarded by several ethical principles. Participation was entirely voluntary, and individuals were free to withdraw from the study at any time without facing any consequences. Participants were treated fairly during the data collection process. Confidentiality was upheld throughout the research, with data being collected anonymously and no names being recorded. The collected data was stored in a secure safe place and only investigators have access to it.

**Results:**

Out of the 350 who were invited to fill in the survey 243 of them replied. Response rate of 69.43%.

| **Variable** | **N=243** |
|---|---|
| **Age** | 37.9± 9.3 |
| **Gender** | |
| Male | 33(13.6) |
| Female | 210(86.4) |
| **Education** | |
| Diploma | 57(23.5) |
| Bachelor | 181(74.5) |
| Master | 5(2.1) |
| **Marital status** | |
| Single | 104(42.8) |
| Married | 128(52.7) |
| Divorced | 9(3.7) |
| Widow | 2(0.8) |
| **Nationality** | |
| Saudi | 42(17.3) |
| Non-Saudi | 201(82.7) |
| **Position** | |
| Clinical coordinator | 19(7.8) |
| SN1 | 128(52.7) |
| SN2 | 96(39.5) |
| **Total experience** | |

| | |
|---|---|
| 1-9 years | 82(33.7) |
| 10-19 years | 94(38.7) |
| 20-29 years | 48(19.8) |
| 30+ years | 19(7.8) |
| **KSA experience** | |
| 1-9 years | 154(63.4) |
| 10-19 years | 56(23) |
| 20-29 years | 31(12.8) |
| 30+ years | 2(0.8) |

The study involved 243 nurses, with an average age of 37.9 ± 9.3 years. Majority of participants were female (86.4%), outnumbering males (13.6%). A significant portion held a bachelor's degree (74.5%), while 23.5% had a diploma, and only 2.1% possessed a master's degree. Approximately half of the participants (52.7%) were married, and a substantial majority (82.7%) were non-Saudi. In terms of positions, around half (52.7%) were Staff Nurse 1 (SN1), 39.5% were Staff Nurse 2 (SN2), and 7.8% served as clinical coordinators. Regarding nursing experience, 38.7% had 10-19 years, 33.7% had 1-9 years, 19.8% had 20-29 years, and 7.8% had 30+ years. In terms of experience in KSA, 63.4% had 1-9 years, 23% had 10-19 years, 12.8% had 20-29 years, and only 0.8% had 30+ years.

**Table 2:**

| **CCS Communication domain** | | |
|---|---|---|
| **Item** | **Mean (SD)** | **% of Agreement** |
| 1 | 3.65(0.882) | 73**%** |
| 2 | 4.08(0.872) | 81.6**%** |
| 3 | 3.94(0.850) | 78.8**%** |
| 4 | 3.74(0.961) | 74.8**%** |
| 5 | 4.01(0.827) | 80.2**%** |
| 6 | 3.98(0.865) | 79.6**%** |
| 7 | 3.94(0.848) | 78.8**%** |
| 8 | 4.05(0.860) | 81**%** |
| **Overall domain** | **31.34**(5.353) | **78.35%** |
| **CCS Sensitivity domain** | | |
| **Item** | **Mean (SD)** | **% of Agreement** |
| 1 | 4.09(0.881) | 81.8% |

| | | |
|---|---|---|
| 2 | 4.29(0.859) | 85.8% |
| 3 | 4.27(0.824) | 85.4% |
| 4 | 4.14(0.867) | 82.8% |
| 5 | 4.08(0.779) | 81.6% |
| **Overall domain** | 20.892(3.541) | **83.56%** |
| **CCS Insight domain** | | |
| **Item** | **Mean (SD)** | **% of Agreement** |
| 1 | 4.19(0.762) | 83.8**%** |
| 2 | 4.06(0.828) | 81.2**%** |
| 3 | 4.07(0.809) | 81.4**%** |
| 4 | 4.09(0.833) | 81.8**%** |
| **Overall domain** | 16.409(2.794) | **82%** |

The mean score for compassion care competency across all domains among nurses was 22.87. Specifically, the average scores were 31.35 (78.35%) for the communication domain, 20.89 for the sensitivity domain, and 16.40 for the insight domain.

**Table 3 CFST Compassion fatigue:**

| **Item** | **Mean (SD)** | **% of Agreement** |
|---|---|---|
| 1 | 3.14(1.38) | 62.8**%** |
| 2 | 2.18(1.11) | 43.6**%** |
| 3 | 2.20(1.15) | 44**%** |
| 4 | 2.09(1.18) | 41.8**%** |
| 5 | 2.06(1.16) | 41.2**%** |
| 6 | 2.23(1.30) | 44.6**%** |
| 7 | 1.96(1.10) | 39.2**%** |
| 8 | 2.01(1.22) | 40.2**%** |
| 9 | 2.28(1.27) | 45.6**%** |
| 10 | 2.49(1.24) | 49.8**%** |
| 11 | 2.07(1.17) | 41.4**%** |
| 12 | 1.92(1.18) | 38.4**%** |
| 13 | 1.89(1.15) | 37.8**%** |
| 14 | 2.14(1.27) | 42.8**%** |
| 15 | 2.07(1.26) | 41.4**%** |
| 16 | 2.35(1.33) | 47**%** |
| 17 | 2.37(1.36) | 47.4**%** |
| 18 | 1.94(1.19) | 38.8**%** |
| 19 | 1.80(1.12) | 36**%** |
| 20 | 1.79(1.09) | 35.8**%** |
| 21 | 1.86(1.16) | 37.2**%** |
| 22 | 1.87(1.13) | 37.4**%** |

| | | |
|---|---|---|
| 23 | 1.73(1.08) | 34.6**%** |
| **Overall domain** | 48.50(19.434) | 42.17% |

The average compassion fatigue score for nurses was 48.50, suggesting a moderate risk of experiencing fatigue.

T**able 4 CFST Risk of Burnout:**

| **Item** | **Mean (SD)** | **% of Agreement** |
|---|---|---|
| 1 | 1.79(1.10) | 35.8% |
| 2 | 1.86(1.06) | 37.2% |
| 3 | 1.91(1.17) | 38.2% |
| 4 | 1.78(1.07) | 35.6% |
| 5 | 1.81(1.12) | 36.2% |
| 6 | 1.72(1.09) | 34.4% |
| 7 | 1.67(1.06) | 33.4% |
| 8 | 1.98(1.15) | 39.6% |
| 9 | 2.04(1.22) | 40.8% |
| 10 | 1.81(1.14) | 36.2% |
| 11 | 1.97(1.23) | 39.4% |
| 12 | 2.16(1.27) | 43.2% |
| 13 | 2.09(1.29) | 41.8% |
| 14 | 1.78(1.09) | 35.6% |
| 15 | 1.82(1.15) | 36.4% |
| 16 | 1.95(1.22) | 39% |
| 17 | 2.16(1.30) | 43.2% |
| **Overall domain** | 32.35(15.20) | 38.05% |

The average burnout score among nurses was 32.35, indicating a moderate risk of burnout.

**Table 5 fatigue & burnout levels**

| **Category** | **Fatigue No (%)** | **Burnout No (%)** |
|---|---|---|
| Extremely low risk | 22(9.1) | 72(29.6) |
| Low risk | 25(10.3) | 31(12.8) |
| Moderate risk | 26(10.7) | 28(11.5) |
| High risk | 30(12.3) | 53(21.8) |
| Extremely high risk | 140(57.6) | 59(24.3) |

The current study revealed that more than half (57.6%) of the participants experienced an extremely high risk of fatigue, with 12.3% at a high risk, 10.7% at a moderate risk, and 10.3% at a low risk; only 9.1% reported an extremely low risk of fatigue. Furthermore, approximately one-third of the participants (29.6%) reported an extremely low risk of burnout, while 24.3% were at an extremely high risk, 21.8% at a high risk, 12.8% at a low risk, and only 11.5% at a moderate risk.

**Table 6 Communication domain by basic characteristics of participants:**

| Variable | Mean± SD | Significance |
|---|---|---|
| **Gender** | | t= 2.971 , *p*= 0.003* |
| Male | 33.87 ± 4.37 | |
| Female | 30.94 ± 5.39 | |
| **Education** | | F=3.67 , *p*= 0.27* |
| Diploma | 29.80 ± 3.646.10 | |
| Bachelor | 31.88 ± 5.05 | |
| Master | 29.40 ± 1.63 | |
| **Marital status** | | F= 0.570 , *p*=0.636 |
| Single | 31.28 ± 5.32 | |
| Married | 31.46± 5.26 | |
| Divorced | 31.33± 5.31 | |
| Widow | 26.50 ± 14.84 | |
| **Nationality** | | t= -0.396 , *p*=0.692 |
| Saudi | 31.04± 5.71 | |
| Non-Saudi | 31.40± 5.28 | |
| **Position** | | F=4.610 , *p*= 0.011* |
| Clinical coordinator | 29.47± 4.41 | |
| SN1 | 30.71± 5.41 | |
| SN2 | 32.55 ± 5.23 | |
| **Total experience** | | F=1.521 , *p*=0.210 |
| 1-9 years | 30.52± 5.71 | |
| 10-19 years | 31.50± 5.54 | |
| 20-29 years | 31.70± 4.39 | |
| 30+ years | 33.21± 4.70 | |
| **KSA experience** | | F=0.692 , *p*=0.558 |
| 1-9 years | 31.12± 5.52 | |
| 10-19 years | 31.39± 4.73 | |

| | | |
|---|---|---|
| 20-29 years | 32.09± 5.60 | |
| 30+ years | 35.50± 4.94 | |

The communication domain of nurses showed a significant correlation with gender ($p$=0.003*), education ($p$=0.27*), and position ($p$=0.011*). The research revealed that male nurses exhibited higher compassion competency in the communication domain. Additionally, nurses with a bachelor's degree demonstrated greater communication competency compared to those with diploma or master's degrees. Staff Nurse 2 (SN2) positions also exhibited competence in communication compared to other roles.

**Table 7 Sensitivity domain by basic characteristics of participants:**

| **Variable** | **Mean± SD** | **Significance** |
|---|---|---|
| **Gender** | | t= 2.762, $p$= 0.006* |
| Male | 22.45± 2.34 | |
| Female | 20.64± 3.63 | |
| **Education** | | F= 1.084 , $p$=0.340 |
| Diploma | 20.33± 4.63 | |
| Bachelor | 21.08± 3.13 | |
| Master | 20.20± 3.03 | |
| **Marital status** | | F=2.360 , $p$=0.072 |
| Single | 20.93± 3.16 | |
| Married | 20.90± 3.58 | |
| Divorced | 21.66± 3.57 | |
| Widow | 14.50± 13.43 | |
| **Nationality** | | t= -1.3658 , $p$=0.173 |
| Saudi | 20.21± 3.92 | |
| Non-Saudi | 21.03± 3.45 | |
| **Position** | | F=2.174 , $p$=0.116 |
| Clinical coordinator | 20.26± 3.69 | |
| SN1 | 20.55± 3.81 | |
| SN2 | 21.46± 3.05 | |
| **Total experience** | | F=0.853 , $p$=0.466 |
| 1-9 years | 20.41± 3.52 | |
| 10-19 years | 21.02± 4.03 | |
| 20-29 years | 21.22± 2.58 | |
| 30+ years | 21.47± 3.07 | |
| **KSA experience** | | F=0.377 , $p$=0.770 |

| | | |
|---|---|---|
| 1-9 years | 20.73± 3.62 | |
| 10-19 years | 21.26± 3.00 | |
| 20-29 years | 20.93± 4.14 | |
| 30+ years | 22.89± 1.41 | |

The sensitivity domain of nurses showed a significant correlation with gender only ($p$=0.006*), where male nurses exhibited higher compassion competency in the sensitivity domain.

**Table 8 Insight domain by basic characteristics of participants:**

| **Variable** | **Mean± SD** | **Significance** |
|---|---|---|
| **Gender** | | t= 2.484, $p$= 0.014* |
| Male | 17.51± 2.29 | |
| Female | 16.22± 2.83 | |
| **Education** | | F=0.135 , $p$=0.874 |
| Diploma | 16.280± 3.42 | |
| Bachelor | 16.45± 2.58 | |
| Master | 16.00±2.54 | |
| **Marital status** | | F= 1.013 , $p$=0.388 |
| Single | 16.35± 2.66 | |
| Married | 16.39± 2.82 | |
| Divorced | 17.55± 2.45 | |
| Widow | 14.00± 8.48 | |
| **Nationality** | | t=-1.211 , $p$=0.227 |
| Saudi | 15.92± 2.88 | |
| Non-Saudi | 16.50± 2.77 | |
| **Position** | | F= 0.456 , $p$=0.635 |
| Clinical coordinator | 16.21± 2.82 | |
| SN1 | 16.27± 2.89 | |
| SN2 | 16.61± 2.66 | |
| **Total experience** | | F= 1.861 , $p$=0.137 |
| 1-9 years | 16.03± 2.86 | |
| 10-19 years | 16.26± 3.07 | |
| 20-29 years | 16.91± 2.05 | |
| 30+ years | 17.36± 2.45 | |

| | | |
|---|---|---|
| **KSA experience** | | F= 1.223 , *p*=0.302 |
| 1-9 years | 16.15± 2.93 | |
| 10-19 years | 16.82± 2.35 | |
| 20-29 years | 16.77± 2.80 | |
| 30+ years | 18.00± 2.82 | |

The insight domain of nurses showed a significant correlation with gender only (*p*=0.014*), where male nurses exhibited higher compassion competency in the insight domain.

**Table 9 Compassion fatigue by basic characteristics of participants:**

| Variable | Mean± SD | Significance |
|---|---|---|
| **Gender** | | t=3.01 , *p*= 0.001* |
| Male | 73.84± 8.31 | |
| Female | 67.82 ± 10.99 | |
| **Education** | | F= 1.874 , *p*=0.156 |
| Diploma | 66.42± 13.41 | |
| Bachelor | 69.42± 9.91 | |
| Master | 65.60± 8.67 | |
| **Marital status** | | F= 1.156 , *p*=0.327 |
| Single | 68.57± 10.09 | |
| Married | 68.77± 10.99 | |
| Divorced | 70.55± 10.63 | |
| Widow | 55.00± 36.76 | |
| **Nationality** | | t=-0.953 , *p*=0.342 |
| Saudi | 67.19± 11.73 | |
| Non-Saudi | 68.94± 10.66 | |
| **Position** | | F= 2.90 , *p*= 0.049* |
| Clinical coordinator | 65.94± 10.57 | |
| SN1 | 67.54± 11.33 | |
| SN2 | 70.63± 10.00 | |
| **Total experience** | | F= 1.483 , *p*=0.220 |
| 1-9 years | 66.97± 10.94 | |
| 10-19 years | 68.78± 11.93 | |
| 20-29 years | 69.85± 8.39 | |
| 30+ years | 72.05± 9.82 | |

| | | |
|---|---|---|
| **KSA experience** | | F= 0.666 , *p*=0.573 |
| 1-9 years | 68.01± 11.16 | |
| 10-19 years | 69.48± 9.29 | |
| 20-29 years | 69.80± 12.05 | |
| 30+ years | 75.50± 9.19 | |

**Table 10 Risk for burnout by basic characteristics of participants:**

| Variable | Mean± SD | Significance |
|---|---|---|
| **Gender** | | t=-0.983 , *p*=0.326 |
| Male | 29.93± 15.49 | |
| Female | 32.73± 15.15 | |
| **Education** | | F=0.609 , *p*=0.545 |
| Diploma | 30.47± 14.99 | |
| Bachelor | 32.88± 15.31 | |
| Master | 34.80± 14.04 | |
| **Marital status** | | F= 4.336 , *p*= 0.005* |
| Single | 36.16± 16.85 | |
| Married | 29.90± 13.50 | |
| Divorced | 24.88± 8.13 | |
| Widow | 25.00± 8.48 | |
| **Nationality** | | t= 4.064 , *p*= 0.000** |
| Saudi | 40.76± 17.15 | |
| Non-Saudi | 30.60± 14.18 | |
| **Position** | | F= 1.114, *p*=0.330 |
| Clinical coordinator | 34.47± 4.09 | |
| SN1 | 33.36± 14.99 | |
| SN2 | 30.59± 14.90 | |
| **Total experience** | | F= 6.877 , *p*= 0.000** |
| 1-9 years | 37.97± 17.48 | |
| 10-19 years | 30.91± 14.06 | |
| 20-29 years | 28.20± 11.14 | |
| 30+ years | 25.73± 2.69 | |
| **KSA experience** | | F=1.828 , *p*=0.143 |
| 1-9 years | 33.53± 16.17 | |
| 10-19 years | 32.39± 14.10 | |
| 20-29 years | 26.61± 10.87 | |
| 30+ years | 29.50± 12.02 | |

Table 11 relation between both of fatigue and burnout & demographic characteristics

| **Items** | **Fatigue** | | | | | | **Burnout** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Extremely low risk No (%)** | **low risk No (%)** | **Moderate risk No (%)** | **High risk No (%)** | **Extremely high risk No (%)** | ***p*** | **Extremely low risk No (%)** | **low risk No (%)** | **Moderate risk No (%)** | **High risk No (%)** | **Extremely high risk No (%)** | ***p*** |
| **Gender** | | | | | | | | | | | | |
| Male | 2(0.8) | 5(2.1) | 6(2.5) | 3(1.32) | 17(7) | 0.430 | 14(5.8) | 3(1.2) | 5(2.1) | 4(1.6) | 7(2.9) | 0.315 |
| Female | 20(8.2) | 20(8.2) | 20(8.2) | 27(11.1) | 123(50.6) | | 58(23.9) | 28(11.5) | 23(9.5) | 49(20.2) | 52(21.4) | |
| **Education** | | | | | | | | | | | | |
| Diploma | 3(1.2) | 7(2.9) | 9(3.7) | 9(3.7) | 29(11.9) | 0.537 | 19(7.8) | 9(3.7) | 6(2.5) | 14(5.8) | 9(3.7) | 0.782 |
| Bachelor | 19(7.8) | 17(7) | 17(7) | 21(8.6) | 107(44) | | 52(21.4) | 22(9.1) | 21(8.6) | 38(15.6) | 48(19.8) | |
| Master | 0(0) | 1(0.4) | 0(0) | 0(0) | 4(1.6) | | 1(0.4) | 0(0) | 1(0.4) | 1(0.4) | 2(0.8) | |
| **Marital status** | | | | | | | | | | | | |
| Single | 3(1.2) | 9(3.7) | 10(4.1) | 9(3.7) | 73(30) | 0.000** | 25(10.3) | 11(4.5) | 11(4.5) | 20(8.2) | 37(15.2) | 0.080 |
| Married | 19(7.8) | 16(6.6) | 14(5.8) | 16(6.6) | 63(25.9) | | 44(18.1) | 17(7) | 15(6.2) | 30(12.3) | 22(9.1) | |
| Divorced | 0(0) | 0(0) | 2(0.8) | 3(1.2) | 4(1.6) | | 2(0.4) | 3(1.2) | 2(0.8) | 2(0.8) | 0(0) | |
| Widow | 0(0) | 0(0) | 0(0) | 2(0.8) | 0(0) | | 1(0.4) | 0(0) | 0(0) | 1(0.4) | 0(0) | |
| **Nationality** | | | | | | | | | | | | |
| Saudi | 3(1.2) | 2(0.8) | 0(0) | 4(1.6) | 33(13.6) | 0.023* | 5(2.1) | 3(1.2) | 6(2.5) | 10(4.1) | 18(7.4) | 0.006* |
| Non-Saudi | 19(7.8) | 23(9.5) | 26(10.7) | 26(10.7) | 107(44) | | 67(27.6) | 28(11.5) | 22(9.1) | 43(17.7) | 41(16.9) | |
| **Position** | | | | | | | | | | | | |
| Clinical coordinator | 2(0.8) | 2(0.8) | 3(1.2) | 2(0.8) | 2(0.8) | 0.477 | 3(1.2) | 4(1.6) | 4(1.6) | 3(1.2) | 5(2.1) | 0.426 |
| SN1 | 7(2.9) | 11(4.5) | 12(4.9) | 16(6.6) | 16(6.6) | | 36(14.8) | 13(5.3) | 13(5.3) | 33(13.6) | 33(13.6) | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SN2 | 13(5.3) | 12(4.9) | 11(4.5) | 12(4.9) | 12(4.9) | | 33(13.6) | 14(5.8) | 11(4.5) | 17(7) | 21(8.6) | |
| **Total experience** | | | | | | | | | | | | |
| 1-9 years | 5(2.1) | 8(3.3) | 5(2.1) | 8(3.3) | 56(23) | 0.029* | 19(7.8) | 8(3.3) | 7(2.9) | 13(5.3) | 35(14.4) | 0.004* |
| 10-19 years | 9(3.7) | 4(1.6) | 14(5.8) | 12(4.9) | 55(22.6) | | 26(10.7) | 14(5.8) | 14(5.8) | 24(9.9) | 16(6.6) | |
| 20-29 years | 4(1.6) | 9(3.7) | 5(2.1) | 6(2.5) | 24(9.9) | | 18(7.4) | 5(2.1) | 6(2.5) | 13(5.3) | 6(2.5) | |
| 30+ years | 4(1.6) | 4(1.6) | 2(0.8) | 4(1.6) | 5(2.1) | | 9(3.7) | 4(1.6) | 1(0.4) | 3(1.2) | 2(0.8) | |
| **KSA experience** | | | | | | | | | | | | |
| 1-9 years | 14(5.8) | 13(5.3) | 16(6.6) | 16(6.6) | 95(39.1) | 0.003* | 44(18.1) | 21(8.6) | 15(6.2) | 30(12.3) | 44(18.1) | 0.029* |
| 10-19 years | 5(2.1) | 2(0.8) | 6(2.5) | 8(3.3) | 35(14.4) | | 12(4.9) | 9(3.7) | 10(4.1) | 13(5.3) | 12(4.9) | |
| 20-29 years | 3(1.2) | 10(4.1) | 3(1.2) | 5(2.1) | 10(4.1) | | 16(6.6) | 0(0) | 3(1.2) | 9(3.7) | 3(1.02) | |
| 30+ years | 0(0) | 0(0) | 1(0.4) | 1(0.4) | 0(0) | | 0(0) | 1(1) | 0(0) | 1(0.4) | 0(0) | |

This study indicated a significant correlation between the risk of fatigue and burnout and factors such as nationality, total years of experience, and experience specifically in Saudi Arabia. Additionally, marital status was found to be significantly associated with the risk of fatigue only. For instance, non-Saudi participants exhibited higher risks of fatigue and burnout compared to Saudi participants. Nurses with 10-19 years of experience also showed increased susceptibility to fatigue and burnout compared to other experience groups. Moreover, participants with 1-9 years of experience in Saudi Arabia demonstrated higher risks of fatigue and burnout. Furthermore, the risk of fatigue was observed to be higher among married participants compared to those who were single, divorced, or widowed.

## Discussion

The present study gives a critical assessment of compassion competence, the risk of compassion fatigues, and the risk of burnout among nurses from diverse cultural backgrounds during caring of COVID-19 patients in King Abdulaziz Medical City, Jeddah. The findings of the present study are in line with and contribute to the growing body of literature on the challenges faced by healthcare professionals during COVID-19 pandemic.

This study reveals the high levels of compassion competence among the nurses, particularly in communication, sensitivity, and insight, which could be reflected of the commitment of nurses to delivering patient-centered care under the challenging circumstances that faces them. Compassion competence refers to recognizing, empathizing with and working toward relieving suffering through nursing especially in multicultural contexts where language barriers and cultural differences can complicate patient care (Lee et al., 2021).

The current literature also highlighted that compassion competence is essential for nurses to improve patient outcomes and satisfaction. For example, a study by Sinclair et al. (2017) emphasizes that effective communication in a multicultural setting should be not based on exchange of information only but also building trust and understanding between nurses and their patients. In the present study, the mean score for communication domain was very high (mean = 31.35, agreement = 78.35%) indicating that the nurses at King Abdulaziz Medical City are highly competent and be able to handle challenges, especially during the COVID-19 pandemic.

Moreover, the present study found that the nurses have a high score in sensitivity and insight domains which indicated that these nurses can address their patients emotional and psychological needs. This finding aligns with the findings of Peters, (2018), who argued that sensitivity and insight play a key role in caring with compassion, where the nurses can tailor their interventions to the specific needs of each patient. Therefore, the findings of the present study indicated that despite the challenging demands of the COVID-19 pandemic, nurses demonstrated a strong foundation of compassion competence. On the other hand, the findings of the present study also show a significant level of compassion fatigue among the nurses at King Abdulaziz Medical City. This finding is consistent with the findings of numerous studies conducted during the COVID-19 pandemic. Compassion fatigue, which means feeling drained and less able to care often happens to healthcare workers who see a lot of suffering for a long time (Figley, 2002). In fact, over 62% of the nurses reported exhausted and feeling emotionally drained during the care for COVID-19 patients. This finding aligns with the recent studies that have shown higher levels of compassion fatigue among healthcare workers during the pandemic (Lai et al., 2020).

In addition, nurses are often directly exposed to viruses while caring for critically ill patients and other risks of diseases which lead to an increase in their stress of working

and creates a situation where compassion fatigue is hard to avoid. This study found moderate levels of compassion fatigue, which means that although nurses can still do their jobs, they might get worse if their current problems are not addressed.

The findings of the present study also highlighted the burnout which is closely related to compassion fatigue. Burnout includes feeling drained treating patients and feeling less accomplished. It's a well-known problem in nursing in high-stress situations like the COVID-19 pandemic (Galanis, et al., 2021). The nurses in this study showed signs of burnout, which shows how tough their work environment is. Many studies have shown that burnout does not only affect nurses' mental health, but it also reduces the quality-of-care level they provide (Dall'Ora et al. 2020). In fact, burnout is a systematic workplace issue. These include not having enough staff, working long hours, and not getting enough support from the organization. All of these have been common during the pandemic (Shanafelt et al., 2020).

The findings of this study suggest that interventions at both the individual and organizational levels are needed to mitigate burnout and its adverse effects.

**Implications for Practice:**

These findings have major consequences for nursing practice and healthcare management. The high levels of compassion competence among the nurses should be reinforced through ongoing training and professional development. However, the risks associated with compassion fatigue and burnout require urgent attention. Implementing peer support programs, providing access to mental health resources, and ensuring adequate staffing and manageable workloads are essential steps in addressing these issues.

Moreover, healthcare organizations must recognize the importance of creating a supportive work environment that prioritizes the well-being of healthcare workers. As suggested by West et al. (2018), fostering a culture of compassion within healthcare organizations can help to sustain the emotional and psychological resilience of nurses, enabling them to continue providing high-quality care without compromising their well-being.

**Conclusion:**

In conclusion, while the nurses at King Abdulaziz Medical City demonstrate high levels of compassion competence, they are also at significant risk of compassion fatigue and burnout. These findings underscore the need for comprehensive strategies to support nurses during and after the pandemic, ensuring that they can maintain their compassion competence while safeguarding their own mental health. Further research is needed to explore the long-term effects of the pandemic on healthcare workers and to identify effective interventions for preventing compassion fatigue and burnout.

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