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# Professional Quality of Life among Nurses Caring for Cancer Patients

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## Abstract

This study aimed at assessing the level and determinants of professional quality of life (compassion satisfaction, compassion fatigue, and burnout) for cancer care nurses. A descriptive correlation was conducted among 90 cancer care nurses using ProQoL Version-V and Brief COPE inventory self-administered questionnaires. Stratified sampling was used to select the study participants from different units. There was a high score for compassion satisfaction 42±4.76, low to average burnout 33±4.7, and compassion fatigue 27±8.7 scores. There was a statistically significant difference in the levels based on some demographic factors and personal factors. A negative relationship between compassion satisfaction with exposure to chemotherapeutic, workload, and insufficient preparation with Staff patient ratio was noted to be the major predicting factors for all subscales of ProQoL. Organizational and personal intervention measures such as self-care, a mentorship program for upcoming new oncology staff, and training cancer caregivers. A study with a large sample is highly recommended.

**Keywords:** *Oncology nursing, compassion satisfaction, burnout, compassion satisfaction*

## 1.0 Background of the study

Cancer is the 3rd leading cause of death after infectious and cardiovascular diseases locally, with an annual incidence of about 28,000 new cases and mortality of 22 000 annually (National Cancer Control Strategy, 2017-2022). The high number of cancer cases may negatively impact nurses caring for cancer patient's majority of whom are not oncology specialized. Cancer care nursing is unique compared to other nursing disciplines. Nurses must show less negative emotions and have a hardy personality in dealing with patients with intense pain. Still, the nature of their work requires one to show sympathy and empathy to cancer patients, leading to emotional dissonance and moral distress as an ethical issue in oncology practice (Vargas Celis & Concha Méndez, 2019). Oncology nurses work in an emotionally charged environment and may assimilate the suffering of their patients (Ko & Kiser-larson, 2016).

This chronic exposure to stressful situations at the workplace has been associated with health care workers' low quality of life, particularly if they have no organizational and personal coping strategies in place. However, studies show that oncology nurses experience compassion satisfaction, a positive feeling due to their prolonged therapeutic relationship with their patients (Wu et al., 2016; Yu et al., 2016; Sacco & Copel, 2018). Tuna and Baykal (2017) found that empathizing with cancer patients leads to the formation of a special bond that can be emotionally satisfying on the part of the nurse. The professional quality of life constitutes three subscales; compassion satisfaction, burnout, and compassion satisfaction this concept has not been explored regionally and in particular among cancer caregivers locally.

The consequences of compassion fatigue (secondary traumatic stress) and burnout can manifest themselves at personal and organizational levels. This could lead to far-reaching effects on the clinical practice, compromised quality of care, and increased rates of medication errors (Kelly & Tyson, 2015; Lagerlund et al., 2015; Wells-English et al., 2019). On the other hand, compassion satisfaction includes a sense of wellbeing, accomplishment, and enthusiasm to help more (Bardeh, Sayedali & Kourosh, 2016). The actual magnitude and the factors influencing either positive or negative ProQoL are not known regionally hence the rationale to undertake this study.

Ortega-Campos et al. (2020) conducted a systematic review including 15 studies with a combined sample of 900 oncology nurses. The findings revealed that 19% of oncology nurses had low compassion satisfaction, 56% had medium and high burnout, while 60% had medium and high compassion fatigue. Similarly, in another study conducted in South Africa among nurses working in three oncology departments, 55% of participants had compassion satisfaction, 61% had burnout experiences, while 75% had average compassion fatigue (Wentzel & Brysiewicz, 2018). Other studies have reported similar findings whereby high burnout and compassion fatigue (Wu et al., 2016; Gómez-urquiza et al., 2016).

Oncology nurses exhibited higher levels of burnout and compassionate fatigue in a meta-analytic study (n=21) on burnout experiences among oncology nurses in Canada, Spain. The participants showed emotional exhaustion of 30% and depersonalization or cynicism of 15%. The participants sighted regular confrontation with the physical and emotional suffering of their patients, having to carry bad news and ethical dilemmas as sources of burnout experiences (Cañadas et al., 2018). In assessing the emotional impact and professional quality of life dimensions, Arimon-Pagès et al. (2019) found that the oncology nurses experienced low compassion satisfaction (18.2%) to leave the unit and the profession. In a review of

studies, oncology nurses were noted to be the group with the highest risk of burnout development (Domagała & Gaworska-Krzemińska, 2018; Wu et al., 2016).

Determinants of ProQol could be personal, work-related, or organizational. Coping strategies such as mentorship, debriefing, and self-care strategies such as exercises, reflections, talking with others, work-life balance, and spirituality helps to mitigate the occurrences of negative ProQoL (Duarte, 2017). Personal factors, work-related and demographic characteristics may determine the ProQoL positive or negative status. Oncology nurses work in an emotionally charged environment that can be a source of vicarious trauma and lead to secondary traumatic stress experiences (Boyle & Boyale 2015). The job tension associated with patients, relatives, colleagues, and physicians can be a source of stress for the nurses though tension relieving measures such as self-regulation, social support at the workplace, and a positive attitude can manage negative experiences (Bardeh et al., 2016).

In a study conducted by Domagała and Gaworska-Krzemińska (2018), it was revealed that younger nurses in the profession are at a lower risk for occupational burnout, while emotional exhaustion was found to be lowest among younger nurses. In a study by Duarte and Pinto (2017), years of experience showed a significant correlation with compassion satisfaction. However, Yu et al. (2016) found that oncology nurses with more years of experience were noted to have high compassion fatigue similar to a systematic review it was found that, burnout affected nurses with more years of oncology experience. (Elena et al., 2019).

Being trained and knowing certain aspects of work can be rewarding and motivating. One becomes skilled and competent to handle work-related issues when they crop up with confidence and less likelihood of causing errors. (Bardeh et al., 2016). Registered nurses in Sweden reported higher burnout scores and showed intentions to leave the workplace due to inadequate cancer care education (Lagerlund et al.,2019; Nwozichi et al., 2015). This agrees with a study done in a tertiary hospital in Korea by Jang et al. (2016), which indicated compassion satisfaction had a statistically significant difference with education and professionalism. The demographic characteristics did not have any statistical significance with ProQol (Zhang et al., 2018) while Mohebi et al. (2018) found that social-demographic variables were found to have a significant association with burnout.

Personal factors may predispose one to poor professional quality of life. A study conducted in Canada established that learning to pause and recognize stressors, self-care, building self-compassion, having emotional insight, spirituality, and practicing reflection can also be personal strategies for dealing with job demands and enhancing compassion satisfaction (Wahlberg et al., 2016; Davis et al., 2015). Verbalization, exercise, ability to relax, caring for self, and emotional insight can enable one to experience less stress and burnout (Bahad, 2017). Having personal resources such as family cohesion and social support leads to less experience of stressful situations. (Kutluturkan, Elif, Uysal & Figen, 2016).

Work-related elements may promote or lead to burnout. A Cancer care nurse can unconsciously assimilate the emotions, fear & grief experienced by their patients and death and dying and reflection of own death which are sources of stress (Ko & Kiser-larson, 2016) and (Intan et al., 2016). Therefore, it is essential for oncology health professions to have emotional maturity, keep some emotional distance, and develop communication skills to handle patients and their grieving relatives. Lack of skills for empathy and discussing death, dying, and end-of-life care posed communication challenges among cancer care nurses. (Banerjee et al., 2016). In Sweden, participants reported higher burnout scores and showed intentions to leave the workplace due to a Lack of adequate cancer care education (Lagerlund et al., 2015).

The lack of teamwork and cohesiveness among the multidisciplinary team in cancer care can be a real threat to the quality of care being given. Lack of support from supervisors, disrespect from patients and their relatives, poor relationships with colleagues at the workplace, and lack of a supportive work environment were excellent sources of stress among oncology care nurses (Bardeh et al., 2016; Ko & Kiser-larson, 2016 & Wu et al., 2016). A good working environment in an organization has a positive effect on health care workers. A study on burnout precursor among cancer caregivers in Switzerland (n=103) reported low burnout levels of 3.8%, and only 2 out of 53 nurses showed moderate burnout risk levels. The low levels were due to work structures being in line with the needs of employees, decentralization of operations, autonomy, and training of leaders (Bonetti et al., 2019). The main objective of this study was to explore the professional quality of life both negative (compassion fatigue &burnout) and its positive component (compassion satisfaction) among nurses caring for cancer patients at the referral hospital. The specific objectives were;

## 2.0 Theoretical Framework

This study adopted the job demand-resource model ( JD-R model), published by Demerouti et al. (2001) in a study to identify the antecedents that leads to burnout development. This model assumes that adequate personal and job resources are vital in protecting an employee from experiencing job strain that leads to negative quality of life or ill health and low productivity while the opposite is job satisfaction. Any mismatch between low job resources and chronic high job demands leads to negative quality of life effects. The job demand resource entails any organizational and personal resources that may tax or put sustained pressure on workers' mental, physical and psychological well-being. These factors hinder employees from carrying out their jobs well and lead to job strain which if chronic can lead to poor quality of life.

Job resources could have a buffering role and could be any organizational and personal interactions that could enable better performance and improved employee wellbeing. According to Gawo), things like feedbacks autonomy, job security rewards, and role clarity may help reduce job strain. Any chronic job strain such as prolonged exposure to traumatized clients produces negative feelings or consequences such as physical illness on the employee, reduced productivity, and organizational commitments. The study sought to examine the level of Compassion Fatigue, Burnout, and Compassion Satisfaction, identify actual or perceived determinants of professional quality of life among cancer care nurses, and the associations between variables.

## 2.1 Empirical Review

### 2.1.1 Determinants of Compassion Fatigue, Burnout and Compassion Satisfaction

#### *Demographic Factors*

According to a study carried out among nurses caring for cancer patients, participants showed that being young in the profession is a less risk factor for occupational burnout as emotional exhaustion was found to be lowest among younger nurses (Domagała & Gaworska-Krzemińska, 2018) and (Davis, Linda & Sorensen, 2013).On the contrary, being young was reported as a risk factor for burnout as compared to their older workmates in the same work setting. Perhaps this was so because the more years of work experience, the staff has learned coping strategies and can handle job demands better (Rn et al., 2018).

In an integrative review of electronic databases (N=7) in the USA to understand the resilience in nurses, the report indicates that there is inconsistence of personal characteristics in relation

to the development of burnout (Hart, Branny & Chesney, 2014), However, study on 101 oncology nurses in an Andalusian hospital in Spain; the findings demonstrated that there was no significant relationship of seniority at the workplace, demographic characteristics, and burnout (Albendín-garcía et al., 2017).

***Personal factors***

Despite organizational factors, there are personal challenges that may predispose one to poor personal and negative professional quality of life. In a systematic review of articles (n=13) of which three were on oncology nurses on compassion fatigue among health workers, the researchers identified various personal intervention strategies such as having professional efficacy, exercising socialization, and having access to educational articles that could prevent compassion fatigue (Cocker & Joss, 2016).

In a Pretest & posttest on mindfulness-based group intervention training of oncology health care workers in Canada, the study established that learning to pause and recognize stressors, self-care, building self-compassion, and becoming fully present helped to reduce burnout occurrence as the participants demonstrated a positive transformation. The use of spiritual resources such as meditation and sharing of issues with the multidisciplinary team and acknowledgment by the organization was also helpful. Supportive relationships among staff, taking time off work and having self-efficacy, debriefing, and counseling sessions for cancer care nurses could help in coping with distress. Good communication or social environment at the workplace, recognition, and support from nursing administrations could act as a buffer or protective mechanism for oncology nurses (Wahlberg, Anita & Capezuti, 2016).

A study done among cancer care nurses showed that having emotional insight, spirituality, and practicing reflection can also be personal strategies for dealing with job demands and enhancing compassion satisfaction (Wahlberg et al., 2016; Davis et al.,2015) and. Verbalization, exercise, ability to relax, caring for self, and having emotional insight can enable one to experience less stress and burnout (Bahad, 2017) while having personal resources such as family cohesion and social support leads to less experience of stressful situations (Kutluturkan, Elif, Uysal & Figen, 2016).

***Work-Related Factors***

According to a study done in the USA by (Hunsaker et al., 2015) participants had good ProQol as indicated by high CS score due to managerial support, high level of education, and more years of work experience which agrees with the current findings. In a study on the relationship between job stressors and burnout levels among 189 participants working in Turkey, the participants reported that they encountered work role ambiguity and role conflicts, non-nursing duties 98.8% such as creating patients file 63.3%, looking for supplies and linen as well as nurses shortage 83.1% leading to an experience of burnout. (Tuna & Baykal, 2014). According to Tuna & Baykal, (2014), 84.7% of oncology nurses reported extreme workload coupled with inadequate nursing staffs (83.1) and regular exposure to chemotherapy (75.2%) as sources of tension that was negatively affecting them. This concurs with Wazqar (2019) who found workload and inadequate nurse staffing as a source of job-related stressors.

**2.1.2 Prevalence/ levels of compassion fatigue, burnout, and compassion satisfaction**

In a meta-synthesis carried out (n=9) at the University of Johannesburg, the authors identified that nurses do experience effects of Compassion Fatigue emanating from the high workload and lack of knowledge while Coping strategies identified were mentorship, debriefing, and

self-care strategies that is, exercises, reflections, talking out with others, work-life balance and spirituality (Duarte & pinto; Nolte et al., 2017).

Oncology nurses exhibited higher levels of burnout and compassionate fatigue in a meta-analytic study (n=21) on burnout experiences among oncology nurses in Canada, Spain. The participants showed emotional exhaustion of 30% (95 c1, 9-236) and depersonalization or cynicism of 15%. The participants sighted regular confrontation with physical and emotional suffering of their patients, having to carry bad news and ethical dilemmas as sources of burnout experiences. (Cañadas et al., 2018)

## 3.0 Research Methodology

The study adopted a correlation study design to examine the work-related, personal factors and demographic characteristics that determine oncology nurses' professional quality of life status. The targeted population was 124 cancer care nurses. Fisher et al. (1998) formula was used to calculate sample size (N=94). Those who cared for cancer patients for more than six months were recruited through stratified sampling based on five cancer in-patient units and cancer outpatient clinics. A Stratified sampling technique was applied in recruiting proportions of individual nurses in each unit then a simple random was undertaken to give each participant an equal chance of participating in the study.

A semi-structured self-administered questionnaire was utilized to collect demographic data. The Professional Quality of Life Version –V (ProQoL-5) constitutes 30 items. Each scale has10 items rated numerically on a 5-point Likert scale, ranging from 1 (never) to 5 (very often). Total raw scores interpretation for each subscale was that less than 22 for each scale was noted to be low levels, 23-41 average, and more than 42 scores were noted as high levels. The tool has been used severally over the years to assess CF, BO, and CS among health care providers and demonstrated satisfactory reliability and construct validity, with a Cronbach alpha ranging from 0.7 to 0.91 (Sacco & Copel, 2018) (Stamm, 2010). Coping strategies were assessed using Brief COPE inventory (Carver, 1997, 2007). The Inventory comprises 14 coping behaviors: positive reframing, acceptance; humor; self-distraction; denial; venting, substance use, behavioral disengagement, and self-blame. Each item has a 4-point Likert response scale: "1 – I haven't been doing this at all" to "4 – I've been doing this a lot". The participant was asked to indicate the option which best describes their actions.

Descriptive statistics, including percentages, means, and standard deviation, were used to describe nurses' demographic characteristics. T-tests and one-way analysis of variance were used to analyze demographic and work-related variables, Pearson's coefficient correlation was used to establish the relationships between the variables, and stepwise regression analysis was utilized to identify the predictors of ProQoL. The Statistical significance (p-value) set at 0.05 was tested at a 95% confidence level.

## 4.0 Results and Discussion

The study sample size that was sought was 94 nurses caring for cancer patients. From the 94 questionnaires that were issued, 90 were filled and returned for data analysis indicating a 96% response rate.

### 4.1 Descriptive findings of demographic, personal, and work-related characteristics

Demographic characteristics as presented in Table 1 showed that the average age was 38± 9.7 years, 66.7% (n =60) were female, 74.4% (n =67) were married, 54.4% (n =49) of the respondents had a diploma in nursing as their highest level of education, while 97.8% (n =88) were Christians. The age of respondents less than 30 years was 30%, while 43.4% (N=31) of

participants were32-40 years, with those with more than ten years of work experience being 55.6%. Participants with less than five years of oncology experience were the majority72.2% (n=65) and more than ten years 20% (N=18). 88.9% (N=80) of the cancer care nurses had no oncology specialization or training.

**Table 1: Demographic characteristics of participants**

| | Mean ±SD | Frequency (n) | Percentage (%) |
|---|---|---|---|
| Age | 38 (9.7) years | | |
| Gender | | | |
| Male | | 30 | 33.3 |
| Female | | 60 | 66.7 |
| Marital status | | | |
| Single | | 16 | 17.8 |
| Married | | 67 | 74.4 |
| Separated | | 7 | 7.8 |
| Level of education | | | |
| Diploma in nursing | | 49 | 54.4 |
| Higher Diploma | | 15 | 16.7 |
| Bachelor's Degree | | 19 | 21.1 |
| Master's Degree | | 7 | 7.8 |
| Religion | | | |
| Christian | | 88 | 97.8 |
| Muslim | | 2 | 2.2 |
| Received oncology training | | | |
| Yes | | 9 | 10 |
| No | | 80 | 88.9 |
| Age of the respondents | | | |
| Less than 30 years | | 27 | 30 |
| 31-40 years | | 31 | 34.4 |
| 41-50 years | | 23 | 25.6 |
| Above 50 years | | 9 | 10 |
| Years of experience | | | |
| Less than 5 years | | 19 | 21.1 |
| 6-10 years | | 21 | 23.3 |
| Above 10 years | | 50 | 55.6 |
| Years of oncology experience | | | |
| Less than 5 years | | 65 | 72.2 |
| 6-10 years | | 7 | 7.8 |
| Above 10 years | | 18 | 20 |

### 4.2 The level of compassion fatigue, burnout, and compassion satisfaction

In investigating the level of compassion fatigue, burnout, and compassion satisfaction, the professional quality of life scale (PROQOL), the scoring guide, was used. The mean scores were 42±4.76, 33±4.7, 27±8.7, respectively. Categories of Professional quality of life. Based on the PROQOL scoring as developed by Stamm (2009), 64.4% (n =58) of the respondents

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had high compassion satisfaction, 86.7% (n =78) of the respondents had average burnout, while 25.6% (n =23) had high compassion fatigue as shown in Table 2.

**Table 2: Average scores and categories of ProQoL levels respectively**

| | N | Min | Max | Mean | SD. Deviation | Interpretation |
|---|---|---|---|---|---|---|
| Compassion satisfaction | 90 | 31.00 | 49.00 | 42.2667 | 4.75891 | High |
| Burnout | 90 | 23.00 | 47.00 | 33.1889 | 4.65409 | Average |
| Compassion fatigue | 90 | 12.00 | 50.00 | 26.6333 | 8.70677 | Average |

| **Professional QoL** | **Frequency** | **\\Percentage** |
|---|---|---|
| **Compassion satisfaction** | | |
| High | 58 | **64.4** |
| Average | 32 | 35.6 |
| **Burnout** | | |
| High | 12 | **13.3** |
| Average | 78 | 86.7 |
| **Compassion fatigue** | | |
| High | 6 | 6.7 |
| Average | 33 | 36.75 |
| **Low** | **51** | **56.7** |

QoL= Quality of life SD= Standard deviation

### 4.3 Determinants of professional quality of life responses

The respondents were asked how they respond to a perceived stressful situation. The common approaches utilized always include spirituality, 61.1% (n =55) and more often used techniques included positively reframing the stressful situation, 58.9% (n =53), work-life balance, 56.7% (n =51), accept the situation 43.3% (n =39) and 41.1% (n =37) being assertive about the situation. However, some used a little bit of avoidance (31.1%), disengagement (38.9%), depressed and being anxious when faced with a stressful situation.

The respondents were asked to rate their perception of the patient-staff ratio in the unit; 53.3% (n = 47) of respondents described the patient-staff ratio as either poor or very poor, 58.9% (n = 53) described the relationship as not being stressful, but 31% (n =28) of the respondents affirmed having interpersonal conflicts at work majority of which were nurse-nurse. Further, 36% (n =32) had difficulties in handling patients and their caregivers. Factors that cause perceived burnout among respondents were rated 1= highest factor and 7 = the most minor factor. The results revealed that shortage of staff (M = 1.51, SD =1.3), High workload (M =1.6, SD =1.3) were the highest factors causing perceived burnout and breaking sad news (M =1.72, SD =1) as the main factor causing the highest perceived stress.

### 4.4 Association between independent variables and CS, BO & CF

There was a significant difference in compassion satisfaction based on gender (p =0.007), marital status (p =0.001), oncology training, (p <0.0001), years of oncology experience (p =0.017) and relationship with colleagues (p = 0.047). There was a statistically significant difference in burnout levels based on oncology training (p = 0.001) and years of oncology experience (p =0.032), compassion fatigue levels and training (p = 0.02) as well as the presence of interpersonal conflicts at work (p =0.02) a shown in Table 3.

The findings further showed that, there was significant differences in the levels of compassion satisfaction based on religion (p =0.044), work-life balance (p =0.043), being assertive, (p =0.044), humorous, (p =0.009), reflection on the situation, (p =0.038), seeking emotional support, (p =0.005), venting of emotions (p =0.001), depressed, (p =0.005) and anxious (p<0.0001). There was significance in the levels of burnout based on being assertive approach (Table 3).

**Table 3: Association between Demographic characteristics and CS, BO & CF**

| Demographic characteristic | Compassion satisfaction | | Burnout | | Compassion fatigue | |
|---|---|---|---|---|---|---|
| | Mean | p-value | Mean | P-value | Mean | p-value |
| **Gender** | | | | | | |
| Male | 40.37 | t =1.341, | 32.37 | t =2.411, | 26.13 | t =1.613, |
| **Female** | **43.22** | **p =0.007** | 33.6 | p =0.238 | 26.88 | p =0.702 |
| Age | | r =-0.160, p = 0.131 | | r =-0.128, p = 0.231 | | r =-0.144, p = 0.176 |
| **Marital status** | | | | | | |
| Single | 42.81 | F=7.154, **p = 0.001** | 32.44 | F=71.127, p = 0.329 | 27.13 | F=2.934, p = 0.058 |
| Married | 43.78 | | 33.58 | | 27.3 | |
| Separated | 36.14 | | 31.14 | | 19.14 | |
| **Level of education** | | | | | | |
| Diploma in nursing | 42.49 | | 33.27 | | 28.53 | |
| Higher Diploma | 41.07 | F=0.64, | 32.07 | F=0.588, | 20.8 | F=3.969, |
| Bachelor's Degree | 43.05 | p = 0.586 | 33.26 | p = 0.684 | 25.05 | **p = 0.011** |
| Master's Degree | 41.14 | | 34.86 | | 30.14 | |
| **Received training** | | | | | | |
| Yes | 42.22 | t =1.841, | 29.11 | t =1.242, | 21.56 | t = -1.341, |
| No | 36.96 | **p<0.0001** | 31.33 | p =0.274 | 27.2 | **p =0.020** |
| **Years of oncology experience** | | r =0.267, **p = 0.017** | | r =-0.073, p = 0.032 | | (r =-0.074, p = 0.489 |
| **Weekly working hours** | | r =0.087, p = 0.234 | | r =-0.067, p = 0.642 | | (r =-0.507, p = 0.643 |
| **Relationship with colleagues** | | | | | | |
| Not stressful | 43.13 | | 32.6 | | 27.7 | |
| Mild stressful | 42.8 | F=9.698, | 33.84 | F=1.126, p | 23.32 | F=1.772, |
| Moderately stressful | 40 | **p<0.0001** | 33.38 | =0.343 | 28.75 | p =0.159 |
| Very stressful | 32 | | 36.5 | | 29 | |
| **Interpersonal conflicts at work** | | | | | | |
| Yes | 41.54 | F=0.797, | 34.64 | F=4.849, | 29.82 | t = -1.341, |
| No | 42.52 | p=0.374 | 32.35 | **0.030** | 25.17 | **p =0.020** |

Independent t-test, f = analysis of variance (ANOVA), r =Pearson correlation

### 4.5 Workplace characteristics and perceived CS, BO, and CF

There was a statistically significant difference in the levels of CS (p= 0.006), BO (p=0.047) and CF (p= 0.001) based on the staff-patient ratio, CS levels based on the good relationship with colleagues (p<0.0001), burnout, and compassion fatigue levels based on the presence of interpersonal conflicts at work (p =0.03), (p=0.02) respectively. In addition, respondents experienced burnout (p=0.033) and compassion fatigue (p=0.012) emanating from handling patients with cancer and their relatives.

There was significant negative relationship between compassion satisfaction with exposure to chemotherapeutic, (r = -.343, p =0.002), frequent ethical dilemmas, (r = -.301, p =0.005) and insufficient preparation, (r = -.339, p =0.002). There was also negative relationship between insufficient preparation and burnout, (r = -.292, p =0.009). Workload, (r = -.241, p =0.029), shortage of staff, (r = -274, p =0.012), lack of support from hospital management, (r = -.262, p =0.018) and insufficient preparation (r = -.360, p =0.001) were negatively related to compassion fatigue as shown in Table 4.

**Table 4. Relationship between factors that cause perceived burnout and CS, BO &CF**

| Factors | | Compassion Satisfaction | Burnout | Compassion fatigue |
|---|---|---|---|---|
| Workload | Pearson Correlation | 0.134 | 0.057 | -.241* |
| | P-value | 0.229 | 0.611 | **0.029** |
| Shortage of staff | Pearson Correlation | -0.017 | 0.133 | -.274* |
| | P-value | 0.882 | 0.232 | **0.012** |
| Exposure to chemotherapeutic | Pearson Correlation | -.343** | -0.107 | -0.155 |
| | P-value | **0.002** | 0.338 | 0.164 |
| Shortage of equipment | Pearson Correlation | 0.124 | 0.087 | **0.032** |
| | P-value | 0.266 | 0.439 | 0.774 |
| **Frequent ethical dilemmas** | Pearson Correlation | -.301** | -0.204 | -0.139 |
| | P-value | 0.005 | 0.062 | 0.206 |
| Lack of support from the hospital management | Pearson Correlation | 0.019 | -0.050 | -.262* |
| | P-value | 0.866 | 0.659 | 0.018 |
| **Insufficient preparation** | Pearson Correlation | -.339** | -.292** | -.360** |
| | P-value | 0.002 | 0.009 | 0.001 |
| Prolonged relationship with cancer patient | Pearson Correlation | -0.149 | -0.058 | -0.165 |
| | P-value | 0.188 | 0.612 | 0.144 |

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

### 4.6 Factors for Predicting the Level of CS, BO, and CF

The findings revealed that gender, years of experience, level of education, relationship with colleagues, and the patient-staff ratio were predictors of compassion satisfaction. Marital status and patient staff ratio description were predictors of burnout. Patient staff ratio AR (0.2) and relationship with colleagues AR (0.29) were predictors of compassion fatigue, as shown in Table 5.

**Table 5: Summary of stepwise regression for predicting Compassion Satisfaction, Burnout, and Compassion fatigue**

| | Adjusted R square | R square change | F | Standardized Coefficients | t |
|---|---|---|---|---|---|
| **Compassion satisfaction** | | | | | |
| Gender | 0.367 | 0.382 | 25.37 | 0.342 | 4.093 |
| Years of experience | 0.508 | 0.150 | 22.72 | -0.222 | -2.510 |
| Level of education | 0.621 | 0.116 | 23.91 | 0.212 | 2.181 |
| Relationship with colleagues | 0.684 | 0.066 | 23.69 | -0.634 | -6.407 |
| Patient staff ratio | **0.712** | 0.033 | 21.77 | -0.356 | -4.133 |
| **Burnout** | | | | | |
| Marital status | 0.086 | 0.335 | 1.343 | 0.611 | 2.884 |
| Patient staff ratio | **0.122** | 0.456 | 3.341 | 0.440 | 2.273 |
| **Compassion fatigue** | | | | | |
| Patient staff ratio | 0.218 | 0.236 | 13.281 | -2.776 | 4.568 |
| Relationship with colleagues | **0.296** | 0.488 | 2.544 | -0.463 | -2.382 |

## Discussion

The study sought to investigate the professional quality of life among nurses caring for cancer patients. The majority, 66.7%, were female. The level of care required given to cancer patients requires a high level of focus on the patient's needs which is synonymous with female nurses. These findings are consistent with (Wu et al., 2016) in a study conducted in the United States and Canada, revealing that most nurses managing cancer patients were female. In addition, the majority of the respondents had a diploma as their highest level of education. In Kenya, diploma certification is the least qualification to be a certified nurse, which may explain the present study trend. Very few participants affirmed to have received oncology training. The hospital has not provided specialized professional-based oncology training, which defines the trend observed in the present study where most knowledge is gained through experience.

The results from the present study found that there was a high level of compassion satisfaction of 64.4% (N=58) and average levels of 35.6% (N=32), with a mean score of 42.3±4.75 among nurses. These findings are consistent with other studies that found that cancer care nurses have a good ProQol, medium burnout, and compassion fatigue, perhaps due to good interpersonal relationships. The satisfaction is due to team cohesiveness and a supportive work environment. These findings are comparable to Baek et al. (2020), who found that satisfaction due to interpersonal relations led to good professional quality of life.

In assessing burnout, participants in this study had a mean score of 33.2±4.65, very high burnout levels 13.3%, and average levels 86.7%. Further, the average compassion fatigue means a score of 26.63±8.7 (low scores 56.7% and very high 6.7%). The finding is consistent with Cañadas et al. (2018), which indicates participants experience low to average burnout

levels leading to a feeling of personal accomplishment, and Wells-English et al. (2019), who established average secondary traumatic stress and burnout levels. However, the finding contradicts the studies which reported high levels of BO, CF, and low levels of CS by Ann et al. (2020) and Duarte (2017).

Female participants had a higher compassion satisfaction mean of 43.22 (p=0.007) than men, perhaps because they were the majority (66.7%). These findings are comparable to those (Kleiner & Wallace, 2017) who found that female gender was a significant predictor of higher compassion satisfaction (p= 0.012) which is contrary to Eelen et al. (2014), who sighted that women are at a greater risk of experiencing burnout. Similarly, In Spain, a systematic review of studies (N =15) in oncology units indicated BO & CF affecting more females, participants with more years of work experience, and those in oncology units having the highest levels. (Elena et al., 2019) and (Yu et al., 2016).

Married participants reported higher compassion satisfaction scores. This can be explained by shared burden between spouses, which results in increased satisfaction and reduced negative attitude among participants. Oncology education was also identified as a critical factor in compassion satisfaction. The present study found a statistical difference in compassion satisfaction scores based on oncology specialization (mean 42.2, p<0.0001). Participants who were trained had higher compassion satisfaction scores than those who did not. This concurs with a study that showed nurses with a high level of education had less compassion fatigue. (Wu et al., 2016) and (Hunsaker et al., 2019), who found that participants with high levels of education and managers support experienced compassion satisfaction.

The years of oncology experience had a significant relationship with the experience of compassion satisfaction (r=0.267, p=0.017), perhaps due to the development of appropriate coping mechanisms or increased resilience over time. These findings are consistent with (Duarte, 2017; (Wu et al., 2016), who reported that nurses with experience of more than 26 years had low secondary traumatic levels. Similarly, Jang et al. (2016) showed that the participants had a high compassion satisfaction, moderate burnout, and low fatigue. CS had a statistical significance with age, education, and years of experience, consistent with the current findings. The present results are contrary to Mohebi et al. (2018) and Ko & Kiser-larson (2016), who found that participants age and more years of work experience had high work-related stress cores. The current findings affirm the previous study that demographic variables have an association with burnout and compassion fatigue. However, Wahlberg (2016) and Wells-English et al. (2019) indicated no statistical significance was found between being depressed and professional quality of life and demographic characteristics, respectively. The difference could be due to advanced resources available to oncology nurses or train while on the job hence experience does not play a significant role in defining individual efficacy.

Personal characteristics such as Spirituality, maintaining a work-life balance, and positively reframing a stressful situation were associated positively with compassion satisfaction. This is consistent with studies that showed personal factors such as openness, extraversion, and conscience correlated negatively with burnout and positively with anxiety and depression (Albendín-garcía et al., 2017). Verbalization, exercises, taking time off work, and relaxation was coping behaviors utilized by nurses in Sanford Roger Maris cancer center. (Ko & Kiser-larson, 2016). In his studies, Wahlberg et al. (2016) also demonstrated that the participants who had adopted appropriate coping mechanisms had low levels of distress. The current study also concurs with Kelly and Tyson (2017) and Kleiner and Wallace (2017). Dealing

with a stressful situation requires integrating different aspects, including trained concepts and skill-based approaches that define individual responses to a stressful situation.

Not being assertive and being anxious had a significant statistical association with the experiences of burnout. This agrees with a study by Duarte et al. (2017), which indicated having self-compassion and empathy lead to a feeling of satisfaction while judging self and psychological inflexibility increased BO & CF&. Participants who employed work-life balance, assertive, humorous, reflection on stressful situations, seeking emotional support, venting of emotions, less depressed and less anxious had higher compassion satisfaction scores similar to Ibrahim Jaleesah's (2019) and Cooper et a,. (2020). These measures are crucial in boosting individual psychological wellbeing, concentration, and productivity by acting as stress-relieving approaches. Personal characteristics such as venting emotions, being depressed and anxious had a negative association with CS and statistical significance with BO. This is also consistent with studies where depersonalization and emotional exhaustion (BO) had a significant positive correlation with anxiety and depression, whereas personal accomplishment and anxiety, depression correlated negatively (Chowdhury & Chakraborty, 2017) and (Kutluturkan et al., 2016).

In the work context, the participants in this study who did not perceive their relationship with their colleagues as stressful, 69% (N=62), had higher compassion satisfaction. This is because of an existing positive relationship within the workplace which improved the level of engagement at the workplace and commitment to improving patient care needs. This finding concurs with Wentzel & Brysiewicz (2018), who established that good relations at the workplace had a strong association with CS, and a study by Bonetti et al. (2019) showed a low burnout score related to the presence of a good working environment. Few participants indicated encountering interpersonal conflicts at the workplace, which was associated with BO (p=0.03). The findings of this study confirm the results of other studies, which indicated workload, frequent ethical dilemmas (r -301, p=0.005), exposure to chemotherapy agents, insufficient preparation correlated positively with CF and BO.

To assess the predictors of ProQoL, the stepwise regression analysis established that 53% of participants indicated a poor to very poor patient-staff ratio. Staff patient ratio due to inadequate staffing is a predictor of lower compassion satisfaction scores, higher burnout, and compassion fatigue scores. This agrees with Wentzel & Brysiewicz, (2018); which identified inadequate staffing and shortage of staff impacts staff and quality of care being given to patients. The patient staff ratio is essential in the delivery of quality care. Thus, a higher staff-patient ratio means less workload. Nurses have ample time to interact with their patients leading to positive ProQol since every staff has a manageable number of patients.

However, some conflicts at the workplace lead to CF scores. Conflicts at the workplace create a poor working environment because of the existing confrontations and conflicts especially considering that healthcare is multidisciplinary and team-based, which cannot be effective in a conflicting environment. These findings are similar to those (Kleiner & Wallace, 2017). The conclusions of this study found that gender, years of experience, levels of education, relationship with colleagues, and staff-patient ratio were predictors of compassion satisfaction. These findings are consistent with results from (Baek et al., 2020) which found that staffing was a significant predictor of compassion satisfaction in oncology nurses. The current findings affirm that a supportive work environment and years of experience in oncology and cancer care education strongly predict compassion satisfaction. This is similar to Duarte & Pinto (2017) and Wu et al. (2016), who showed that a conducive work environment leads to an experience of compassion satisfaction in cancer care.

## 5.0 Conclusion

The findings of this study show participants had a positive professional quality of life as demonstrated by high scores of compassion satisfaction. The positive ProQOL feeling in the study correlated positively with a combination of personal factors, a positive work environment, good interpersonal relationships among the collaborative team, and organizational support. The findings confirm that demographic factors such as years of work experience in oncology and personal characteristics such as self-care, reframing of a situation, and being assertive in one work as a helper play a crucial role in propagating a favorable Pro QOL. Being trained to carry out one's duty may help match the job demands and personal resources hence mitigating the development of negative aspects. Young oncology nurses could be at risk for negative ProQoL hence this study reinforces the need for mentorship programs for newly employed oncology nurses who are at a high risk of poor professional quality of life. The findings reinforce the need for a mentorship program to support younger oncology nurses, Nurses' resilience training, improve the workforce, and empowerment of health care workers particularly oncology specialization due to rapid emerging incidences of cancers as well as being in alignment with vision 2030.

## 6.0 Relevance to clinical practice

Burnout and compassion fatigue in nursing staff can be prevented and minimized with a correct evaluation and development of intervention programs to tame or keep burnout at bay. The findings reinforce the need for a mentorship program to support younger oncology nurses, Nurses' resilience training, improve the workforce, and empowerment of health care workers particularly oncology specialization due to rapid emerging incidences of cancers as well as being in alignment with vision 2030.

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