Review Article

Compassion Fatigue in Oncology Nurses: An Integrative Review

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Abstract: Oncology nurses are more likely to get compassion fatigue (CF) than nurses in other fields because of the emotional stress and poor outlook of cancer patients. Because of this, the care might not be very good, the job might not be very satisfying, and there is a good chance that the patient's pain won't be noticed. **Aim.** To synthesize empirical evidence on compassion fatigue in order to extract the common, central, and fundamental elements that may improve nursing care. Design. An integrative review **Results.** Fifteen (15) studies met the eligibility criteria wherein five themes emerged. These are the level of compassion fatigue among oncology nurses, the oncology nurses' perspectives on compassion fatigue, precipitating factors leading to CF with 2 subthemes (work environment and a feeling of lack of support), the influence of compassion fatigue on the personal lives and general well-being of cancer nurses, and the consequences on the quality of oncology nurses' professional lives at work. **Conclusion.** CF is a significant problem for nurses who work in specialized areas such as cancer units, demonstrated as a basic incapacity to nurture others. The integration of studies provides evidence of clinical practice application which can provide better outcomes and improve nursing care. **Implications for Practice.** The findings provide understanding into healthcare practice on how to avoid compassion fatigue. Clinical management approaches that can mitigate compassion fatigue and its negative repercussions are presented, as well as the formation of peer support groups that have the ability to ameliorate CF.

Keywords: Oncology Nurses, Compassion Fatigue, Nursing, Burnout, Cancer Nurses

Highlights

What is already known about this topic?
1. Nurses are more at risk to compassion fatigue than any other medical professional.
2. CF is characterized as physical emotional, and psychological exhaustion caused by continuous work-related stress.
3. CF can negatively influence nurses' quality of life, capacity to care for patients, jeopardize patient safety and the nurses' wellbeing.

What this paper adds?
1. CF is a major issue among cancer nurses, compromising both their quality of treatment and retention.
2. CF is a critical factor influencing oncology nurses' clinical performance.
3. The findings highlight the need to develop ways to combat compassion fatigue.

1. Introduction

Compassion fatigue is defined as an emotional state of exhaustion brought on by interactions with compassion stress. It can appear suddenly and without notice, leaving

the nurse feeling lost, alone, and helpless [10]. Caring for a cancer patient is not an easy task for an oncology nurse, unlike other nurses when caring for a cancer patient, there are many considerations such as physical care, emotional care, social care, spirituality and others [34]. Cancer is still one of the top diseases worldwide because of the high mortality rate in various countries. The adjectives "fatigue" and "burnout" are frequently used by oncology nurses since dealing with such circumstances is not simple for healthcare professionals. Because of this, they frequently are unable to provide their patients the adequate care that they need. Empathy is common to oncology nurses because they usually deal with dying patients, fatigue and burnout are just some of the things they experience when interacting with patients and their families [37]. Fatigue and burnout impact on oncology nurses as personal life stressors and the experiences they have can cause positive and negative effects on the quality of their work [12].

There are percentages that prove that day care centers are more compassionate, as we know that the stress is not that high, compared to operational settings like hospitals, where the number of patients is really high and fatigue and burnout are felt among nurses [21]. The explanation was revealed to be emotional stress, posing a threat to an oncology nurse's ability to provide the best care possible for cancer patients in palliative or even terminal stages. This exhaustion by the oncology nurses resulted in their inefficiency at work. With proper support particularly for the management of work-related and providing psychological support for oncology nurses, they willbbe more positive in all aspects of their work and will increase the level of care that they provide to their cancer patients [35].

Oncology nurses have a unique features not only because they are caring for cancer, but they are often prone to what we call fatigue and burnout and this is one of the things that should not be ignored, just like nurses in other countries also need adequate support for that hospital administration in assessing the professional quality of life so that various stressors do not affect their work, especially the psychological factors that are a major cause of why an oncology nurse cannot perform their work [41]. It is also a way to weigh the positive and negative effects in managing cancer patients through emotional support from their health care provider [37]. This includes the following, among others: CF, Burnout, and other number of cases are higher when caring for COVID-19 patients contrasted to those in other clinical situations [31]. These findings are in line with a study carried out in Asia [20] on the stress, depression, and psychological health of healthcare workers. Their findings showed increased levels of Wuhan, the origin and epicenter of healthcare worker stress in China, in proportion to other provinces, of the epidemic. The factors because this could include the possibility of an infection for them or their loved ones, the heightened need for care, and a potential shortage of essential self protection measures [4, 33].

Various studies on compassion fatigue in the general healthcare workforce, however, there is a paucity of studies that focuses solely in oncology nurses. The significant benefit for this study is to practice empathy towards patients not all health care providers like nurses can have empathy to their patient and also need into study as part of nursing career we know that working as a nurse is very stressful due to heavy workloads empathy is sometimes disregarded, perhaps the lack of time is also a reason why there is no empathy for the patient, especially for the cancer patients. Hence, this integrative review aims to synthesize empirical studies and enhanced knowledge of compassion fatigue among nurses caring for cancer patients. Particularly, to address the two following research questions: 1) What research has been done on the subject of compassion fatigue among oncology nurses? and 2) How does compassion fatigue influence oncology nurses?

2. Materials and Methods

2.1. Design

Compassion fatigue among nurses has been reported through several kinds of empirical studies. To gather a comprehensive understanding and meet the study aims, an integrative review of Whittemore and Knafl (2005) was used [38]. Moreover, it was chosen for its ability to thematically synthesize findings from both qualitative and quantitative studies. The method of this review followed five steps: 1) Problem identification; 2) Literature Search; 3) Data Evaluation; 4) Data Analysis and 5) Presentation. The data is presented as a thematic summary in the results.

2.2. Search Strategy

This study's integrative search strategy employed several online resources such as PubMed, SAGE, CINAHL, Science Direct, and Wiley which was conducted in January-March 2023. The keywords used were oncology nurses, compassion fatigue, nursing, burnout, and cancer nurses. To optimize our search, reference lists from retrieved articles were also manually reviewed using a public search engine, Google Scholar. PRISMA flow diagram was adopted as shown on Figure1. The initial search yielded 234 titles linked to compassion fatigue, which were then reviewed. Based on the inclusion criteria, 32 abstracts were evaluated and chosen, with 21 of them being read in full. After considering the inclusion requirements, only 15 papers that met all of the qualifications were included.

2.3. The Inclusion and Exclusion Criteria

Table 1 shows the inclusion and exclusion criteria used to analyze the research. Studies included: Primary or original research articles published in a peer-reviewed publication, published in English or translated into English, research papers or articles accessible in their entirety, and mixed-method research studies from any healthcare setting that focused on oncology nurses' compassion fatigue, stress, or burnout. Studies were only included if they had been published between 2010 and the present. This was done to make sure that the topic of this review was still relevant to current research on compassion fatigue. Other publications in textbooks, news, review articles, and encyclopedias were excluded. Secondary reviews such as systematic, integrative, and meta-analysis research papers were also excluded, as were studies that did not specifically address compassion fatigue or research studies focusing on general nurses, health care professionals, or other nursing specialties.

2.4. Data Evaluation/ Quality Appraisal

An evaluation matrix was generated from the included studies using Sparbel and Anderson's (2000) tool with the following information: authors, country, year of publication, study design, sampling technique, settings, and results [32]. The articles were classified using the matrix for the data analysis. All of the researchers carefully evaluated each paper, taking into account itspurpose, methodology, and findings. Consensus was used to reach an agreement on the selection of the studies.

To critically appraise the included papers, the Mixed Methods Appraisal Tool (MMAT) (2018) was utilized [16]. It was used to ensure that the different study designs in this review could be evaluated using the same tool and identify the strengths and shortcomings of mixed-method studies, as well as ensure the reliability and validity of the study findings. The MMAT 2018, the most recent version, includes more precise criterion, with each category having 5 criteria Articles in this study were classified as high-quality (5) if they met all five quality criteria, moderate (4) if they met three to four of the five quality criteria, low (3) if they met two of the five quality criteria, and very low (0-1) if they met none or just one of the five quality criteria. Regardless of MMAT categorization (as shown in Appendix A, Supplementary File), all studies were included to ensure that

the evaluation was as thorough as possible. Table 2 summarizes the characteristics of all studies. In addition, The Hierarchy of Evidence for Intervention and Treatment Questions (Melnyk and Fineout-Overholt, 2022) was used to classify the level of evidence (LOE) as represented on Table 2 [22]. One nursing colleague independently evaluated the papers, any inconsistencies were discussed, and consensus was obtained.

3. Results

3.1. Characteristics of the study

A total 15 studies met the final criteria. The studies that were gathered have different study designs that were related to the subject at hand and the proposed research questions. The research designs were as follows: mixed method design (n=4), qualitative design (n=2) and quantitative descriptive design (n=9).

The studies were conducted in South Africa (n=1), United States of America (n=4), United Kingdom (n=1), Nepal (n=1), Japan (n=1), Canada (n=1), Portugal (n=1), Turkey (n=1), Jordan (n=1), Spain (n=2), and China (n=1). The studies were conducted in various settings such as hospitals (n=8), cancer care center (n=5), and one single unit/ward (n=2).

The data collection was utilized in six different methods with the questionnaires as being the most commonly used. The following were the methods used in the data collection: questionnaires (n=8), semi-structured interviews (n=2), questionnaire with in-depth interview (n=2), questionnaires with semi-structured informal interviews (n=1), questionnaires with face to face interview (n=1), and face to face meetings with online assessment (n=1).

The collected studies have utilized three methods for choosing samples : purposive sampling (n=9), convenience sampling (n=5), and convenience and cluster sampling (n=1). The participants included in the study were all oncology nurses (sample size of 2,201 oncology nurses) and the level of evidence (LOE) in all of the studies was VI Descriptive studies (n=15).

Lastly, MMAT (2018) was utilized in the quality scoring of the studies and the quality criteria were scored as high, moderate, low or very low. Three studies [12, 11, 28] scored high, eleven studies [37, 34, 35, 7, 19, 18, 2, 29, 1, 39, 41] scored moderate and one study [21] scored low.

3.2. The level of compassion fatigue and professional characteristics of oncology nurses

Out of fifteen studies, seven studies discussed about the prevalence/level of compassion fatigue among oncology nurses [34, 29, 21, 18, 41, 39, 2] found that increasing clinical nursing experience reduced compassion fatigue. In contrast, Yu et al., 2016, found that nurses with more years of clinical experience had greater levels of CF [41]. Moreover, Jarrad et al., (2020) discovered that age and fewer than 5 years of nursing experience were associated with indicators of compassion fatigue and burnout [18]. An existing trend for greater risk burnout and compassion fatigue with advanced degrees was discovered, although it did not achieve statistical significance. Similarly, Arribas-Garcia et al. (2020) found no significant link between sociodemographic characteristics and professional parameters and compassion fatigue [2]. Upton (2018), on the other hand, demonstrated that age and years of experience had a substantial influence on CF [34].

3.3. Oncology nurses' perspectives on compassion fatigue

Three studies explained the perception of oncology nurses about compassion fatigue [37, 19, 2]. The studies revealed that the emotional strain that caring for cancer patients takes on oncology nurses makes them vulnerable to compassion fatigue. The studies also revealed that oncology nurses must be aware of compassion fatigue and be able to evaluate how they are coping (both favorably and negatively) with the stressors present in on-

cology wards or units. Lastly, oncology nurses claimed that caring for cancer patients increases burnout and that they were inadequate at handling work stress and providing psychological care to patients were insufficient.

3.4. Precipitating factors leading to Compassion Fatigue

3.4.1. Work Environment

According to Giarelli (2016), Upton (2018), and Potter et al. (2010), the workplace contributed to nurses' compassion fatigue. Nursing staff shortages, heavy workloads, and uneven assignments were identified as specific factors [12, 34, 29]. Furthermore, Giarelli (2016) found that the workplace exacerbates stress by undermining nurses' efforts to give the best care possible. One nurse said, "I don't have time to talk to them. The tasks take priority." Another respondent lamented, "...our ratios could go up to six patients per nurse. It was overwhelming." [12].

**3.4.2. A feeling of lack of support**

Several authors (Upton, 2018; Perry et al., 2011; Manandhar et al., 2020) have identified one of the elements that contributes to compassion fatigue as a feeling of being unsupported [34, 28, 21]. Participants in Upton (2018) study, expressed frustration with their nurse supervisors' reluctance to help in great detail. One nurse stated, "...nothing happened..nobody (managers) does anything. Another nurse added, "...you just have to put up with anything that is thrown at you". It was also said that the lack of support from administrators contributed to the start of CF. One nurse said, "...It is not nurses' duty/responsibility to handle money matters. This is just an absolute work burden" [21]. According to Perry et al. (2011) lack of support over time can exacerbate the experience of CF [28].

3.5. Effects of compassion fatigue on the quality of professional life among oncology nurses

Four studies discussed the effects of compassion fatigue on the quality of professional life work among oncology nurses [12, 7, 14, 35]. The studies revealed that oncology nurses were at higher risk for developing burnout and indicated that burnout predicted turnover intention or subsequently oncology nurses leaving their jobs. The studies also explained that oncology nurses who were self-judgemental and psychologically inflexible were more prone to compassion fatigue and burn-out and those oncology nurses who were empathic suggested to have more compassion satisfaction at their jobs. Lastly, compassion fatigue affects the nurses' quality of compassion in their nursing role which in turn can have an effect on the quality of their care to suffering patients.

3.6. Effects of compassion fatigue on personal and well being of oncology nurses

Only one study discussed the effects of compassion fatigue on the personal life and well-being among oncology nurses [28]. The study revealed that oncology nurses experienced excessive emotional attachment to their patients which contributed to compassion fatigue. Also, oncology nurses were more vulnerable to compassion fatigue when they had personal health or home issues and they experienced negative relationships among their personal lives as compassion fatigue led them to choose to be isolated and spend less time being involved in leisure activities. Lastly, CF caused oncology nurses to feel helpless, especially when they were unable to help those patients in end-of-life care.
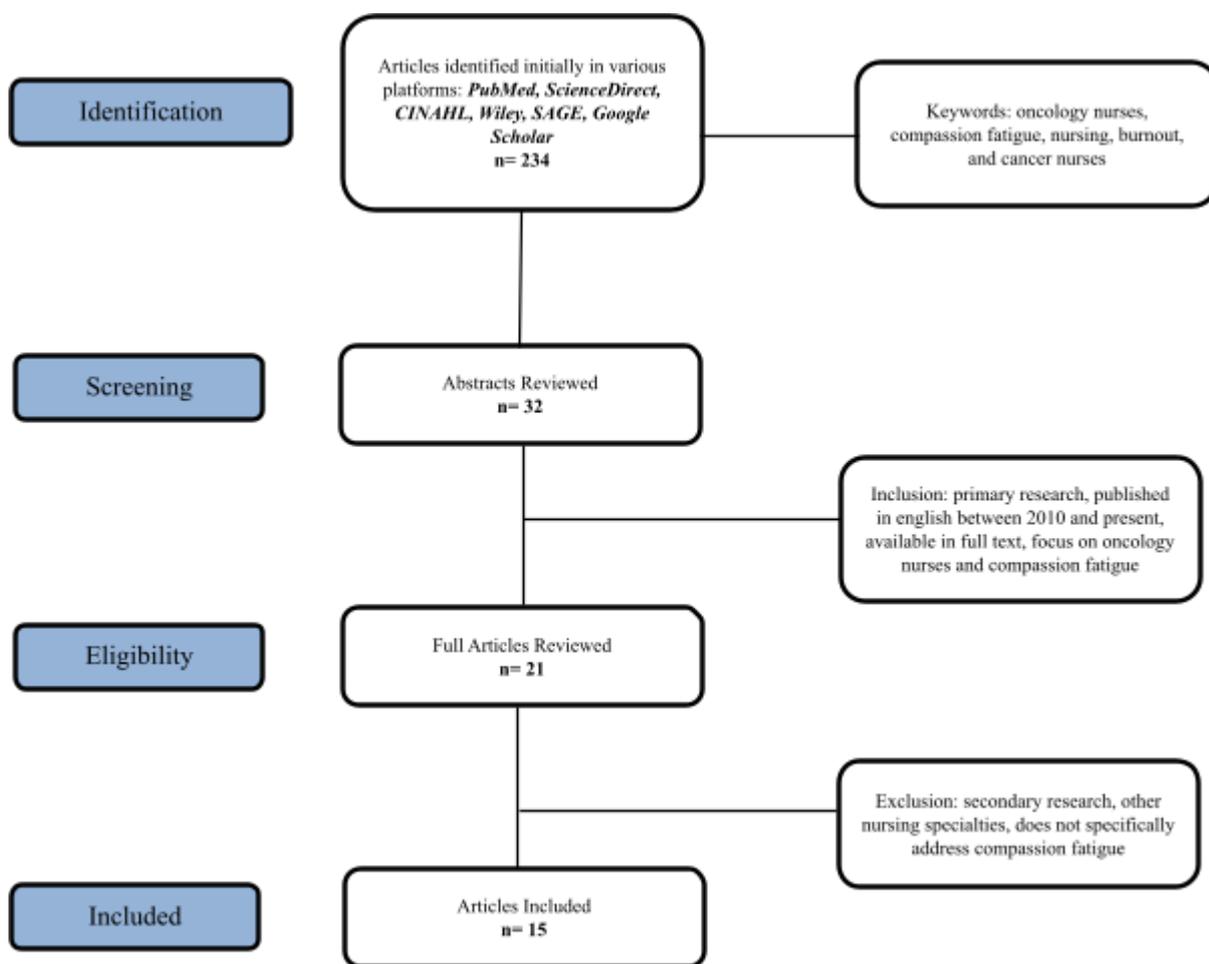
Figure 1. PRISMA Flow Diagram on Compassion Fatigue among Oncology Nurses

Table 1. Summary of the Criteria for Inclusion and Exclusion

Inclusion Criteria	Exclusion Criteria
Primary or original research articles published in a peer-reviewed publication	Secondary research published in textbooks, news, review articles and encyclopedias
Published in English or translated into English	Systematic, integrative reviews and meta analysis research papers
Research paper or articles accessible in their entirety	Compassion Fatigue research studies on general nurses or other nursing specialties
Mixed-method research studies from any healthcare setting that focused on oncology nurses' compassion fatigue, stress or burnout	Research studies that does not particularly address compassion fatigue
Published between 2010 and present	Published before 2010

Table 2. An overview of the included articles.

Author (Year) Country	Design	LOE	Data Collection	Settings	Sample Size and Participants (Oncology Nurses)	Sampling Technique	Methods/Instruments	Aim	Findings
Wentzel et al., 2019 South Africa [37]	Mixed Method Sequential Exploratory Design	VI	February to June 2017	One state hospital, South Africa	8	Purposive Sampling	Semi-structured Interviews	To describe compassion fatigue from the perspectives of Oncology Nurses	Emotional connection, emotional fatigue, emotional loss, blurring boundaries and acceptance were the 5 themes that arose in this study.
Giarelli, 2016, USA [12]	Descriptive Mixed Method	VI	Not Specified	Hematology-Oncology Unit, USA	20	Purposive Sampling	Self-Report Questionnaires and In-Depth Interviews	To examine factors that influenced the nurse's perceived quality of work life and risk for compassion fatigue	Personal life stressors make the respondents more at risk of Compassion Fatigue.
Duarte & Pinto-Gouveia, 2017, Portugal [7]	Cross-Sectional Design	VI	Not Specified	Public Hospitals, North and Center regions of Portugal	221	Convenience Sampling	Questionnaires	To investigate the effect of numerous psychological factors on nurses' professional quality of life	Nurses who are more prone to burnout and compassion fatigue are more self-judgmental, and have greater psychological inflexibility.
Perry et al., 2011,Canada [2 8]	Descriptive Exploratory Qualitative Design	VI	Not Specified	Oncology Wards, Canada	19	Purposive Sampling	Questionnaire	To understand more about compassion fatigue in oncology nurses; explore the factors that impact their wellbeing and their patients	Oncology nurses experienced knowledge gaps and a lack of external help might lead to compassion fatigue.

Manandhar et al., 2020, Nepal[21]	Mixed Method Design	VI	July 2019 to October 2020	Bhaktapur Cancer Hospital and Kathmandu Cancer Center, Nepal	71	Purposive Sampling	Structured Questionnaire and In-Depth Interview	To assess the level of compassion fatigue as well the level of satisfaction of Nurses while caring for cancer patients	The nurses' fatigue experiences were associated with expectation gaps and challenges in exposure to patient's death.
Kamisli et al., 2017, Turkey[19]	Quantitative Descriptive	VI	January to April 2012	Hachette University Oncology Hospital	70	Purposive Sampling	Self-evaluation Scale, Study Questionnaire andFace-to-Face Interview	To evaluate the aspects of oncology nurses about their profession in order to enhance the standards of oncology nursing	Most frequently expressed difficulties were exhaustion, coping with the psychological problems of the patients and frequent deaths.
Wells-English et al., 2019, USA[35]	Mixed Method Design	VI	3 month period (exact months not specified)	Urban for-profit Cancer-Center, with 4 separate Oncology Units; Southern USA	150	Convenience Sampling	Paper surveys	To examine the relationships between CS and CF and turnover intention among oncology nurses.	Nurses who reported higher scores on burnout are more at risk of turnover intention. In contrast, nurses who experience greater satisfaction have less desire to leave their place of employment.
Arribas-Garcia et al., 2020, Spain[2]	Descriptive, correlational, cross-sectional design	VI	September 2018-March 2019	Oncology services at Basurto and Cruces University Hospitals, Spain	69	Convenience Sampling	Face to face meetings and online assessment/dossi er test	To determine the perception of Compassion Satisfaction and Fatigue of oncology nursing staff; correlation between Compassion Satisfaction and Fatigue and sociodemograph ic, professional and adaptive variables (resilience, attitudes toward death, personality); and to identify predictors of the two dimensions	Revealed a moderate level of compassion fatigue among the (n=46) participants. CF had a strong correlation with neuroticism and resilience.
Potter et al., 2010, USA[29]	Descriptive, cross-sectional design	VI	Not specified	National Cancer Institute, Mid-western USA)	153	Purposive sampling	Questionnaires	To examine the prevalence of compassion fatigue and burnout among all staff	RNs had the highest percentage of high-risk scores for compassion fatigue, and graduate-prepared nurses are at the highest risk for burnout.

Fukumori et al., 2017, Japan[11]	Qualitative study	VI	not specified	Cancer Care, Japan	30	Purposive sampling	Semi-structured interviews	To describe the components of nurses' cognitive reactions from their exposure to cancer patients' traumatic experience to the onset of compassion fatigue.	This information can contribute to the understanding of the onset of compassion fatigue and provide the foundation for nurses in cancer care to avoid and recover from compassion fatigue.
Arimon et al., 2019 Spain[1]	Multicentre/Cross-s ectional	VI	January to December 2015.	Catalonia Hospitals, Spain	297	Convenience Sampling	Questionnaire	To assess the prevalence of Compassion Satisfaction, Compassion Fatigue and anxiety in oncology nurses and the association with demographics, training, work-related conditions, and psychological factors.	Nurses' desire to leave the unit was associated with high burnout and Secondary Traumatic Stress; while the desire to leave the profession was related to high State Anxiety.
Wu et al., 2016 USA and Canada[39]	Quantitative, descriptive, nonexperimental.	VI	Not Specified	California State University, USA	63	Purposive sampling	Demographic Questionnaire	To examine the experiences of compassion fatigue, burnout, andcompassion satisfaction among oncology nurses in the United States and Canada.	Demographic characteristics were reported comparable levels of compassion fatigue, burnout, andcompassion satisfaction. Team cohesiveness was significant to both groups.
Yu, H. et al., 2016,China [4 1]	Cross-sectional design	VI	Not specified	Ten tertiary hospitals and five secondary hospitals, China	669	Convenience and cluster sampling	Questionnaires	To describe and explore the prevalence of predictors of professional quality of life (compassion fatigue, burnout and compassion satisfaction)	Higher compassion fatigue and burnout were found among oncology nurses who had more years of nursing experience, worked in secondary hospitals and adopted passive coping styles.

4. Discussion

Healthcare practitioners frequently witness the agony and pain of their patients' and families. Most of the time, their desire to meet patients' physical and emotional demands surpasses their capacity to do so, which causes CF [23, 27]. Although CF and burnout affect a wide range of medical groups and specialties, nurses and other healthcare personnel who work in critical care, emergency departments, mental health units, and direct patient care have been recognized as being at higher risk with oncology nurses showing significant CF symptoms and burnout, a one component of CF [24, 25, 6, 29, 8]. Furthermore, oncology nursing has a higher turnover rate than all other specialties [9]. This review was undertaken to gain a better understanding of oncology nurses' compassion fatigue. The demographic variables, triggering factors and consequences of compassion fatigue on the oncology nurse workforce were highlighted in the data analysis from the 15 studies that were included.

4.1. Demographic Variables

Age, education, and years of nursing experience were shown to have inconsistent effects on compassion fatigue, which is congruent with the studies by Gribben and Semple (2021) and Ruiz-Fernández, M., et al., 2020 [13, 30]. Notably, this finding differs from that reported by Xie et al. (2021) in which they investigated the prevalence, severity, and associated factors of compassion fatigue among oncology nurses [40]. According to the researchers, young nurses and those with a lesser degree of education had a higher prevalence of CF. Jalal et al. (2019) adds to our understanding of the relationship between a specific nurse characteristic and CF experiences [17]. The researchers looked specifically at CF among critical nurses and discovered that personal characteristics, attributes, and years of experience are factors in the onset of CF. While we found no significant impact between the demographic variables and CF in this study, previous studies highlight how individual characteristics of cancer nurses can be a factor to reduce the degree of compassion fatigue. As a result, in developing policies to address CF, nursing administrators should consider nurses' personal attributes.

4.2. Triggering Factors

A considerable body of data, on the other hand, suggests that the work environment and support from managers and administrators are elements that may precipitate the emergence of compassion fatigue [34, 29, 28]. This is consistent with the results of an integrative review reporting how workplace culture, particularly, organizational relationship, team connectedness and professional values can help reduce burnout and increase work satisfaction [13]. Also, nurses have said that a shortage of nurses makes compassion fatigue worse [26]. As a result, it is critical that a creative solution be applied. It has been demonstrated that a positive environment improves nurse and patient outcomes. Particularly, nurses need a place of work where they can get positive feedback and where their work is recognized and appreciated. The most important thing is to make rules or procedures that will protect them from bullying at work. In general, nurses and management must support a therapeutic workplace culture in which nurses are supported, good communication is encouraged, and there is team cohesion.

4.3. Consequences of Compassion Fatigue

Compassion fatigue affects nurses' professional and personal lives, impacting nurse turnover as well as personal and family relationships. This might be due to their regular encounters with their patients and family members' situations of death and suffering. An integrative review [23] describing how nurses may experience compassion fatigue due to excessive emotional workload supports this. Some studies have found that a resilience program, a peer support group, social support, and coping skills can help reduce CF [36, 37, 5]. In addition, self-care activities such as exercise and spending time with friends and

family contributed to happiness away from work [9]. So, it is important to come up with ways to improve not only the nurses' physical health but also their mental health.

This review sheds light on what could be the primary aspect and fundamental characteristics of compassion fatigue, the contributing variables that influence CF, and possible solutions that might be used in clinical practice and future academic research.

4.4. Implication for Practice

The findings of this review are significant for conceptualizing compassion fatigue which is a critical tool in developing an effective and tailored solution.

Stress and burnout can cause oncology nurses to give care that isn't as good or as close to the patient as it could be. So, they need to be told about the causes, including the symptoms, so they can become more aware of them and take action. Also, healthcare organizations must give their employees a healthy, caring, and understanding place to work where their emotional health is fully supported. Peer support groups have been shown to lower stress, which is also advantageous for them. Most importantly, real leadership from nursing management that encourages openness and a supportive work environment can help both new and experienced nurses stay in their jobs.

5. Limitations and Recommendations

The present study has several limitations. First, studies conducted in different countries that may have different hospital settings especially in hospital protocols that may cause limitations in the study. While the CF and SC experiences of non-participants may differ from those of those who did, it may be claimed that this sample of acute medical care hospital nurses, from one urban acute medical care hospital, may not accurately represent the community of acute medical care hospital nurses. Second is the level of nursing experience of participants could be another factor, perhaps their perception of emotional stress and psychological stressor are different that could limit the study. Yet, our sample's ratio of male to female nurses is comparable to that of other international samples [3, 15].

This study's findings demonstrated the higher the level of knowledge, the better an oncology nurse can handle his cancer patient. Training programs for oncology nurses are a big factor so that they will be more equipped for this work with less error, emotion and psychological stress.Benefits like enough risk pay and a good ratio for cancer nurses will help nurses get over exhaustion and burnout if they pay them enough for the work they do. When cancer patients are their main patients, oncology nurses will benefit from a change in management that lowers their emotional stress. Another thing is emotional stress that may not be related to work experience; it can also be from other things, such as family-related problems or their working relationship with their department. It is recommended that oncology nurses get regular training, take part in fun activities, get enough administrative help, and talk to a counselor about how to deal with traumatic experiences. This will help them adjust psychologically and make them more aware of both the good and bad things that happen when they work with cancer patients. As this study highlighted the causes and consequences of CF, strategies and their efficacy Concentrating on building compassion that boosts professional abilities and lowers CF levels may be a promising future area of research. In terms of nursing education, the findings may help teachers make more people aware of how CF affects the lives of future nurses. Also, they can be taught about the causes and effects of CF through preventative and educational seminars.

6. Conclusion

Caregiving for cancer patients, particularly at the end of life, is not an easy task, and CF is a significant issue that oncology nurses face Several studies came to the conclusion

that oncology nurses were more vulnerable to compassion fatigue from the emotional attachment in taking care of cancer patients, stressors that they encounter in the oncology wards/units, and from the burnout that they experience in caring for severely ill cancer patients. Numerous studies have also shown that compassion fatigue has had an impact on the personal lives and wellbeing of oncology nurses, as their health and home issues have suffered, causing them to isolate, feel helpless, and have negative personal relationships. In order to support the emotional wellbeing of oncology nurses, this review highlights the requirement for healthcare institutions to provide a healthy, compassionate, and empathic work environment. Therefore, a supportive nursing management and peer support group will be able to address or aid stress, burnout, and prevent turnover intention of oncology nurses.

7. Patents

N/A

Appendix A. Quality Score using MMAT (2018)

Category of study	Methodological quality criteria	Wentzel, et al. (2019),South Africa[37]	Giarelli, E. (2016), USA[12]	Upton, K. V. (2018),UK[34]	Manandhar et al. (2020)Nepal[21]	Wellsh-English et al. (2019), USA[35]	Fukumori, T., et al, (2017),Japan[11]	Perry, B et al. (2011),Canada[28]	Duarte, J.and Pinto-Gouveia, J.(2017),Portugal [7]	Kamisli et al. (2017)Turkey[19]	Jarrad, R. et al. (2020),Amman Jordan[18]	Arribas-Garcia et al. (2020),Spain[2]	Potter, P. et al. (2010), USA[29]	Arimon et al.(2019)Spain[1]	Wu et al. (2016)United states and Canada [3 9]	Yu,H. et al. (2016),China[41]
		*5. Mixed Method	*5. Mixed Method	*5. Mixed Method	*5. Mixed Method	*4. Quantitative Descr	1.Qualitative	1.Qualitative	4. Quantitative Descriptive	4. Quantitative Descriptive	4. Quantitative Descriptive	4. Quantitative Descriptive	4. Quantitative Descr	4. Quantitative Descriptive	4. Quantitative Descriptive	4. Quantitative Descriptive
Screening questions (forall types)	S1. Are there clear research questions?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	S2. Does the collected data allow me to address the research questions?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
1. Qualitative	1.1. Is the qualitative approach appropriate to answer the research question?	Yes	Yes	Yes	Yes		Yes	Yes						Yes	Yes	Yes	Yes
	1.2. Are the qualitative data collection methods adequate to address the research question?	Yes	Yes	Yes	Yes		Yes	Yes						Yes	Yes	Yes	Yes
	1.3. Are the findings adequately derived from the data?	Yes	Yes	Yes	Yes		Yes	Yes						Yes	Yes	Yes	Yes

Category	Question															
	1.4. Is the interpretation of results sufficiently substantiated by data?	Yes	Yes	Yes	Yes		Yes	Yes						Yes	Yes	Yes	Yes
	1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation?	Yes	Yes	Yes	Yes		Yes	Yes						Yes	Yes	Yes	Yes
4.Quantitative descriptive	4.1. Is the sampling strategy relevant to address the research question?	N/A	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes	Yes	
	4.2. Is the sample representative of the target population?		Yes	No	Yes	Yes			No	Can't Tell	Yes	Yes	Yes	Yes	Yes	Yes
	4.3. Are the measurements appropriate?		Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Can't Tell	Can't Tell	Yes
	4.4. Is the risk of nonresponse bias low?		Yes	No	Can't Tell	Can't Tell			Can't Tell	Can't Tell	Can't Tell	Can't Tell	Can't Tell	Yes	Can't Tell	No
	4.5. Is statistical analysis appropriate to answer the research question?		Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5. Mixed methods	5.1. Is there an adequate rationale for using a mixed methods design to address the research question?	Yes	Yes	Yes	No								Yes	Yes	Yes	Yes
	5.2. Are the different components of the study effectively integrated to answer the research question?	Yes	Yes	Yes	Yes								Yes	Can't Tell	Yes	Yes
	5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted?	Can't Tell	Yes	Yes	Yes								Can't Tell	Yes	Yes	Can't Tell
	5.4. Are divergences and	Can't	Yes	Can't	Can't								Can't	Can't	Yes	Yes

inconsistencies between quantitative and qualitative results adequately addressed?	Tell		Tell	Tell								Tell	Tell		
5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved?	Yes	Yes	Yes	Can't Tell								Yes	Yes	Yes	Yes
Score/Quality	3/Moderate	5/High	4/Moderate	2/Low	4/Moderate	5/High	5/High	3/Moderate	3/Moderate	4/Moderate	4/Moderate	3/Moderate	3/moderate	3/Moderate	4/Moderate

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