



# A comprehensive review of compassion fatigue in pre-licensure health students: antecedents, attributes, and consequences

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## Abstract

Compassion fatigue has been documented in the nursing and allied health literature as an emerging issue for health professionals. Little is known regarding the experience of compassion fatigue in undergraduate, pre-licensure students entering health care professions. This study used Walker and Avant's concept analysis methodology to explain antecedents, attributes, and consequences of compassion fatigue in undergraduate, pre-licensure students. Exploration of the published literature from January 1992–April 2020 occurred using systematic review criteria based on the Joanna Briggs Institute. Findings revealed three antecedents that included: *Coping Ability*; *Self-Efficacy*; and *Clinical and Occupational Hazards*. Three defining attributes of compassion fatigue included: *Psychological Stress*; *Witnessing Negative Experiences of Others*; and *Depression*. Consequences included: *Decreased Well-Being*; and *Program Withdrawal and Intention-to-Leave*. The results offer new perspectives and opportunities for research in pre-licensure health studies undergraduate students expected to uphold the values of their professional program prior to entry into the workforce.

**Keywords** Concept analysis · Burnout · Secondary traumatic stress · Compassion fatigue · Pre-licensure students · Baccalaureate students · Comprehensive literature review

## Introduction

Interest in psychological traumatic injury has persisted for centuries (Lasiuk and Hegadoren 2006) with the field of traumatology blossoming in the 1980s (Morrissette 2004). Despite several decades of study, ongoing research is needed to understand how helping professionals manage the personal pain associated with helping others (Morrissette 2004). Carla Joinson (1992) was one of the first nurses to discuss compassion fatigue (CF) in the published literature and referred to CF as being “emotionally devastating” requiring awareness to recognize when it is occurring. In Figley 1995, Charles Figley, a scholar with expertise in psychotherapy and traumatic stress, noted the paucity of literature surrounding CF in psychotherapy professionals. Figley (1995) suggested

that the terms ‘compassion fatigue’ and ‘compassion stress’ are appropriate to connote ‘the cost of caring’ in those who help others. In two recent concept analyses of CF in nurses, CF included decreased energy, exhaustion, loss of power, physical complaints, irritability, intent-to-quit, and provision of poor-quality care (Peters 2018) wherein “the compassionate energy that is expended by nurses has surpassed their restorative processes” (Coetzee and Klopper 2010, p. 237). Unfortunately, we do not understand if similar antecedents, attributes, and consequences occur in undergraduate, pre-licensure health studies students.

## Background

Wilson (1963) developed a method of concept analysis that was later refined by Walker and Avant (2011) as a way to analyze and describe important concepts within the nursing discipline. This method was used to guide the literature review in this study and to identify how the concept of CF is understood in undergraduate, health-related pre-licensure student populations, including defining attributes, antecedents, and consequences (Walker and Avant 2011). According to Risjord (2009), theoretical concept analysis is dependent upon

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the context, or setting, and theory within which the concept analysis is performed. Risjord (2009) further argued that to strengthen both the epistemological foundation and ontological underpinning of the concept being analyzed, these specific conditions must be articulated. Hence, in this review, the concept of CF was analyzed within the context of undergraduate students in pre-licensure health disciplines within the framework of the Professional Quality of Life (ProQOL) Scale (Version 5) developed by Stamm (2010). In this review, pre-licensure students are learners enrolled in a baccalaureate education program where upon completion, are eligible for licensing and registration under a regulatory body.

The ProQOL Scale is a 30-item measure derived from Stamm's (2010) theoretical model of professional quality of life available in Fig. 1 (The Centre for the Victims of Torture 2019). The model is comprised of two dimensions, compassion satisfaction (CS) and compassion fatigue (CF); the latter includes burnout (BO) and secondary traumatic stress (STS). The tool emanates from over 15 years of research that highlights CS (defined as the positive aspects one derives from helping work) and CF (related to the negative aspects of work within a helping profession such as nursing, social work, teaching, policing, firefighting, clergy, students in caring professions, and others) (Stamm 2010). Stamm's theoretical model, captures three environmental domains that encompass: (a) the work environment, consisting of tasks and organizational structures; (b) the client environment in which the care provider delivers assistance or help to an individual, consisting of helper exposure(s) to primary and secondary trauma; and (c) the personal environment of the helper, consisting of personal characteristics and experiences which may lead to compassion satisfaction or fatigue. The ProQOL Scale is a pre-eminent tool that has been used in more than 200 peer-reviewed papers (Stamm 2010) reporting research

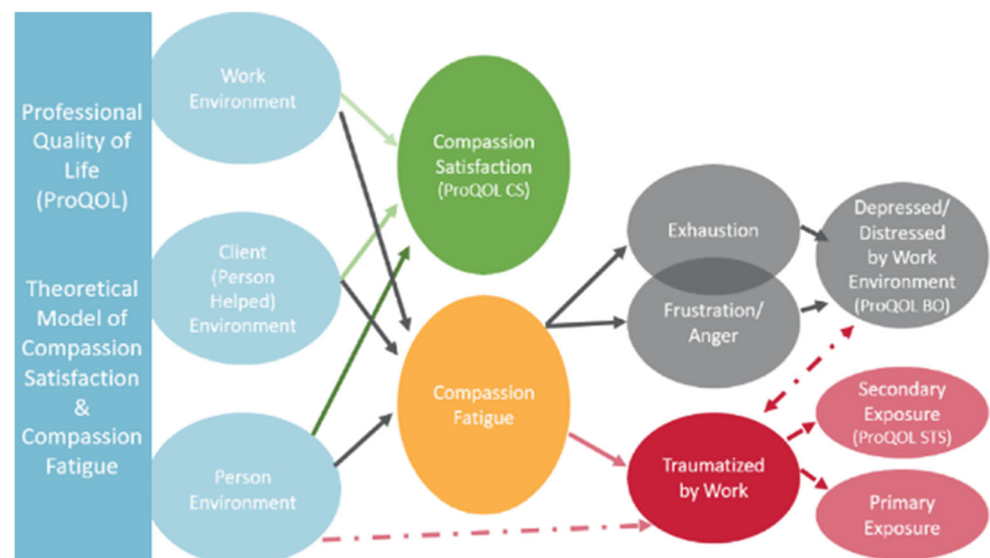
involving registered nurses, psychiatric nurses, and students from different 'helping' professions. The tool offers an all-in-one measure of CS, BO, and STS not fully captured by other singular tools (Bride et al. 2007). Most recently in a Canadian study of child protection workers, convergent and discriminant validity of the ProQOL Scale were established, as well as construct validity when assessed using bifactor modeling of the three subscales (Geoffrion et al. 2019) indicating that it is an appropriate tool to assess for CF. Cronbach's alpha scores for the tool were reported as 0.88 for CS, 0.75 for burnout, and 0.81 for STS, and an overall alpha of 0.88 (Stamm 2010).

Numerous stressors are placed on pre-licensure health students who are expected to uphold professional behaviours and values while undertaking their studies and in the clinical practice environment. For example, nursing and psychiatric nursing students are responsible for providing care to their assigned patient/client and family members over the duration of an eight or 12-h shift. The responsibility of forming close inter-personal relationships yet maintaining emotional boundaries between the care-provider and client become enmeshed during care provision (Boyle 2011). Providing care for a prolonged period of time during times of bad news, death, pain, or suffering with a terminal illness, and existential crises, have been attributed to traumatic stress in nurses (Boyle 2011).

## Search Strategy

A review of the literature across four databases was conducted that included the Cumulative Index of Nursing and Allied Health Literature (CINAHL), PsycINFO, ERIC (Education Resources Information Center), as well as PubMed (included Medline). Key search medical subject headings (MeSH) and

**Fig. 1** Professional Quality of Life Theoretical Model (The Centre for the Victims of Torture 2019)



terms included: compassion fatigue, occupational stress, burnout, secondary traumatic stress, and students from a variety of groups such as education, nursing and allied health disciplines including those attending university, community college, and junior college. Search strings with MeSH terms (available in Table 1) were developed in consultation with a research librarian for each database to capture essential terms. Factors identified in the literature were analysed for themes in accordance with Walker and Avant's (2011) concept analysis methodology to determine exposures of interest, as they related to the concept of CF. CF is known as the emotional pain and exhaustion that occurs with a gradual onset that arises in some care providers when exposed to a suffering individual (Figley 1995).

The comprehensive search explored the peer-reviewed literature published between January 1992–April 2020 and

followed guidelines for a systematic review of the literature from the Joanna Briggs Institute (JBI), *Systematic Reviews of Etiology and Risk* (Moola et al. 2017). The date range is reflective of when CF first appeared in the nursing and allied health literature with Joinson's (1992) publication. The population of interest was undergraduate students in health-related disciplines. The outcome variables of interest were CF comprised of BO and STS. BO and STS are two components of CF where the care provider experiences decreased self-efficacy related to workload demands and increased perceived stress that arise during care provision to a person who is suffering (Boyle 2011; Figley 1995; Hegney et al. 2014; Morrissette 2004; Rudman and Gustavsson 2012; Stamm 2002; Stamm 2010).

## Inclusion Criteria

In keeping with Risjord's (2009) advice for concept analysis criteria, peer-reviewed studies that utilized the ProQOL Scale as a pre-eminent tool (Bride et al. 2007; Stamm 2010) with a population of undergraduate students published between January 1992 and April 2020 were reviewed. All original research published in the English language were included for review commencing with titles and abstracts of articles, followed by full article review.

## Exclusion Criteria

Studies were excluded if they involved graduate-students, did not describe the student population, or did not report primary research. Anecdotal articles and commentaries were also excluded. Theses and dissertations and non-peer-reviewed (i.e., grey literature) and literature reviews were also excluded; however, the reference lists of these works were reviewed for articles that met the inclusion criteria. Studies that received a methodological appraisal score  $\leq 50\%$  as per the Joanna Briggs Institute (JBI 2017) appraisal criteria were excluded from the theoretical concept analysis pertaining to pre-licensure, undergraduate health studies students.

## Search Results and Appraisal

The search results are presented in a Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow diagram adapted from Moher et al. (2009) in Fig. 2. Articles that met the inclusion criteria ( $n = 12$ ) were appraised for quality in accordance with the Joanna Briggs Institute Reviewer's Manual. JBI (2017) critical appraisal tools are available for a variety of studies (including cross-sectional and prevalence studies), which comprised the final literature sample for the theoretical concept analysis of CF. Refer to Tables 2 and 3 to view scoring of the appraised articles specific to

**Table 1** Search strings

CINAHL (EBSCOhost)
(MM "Burnout, Professional" OR "Compassion Fatigue") AND (MM "Students, Nursing" OR "Students, Nurse Midwifery" OR "Students, Nursing, Associate" OR "Students, Nursing, Baccalaureate" OR "Students, Post-RN" OR "Students, Nursing, Diploma Programs" OR "Students, Nursing, Graduate" OR "Students, Nursing, Doctoral" OR "Students, Nursing, Masters" OR "Students, Nursing, Male" OR "Students, Allied Health" OR "Students, Athletic Training" OR "Students, Audiology" OR "Students, Dental Hygiene" OR "Students, Dietetics" OR "Students, Medical Technology" OR "Students, Occupational Therapy" OR "Students, Physical Therapy" OR "Students, Physician Assistant" OR "Students, Radiologic Technology" OR "Students, Respiratory Therapy" OR "Students, Social Work" OR "Students, Speech-Language Pathology" OR "Students, Chiropractic" OR "Students, Dental" OR "Students, Medical" OR "Students, Midwifery" OR "Students, Nursing" OR "Students, Nursing, Practical" OR "Students, Pharmacy" OR "Students, Podiatry")
PsycINFO (EBSCOhost)
(MM "College Students" OR MM "Community College Students" OR MM "Education Students" OR MM "Junior College Students" OR MM "Nursing Students" OR MM "ROTC Students") AND (MM "Occupational Stress" OR MM "Compassion Fatigue")
PubMed (includes Medline)
("students"[MeSH Terms] OR "students"[All Fields]) AND ("health occupations"[MeSH Terms] OR ("health"[All Fields] AND "occupations"[All Fields]) OR "health occupations"[All Fields])) AND (((("burnout, psychological"[MeSH Terms] OR ("burnout"[All Fields] AND "psychological"[All Fields]) OR "psychological burnout"[All Fields] OR "burnout"[All Fields]) AND professional[All Fields]) OR ("compassion fatigue"[MeSH Terms] OR ("compassion"[All Fields] AND "fatigue"[All Fields]) OR "compassion fatigue"[All Fields]))
ERIC (EBSCOhost)
(DE "College Students" OR DE "Community College Students" OR DE "Education Students" OR DE "Junior College Students" OR DE "Nursing Students" OR DE "ROTC Students" OR DE "Undergraduate Students" OR DE "Premedical Students") AND burnout

**Table 2** Appraisal of Cross-Sectional Studies ( $n = 10$ )

Study	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	%
Beaumont et al. 2016	N	Y	N	Y	Y	N	Y	Y	63
Flinton et al. 2018	N	N	U	Y	N	N	Y	U	25
Kinker et al. 2018	Y	N	U	U	N	U	U	U	13
Lin and Lin 2016	Y	Y	Y	Y	Y	Y	Y	Y	100
Lin et al. 2016	Y	N	U	U	Y	Y	N	Y	50
Lin et al. 2017	Y	Y	Y	Y	Y	Y	N	Y	88
* Mason 2018	Y	N	Y	Y	N	U	Y	Y	63
McArthur et al. 2017	Y	Y	Y	Y	U	Y	Y	Y	88
* Michalec et al. 2013	Y	Y	Y	Y	N	N	Y	Y	75
* Rees et al. 2016	Y	Y	Y	Y	N	U	Y	Y	75

Notes: \* Indicates specific to undergraduate nursing students. Criterion met - Y=Yes, N=No, U=Unclear

Q1: Were the criteria for inclusion in the sample clearly defined?

Q2: Were the study subjects and the setting described in detail?

Q3: Was the exposure measured in a valid and reliable way?

Q4: Were objective, standard criteria used for measurement of the condition?

Q5: Were confounding factors identified?

Q6: Were strategies to deal with confounding factors stated?

Q7: Were the outcomes measured in a valid and reliable way?

Q8: Was appropriate statistical analysis used?

undergraduate health disciplines from midwifery, veterinary medicine, medicine, radiotherapy, and nursing. There were three articles that did not meet appraisal score criteria. Findings from the final sample of nine studies are presented in Table 4. The lack of articles specific to students in prelicensure undergraduate programs reveal a need for more research specific to undergraduate, health studies students.

The literature was replete with studies pertaining to CF in practicing professionals that included registered nurses (RNs),

midwives, social workers, and physicians. However, few studies pertained to nursing students or psychiatric nurses. Literature related to psychiatric nurses may have been minimal due to the limited existence of this professional group outside of western Canada, New Zealand, Australia, South Africa, and the United Kingdom. Globally, RNs comprise the largest group of the health care professions and are predominantly responsible for providing mental health services (Hewlett and Moran 2014).

Five studies in the final review focussed on CF among undergraduate nursing students. In South Africa, two prevalence studies were conducted (Mason and Nel 2012; Mathias and Wentzel 2017), however, analysis did not include any predictor or independent variables. Regression analysis conducted by Mason (2018) found that among South African nursing students, those with pessimistic attitudes were more likely to experience CF. Rees et al. (2016) conducted a study focusing on BO and psychological resilience among undergraduate nursing students from Australia and Canada. The authors found that variables such as mindfulness, adaptive coping, and personality factors such as self-efficacy and neuroticism as having significant influence on BO; however, they did not study STS. The fifth study conducted within the United States of America (Michalec et al. 2013) utilized a mixed-methods approach, however, the qualitative findings were limited to third- and fourth-year students. This is unfortunate given that the statistical analysis yielded significant differences in burnout between first- and second-year students. Interestingly, students in the qualitative study arm of the study reported that they believed experiencing burnout at some point in their nursing careers was inevitable.

Given the paucity of literature concerning the presence of CF in Canadian psychiatric nursing and nursing student populations, more research is needed to fully understand the level of secondary traumatic stress and burnout that comprise compassion fatigue within these populations. In light of the

**Table 3** Appraisal of Prevalence Studies ( $n = 2$ )

Study	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	%
* Mason and Nel 2012	Y	U	U	N	Y	Y	Y	Y	U	56
* Mathias and Wentzel 2017	Y	Y	U	N	Y	Y	Y	Y	Y	88

Notes: \* Indicates specific to undergraduate nursing students. Criterion met - Y=Yes, N=No, U=Unclear

Q1: Was the sample frame appropriate to address the target population?

Q2: Were study participants sampled in an appropriate way?

Q3: Was the sample size adequate?

Q4: Were the study subjects and the setting described in detail?

Q5: Was the data analysis conducted with sufficient coverage of the identified sample?

Q6: Were valid methods used for the identification of the condition?

Q7: Was the condition measured in a standard, reliable way for all participants?

Q8: Was there appropriate statistical analysis?

Q9: Was the response rate adequate, and if not, was the low response rate managed appropriately?

**Table 4** Studies of Compassion Fatigue in Undergraduate, Pre-Licensure Students

Author(s); Design	Education Context; Country; (n)	Main Results
Beaumont et al. (2016). Cross-Sectional Study	Student midwives England (n = 103)	Contributors to burnout included: High self-judgment; less compassionate toward others <i>Consequences:</i> Reduced mental well-being; reduced self-kindness
Lin and Lin (2016). Cross-Sectional/Cohort Study	Medical students Taiwan (n = 94)	Contributors to burnout included: High psychological and physical demands; male gender; younger age <i>Consequences:</i> Increased intention-to-withdraw from educational program/leave profession
Lin et al. (2017). Cross-Sectional/Cohort Study	Medical students Taiwan (n = 127)	Contributors to burnout included: Male gender; younger age; poor self-esteem; and decreased sense of control
Mason (2018) Cross-Sectional Study	Nursing students South Africa (n = 150)	<i>Attributes &amp; Consequences:</i> CF and burnout are closely related to pessimistic existential attitudes; optimism is predictive of CS
Mason and Nel (2012). Prevalence Study	Nursing students South Africa (n = 80)	–63.75% of total sample presented with moderate to high risk for burnout <i>Attributes:</i> High scores of burnout occurred during final year of program
Mathias and Wentzel (2017). Prevalence Study	Nursing students in 3rd & 4th years of study South Africa (n = 67)	–94% of sample presented with moderate risk for burnout –95.5% reported average levels of compassion satisfaction
McArthur et al. (2017). Cross-Sectional Survey/ Prevalence Study	Veterinary students Australia (n = 193)	–30% at high risk of burnout –24% at high risk of secondary traumatic stress –21% reported low compassion satisfaction –Secondary traumatic stress is positively correlated to burnout <i>Antecedents:</i> Decreased mindfulness/coping <i>Attributes:</i> Dysfunctional coping; self-stigma; feelings of fear, apprehension and discomfort witnessing negative experiences of others
Michalec et al. (2013). Cross-Sectional Study (with mixed method component)	Nursing students United States of America (n = 436)	–1st year students reported significantly lower levels of burnout compared to 2nd year students –3rd year students reported significantly higher levels of emotional exhaustion compared to 1st years
Rees et al. (2016). Cross-Sectional Survey	Nursing students Australia & Canada (n = 415)	<i>Antecedents:</i> Maladaptive coping strategies; reduced mindfulness

mandate for students to provide compassionate care within the nursing profession (Canadian Association of Schools of Nursing 2015), a study that examines compassion satisfaction and fatigue is warranted. As articulated by Michalec et al. (2013), it is essential to determine if nursing students are affected by CF, what factors contribute to its formation, and understand how educators can work toward preventing its deleterious impacts within student populations.

## Concept Analysis of Compassion Fatigue

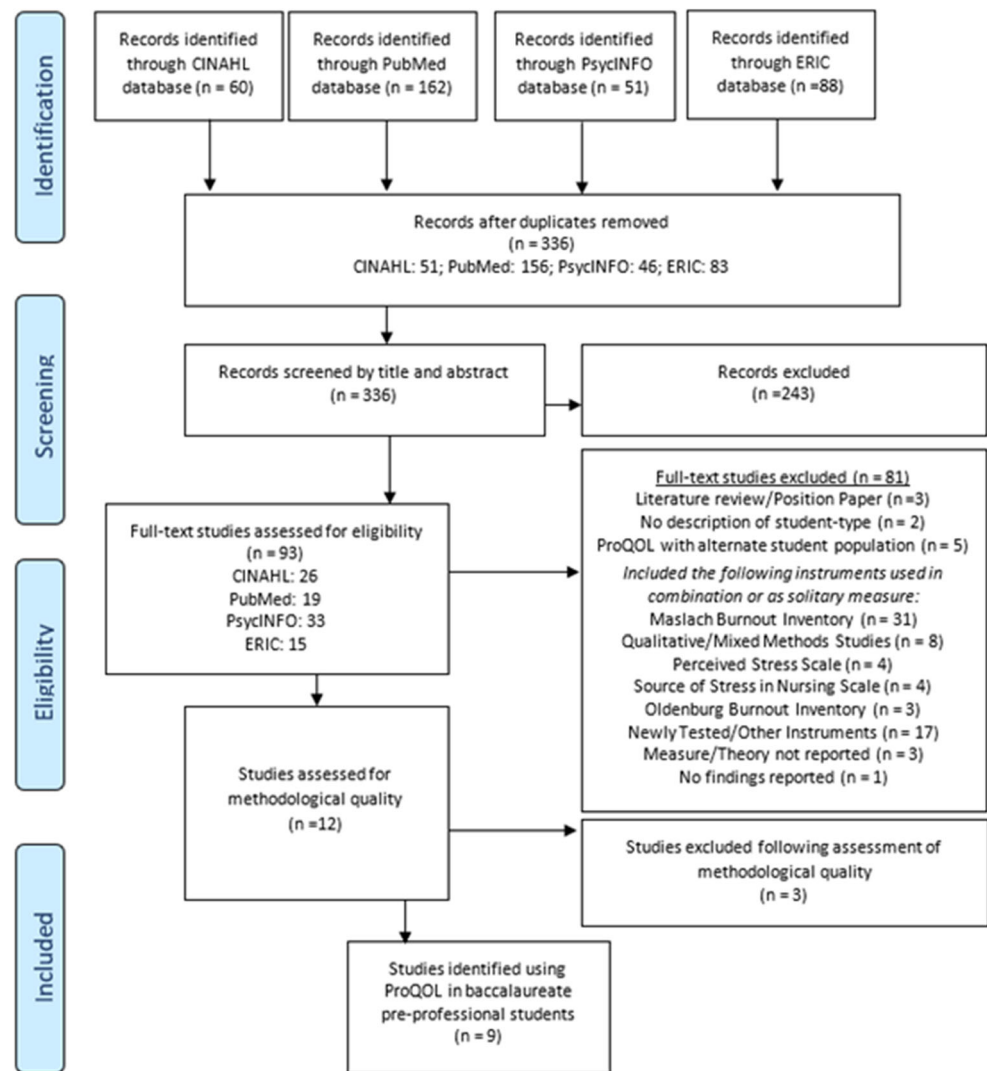
A final sample of nine articles was analyzed for the concept analysis of CF in undergraduate, pre-licensure students. Empirical referents are “observable phenomena by which to determine the existence of the concept in particular clients” (Walker and Avant 2011, p. 169). The identification of empirical referents for this analysis was guided by Stamm’s (2010) *Professional Quality of Life Theoretical Model*,

Fawcett’s (1996) *Nursing Metaparadigm* concepts (nurse, environment, health, and person), and Lazarus and Folkman’s (1984) *Transactional Theory of Stress*. Factors that described the student’s lifeworld in context of CF and imbalances between stressors and coping ability also informed the analysis. Literature pertaining to RNs, veterinary medicine, midwifery, and medicine were included to contextualize findings specific to pre-licensure students.

## Antecedents

Antecedents are events that occur prior to the concept occurring that offer perspective on the social context of the central concept under analysis (Walker and Avant 2011). Three key antecedents in the literature were found related to compassion fatigue in pre-licensure students. They included: coping ability, self-efficacy, and type of clinical setting which account for the social context prior to the concept occurring stipulated by Walker and Avant (2011). The findings represent behaviours,

**Fig. 2** PRISMA Flow Diagram of Professional Quality of Life (ProQOL) Studies Results for peer reviewed studies with undergraduate, pre-licensure students January 1992–April 2020.



mindset, and the clinical/occupational setting that contextualize student experiences as they relate to CF.

### Coping Ability

Maladaptive coping strategies and decreased mindfulness placed learners at risk for burnout (Rees et al. 2016). In contrast, functional coping was associated with increased compassion satisfaction (McArthur et al. 2017). According to Mason and Nel (2012), nursing students should receive and access psychosocial supports while pursuing their undergraduate degree to develop positive coping strategies. In a small quasi-experimental, pre-post intervention study of 17 registered nurses, Hevezi (2016) demonstrated that meditation is an effective coping strategy to reduce BO. These findings offer health studies educators and researchers a strategy that may serve to interrupt BO formation in a student population. However, more research is needed to determine what year within an undergraduate program would be most beneficial to integrate strategies such as

meditation in effort to promote coping and reduce burnout. Conducting a study that determines which year in the program or clinical placement is most at-risk (if any) will allow the development and implementation of targeted interventions such as meditation as evaluated by Hevezi (2016).

### Self-Efficacy

According to Bandura (1977), self-efficacy refers to an individual's belief in their ability to accomplish a goal or task in the face of adverse experience, threat, or obstacles. Among South African nursing students, pessimistic attitudes predicted high levels of CF (Mason 2018). Similarly, medical students who reported higher levels of self-esteem, general self-efficacy, internal locus of control, and emotional stability had statistically significant lower BO levels (Lin et al. 2017). Although this study was conducted in Taiwan, the findings may be applicable to a variety of clinical practice environments with demanding working conditions. Researchers have

argued that demanding working conditions coupled with numerous stressors may predispose students to BO (Lin et al. 2017; Mason and Nel 2012). Therefore, effort may be required on behalf of students and their instructors to seek out meaningful experiences and learning opportunities to build self-efficacy, a sense of mastery, and increase students' adaptability to reduce BO formation. Rees et al. (2016) advocated for integration of curricular programming to embed development of mindfulness skills that may increase student self-efficacy and prevent BO.

### Clinical Setting and Occupational Hazards

Development of CF may be associated with the nature of the clinical practice area. For example, studies of psychiatric settings reported the highest levels of STS among nurses (Berger et al. 2015), as well as high levels of STS and BO (Jacobowitz et al. 2015). These findings may be related to routine emotional and physical injury affiliated with verbal and physical assaults, as well as aggressive client behaviours in psychiatric care settings (Jacobowitz et al. 2015). Studies involving psychiatric nursing students were not found in the literature indicating a gap with regard to CF in this population. Other settings of concern for CF raised in the literature were nurses who worked in emergency departments (Hooper et al. 2010), pediatric care areas (Berger et al. 2015; Shen et al. 2015), and oncology settings where nurses worked for 11–20 years (Potter et al. 2010).

Workplace settings such as emergency departments put health care providers, including nurses, physicians, and emergency responders, at risk for post-traumatic stress disorder (PTSD) and other stress responses (Alden et al. 2008; Manitoba Nurses Union 2015). Research findings link the development of PTSD to direct physical violence, the perception of serious threat, and witnessing severe injury or death of patients (Alden et al. 2008). The view that PTSD is an occupational hazard for combat veterans (Collura and Lende 2012), nurses, and professionals who provide emergency services (Alden et al. 2008) requires more research. According to the Manitoba Nurses Union (2015), death of a pediatric patient due to abuse, providing care to patients who resemble close friends or family, as well as death or serious injury of a patient despite "extraordinary efforts" to save a life (p. 5) lead to the development of STS, BO, and PTSD. These stressors meet *Criterion A* for PTSD within the DSM-5 (American Psychiatric Association 2013) whereby an individual is exposed to death, threat of death, actual or threatened serious injury, or, actual or threatened sexual violence.

### Defining Attributes

Defining attributes refer to the most frequently associated referents to the concept under analysis (Walker and Avant 2011).

Within the analysis of CF, three major attributes arose that included: psychological stress, witnessing negative experiences of others, and depression.

### Psychological Stress

Students who experienced psychological stress and distress are at risk of developing CF. A study of medical students in Taiwan found that students experiencing psychological stress coupled with physical demands are at risk of developing BO (Lin and Lin 2016). In a study of veterinary students in Australia, students who experienced fear, uncertainty, and personal distress were more likely to experience BO and STS as measured by the ProQOL Scale as they attempted to regulate emotions and apprehensions such as anxiety (McArthur et al. 2017). Researchers have argued for the mobilization of students' interpersonal social supports (Lin and Lin 2016; Mason and Nel 2012), as well as support from supervisory and managerial stakeholders to better support students in their roles as care providers (Laschinger and Read 2016). A positive teaching approach that supports students (Harr and Moore 2011) in addition to educating students about BO and CF may normalize the need to seek supports that are necessary to regulate emotions and lessen the development of CF (McArthur et al. 2017).

Other triggers for psychological stress included bullying, harassment, and workplace violence. In a cross-sectional survey of fourth-year nursing students conducted by Babenko-Mould and Laschinger (2014), student exposure to incivility by staff nurses in the clinical practice environment contributed significantly to burnout and emotional exhaustion ( $r = 0.42$ ,  $p \leq 0.05$ ). In another cross-sectional survey conducted in Australia ( $n = 888$ ), nursing students who experienced bullying or harassment suffered negative feelings of anxiety, inadequacy, anger, embarrassment, humiliation, depression, and fear (Budden et al. 2017). In a study of nurses from Pakistan ( $n = 216$ ), patient perpetrated violence was significantly related to occupational stress ( $r = 0.61$ ,  $p < 0.01$ ), BO ( $r = 0.63$ ,  $p < 0.01$ ), and intent-to-leave the profession ( $r = 0.59$ ,  $p < 0.01$ ) (Laeque et al. 2018). Budden et al. (2017) pleaded that "educational institutions have a duty of care to protect students of the health professions from workplace violence during clinical placement" (p. 126). Mason (2018) argued that counseling supports can develop positive, optimistic attitudes to foster professional quality of life in effort to reduce psychological stress.

Findings from Budden et al.'s (2017) study suggest that nursing students' response to bullying and harassment in the clinical setting are similar in nature to symptoms of PTSD (American Psychiatric Association 2013) and Stamm's (2010) definitions of STS and BO within the ProQOL Scale. The theoretical congruence of these attributes suggests the value of the ProQOL Scale to explore bullying and

harassment in relation to CF. Issues of incivility and BO require more attention in undergraduate health studies programs to promote workplace empowerment, professional development, decrease BO, and prevent the erosion of self-efficacy in new graduates entering health care professions (Babenko-Mould and Laschinger 2014; Laschinger et al. 2010).

### Witnessing Negative Experiences of Others

McArthur et al. (2017) found a significant positive correlation of BO and STS ( $r = 0.64$ ,  $p < 0.001$ ) in veterinary students who witnessed negative experiences and personal distress ( $r = 0.34$ ,  $p < 0.001$ ). Duarte and Pinto-Gouveia (2017) found significant correlations in their cross-sectional survey of 298 nurses in Portugal regarding empathy and CF formation. Nurses' reports of empathic concern ( $r = 0.2$ ) and survival guilt ( $r = 0.38$ ) were significantly correlated with CF ( $p < 0.01$ ). More specifically, nurses who witnessed others suffering and attributed their suffering to be caused by the nurse led to CF. In addition, nurses who falsely believed they could relieve the suffering of another person, led to CF (Duarte and Pinto-Gouveia 2017).

Qualitative studies of student midwives and nurses revealed that witnessing negative experiences of others, including death, emotionally affected the undergraduate student participants. In the United Kingdom, Davies and Coldridge (2015) found that when a midwifery student identifies with the patient for whom they are providing care, the student is more vulnerable when traumatic situations arise. Within the study, the major theme labelled 'the aftermath' depicted student accounts of re-living the traumatic event, with rumination and worry that they should have done more (Davies and Coldridge 2015). In a similar qualitative study conducted among Australian student midwives, participants felt shock, inadequacy, helplessness, and questioned their career choice. For example, one student stated, "I didn't sign up for death, I signed up for life here" when reflecting on witnessing others' stress and trauma in the clinical environment (McKenna and Rolls 2011, p. 78). Terry and Carroll (2008) reported nursing students' feelings of guilt, having flashbacks of seeing a dead body, and not knowing how to portray a professional self when engaging with family members of the deceased patient. These findings align with Hooper et al. (2010) who stated that the cost of nurses witnessing others' struggles can result in intrusive images, flashbacks, sadness, depression, anxiety, and survivor guilt. As levels of CS reduced in nurses, BO increased (Hegney et al. 2014) and suggests that health studies pre-licensure students may also be at risk.

Nurses who encounter abused children, end-of-life situations, and severely ill patients may develop CF (Berger et al. 2015). In a systematic review conducted by Beck (2011), STS was reported in a variety of nursing groups that included

forensic nurses, emergency department nurses, oncology nurses, pediatric nurses, and hospice nurses, with no specific studies at that time that included psychiatric nurses. Beck (2011) found that most CF studies focus on BO rather than STS. There continues to be a need to understand witnessing the negative experiences of others in psychiatric care settings that includes licensed professionals and students.

### Depression

Few studies have examined occupational role stress within undergraduate students, coping strategies, and depression in a single study. In an Australian study of undergraduate students, multiple regression analysis showed that an avoidance coping style and younger age were associated with depression and distress (Paspaliaris and Hicks 2010). In a cross-sectional study of Australian RNs, Hegney et al. (2014) found that stress, anxiety, and depression were significantly correlated with CF measures: STS and stress ( $r = 0.63$ ,  $p < 0.01$ ); STS and anxiety ( $r = 0.56$ ,  $p < 0.01$ ); STS and depression ( $r = 0.48$ ,  $p < 0.01$ ); BO and stress ( $r = 0.55$ ,  $p < 0.01$ ), anxiety ( $r = 0.37$ ,  $p < 0.01$ ), depression ( $r = 0.052$ ,  $p < 0.01$ ). Furthermore, the authors found that younger and less experienced nurses had greater anxiety placing them at greater risk of developing CF (Hegney et al. 2014). These findings provide additional evidence in the claim that students (i.e., younger individuals) may be at higher risk for mental health issues when confronted by work-related stress.

Knight (2010) studied CF in social work students and instructors and found that students had a greater risk of STS than their instructor counterparts ( $t(90) = -3.247$ ,  $p \leq 0.002$ ). This was attributed to students being younger and less experienced in coping with stressors than their instructors. In a meta-analysis of age and BO, researchers found a significant inverse relationship between age and emotional exhaustion as a component of BO; however, the magnitude of the relationship was very small ( $r = -0.46$ ,  $p < 0.05$ ) and was mediated by other variables that included gender, marital status, professional experience, sense of personal accomplishment, and whether or not the survey was conducted in English (Gómez-Urquiza et al. 2017). This research suggests that younger individuals may rate more highly on depression and CF due to lower levels of maturity, less life experience, and difficulty navigating strenuous life circumstances as a student (Harr et al. 2014).

In context of nursing students, Budden et al.'s (2017) analysis which linked bullying to depression is of great concern in light of a statistically significant inverse relationship between younger aged participants and the likelihood of being bullied or harassed ( $r = -0.06$ ,  $p = 0.05$ ). According to Giorgi et al. (2016), workplace bullying in health care environments is a common issue in Italy and is considered to be part of the job. In their study of nurses ( $n = 658$ ), those who were bullied reported higher burnout levels with poor physical ( $r = 0.47$ ,



$p < 0.01$  [2-tailed]) and poor mental health ( $r = 0.38$ ,  $p < 0.01$  [2-tailed]) (Giorgi et al. 2016). Interventions that support adaptive coping skills among undergraduate students includes access to counselling to improve mental health when confronted by occupational stressors (Hegney et al. 2014; Paspaliaris and Hicks 2010). What remains unclear is whether-or-not depression is an attribute of CF or if depressive mood occurs as a consequence of CF related to BO and feelings of exhaustion (Bianchi et al. 2015).

## Consequences

Consequences are a result of the concept occurring (Walker and Avant 2011). Of serious concern within the literature regarding STS and BO is that students who experience decreased well-being, may withdraw from their program of study or leave the profession altogether following entry-to-practice when elements of CF were experienced.

## Decreased Well-Being

The first consequence of CF noted in the literature is decreased psychological well-being and poor mental health. In a longitudinal study of Spanish nursing students ( $n = 218$  at time 1, and  $n = 113$  at time 2), emotional exhaustion, which is a component of BO, was significantly associated with decreased well-being ( $r = 0.40$ ,  $p < 0.001$ ) (Ríos-Risquez et al. 2018). The authors recommended implementing strategies that focus on improving well-being among university nursing students as a mechanism to improve emotional regulation skills (Ríos-Risquez et al. 2018).

In a study of midwifery students from the United Kingdom, Beaumont et al. (2016) reported a statistically significant inverse relationship between self-compassion and BO ( $r = -0.312$ ,  $p < 0.01$ ). Furthermore, students with high levels of self-judgement were less compassionate toward others ( $r = -0.216$ ,  $p < 0.05$ ) (Beaumont et al. 2016). Lower scores on measures of self-kindness ( $r = -0.570$ ,  $p < 0.01$ ) and reduced well-being ( $r = -0.373$ ,  $p < 0.01$ ) were also positively associated with BO ( $r = 0.283$ ,  $p < 0.01$ ) (Beaumont et al. 2016).

Depleted well-being could lead to a variety of other longer-term individual health issues such as depression and anxiety within students (McArthur et al. 2017). Tully (2004) reported other problem behaviours such as poor coping strategies, comfort eating, drinking, smoking or taking medications, taking out problems on others and/or trying to forget the source of distress in an Irish study of psychiatric nursing students. Tully's (2004) study was the only source found in the literature regarding the student psychiatric nurse population, however, the number of participants ( $n = 35$ ) in the study was very small and therefore has limited generalizability.

A recent study of substance use in Jordanian nurses ( $n = 282$ ) revealed that CF was significantly higher in those who

used substances that included tobacco, sleeping pills, anti-depressants, and anti-anxiety medications (Jarrad et al. 2018). Within the study, variables associated with alcohol use and CF did not reach statistical significance, and marijuana usage was not included in the study. Surprisingly, ethical considerations within the study were not discussed, nor was religion given that those of Muslim faith generally do not consume alcohol which may explain non-significance of the findings related to alcohol use. Using Watson's *Theory of Human Caring* (Watson 1997), Lombardo and Eyre (2011) advocated that nurses be taught skills in self-assessment to gain insight into stressors that contribute to CF in effort to generate a recovery plan. This is consistent with Beaumont et al.'s (2016) argument that students need to develop compassion-for-self and self-care strategies to sustain CS to off-set self-inflicted suffering and exhaustion.

## Program Withdrawal and Intention-to-Leave

The consequences of students who experience CF include withdrawing from their educational program (Hunt et al. 2012) or electing to leave their profession following graduation (Chachula et al. 2015; Lin and Lin 2016; Rudman et al. 2014). In particular, Budden et al. (2017) found the experience of bullying or harassment led 12.9% of nursing students to consider leaving nursing. A study of university students ( $n = 2,468$ ) conducted in Australia revealed burnout was strongly associated with students' intent-to-withdraw from their program ( $r = 0.59$ ,  $p < 0.001$ ), while only one-third of the students surveyed reported effort-reward imbalances (Williams et al. 2018). Of note, approximately 25% of the study sample was comprised of students from medicine/nursing/dentistry, education, and the biological/veterinary disciplines.

Upon completion of the undergraduate program and entry into the workforce, graduates may choose to leave their profession. In a longitudinal study of Swedish nursing students ( $n = 1702$ ) Rudman and Gustavsson (2012) found that students who reported exhaustion related to academic and clinical courses had poor health outcomes upon entry into the workforce and had intentions-to-leave the profession. The authors also reported that students experienced increasing levels of disengagement and exhaustion as they progressed through the curriculum: 29.7% in the first year, 36.9% in the second year, and 41% in the final third year (Rudman and Gustavsson 2012). The authors recommended preventative measures that enhance the ability of students and new graduates to cope with stressful situations (Rudman and Gustavsson 2012). These findings imply the need to understand these phenomena within additional health studies student populations to determine who may be at high risk of developing CF and their intention-to-withdraw from their program.

A conceptual synthesis map that summarized the findings is presented in Fig. 3. The map visually highlights

antecedents, defining attributes, and consequences of compassion fatigue in an undergraduate, pre-licensure student population.

## Discussion

Exploration of the CF literature revealed that more knowledge is needed to better understand this phenomenon in nursing and psychiatric nursing students. Findings from Coetzee and Klopper's (2010) concept analysis of CF in nurses revealed many similar empirical referents that included the desire-to-quit, diminished performance, and feeling emotionally overwhelmed. Peters' (2018) analysis of CF in nursing also yielded similar attributes such as exhaustion, helplessness, and hopelessness that align with depression, and consequences that included desire to quit the profession, providing poor quality care, and increased work errors. Arguments presented by Coetzee and Klopper (2010), Peters (2018), and Bianchi et al. (2015) assert that descriptions of CF include depressed mood and depression which is captured in the proposed concept map regarding health studies pre-licensure students.

Nurses are known colloquially to 'eat their young'. Findings related to the number of nursing students who experienced bullying from staff nurses, clinical instructors, student peers, as well as patients and families, with the result that these learners were significantly more likely to leave the nursing program (Clarke et al. 2012; Hunt et al. 2012) and the nursing profession (Budden et al. 2017; Chachula et al. 2015; Laschinger et al. 2012;) are most troubling given the preventability of this phenomenon. These findings highlight the existence of a perpetual cycle of students and nurses working in stressful occupational settings where being threatened with physical harm and verbal abuse, oppression, social hierarchies, and power dynamics (Budden et al. 2017; Clark and

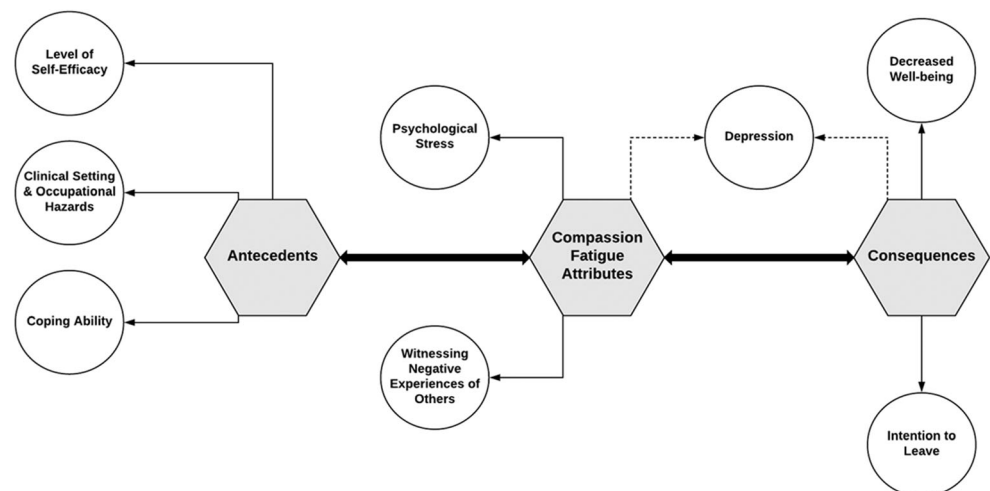
Springer 2010; Clarke et al. 2012; Laschinger et al. 2010) that jeopardize their mental health, psychological, and physical well-being. This finding highlights the need for more research across different health disciplines to determine if this a phenomenon unique to the nursing profession.

Despite the opportunity the ProQOL Scale offers researchers to understand CS and CF, the tool is not without criticism. In one study of nurses practicing in Australia, researchers portended that the ProQOL Scale should be comprised of 21-items due to mixed findings in an analysis of the scale (Heritage et al. 2018). While the ProQOL tool met Cronbach alpha validity criteria in the study (BO  $\alpha = .80$ , STS  $\alpha = .84$ , and CS  $\alpha = .90$ ) using classical test theory, mediocre results were found for the BO and STS subscales using Rasch modelling that led to re-development of the scale using 21-items (Heritage et al. 2018). No published studies were found that used the 21-item revised scale, nor has the 21-item scale ever been used in an undergraduate student population. Therefore, adopting the revised scale in a study would require an extra layer of caution and interpretation when comparing findings to the published literature. Sinclair et al. (2017) argued that the ProQOL tool lacked validity, however, their analysis excluded review of articles that referred to STS and BO which are the key constructs that comprise CF.

## Limitations

This study focussed on undergraduate, pre-licensure health studies students from a variety of health-related disciplines in different countries. The characteristics of undergraduate students captured in this review were diverse including those from a variety of age groups, ethnic, and socio-economic backgrounds. Findings from studies that explored graduate student experiences and medical residencies were excluded given that these programs are not regarded as baccalaureate entry-level curricula. The exclusion criteria limited eligibility

**Fig. 3** Conceptual Synthesis Map of Compassion Fatigue



to studies that were peer-reviewed and published in English which excluded all other languages. Despite careful and thoughtful analysis, every attempt was made to generate mutually exclusive, distinguished cases associated with the concept of CF within the ProQOL Scale (Stamm 2010) from antecedents, consequences, and defining attributes. However, untangling these concepts from each other despite analyzing empirical referents may result in some overlap between and within BO and STS that comprise CF measured in the ProQOL Scale (Stamm 2010). “Concepts are not carved in stone....and may also change over time” (Walker and Avant 2011, p. 158). The more research that is published regarding student experiences of CF in health settings will offer greater understanding of the antecedents, attributes, and consequences within pre-licensure health studies students.

### Areas of Future Research

The inclusion of psychiatric nursing students in a study that explores CF is warranted given the risk of STS noted in psychiatric care settings (Berger et al. 2015; Jacobowitz et al. 2015; Jarrad et al. 2018). There is a need to better understand how different factors may play a role in development of CF within psychiatric nursing and nursing student populations prior to their entry into the workforce. Tools that assess levels of undergraduate student BO and STS may assist faculty teaching in pre-licensure programs in developing avenues for improving the student learning experience, reduce student withdrawal from their education program, and/or intention-to-leave the profession following graduation. This includes a need for educators to teach positive student self-care practices within curricula that promote flourishing in both the nursing and psychiatric nursing professions.

### Conclusion

A review of the literature revealed that CF within pre-licensure health studies student populations is not commonly studied. The literature seldom reported studies with a focus on undergraduate psychiatric nursing students. Conducting a study which incorporates student intent-to-withdraw from their program of study should be considered given assertions in the published literature that has linked CF with this phenomenon. The ProQOL Scale may help to identify students who are at risk of CF. By identifying at-risk pre-licensure health students, educators can utilize findings to inform undergraduate curricular planning in preparation for entry into the workforce.

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### Compliance with Ethical Standards

**Conflict of Interest** The author declares no conflict of interest.

**Ethical Approval** The exploration of the literature did not involve human subjects, therefore, ethical approval for research involving humans was waived.

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