Compassion satisfaction and compassion fatigue in Australian emergency nurses: A descriptive cross-sectional study

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A R T I C L E   I N F O

A B S T R A C T

Introduction: Emergency nurses are at risk of compassion fatigue. Compassion fatigue caused by exposure to suffering may compromise the individual's personal wellbeing and reduce work efficiency.
Methods: A quantitative cross-sectional survey with open responses was conducted using the Professional Quality of Life: Compassion Satisfaction and Compassion Fatigue (ProQOL) scale and open-ended questions. Responses from a convenience sample of 86 nurses from two hospital emergency departments in Victoria, Australia, were analysed.
Results: The median score for Compassion Satisfaction was 78% with all nurses reporting average to high scores. Most had average levels of Compassion Fatigue: Burnout median score was 53% and Secondary Traumatic Stress median score 49%. No statistically significant correlation was found between scales nor with influencing demographic characteristics. A qualification in emergency nursing was predictive of Compassion Satisfaction. Six descriptive job-associated factors contributed to nurses' stress: human resources, the organisation, job-specific components, patient mix and professional and personal components.
Conclusion/s: Average to high levels of Compassion Satisfaction and low to average levels of Compassion Fatigue were found in emergency nurses. Issues contributing to stress were work and role related. An understanding of these stressors may help nurses and nurse managers to ameliorate emergency nurses' levels of stress and help limit staff burnout.

1. Introduction

Nurses are known to be at risk of compassion fatigue owing to the stresses of caring for patients who are in significant emotional pain and physical distress [1,2]. This study explores the level of compassion felt by Australian emergency nurses. It is recognised that the degree of compassion in nurses working in speciality practice can affect the quality of patient care, organisational capacity, staff retention and nurses' general wellbeing [3]. While the study setting is in Australia it is likely that compassion fatigue and stress is something that emergency nurses worldwide experience, therefore the design and findings of the study may be useful internationally.

Emergency nurses are working at the front line between the community and the hospital setting [4]. They often need to deal with complex patient loads, long shifts, demanding physicians and a fast-paced environment. Nurses are routinely exposed to the acute and first stages of illness and injury and are paramount in the critical work of resuscitating patients. Emergency nursing work is described as being emotionally and physically challenging [5,6]. Among numerous studies of nurses' caring and compassion, the majority have explored compassion fatigue and stress as an important antecedent to lack of retention of nurses [7–9].

As in other countries, with the aging of the Australian population, emergency patient presentations are increasing in complexity and demand within emergency departments is growing [10]. Studies show that emergency nurses are under increasing time pressures both internationally [11–13] and in Australia [14]. They face greater physical demands, greater patient expectations and have lower decision authority and less adequate work procedures than those nurses working in other departments. Emergency nurses are increasingly exposed to aggressive behaviour and patient violence [15]. The results of an Australian study reveal that younger age nurses and those without postgraduate qualifications may be more likely to experience stress, for 20% of 132 nurses surveyed in a tertiary hospital had elevated levels of

Table 1
Descriptors for key terms.

Key Term	Description
Compassion Satisfaction (CS)	The positive feelings derived from helping others through traumatic situations.
Compassion Fatigue (CF)	A combination of physical, emotional, and spiritual depletion associated with caring for patients in significant emotional pain and physical distress. According to Stamm [17] this comprises two compassion fatigue elements: Burnout and Secondary Traumatic Stress.
Burnout (BO)	A cumulative state of frustration with a person's work environment that develops over a long time.
Secondary Traumatic Stress STS)	Stress related to negative feelings resulting from fear and work-related trauma.

Source: Stamm [17]; Figley [1].

compassion fatigue [16].

Professional quality of life is described as having both positive elements (compassion satisfaction) and negative elements (compassion fatigue) [17]. The key terms that are used throughout this paper are described in Table 1.

According to Stamm [17], maintaining a balance between these positive and negative aspects of caring can help sustain employees' morale in their workplace. Many studies have used the Professional Quality of Life: Compassion Satisfaction and Compassion Fatigue (ProQOL) measure to examine compassion [17]. This instrument was developed by Figley and Stamm from 1995 with a sample of 463 people. Compassion Satisfaction items were derived from the positive and altruistic aspects that people take from their work and Compassion Fatigue comprised the negative aspects. Compassion Satisfaction and Compassion Fatigue are conceptual opposites and are not co-related. Compassion Fatigue comprises two independent subscales: Burnout and Secondary Traumatic Stress. The validity and reliability of the scales was previously established, including through publication of over 200 papers and instrument reliability data [17]. In regard to compassion, the pressures and contextual surroundings of emergency work may place emergency nurses at risk of having more compassion fatigue than compassion satisfaction [11,12,18,19]. It is therefore important that the positive emotional aspects such as compassion satisfaction be encouraged while compassion fatigue should be recognised and addressed. Despite worldwide studies related to nurses' levels of compassion satisfaction and compassion fatigue, there is very little information about these levels within emergency nurses. Studies regarding this in emergency nurses have mainly been undertaken in the USA.

Given that little is known about the compassion status of emergency nurses internationally and nationally, and that much other evidence is dated, this study aimed to conduct a cross-sectional survey to examine the current situation in two Australian emergency departments.

2. Methods

The design is a cross-sectional observational descriptive study incorporating quantitative data (Fig. 1) and descriptive participant responses. The research questions to be answered are: (a) What is the prevalence of Compassion Satisfaction (CS) and Compassion Fatigue (CF) in Emergency Nurses?; (b) What demographic factors correlate with Compassion Satisfaction and the Compassion Fatigue subscales: Burnout (BO) and Secondary Traumatic Stress (STS), and (c) What themes emerge when emergency nurses are asked open-ended questions regarding satisfying or exhausting/draining components of emergency work?. The study reporting aligns with the STROBE checklist for reporting observational studies [20].

3. Sample and setting

Emergency nurses were sampled from the emergency departments in two major metropolitan acute care hospitals in Melbourne, Australia. Together, these departments have 110 beds and manage approximately 220,000 emergency presentations per year to service 17% of the state's population [21].

All permanently employed registered nurses and enrolled nurses working in one of the two emergency departments were invited to participate in the study (approximately 235 staff). Study information and an invitation to participate was distributed by nurse unit managers, inviting completion of an online questionnaire. The survey was open for six weeks in 2015 and two reminder messages were sent.

4. Instrumentation

The online questionnaire comprised three components: a demographic survey, the Professional Quality of Life (ProQOL v5) scale [17] and two open-ended questions. The demographic online survey asked about participants' age, gender, qualifications, nursing experience, race, ethnicity, current job status, and role.

The ProQOL 5 instrument is a 30-item self-report measure, anchored by a five-point Likert scale [17]. This was chosen because of its ability to measure compassion satisfaction and compassion fatigue as individual concepts to describe the positive and negative effects on nurses of experiencing secondary trauma through seeing the suffering of
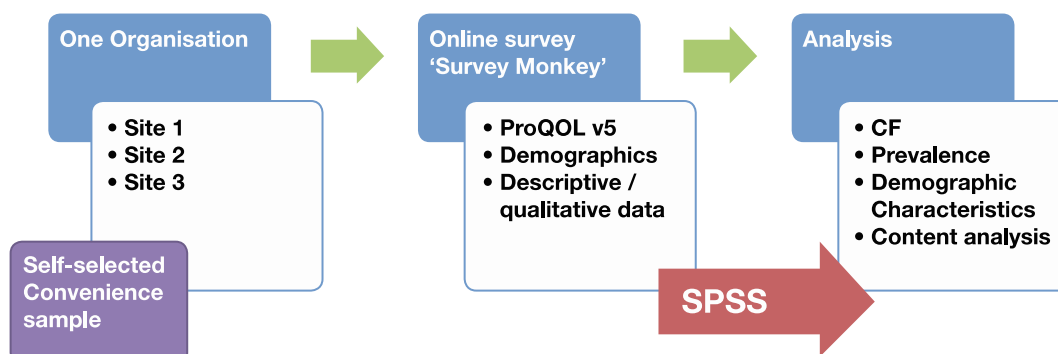
METHODOLOGY

Fig. 1. Methodology of study.

patients. Participant perceptions are relative to nurses' experiences in the last 30 days.

This validated instrument has been widely used to self-report compassion [17], including in nurses [6,8,11,22,23]. As mentioned earlier, the instrument comprises three subscales (CS, BO and STS), with the psychometric properties such as internal validity having been variously reported in many studies. Stamm [17] reports the reliability of the three scales ranges from α 0.84 to 0.90 and that correlations between scales showed only 2% shared variance (r = −0.14; co-σ = 2%; N = 1187) with CF and 5% shared variance with BO (r = −0.23; co-σ = 5%; N = 1187), thus, indicating that the scales are separate entities.

Each subscale has 10 question items based on a five-point response scale of 1 (never) to 5 (very often) [17]. The current study outcomes were achieved by totalling the ProQOL 5 scores for each subscale and ranking total scores according to Stamm's levels of evidence. For CS: a score of ≤ 22 denotes low levels of CS; 23–41 indicates average levels, and ≥ 42 indicates high levels. For CF-BO: a score of ≤ 22 indicates low levels, 23–41 indicates average levels, and ≥ 42 reveals high levels of CF. For CF- STS: the same ranking applies.

The instrument's reliability in the current study was satisfactory, as indicated by Cronbach's alpha 0.86 for Compassion Satisfaction (CS), 0.80 for Burnout (BO) and 0.72 for Secondary Traumatic Stress (STS). Cronbach's alpha shows the internal consistency, a form of reliability. It shows correlations between items of the same attribute [24].

Additionally, two open-ended questions were posed in the online survey: (i) What do you find rewarding/successful at work? (ii) What do you find draining/exhausting at work? The survey and additional questions were administered electronically, using SurveyMonkey (surveymonkey.com).

5. Data analysis

Questionnaire data were downloaded and analysed using the software IBM-SPSS version 23.0 [25]. The results were collated and analysed according to the ProQOL 5 instructional manual [17]. It was noted that each of the three scales comprising 10 items is scored out of a maximum of 50 points. The negatively posed response items 1, 4, 15, 17, and 29 were reverse-coded as required. Demographic characteristics were analysed descriptively to explore summary data (total number, mean, median and range), as were the three ProQOL scales. Correlations between ProQOL scale's total scores and demographic characteristics were assessed with use of Pearson's Product Moment Correlation co-efficient applied to the interval and dichotomous variables; t-tests and ANOVA were conducted where relevant. A p-value of < 0.05 was considered statistically significant for all tests.

A hierarchical multiple regression analysis was conducted to test for variables that may predict Compassion Satisfaction. After confirming data suitability, first the independent variable 'department' (comprising A and B) was added in order to statistically control for any difference in responses of staff between departments. Second, seven other independent variables (listed in Table 3) were transformed into suitable dichotomous or interquartile formats and were added to the equation to be tested. The analysis conducted was guided by the method of Pallant [26].

Open ended questions were categorised using descriptive content analysis. Three researchers independently coded the questions and results were combined and agreed collaboratively.

6. Ethics approval

The project was approved by the Human Research Ethics Committee, (approval no. 14348L) *(blanked for anonymous review)* and the Human Research Ethics Committee, (approval no. 14/3957).

Implied consent was obtained by completion of the survey. Emotive issues raised on distribution and completion of the survey were pre-empted. Details for national helplines and emotional support were provided in the survey.

7. Results

Response data from n = 86 emergency nurses were analysed (three were incomplete and were removed). The response rate was approximately 38%.

7.1. Demographics

Most participants were female (91%; n = 78) and 7% (n = 6) were male and 2% (n = 2) participants did not report gender. Their ages ranged between 18 and 61 years. Half (56%) were aged less than 30 years, 26% were aged 31–40 and 16% were aged > 41 years. Most nurses (81%) were born in Australia and 76% reported Australian ethnicity (and 18% Asian or European). Their average years of nursing experience was 10.2 (SD: 9.14), ranging from one to 48 years. The average length of Emergency Department experience was 7.0 (SD = 7.4) years with a range spanning one year to 41 years. For 24%, employment involved full-time work and 76% worked part-time. Most nurses (77%; n = 66) had completed specialist training in emergency nursing (such as a certificate or diploma) in addition to their nursing entry-level qualification.

7.1.1. Compassion

Compassion Satisfaction scores were all average to high. As presented in Table 2, of a possible total score of 50 points, 73.3% had an average score, 26.7% a high score and none had a low score.

Compassion Fatigue is measured by two independent subscales: Burnout and Secondary Traumatic Stress. Results revealed low levels of Burnout for 22.3%; average levels for most participants (76.7%) and none recorded high levels. These low to average scores proved similar to those for stress. Scores for Secondary Traumatic Stress showed almost one-third (31.4%) reported low levels, two-thirds (68.6%) had average levels and none had a high level.

7.2. Associations between variables

Pearson's correlation and *t* tests were used to identify relationships between demographic variables and Compassion Satisfaction, Burnout and Secondary Traumatic Stress. There was a non-significant correlation between the three scales, confirming the instrument's internal validity claim of independence. Although there were some differences between compassion scale responses and nurses' demographic

Table 2

Interpreted Compassion Satisfaction and Compassion Fatigue scores.

Domain and Element		Low score n (%)	Average score n (%)	High score n (%)
Compassion Satisfaction (M = 38.3 (SD 5.0); Md 39, range 23–47)		0 (0.0)	63 (73.3)	23 (26.7)
Compassion Fatigue	Burnout (M = 26.6 (SD 5.4); Md 26.5, range 16–40).	20 (23.3)	66 (76.7))	0 (0.0)
	Secondary Traumatic Stress (M = 24.6 (SD 4.5); Md 24.5, range 12–37).	27 (31.4)	59 (68.6)	0 (0.0)

Legend: M = mean; Md = median, SD = standard deviation. Total possible score is 50 points for each scale and subscale; the quality range for the transformed scores according Stamm 2010 (p 28–30) [17] is low score = ≤ 22; average score is 23–41; high score is > 42.

Table 3
Predictors of Compassion Satisfaction.

Model		Standardized Coefficients	t	Sig.
		Beta		
1	Emergency Department A or B	0.939	24.296	0.000
2	Emergency Department A or B	0.175	3.199	0.002
	Specialist training in Emergency Nursing Yes/No	0.269	3.320	0.001
	Religious belief Yes/No	0.198	3.488	0.001
	Ethnicity – Aust or NZ//Caucasian, or Asian	0.152	2.596	0.011
	NO IMPACT:			
	Employment status Fulltime/Part-time	0.174	1.881	0.064
	Age: 18–30/31–40/ > 41 years	−0.011	−0.226	0.822
	Nurse with postgrad Cert/Dip/Degree Yes/No	0.033	0.472	0.638
	Years in nursing: quartiles 4/7/12	0.032	0.456	0.650

variables, none of these reached a level of significance. The only trends noted were in CS which appeared higher in the smaller department B and STS appeared lower; plus increasing CS in nurses as they aged: 31–40 year-olds had a score of 37.1 and those ≥41 years scored 39.2. There was no significant correlation of any of the three scales with an individual demographic variable (p = > 0.05), suggesting that this study may not be sufficiently powered to identify differences.

Hierarchical multiple regression was used to further explore relationships between the variables that may predict nurses' coping evidenced by Compassion Satisfaction. After controlling for the department setting (department A or B), regression revealed a significant model and a relationship between emergency nursing education and Compassion Satisfaction. The main independent contributor to the model was participants' ED-specific nursing education (beta 0.269, t = 3.320, p = 0.001). As seen in Table 3, two additional measures (religiosity and ethnicity) accounted for a small part of the variance. The Compassion Satisfaction model, as a whole, could significantly predict 97.3% of the variance in compassion satisfaction (R^2 = 0.973, F = (4,76) = 63.862, p = 0.000).

7.3. Descriptive findings

Content analysis of nurses' open-text responses revealed further impacts of the work environment. Eighteen participants designated the most common rewarding and satisfying issue at work in emergency as 'job satisfaction'. Seventeen thought that 'helping vulnerable people' was rewarding. These caring elements of nursing are likely to influence compassion satisfaction. Positive professional components such as 'making a difference', 'job tasks' and 'collegial interactions' were also common responses that were posited as rewarding (Fig. 2).

The 'draining and exhausting' components comprised 'care delivery', 'human resource management', 'emergency patient type', 'patient and family social components', and 'professional and personal components' (Fig. 3). The lead extenuating factor suggested as relating to compassion fatigue was 'workload'. This could be quantified as the most influential factor, with over one-third of the nurses (37%; n = 33) identifying this as the key cause of exhaustion. This was followed by 'emergency patient volume' (n = 20, 22.4%) and 'abusive patients' (n = 14, 15.7%) as contributors to exhaustion. Further exploration of the work environment components seen as rewarding or exhausting is presented in Figs. 2 and 3.

8. Discussion

Nurses working in the surveyed emergency departments were found to have average and high levels of compassion satisfaction and average

to low levels of compassion fatigue. An average compassion satisfaction was revealed by 73% and a high level by 24%. Burnout was low to average in this cohort (BO: 23.3%, 76.7% respectively); none had high levels. Similarly, Secondary Traumatic Stress was limited to low and average scores (STS: 31.4%; 68.6%). This reflects a good balance of the positive factor CS with the negative factor CF, which is required to maintain nurses' resilience and prevent compassion fatigue [9]. As expected, there was no correlation between the positive element CS and the negative element CF, suggesting the instrument ProQOL 5, had correctly captured the figure. Although there was no Australian study identified to enable a direct comparison, our findings concur with much of the literature from the USA. Similar to our study, Flarity et al. [9] used the ProQol 5 in investigating the effectiveness of an educational program on compassion fatigue for n = 59 emergency nurses in Colorado, USA. They reported median scale values were average to high for CS (Md = 42), low to average for BO (Md = 23), and low to average for STS (Md 24), which reflect our findings. They noted significant positive changes in compassion after a 4-hr educational intervention for emergency nurses.

Hunsaker et al. [6] who surveyed 284 emergency nurses across USA using the ProQOL also reported average to high levels of compassion satisfaction and low to average levels of compassion fatigue and burnout. In their study, 56.8% of the emergency nurses had an average level of CS, 65.9% were in the low level of CF, and 54.1% were in the average level of burnout. Furthermore, similar to our study, older emergency nurses had significantly higher CS than younger nurses. They also showed that younger nurses reported higher CF (STS and BO).

A study of n = 221 critical care nurses surveyed in a large USA medical centre showed that all three ProQOL subscale scores were within the average range [23]. However, group and individual findings in the CS and CF measures differed significantly. Differences were found in CS by sex, age, acuity level and management change. Notably and in contrast to our findings, nurses 40–49 years old had significantly *lower* CS (p = 0.03) than did nurses in other age groups. Differences were found in CF by age, acuity and management change.

All three of these studies conducted within the last five years indicate that nurses in these specialty areas have recorded average-high compassion satisfaction and are not commonly exposed to high levels of compassion fatigue (measured as burnout and secondary traumatic stress) that may result from their experiences of seeing the pain and suffering of patients. In all these studies, there was some evidence that younger and less experienced nurses were at greater risk for stress while older and more experienced nurses were better adjusted with higher satisfaction. In line with the logical explanation, a recently published meta-analysis included data from 21 studies together with other recent research evidence suggested that education and training may have a moderating effect on compassion fatigue and burnout [27–30]. A study by Von Rueden [31] also found that secondary traumatic stress was more prevalent in younger nurses [31]. The literature, however, can be conflicted as some earlier dated studies have noted high levels of burnout and stress. Hooper et al. [11] who surveyed 49 emergency nurses and 65 nurses in other selected departments in South Carolina USA in 2008, reported that 82% of emergency nurses had moderate to high levels of burnout, and around 86% had moderate to high levels of compassion fatigue. Physical symptoms and emotional symptoms are among recognisable trigger factors [32].

Past studies have explored a lack of job satisfaction and presence of burnout as key antecedents of nurse turnover [11,16]. It may be that our present results indicate that emergency nurses are adequately educated and well supported by managers and effective organisational processes; to enable functioning despite the trauma and suffering they see in their environment. Notably, our study participants were well educated with 77% reporting completion of a specialty emergency nursing qualification in addition to entry level nursing requirements. Specialty education may impact emotional preparedness for emergency nursing, as may the length of emergency nursing experience.
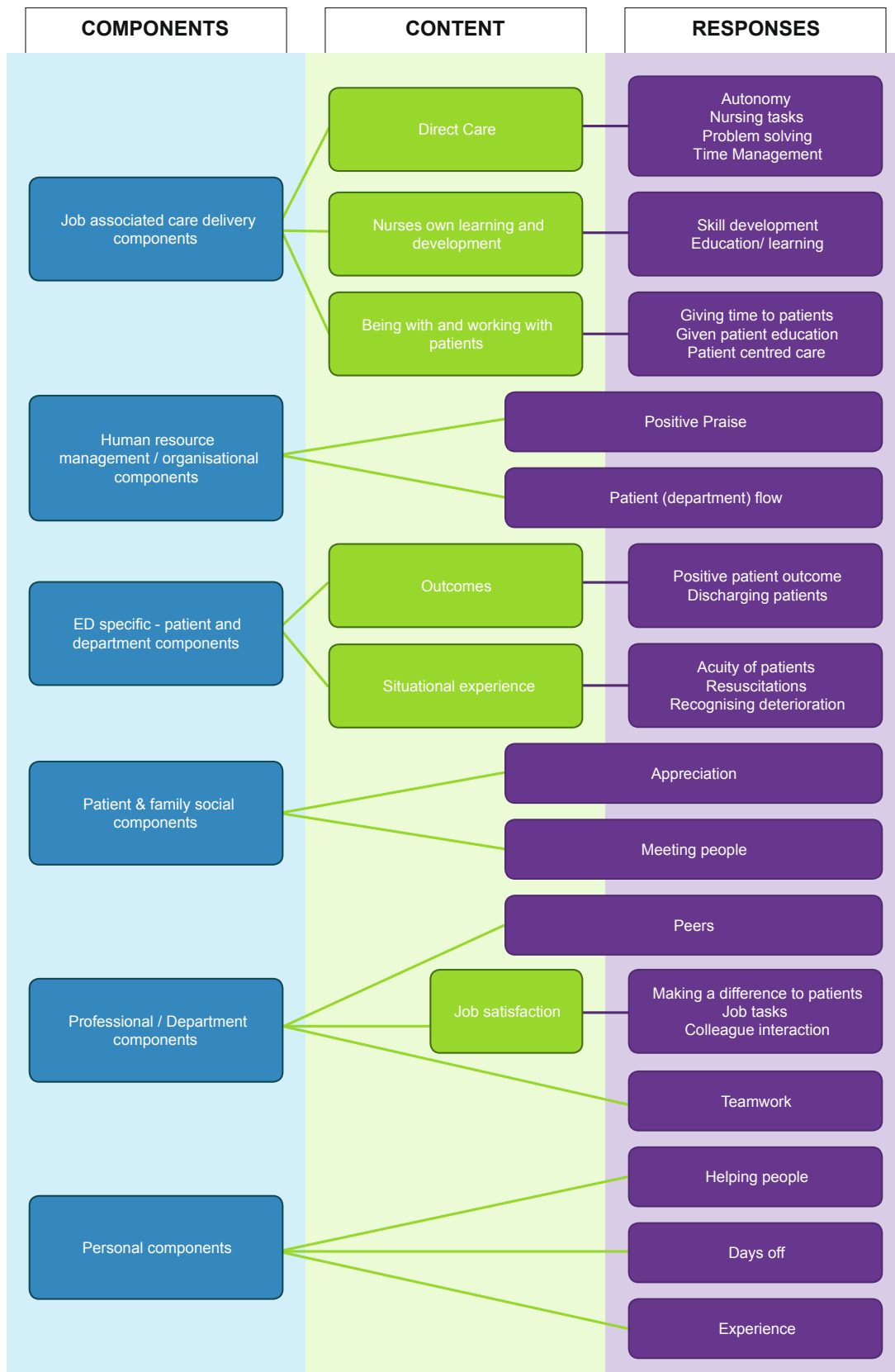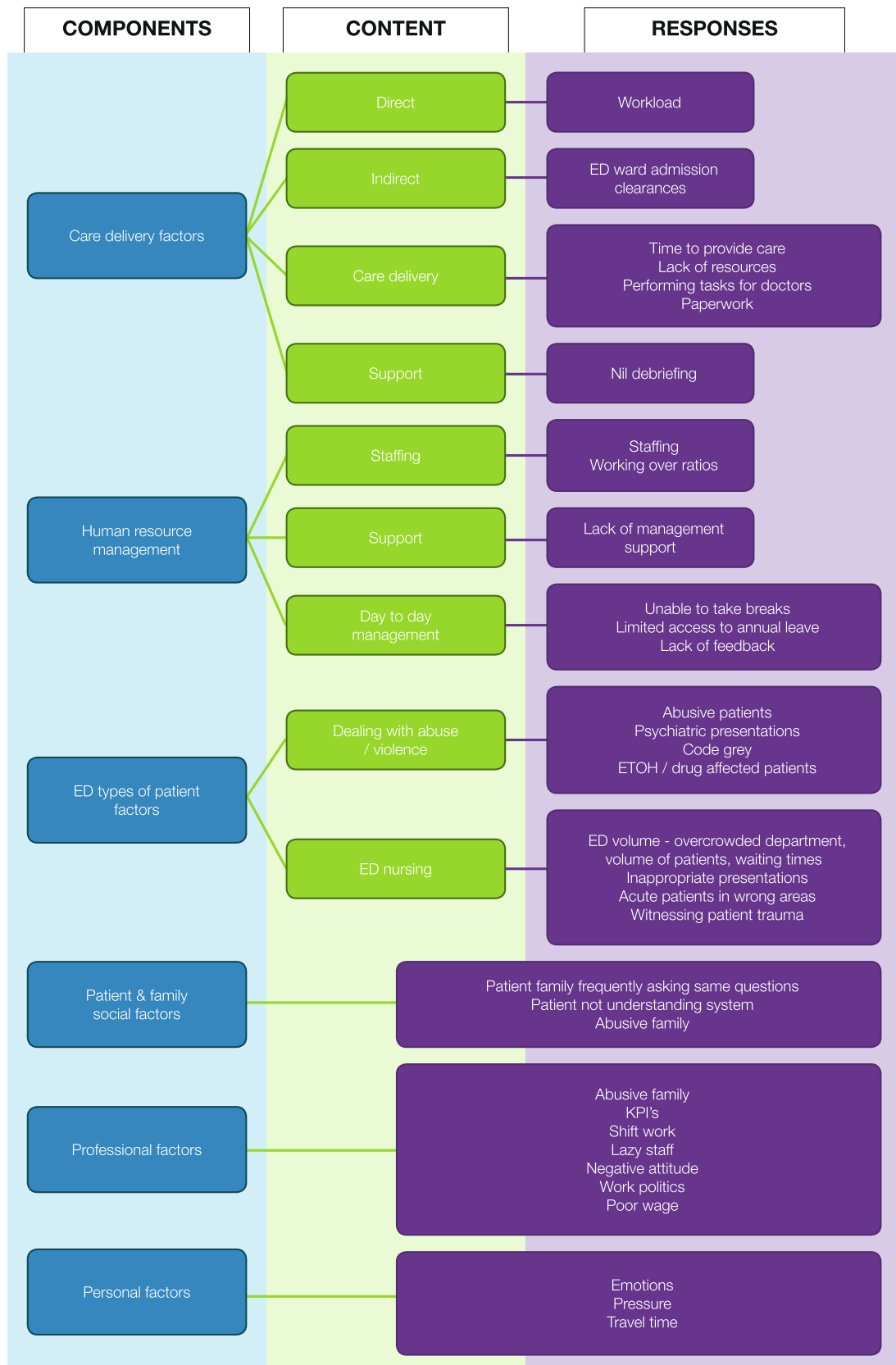
Fig. 2. Rewarding issues at work.

Nursing is often regarded as synonymous with compassion and caring qualities. The Unabridged Random House Dictionary defines compassion as "a strong desire to alleviate the pain or remove its cause" [33]. This is often a motivation for people to study nursing. Compassion satisfaction is recorded as the positive aspects of caring that balance out the negative aspects of exposure to human illness and suffering [34]. Burnout, the alternative emotional state, encompasses emotional exhaustion, depersonalization and negative attitudes to patient suffering, with lessened feelings towards achievements [35]. It may be that in studies whose results oppose ours, where nurses' burnout is high, compassion satisfaction is low. The consequence is that because emotional distress affects job retention, staff numbers may be impacted with one study finding that 23% of nurses who were stressed planned to leave their job within one year [36]. It is difficult to measure compassion fatigue without also knowing that an individual's work provides compassion satisfaction. In this regard, the current study provides valuable insights.

Finally, we refer to the 'Discovery' components of the workplace environment that were posited as new findings that have not been previously explored in research. These are:

- job associated care delivery
- human resource management
- emergency specific patients
- patient and family social factors
- professional factors
- personal factors

These components reflect both rewarding and exhausting work experiences. These need to be considered in the context of emergency nursing. There is a need to further explore factors that assist emergency nurses in their role and also those that form a barrier to compassion, such as time pressures, emergency volume and abusive patients. Health organisations should focus on creating systems that will enhance staff wellbeing and reduce the occurrence of BO and SCC in the healthcare workforce. These could be through providing staff general well-being training such as resilience training. By maintaining nurses' physical and mental health, it will enhance their performance and optimise the quality of clinical care.

Managers play an important role in supporting emergency nurses, for a change in manager/management was found to be one of the threats to nurses' compassion satisfaction [23]. Previous studies in this regard described four influencing components: environmental, organisational, professional and personal components. In Australia, Drury et al. [37] found that a nurse's capacity to cope can be enhanced through strong social, collegial support and infrastructure that supports the provision of quality nursing care and positive affirmation. From a survey of n = 491 direct care nurses in USA, Kelly et al. [38] suggest that meaningful recognition may increase compassion satisfaction, positively impact retention, and elevate job satisfaction.

9. Limitations

Several limitations of the study design are acknowledged. A convenience sample in the invited population may not represent all emergency nurses and therefore results should be interpreted with caution. It is possible that the respondents self-selected to participate because they were nurses who have manageable burnout and low stress levels. These respondents may have other intrinsic physical or mental strength to better manage their stress level compared to those non-respondents. Owing to the small sample, the design may have been underpowered to detect response differences. Self-report surveys are prone to bias and more objective evidence may be provided by other indicators such as frequency of sick leave and job turnover figures. These may have provided a different perspective on the prevalence of compassion fatigue.

10. Conclusion

Although the body of research on compassion and compassion fatigue as an individual concept continues to grow, this study highlights the paucity of studies outside of the USA that examine this within emergency nurses. This Australian based study assists extension of this knowledge internationally. There is a need for further studies to be conducted internationally to obtain more information about this phenomenon within emergency nurses. Results revealed a balance in professional quality of life in regard to the positive factor Compassion Satisfaction and the negative factor Compassion Fatigue (BO and STS). A balance in these emotional factors may help to sustain employees in their work. In addition, Emergency specific nursing education may be influential in raising levels of Compassion Satisfaction and further exploration of this avenue is necessary. Senior nurses may be a pivotal factor in assisting newer, more vulnerable nurses to improve their professional quality of life. Thus, organisations, managers and individual nurses need to provide support for emergency nurses to improve Compassion Satisfaction and prevent Burnout and Secondary Traumatic Stress.

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