

	<div>ORIGINAL RESEARCH PAPER</div> <div>IMPACT OF SECONDARY TRAUMATIC STRESS, BURNOUT, AND COMPASSION SATISFACTION ON CAREGIVING BEHAVIOR OF PALLIATIVE NURSES</div>	<div>Psychology</div> <div>KEY WORDS: Secondary Traumatic Stress, Burnout, Compassion Satisfaction, Caring Behaviour</div>
<div>Ashna Sanoobar</div> <div>Dr. Lokesh L</div>	<div>Student, Department of Psychology, Kristu Jayanti College (Autonomous), Bangalore KA-560077, India.</div> <div>Professor, Department of Psychology, Kristu Jayanti College (Autonomous), Bangalore KA-560077, India.</div>	
<div>ABSTRACT</div>	<div>This study investigates the impact of secondary traumatic stress, burnout, and compassion satisfaction on the caregiving behaviour of palliative nurses. Secondary traumatic stress refers to the psychological distress that results from exposure to the suffering of others, while burnout is characterized by emotional exhaustion and reduced professional efficacy. In contrast, compassion satisfaction represents the positive emotional fulfilment derived from caregiving. The study employed a cross-sectional design, surveying 120 palliative nurses through validated psychological assessment tools. Results indicate a strong positive correlation between burnout and STS, suggesting that nurses experiencing high emotional exhaustion are more vulnerable to trauma-related stress. However, compassion satisfaction demonstrated a significant negative correlation with burnout, implying that nurses who derive fulfillment from their work are more resilient to emotional exhaustion. Interestingly, no significant correlation was found between secondary traumatic stress and compassion satisfaction, indicating that compassion satisfaction operates independently of exposure to trauma. Caring behaviour remained relatively stable despite burnout and STS, underscoring the role of professional commitment and workplace support.</div>	
<div>INTRODUCTION</div>	<div>Palliative care nurses are frontline caregivers who work closely with patients facing complex health challenges. Because palliative care is holistic, palliative nurses become privy to the pain of patients and caregivers on numerous levels, such as emotional, psychological, spiritual, social, and physical [1]. Responsibilities for palliative care nurses include pain management, symptom control, and supporting patients and families in making informed decisions about their care [2]. Repeatedly witnessing patients in distress and managing their end-of-life care brings grief. This grief can severely impact nurses, resulting in compassion fatigue.</div> <div>Compassion fatigue is the "cost of caring," where workers take the emotional cost of seeing suffering while caring for patients. Individuals facing compassion fatigue may exhibit behaviors like increased absences from work and difficulties in engaging with tasks, including decision-making, reflecting the emotional toll they are experiencing [3]. Compassion fatigue combines two key elements: burnout, which is the prolonged stress from work that drains a nurse's motivation, and secondary trauma, which refers to the emotional scars that can develop from witnessing the suffering of patients over time [4].</div> <div>Compassion satisfaction is the sense of happiness generated by taking care of others and being able to make a difference in patients' lives. This makes nurses feel sense of achievement as they offer support to others trauma and promote well-being, knowing they are making a valuable contribution [5]. The balance between compassion fatigue and compassion satisfaction is significant in influencing the well-being and caregiving attitudes of palliative care nurses. With the increasing demand for palliative services, it is important to understand and address these emotional dynamics. Positive work environments that foster compassion satisfaction and self-care can maximize nurse retention, job satisfaction, and quality of patient care. Nursing emotional well-being as a priority not only serves the nurses but also results in better patient outcomes. Investing in approaches that promote nurse well-being is critical to the long-term maintenance of an empathetic and effective palliative care system, with high-quality care for patients living with life-limiting illnesses.</div> <div>Much research has been conducted on nurse's stress alone and its effect on work life, but research on caring behaviour is not much explored along with compassion fatigue and</div>	
	<div>compassion satisfaction. Also, other research has been focusing on emergency, cancer, ICU nurses not palliative, who focus on end life care of patients and they don't receive much leisure time during their working hours. Also, they witness more distressing life events of other individuals which can directly or indirectly affect their personal life.</div> <div>METHODOLOGY</div> <div>Hypothesis</div> <div>H01: Burnout is not significantly related to secondary traumatic stress</div> <div>H02: Burnout is not significantly related to compassion satisfaction</div> <div>H03: Compassion satisfaction is not significantly related to secondary traumatic stress</div> <div>H04: Burnout is not significantly related to caring behaviour</div> <div>H05: Secondary traumatic stress is not significantly related to caring behaviour</div> <div>H06: Compassion satisfaction is not significantly related to caring behaviour</div> <div>Research Design</div> <div>A correlational design is employed to investigate the inter-relationships between secondary trauma, burnout, and compassion satisfaction on palliative nurses' caring behaviour</div> <div>Sample</div> <div>The specific sample of this research consists of 120 palliative nurses who possess a degree in nursing and have been practicing as palliative nurses. The sampling method employed in the study is purposive sampling.</div> <div>Inclusion Criteria</div> <div><ul style="list-style-type: none"><li>Nurses who are currently employed in a palliative care setting, including inpatient hospice units, home care, and outpatient palliative care services.</li><li>Nurses with a minimum of six months experience in palliative care.</li><li>Full-time palliative care nurses</li><li>Nurses who provide informed consent to participate in the study</li></ul></div>	

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### Procedure

Participants will be chosen through purposive sampling according to the inclusion criteria. Before data collection, all participants will be educated on the nature and purpose of the study, and confidentiality will be guaranteed. Informed consent will be secured, and participation will be wholly voluntary. Data will be gathered via Google Forms and then analyzed through proper statistical methods for interpretation.

### Measures

1. Professional Quality of Life Scale (1995) [6]: It is a 30-item self-report scale by Dr. Barbara Stamm to measure Compassion Satisfaction, Burnout, and Secondary Traumatic Stress. Internal consistency reliability values for subscales are 0.87 for Compassion Satisfaction (range of 0.86 to 0.87 with individual items removed), 0.73 for Burnout (range of 0.71 to 0.79), and 0.83 for Secondary Traumatic Stress (range of 0.81 to 0.84). Test-retest reliability had high Pearson correlations ( $p < .001$ ) between subscales. Convergent validity evidence was obtained in the high positive correlations between the STSS and Secondary Traumatic Stress ( $r = .69$ ) and Burnout ( $r = .57$ ). Divergent validity was established by a negative correlation between Compassion Satisfaction and the STSS ( $r = -.25$ ).

2. Caring Behaviors Inventory (CBI) [7]: It is a measure of nurses' caregiving behaviors from the patient's point of view developed by Wu et al. (2006) to measure assurance, Knowledge and Skill, Respect, and Connectedness. The scale uses a six-point Likert-type scale. The internal consistency of the total scale was .96, and alphas for subscales ranged from 0.82 to 0.92. The content validity index for all items was greater than 0.80, indicating high content validity. All of Cohen's kappa coefficients for the items were more than 0.74, showing excellent inter-rater reliability. The inventory's Cronbach's alpha and correlation coefficient were 0.95 and 0.88, respectively.

### Statistical Analysis

The analysis is conducted by Jamovi software. Statistical method applied to the data analysis of this study is correlation analysis and Regression Analysis.

## RESULTS

### Table 1. Descriptive Statistics

	Burnout	STS	CS	CB
N	120	120	120	120
M	22.5	25.1	37.1	74.0
SD	4.33	5.91	5.26	8.69

Note: \*STS = Secondary Traumatic Stress, \*\*CS = Compassion Satisfaction, \*\*\*CB = Caring Behavior, N = Number of participants, M = Mean, and SD = Standard deviation

Table 1 presents the mean and standard deviation scores for burnout, STS, CS, and CB among 120 participants. The mean value of burnout is 22.5 and the standard deviation score of 4.33 indicates an average level of emotional exhaustion among participants with low variability. In contrast, the mean score of secondary traumatic stress is 25.1 and its standard deviation is 5.91 are slightly higher than burnout, suggesting that stress does not always escalate to burnout. The mean score of compassion satisfaction is 37.1 and a standard deviation of 5.26 imply that many palliative nurses find fulfillment and satisfaction in helping others. Caring behaviour (M = 74.0, SD = 8.69) has the highest mean and variability, indicating that nurses consistently engage in caring behaviours despite experiencing stress and burnout. Compassion satisfaction can act as a protective factor, helping palliative nurses maintain their caring behaviours despite the presence of workplace stress and burnout.

The study's findings reveal a moderate level of exhaustion due

to burnout among palliative nurses, as indicated by the descriptive statistics, which show varying degrees of burnout, STS, CS, and CB. Previous research on nurses has found that burnout was highest among nurses who had heavy workload, decreased resources or rewards, and less social support [8].

The mean STS score of this study depicts that increased stress exposure does not result in severe burnout; it can also account for the moderate level of burnout as observed in this study. Protective factors such as work experience, emotional resilience, organizational support, and effective coping mechanisms can help nurses experience less burnout from work [9]. Psychological empowerment and personality traits like "hardiness" can decrease the effect of stress and vulnerability towards burnout [10]. Despite experiencing secondary traumatic stress and burnout, nurses remain committed to their caring behavior toward patients and derive compassion satisfaction from it, as indicated by the high mean scores for both compassion satisfaction and caring behavior. In nurses, compassion satisfaction increases with higher experience and job satisfaction [5].

### Table 2. Correlation Between Burnout And Secondary Traumatic Stress

		Burnout
STS*	Pearson's df	0.529 118
	p-value	<.001

Note: \*STS = Secondary Traumatic Stress

Table 2 shows strong positive correlation between burnout and STS, with a correlation value of  $r = 0.529$  ( $p < .001$ ). This implies that burnout may result from increased stress. Therefore, the alternative hypothesis—that is, that burnout and secondary traumatic stress are significantly correlated—is accepted and the null hypothesis is rejected.

A significant positive correlation between burnout and STS is indicated by findings of Lee et al. (2021) [11]. Burnout's main characteristic, emotional exhaustion, may make STS more likely to occur, and STS itself may make burnout worse. Resilience is a protective factor for people with low levels of burnout, but as burnout increases, resilience loses its protective effect, which eventually results in emotional exhaustion and increased susceptibility to secondary traumatic stress [12].

### Table 3. Correlation Between Burnout And Compassion Satisfaction

		Burnout
CS*	Pearson's df	-0.403 118
	p-value	<.001

Note: \*CS = Compassion Satisfaction

Table 3 shows the correlation between CS and burnout ( $r = -0.403$ ,  $p < .001$ ) indicates moderate negative relationship. The alternative hypothesis, which suggests a significant correlation between the two variables, is thus accepted, and the null hypothesis is rejected.

According to a meta-analysis by Zhang et al. (2018) [13], burnout is less common among nurses who are more satisfied with their jobs. Well-being, empathy, and a decrease in burnout were all substantially connected with CS [14]. These findings highlight how compassion satisfaction can prevent burnout even in high-stress situations.

### Table 4. Correlation Between Compassion Satisfaction And Secondary Traumatic Stress.

		STS*
CS**	Pearson's df	-0.103 118
	p-value	0.156

Note: \*STS = Secondary Traumatic Stress and \*\*CS = Compassion Satisfaction

Table 4 shows the relationship between STS and CS( $r = -0.130$ ,  $p = .156$ ) indicates no significant correlation, suggesting that exposure to stress does not impact the sense of satisfaction among palliative nurses. Therefore, the null hypothesis is accepted, meaning there is no significant correlation between secondary traumatic stress and compassion satisfaction.

A sense of job satisfaction may have a positive impact on not experiencing stress. This implies that compassion satisfaction operates independently of stress exposure, meaning that even in high-stress environments, nurses can still find meaning and purpose in their work. Whereas research by Hegney et al. (2013) [15] found that at-risk nurses have lower compassion satisfaction and experience more stress. The discrepancy between these studies can be due to other protective aspects such as cognitive processing about stress and satisfaction received through the job. Factors like supportive workspace, personal resilience, strong social support, defence mechanisms, and professional autonomy can mitigate the impact of stress and satisfaction despite challenging work conditions.

Table 5. Correlation Between Burnout And Caring Behaviour

		Burnout
CB*	Pearson's	-0.264
	df	118
	p-value	0.004

Note: \*CB = Caring Behavior.

Table 5 shows the correlation between Burnout and the CB ( $r = -0.264$ ,  $p = .004$ ) shows a weak negative relationship, this shows that higher burnout is associated with slightly lower caring behaviours. As a result, the alternative hypothesis—that is, that burnout and compassionate behavior are significantly correlated—is accepted, and the null hypothesis is rejected.

Higher organizational commitment [16] and professional values held by nurses [17] can significantly impact their caregiving behavior. workplace support systems, teamwork, and personal coping mechanisms can help reduce burnout in patient care. The mean score value obtained in this study between compassion satisfaction and caring behaviour depicts that nurses can be caring due to the satisfaction they receive from helping others.

Table 6. Correlation Between Caring Behaviour And Compassion Satisfaction

		CS**
CB*	Pearson's	0.552
	df	118
	p-value	<.001

Note: \*CB = Caring Behavior and \*\*CS = Compassion Satisfaction

Table 6 shows that CS and the CB showed a strong positive correlation ( $r = 0.552$ ,  $p < .001$ ), suggesting a strong relationship between increased caring behaviours and compassion satisfaction. Consequently, the null hypothesis is rejected, and the alternative hypothesis—that is, that there is a significant correlation between caring behaviors and compassion satisfaction—is accepted.

This implies that the weight of stress and burnout encountered at work can be lifted by finding fulfilment in serving others. Prior studies have demonstrated a positive correlation between CS and CB [18]. Caring behavior is strongly correlated with job satisfaction as measured by personal, professional, and joint participation in the care

process as well as satisfaction with nurse management [19]. Therefore, organizational support, professional values, and compassion satisfaction can lessen the distress and burnout on the CB of palliative nurses.

Table 7. Correlation Between Caring Behaviour And Secondary Traumatic Stress

		STS*
CB**	Pearson's	-0.113
	df	118
	p-value	0.218

Note: \*STS = Secondary Traumatic Stress and \*\*CB = Caring Behavior.

Table 7 shows that CB and STS do not significantly correlate ( $r = -0.113$ ,  $p = .218$ ). Therefore, the null hypothesis, that is, STS and CB do not correlate, is accepted.

The findings implying that trauma exposure does not directly affect how nurses engage in caring behaviours, which is inconsistent with previous research done by Güler et al. (2024) [20] showing that expose to secondary traumatic stress can have negative effect on nurses, which can lead to increased risk of professional deformation. Increasing awareness among nurses and implementing support systems, coping strategies, and interventions to help them manage the emotional discomfort of work [21] can help nurses deal with professional deformation leading to good quality care towards patients.

Model Fit Measures

Model	R	R square
1	0.554	0.307

The correlation coefficient ( $R = 0.554$ ) in the model fit analysis indicates a moderately positive relationship between the predictors and the dependent variable, and the coefficient of determination ( $R^2 = 0.307$ ) indicates that the model explains about 30.7% of the variance in the dependent variable.

Model Coefficients – CBI

Predictor	Estimate	SE	t	P
Intercept	43.7538	7.606	5.753	<.001
STS*	-0.0361	0.135	-0.268	0.789
CS**	0.8830	0.140	6.297	<.001
Burnout	-0.0723	0.199	-0.363	0.717

Note: \*STS = Secondary Traumatic Stress, and \*\*CS = Compassion Satisfaction

The intercept value of 43.7538 ( $p < .001$ ) represents the expected value of the caring behaviour when all predictors are zero, and it is statistically significant. However, the coefficients for Trauma ( $-0.0361$ ,  $p = 0.789$ ) and Burnout ( $-0.0723$ ,  $p = 0.717$ ) are small and not significant, which shows little or no impact towards caring behaviour of palliative nurses. CS has a strong positive coefficient ( $0.8830$ ,  $p < .001$ ), which indicates that satisfaction has an impact on the CB of palliative nurses.

Effect of burnout, CS, and STS on the compassionate behavior of palliative nurses was investigated using regression analysis. Nurses' compassionate behavior is not substantially impacted by the predictors of burnout and STS. Burnout may be mitigated by acknowledgment through pay, a strong team, and dedication at work [22]. The strong positive association between compassion satisfaction and caring behaviour shows the importance of a sense of fulfilment in enhancing patient care. Compassion Satisfaction is a strong predictor of caring behaviour. improving workplace values, recognition, workload balance, and support systems can increase nurses' job fulfilment, making them more engaged and emotionally available for patients [23].

IMPLICATIONS



- Organizations can make use of different strategies to increase compassion satisfaction and emotional wellbeing, such as support groups, self-care initiatives, and stress reduction training.
- Giving resources, adequate staff, and a supportive environment can enhance organizational commitment leading to better patient care.

### LIMITATIONS AND RECOMMENDATIONS

- The study has used cross-sectional design which doesn't explain the long term effects, hence using longitudinal study can ascertain whether cumulative stress exposure eventually affects nurses' capacity to deliver compassionate care.
- Incorporating pay, benefits, experience in the field can help understand its impact on caregiving.
- Exploring moderating and mediating effects of emotional intelligence, coping mechanisms, organizational support and resilience can also help to find out its effect on caring behaviour and compassion satisfaction.

### CONCLUSION

This study aimed to examine the impact of STS, Burnout, and CS on caring behaviour of palliative nurses. The significant role of CS on caring behaviour acts as a protective factor against burnout and STS. Thus, interventions to enhance CS and reduce STS and burnout is important for nurses to engage in high levels of caring behaviour. The study emphasizes the importance of organizational support, adequate resources, and support groups to remain committed to the assigned duty and give quality life care to patients.

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