COMPASSION SATISFACTION, SECONDARY TRAUMATIC STRESS AND BURNOUT AMONG RESCUERS

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ABSTRACT

Objective: To explore the level of and relationship between compassion satisfaction (CS), secondary traumatic stress (STS), and burnout (BO) and to find out significant predictors of compassion satisfaction among rescuers.

Methodology: This study was based on cross-sectional survey research design. It was conducted in Faisalabad Division from September to December 2016. A sample of 185 men with mean age 32.45 ±5.64 paramedics (n=100) and fire-fighters (n=85) working in Rescue 1122 were selected with purposive sampling technique from Faisalabad and Chiniot City. Professional Quality of Life scale developed by Stamm (2009) was used to measure the level of CS, STS and BO among paramedics and fire fighters.

Results: Significant positive relationship between CS and STS and significant negative relationship between CS and BO among rescuers were observed ($p < 0.01$). Rescuers' have moderate level of CS, STS and BO. Compassion satisfaction was significantly predicted from age group, marital status, living area, socioeconomic status, nature of job, STS and BO ($F [7,177] = 44.37$, $p = .001$) $R2 = .64$.

Conclusion: Rescuers had average level of and significant relationship with CS, STS, and BO. Compassion satisfaction was significantly predicted from age group, marital status, living area, and socioeconomic status, nature of job, STS and BO.

Key Words: Rescuers, Compassion satisfaction, Secondary traumatic stress, Burnout, Rescue 1122

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INTRODUCTION

Accidents are the foremost causes of death in adults[1]. Pre-hospital providers are former to face trauma on accident scene. Inadequate indications are available regarding pre-hospital trauma care training programs and the advantage of such programs for trauma patients[2]. There is a high level of involvement and professional belief concerning trauma care on the road[2] . In Pakistan, rescue 1122 is one of the chief emergency service in the state[3].

According to statistics, before February 2017 Rescue 1122 handled more than 1925964 medical tragedies, 1493422 road catastrophic clangs, 149,867 crime occurrences and 88,779 fire events[4]. While speaking around Faisalabad Rescue 1122, since 2014 to 2017 acknowledged 7428370 overall calls and salvaged 415841 patients[4]. These facts undoubtedly indicate how commonly these pre-hospital providers (rescuers) face traumatology. As they are qualified first responders, they truly face the serious conditions of the fatalities. Most of them feel compassion satisfaction (CS) in dealing with such situations[5]. Compassion satisfaction is the understanding of pleasure resulting from serving others, or being gifted to do effort well and the degree of credit by colleagues[6]. Rescuers may prefer to benefit others through their services i.e. by donating their aptitude at work setting or even the greater good of humanity[7].

On the other hand, un-intended trauma experience is named as secondary traumatic stress (STS)[8], also known as compassion fatigue, that is "the stress resulting from serving a traumatized individual[9]. Persons who constantly interact with wounded of traumatic proceedings are at hazard of emerging traumatic signs themselves[10-12]. Shocking events have a habit to shiver a person's essential opinions about a harmless, just world, separating the victim in an existential calamity[12,13]. STS is a multifaceted state of exhaustion and dysfunction in which employees take on the emotional strain and burden of the sufferers themselves[9]. Burnout (BO) and STS have been documented as the central consequences of risky job demands in human services specialists[14,15].

Such strains may comprise recurrent and strong interaction with distressed clients and chronic contact with traumatic content at work[16]. This study aimed to measure the association amongst compassion satisfaction (CS), secondary traumatic stress (STS) and burnout (BO) among rescuers with two main categories paramedics and firefighters who are first providers of medical facilities. Furthermore the contribution of STS, BO and demographic characteristics such as age group, marital status, living area, socioeconomic status and job category to CS among rescuers was assessed.

METHODOLOGY

A cross-sectional survey based on correlational research design conducted from September 2016 to December 2016 in Faisalabad. A sample of 185 rescuers with mean age 32.45 ±5.64 was carefully chosen through purposive sampling technique. For data collection all the assigned stations of Rescue 1122 in Faisalabad and Chiniot were visited. Men only between age 20 years to 40 years with at least one year experience as emergency service provider as Firefighters or Paramedics (Medical First Aid providers) in Rescue 1122. Sample consisted of only men because 85% of the population working in Rescue 1122 centers is male. Participants who refused to provide informed consent (5 subjects) or beyond the age range 20-40 years, undergraduates and working as volunteer (not appointed) in Rescue 1122, were excluded from the current study. Due to less proportion in this field, women were also excluded.

Post hoc Power analysis for linear multiple regression was conducted using G-Power software to obtain the sample power. Input parameters for one tail were effect size f2 0.15, alpha 0.05 and total sample size 185[7]. Based on the above-mentioned assumptions, the desired sample size 185 contains a statistical power (1-β err prob) 0.99.

A self-report sheet consisting of various demographic information and a self-report measure Professional Quality of Life scale (PROQOL) version 5 developed by Stamm (2009) was administered by the researcher to assess rescuers demographic information, CS, STS and BO correspondingly[6]. PROQOL version 5 consists of three subscales CS, BO and STS with five response categories (never=1 and very often=5); hence there were five reverse score items (1,4,15,17,29). Each of the scale has minimum score of 10 and maximum 50. Detail description of items in each subscale and cut of score is given in table 1. Participants were approached in Rescue 1122 centers after the approval of residential authorities. Informed consent form was provided to the participant at first and subsequently demographic sheet and PROQOL scale were provided to rate their responses.

SPSS 21 was used to run the statistical analyses of Descriptive statistics to find out frequencies and percentages of study variables, Pearson product moment correlation for association between variables and Hierarchical (aka sequential) regression analysis to predict CS from other variables were carried out in this study.

RESULTS

Internal consistency of study instrument's subscales ranges from Cronbach's alpha 0.54 to 0.86 in current study. Table 2 indicates the frequencies and percentages of study sample characteristics. Table 3 specifies significant relationship between CS, STS, and BO at confidence interval of 99%. Table 3 also indicates that rescuers have average level of CS, STS and BO.

In table 4 multiple regression predicted CS from age group, marital status, living area, socioeconomic status, nature of job, STS and BO. These variables significantly predicted CS (F [7,177] =44.37, p =.001, R2 =.64). Out of seven variables only five variables added statistically significant contribution to prediction, p <.05.

DISCUSSION

Compassion satisfaction has a significant positive relationship with STS as literature suggests that STS is the emotional stress that people may experience by having close contact with a trauma survivor[17,18]. Strong negative relationship existed between CS and BO supported by a study on nurses at Children's Hospital Los Angeles[19, 20] and a positive relationship between traumatic stress and BO corresponds with previous study conducted by Alkema et al[20]. Moderate level of CS, BO and STS among rescuers correspond with study on emergency nurses confirmed that majority of them have moderate to high level of CS, STS and BO[21].

Regression analysis predicted CS from age, marital status, living area, supported by Spranget al[22] that older age predict CS. Another study showed that along with

Table 1: PROQOL version 5 subscales and cut off scores

Subscales	Items	Low	Average	High
Compassion Satisfaction	3,6,12,16,18,20,22,24,27,30	22 and below	Between 23 and 41	42 and above
Secondary Traumatic Stress	2,5,7,9,11,13,14,23,25,28			
Burnout	1,4,8,10,15,17,19,21,26,29			

Table 2: Frequencies and percentage of demographic characteristics of rescuers

Variables		Frequency	Percentage
Age	Below 30 years	80	43.2
	30 years and above	105	56.8
Marital Status	Single	65	35.1
	Married	120	64.9
Living Area	Urban	65	35.1
	Rural	120	64.9
Living Style	Joint	123	66.5
	Nuclear	62	33.5
Socioeconomic Status	Middle	184	99.5
	High	1	.5
Job category	Paramedics	100	54.1
	Fire fighters	85	45.9

Table 3: Correlation between compassion satisfaction, secondary traumatic stress, and burnout among rescuers

Variables	CS	STS	BO
CS	1	.36**	-.58**
STS		1	.13
BO			1
Mean (SD)	36.32 (5.92)	24.62 (3.76)	22.48 (4.46)

**p<0.01

CS: Compassion Satisfaction, STS: Secondary Traumatic Stress, BO: Burnout

Table 4: Summary of sequential/hierarchical regression analysis in compassion satisfaction among rescuers (n=185)

Variable	Model 1			Model 2		
	B	SE	β	B	SE	β
Age Group	-.41	.93	-.04	.03	.61	.01
Marital Status	-2.29	1.04	-.19*	-2.80	.67	-.23**
Living Area	-.68	.96	-.06	-.19	.62	-.02
Socio-economic Status	-11.43	5.81	-.14	-8.90	3.70	-.11*
Nature of Job	-.594	.92	-.5	-1.84	.61	-.16**
Secondary Traumatic Stress				.74	.08	.47**
Job Burnout				-.87	.07	-.65**
R2		.084			.64	
F for R2 change		3.27*			134.87**	

*p<.05, ** p<.01

age, year of education, training and experience years can also predict CS[23]. A study on medical students of Pakistan indicated that high BO levels were significantly associated with age[24]. It is evident from the study on police officers that married feel more STS as compared to unmarried[25]. However, engaging in self-care activities lowers the risk of STS[26]. Young adults and singles exhibit less STS as compared to adults and the married because an increase in number of experience years increases stress also[27]. Adults and paramedics have high level of BO than young adults and fire fighters supported by a study declaring increase in age among health professionals contribute well to exhibit high level of BO[28].

Workers of rescue 1122 have moderate level of CS that was not only due to their pre-hospital trauma scene services but other factors also contribute in their CS level. These findings can help pre-hospital service trainers to understand factors influencing CS among rescuers.

LIMITATIONS

Limitations of this study include sample from restricted area. Psychological health aspects can also contribute that were ignored in this study. Participants from both genders can be studied in future researches. However this study can provide evidences for future researches in Pakistani context.

CONCLUSION

Rescuers had average level of and significant relationship with CS, STS, and BO. Compassion satisfaction was significantly predicted from age group, marital status, living area, and socioeconomic status, nature of job, STS and BO.

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REFERENCES

1. Deutsche Gesellschaftfür Unfallchirurgie. S3-Leitlinie Polytrauma, Schwerverletzten-Behandlung. AWMF 2016; 33:1-424.
2. Häske D, Beckers SK, Hofmann M, Wölfl CG, Gliwitzky B, Grützner P et al. The effect of paramedic training on pre-hospital trauma care (EPPTC-study): a study protocol for a prospective semi-qualitative observational trial. BMC Med Educ 2014; 14:32.
3. Introduction of Rescue 1122. Punjab Emergency Service. The leading Emergency Service of Pakistan; 2017. Available at: http://www.rescue.gov.pk/Introduction.aspx.
4. Punjab Emergency Service (Rescue 1122). 5year performance report. 14th October 2016.
5. Pietrantoni L, Prati G. Resilience among first responders. African Health Sciences. Afr Health Sci 2008; 8: S14-20.
6. Stamm BH. Measuring compassion satisfaction as well as fatigue. Developing history of the compassion satisfaction and fatigue test. In: Figley CR (Ed). Treating Compassion Fatigue. New York: Brunner- Routledge; 2002:107–19.
7. Stamm BH. Professional Quality of Life: Compassion Satisfaction and Fatigue Version 5 (ProQOL). www.proqol.org.
8. Joinson C. Coping with compassion fatigue. Nursing 1992; 22:116 118–20.
9. Figley CR. Compassion Fatigue. Coping With Secondary Traumatic Stress Disorder In Those Who Treat The Traumatized. Routledge 1995; 7:1-261.
10. Figley CR. Compassion stress and the family therapist. Family Therapy News 1993:1-8.
11. Hodgkinson PE, Shepherd MA. The impact of disaster support work. J Traumatic Stress 1994; 7:587–600.
12. Pearlman LA, Mac Ian PS. Vicarious traumatization: An empirical study of the effects of trauma work on trauma therapists. Prof Psychol Res Prac 1995; 26:558-65.
13. Steed L, Bicknell J. Trauma and the therapist: The experience of therapists working with the perpetrators of sexual abuse. Aust J Disas Trauma Stud 2001; 1:3.
14. Janoff-Bulman R, Frieze IH. A theoretical perspective for understanding reactions to victimization. J Soc Issues 1983; 39:1- 17.
15. Elwood LS, Mott J, Lohr JM, Galovski TE. Secondary trauma symptoms in clinicians: A critical review of the construct, specificity, and implications for trauma-focused treatment. Clin Psychol Rev 2011; 31:25–36.
16. Figley CR. Compassion fatigue: Coping with secondary traumatic stress disorder in those who treat the traumatized. London, England: Brunner-Routledge; 1995.
17. Leibowitz RQ, Jeffreys MD, Copeland LA, Noël PH. Veterans' disclosure of trauma to healthcare providers. Gen Hosp Psychiatry 2008; 30:100–3.
18. Figley CR. Compassion fatigue: Psychotherapists' chronic lack of selfcare. J Clin Psychol 2002; 58:1433–41.
19. Myer RMI, Li A, Klaristenfeld J, Gold JI. Pediatric Novice Nurses: Examining Compassion Fatigue as a Mediator Between Stress Exposure and Compassion Satisfaction, Burnout, and Job Satisfaction. J Pediatr Nurs 2015; 30:174–83.
20. Alkema K, Linton JM, Davies R. A Study of the Relationship Between Self-Care, Compassion Satisfaction, Compassion Fatigue and Burnout Among Hospice Professionals. J Soci Work End-Of-Life Palliative Care 2008; 4:101-19.
21. Hooper C, Craig J, Janvrin DR, Wetsel MA, Reimels E.

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22. Sprang G, Clark JJ, Whitt-Woosley A. Compassion Fatigue, Compassion Satisfaction, and Burnout: Factors Impacting a Professional's Quality of Life. J Loss Trau Int Perspec-Stress Cop 2007; 12:259-80.
23. Sodeke-Gregson, Ekundayo A. Sue Holttum, and Jo Billings. Compassion Satisfaction, Burnout, and Secondary Traumatic Stress in UK Therapists. Eur J Psychotraumatol 2013; 4:
24. Muzafar Y, Khan HH, Ashraf H, Hussain W, Sajid H, Tahir M et al. Burnout and its Associated Factors in Medical Students of Lahore, Pakistan. Cureus 2015; 7:e390.
25. Husain W, Sajjad R. Depression, anxiety and stress among married and unmarried police officers. J Soc Sci 2012;6:43-6.
26. Rothschild B. Help for the helper: The psychophysiology of compassion fatigue and vicarious trauma. New York; 2006.
27. Manning-Jones S, de Terte I, Stephens C. Secondary traumatic stress, vicarious posttraumatic growth, and coping among health professionals; A comparison study. New Zeeland J Psychol 2016; 45:21-9.
28. Rossi A, Cetrano G, Pertile R, Rabbi L, Donisi V, Grigoletti L et al. Burnout compassion fatigue , and compassion satisfaction among staff in community-based mental health services. Psychiatry Res 2012; 200:933–8.

CONTRIBUTORS

SMIHZ conceived the idea, planned the study, and acquisition of data. NY did conceptualization, analysis, interpretation and drafted the manuscript. HS helped acquisition of data, data entry and drafting of the manuscript. All authors contributed significantly to the submitted manuscript.