

RELATIONSHIP OF BURNOUT WITH RESCUERS JOB PERFORMANCE

Naveed Shibli¹ and Iram Mumtaz²

¹Department of Psychology Riphah International University Faisalabad

²Affiliation not available

May 14, 2020

Abstract

Rescuers jobs are important because these are related with own and others lives. The present study was conducted to study that how burnout levels are related with rescuers and their jobs? Copenhagen Burnout Inventory, Self-efficacy scale and the satisfaction with life scale were administered to 120 male rescuers working in a government department serving against various positions. It was found that self-efficacy was significantly correlated with life satisfaction ($r = .45$, $p < .01$) among rescuers. Moreover it was found that self-efficacy and life satisfaction were negatively correlated with burnout ($r = -.71$, $p < .01$), ($r = -.56$, $p < .01$). Some important demographic findings regarding age, assignment and education also emerged. Cross-cultural studies recommended.

Introduction

To save something from a dangerous and difficult situation and to prevent something to fail is a difficult and demanding job. It is a kind of situation in which someone notices something out of place and feels that someone needs help therefore, assumes responsibility to help and finally helps that is what is a rescuer's self and it was the behavior that was observed among Jews during the days of holocaust (Fogelman, 1998). Trivers, (1971) has discussed rescuer behaviors and its other associated behaviors in evolutionary context. Halden (1932) in (Hamilton, 1963) discussed the possibility of altruistic behaviors during evolution. Rescuer behaviors have been found in ants in animal kingdom (Nowbahari & Hollis, 2010). In the history of religion altruistic behaviors are found those are somewhat closely related with the behaviors of rescuers in our times (Qirko, 2004).

Although altruistic rescuing is available in various religious missions in modern days (Fagan, 1986) but now, rescue service has also become a job and responsibility (Matheson, Manning, & Williams, 2011; Fanfarová & Mariš, 2017). It is now a well defined job area (Cooper, 2005) in which the role of a rescuer is well defined (Murphy & Ferry, 2018; Kumm & Bergqvist, 2010). It is also now defined that how do a rescuer perform better considering psychological guidelines (Cocking, Drury & Reicher, 2009), how do the rescuers would follow various safety precautionary measures to save themselves (Murphy & Greenhalgh, 2013) and what lessons the rescuers must learn from early rescue services (Claesson, Lindqvist, Ortenwall & Herlitz, 2012)?

Personal safety (Bibby, 2017) because each individual wants to live free of threat, avoids harms and coming to harm, it is a human need (Maslow, 1948) and its role is important in organization culture (Booth & Lee, 1995). Mitchell and Bray in (Wagner, Martin & McFee, 2009) have defined specific characteristics of a rescuer's personality. Rescuer job are risky, stressful and in some cases are life threatening (Denton & Patrol, 1994). Rescue 1122 jobs are also risky (Amin, 2018). Job designs intervention can help to improve the rescuer jobs (Maher, 2019; Akhter, 2014) because rescuers are different in various traits as compared with people employed in other jobs (Mitchell & Bray, 1990). Researchers have highlighted personality traits those fit

in the performance of rescue job demands (Salters-Pedneault, Ruef & Orr, 2010; Wagner, 2005) moreover, besides training rescue related jobs influence human physiology (Fannin & Dabbs Jr, 2003). Personal safety is an important question of modernity (Hopkins, 2009) and that is related with rescue jobs as well.

In rescue jobs own or others life could be at stake during the performance of rescue jobs the presence of factors like burnout could intervene with rescue job requirements, therefore, the present work was designed to assess that how do various burnout levels interplay with the satisfaction with life and self-efficacy levels among the rescuers?

Burnout is an , “emotional exhaustion, depersonalization, and low personal accomplishment” (Dyrbye, West & Shanafelt, 2009) moreover, “perceived professional failure due to the incongruities of individual dreams of idealistic and altruistic aspirations and expectations of impeccable professional performance” can cause burnout (Friedman, 2006) and variables like , “job dissatisfaction, desire to quit the job, physical and emotional symptoms and perceived performance level” can also contribute in burnout (Pines & Keinan, 2005).

In the present work burnout was measured with, Copenhagen Burnout Inventory (Kristensen, Borritz, Villadsen & Christensen, 2005), self efficacy was measured with the general self-efficacy scale (Jerusalem & Schwarzer, 1979) and the satisfaction with life was measured with the satisfaction with life scale (Diener, Emmons & Larsen, 1985)

Method and Procedure

Present study tested 120 male rescue workers falling between 20 to 40 years of age. All these participants were serving against various positions in a government rescue department. All participants participated voluntarily and signed a consent form prior to participation. The participants included Emergency Medical Technician (EMT), Lead Fire Rescuer (LFR), Light Transport Vehicle (LTV) and Fire Rescuer (FR).

All participants completed following psychological tests.

1. Copenhagen Burnout Inventory (Kristensen, Borritz, Villadsen & Christensen, 2005)
2. Self-efficacy scale (Jerusalem & Schwarzer, 1979)
3. The satisfaction with life scale (Diener, Emmons & Larsen, 1985)

During the testing participants were allowed to leave the testing if it was not convenient for them to continue. The participants completed the tests in approximately 25 to 30 minutes. SPSS (23) was used to assess the responses of the participants.

Results

Self-efficacy with life satisfaction ($r = .45, p < .01$) found significantly correlated. However, self-efficacy found negatively correlated with burnout ($r = -.71, p < .01$), moreover, life satisfaction was also found negativity correlated with burnout($r = -.56, p < .01$) (Table-1-0). Self-efficacy emerged as a significant predictor of burnout, 50% of variance ($R^2 = .50$) in burnout as emerged life satisfaction 31% of variance ($R^2 = .31$) (Tables-I-I/2). The age (Table-1-3), education levels (1-4) of the participants found related with self-efficacy, life satisfaction as well as with burnout. Some hints about of difference in various service duties (ranks and duties) were also found (1-5). Some variables influences were noted related with day and night shift duties (1-6).

Conclusions and Recommendations

The study has provided useful information about rescuers regarding the importance of the variables satisfaction with life and level of self efficacy in recue professional performance. Because it comes up in the study that variation in these factors is capable of increasing burnout tendencies among the rescuers. Moreover, the relationship of age also emerged as related with various variables, some useful information also evolved regarding the role of education in rescuers job. The importance of assigning the duties and placing the employees in various shifts also emerged as important factors for rescue managers and supervisors. The study contributed positively towards the understanding of self of rescuers as well as the influences of the

jobs on the personalities of rescuers; however, limited cultural focus demands further cross-cultural context inquiries. More studies recommended.

Declaration

The author declares no conflict of interests. No human and animal subject was used and no funding and grant received in the study. Riphah Research Ethics Committee Faisalabad approved the study.

Table 1.0

Correlation among Self-efficacy, Life Satisfaction and Burnout (N=120)

Variables	1	2	3	4	5	6
1.Self-efficacy	-	.45**	-.71**	-.65**	-.61**	-.63**
2.Life Satisfaction		-	-.56**	-.46**	-.54**	-.50**
3.Burnout			-	.90**	.88**	.91**

** $p < .01$

Table demonstrates significant correlation of the self-efficacy with life satisfaction ($r = .45$, $p < .01$). But, self-efficacy shows significant negative correlation with burnout ($r = -.71$, $p < .01$), While, life satisfaction was also found negatively significantly correlated with burnout ($r = -.56$, $p < .01$).

Table 1.1

For the Linear Effect of Self-efficacy on Burnout (N=120)

	Burnout	Burnout	Burnout
Predictors	<i>B</i>	<i>B</i>	95% <i>CI</i>
Constant	79.14**		[70.16, 88.11]
Self-efficacy	-1.50**	-.71**	[-1.78, -1.23]
R ²	.50		
F	116.92**		

** $p < .01$; *B* = Unstandardized regression coefficient; β = Standardized regression coefficient; *CI* = Confidence interval

Table shows that self-efficacy was confirmed a significant predictor of burnout and contribute 50% of variance ($R^2 = .50$) in burnout. Its mean that self-efficacy has significant impact on burnout.

Table 1.2

For the Linear Effect of Life Satisfaction on Burnout (N=120)

	Burnout	Burnout	Burnout
Predictors	<i>B</i>	<i>B</i>	95% <i>CI</i>
Constant	76.69**		[64.11, 89.27]
Life Satisfaction	-1.87**	-.56**	[-2.37, -1.36]
R ²	.31		
F	53.08**		

^{**} $p < .01$; B = Unstandardized regression coefficient; β = Standardized regression coefficient; CI = Confidence interval

Table shows that life satisfaction was confirmed as a significant predictor of burnout and contribute 31% of variance ($R^2 = .31$) in burnout. It means that life satisfaction has significant impact on burnout.

Table 1.3

One Way ANOVA for Comparison among Age Group of Respondents with Self-efficacy, Life Satisfaction and Burnout (N=120)

Variable	20-25 Years (<i>n</i> = 17)	20-25 Years (<i>n</i> = 17)	26-30 Years (<i>n</i> = 16)	26-30 Years (<i>n</i> = 16)	26-30 Years (<i>n</i> = 16)	26-30 Years (<i>n</i> = 16)	31-35 Years (<i>n</i> = 44)	31-35 Years (<i>n</i> = 44)	31-35 Years (<i>n</i> = 44)	31-35 Years (<i>n</i> = 44)	31-35 Years (<i>n</i> = 44)	36-40 Years (<i>n</i> = 43)	36-40 Years (<i>n</i> = 43)	36-40 Years (<i>n</i> = 43)			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>M</i>	<i>SD</i>	<i>SD</i>	<i>M</i>	<i>M</i>	<i>M</i>	<i>M</i>	<i>SD</i>	<i>SD</i>	<i>M</i>	<i>M</i>	<i>M</i>	<i>M</i>	<i>SD</i>
Self-efficacy	27.29	4.210	31.06	31.06	6.371	33.11	33.11	33.11	33.11	33.11	5.927	5.927	33.09	33.09	33.09	33.09	6.187
Life Satisfaction	23.47	3.484	24.88	24.88	3.775	3.775	25.82	25.82	25.82	25.82	3.552	3.552	23.40	23.40	23.40	23.40	4.150
Burnout	12.64	10.30	33.14	33.14	12.36	12.36	27.84	27.84	27.84	27.84	12.07	12.07	28.84	28.84	28.84	28.84	13.10
Personal Burnout	11.91	16.96	30.21	30.21	19.03	19.03	26.40	26.40	26.40	26.40	16.14	16.14	26.71	26.71	26.71	26.71	14.40
Work-related Burnout	46.00	8.27	35.71	35.71	10.83	10.83	31.09	31.09	31.09	31.09	11.75	11.75	32.39	32.39	32.39	32.39	14.10
Client-related Burnout	39.44	14.13	33.07	33.07	14.07	14.07	25.48	25.48	25.48	25.48	12.59	12.59	26.82	26.82	26.82	26.82	14.70

Table shows that significant age group differences exhibited in self-efficacy, life satisfaction as well as in burnout. But, the self-efficacy's mean score or also the mean score of life satisfaction were significantly ($p < 0.05$) higher among 31-35 years age group of respondents as compared to 20-25, 26-30 and 36-40 years age group of respondents. Whereas, the mean score of overall burnout, personal burnout, work-related burnout and client-related burnout were significantly ($p < 0.05$) higher among 20-25 years age group of respondents as compared to 26-30, 31-35, and 36-40 years age group of respondents.

Table 1.4

Variable	HSS (<i>n</i> = 18)	HSS (<i>n</i> = 18)	Intermediate (<i>n</i> = 35)	Intermediate (<i>n</i> = 35)	Graduation (<i>n</i> = 52)	Graduation (<i>n</i> = 52)	Master (<i>n</i> = 15)	Master (<i>n</i> = 15)	Master (<i>n</i> = 15)				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>SD</i>	<i>M</i>	<i>M</i>	<i>SD</i>	<i>F</i>	
Self-efficacy	25.67	5.77	31.86	31.86	6.18	32.35	32.35	4.84	4.84	38.80	38.80	1.42	17.83
Life Satisfaction	19.67	3.66	23.83	23.83	2.95	25.06	25.06	2.68	2.68	29.87	29.87	1.92	36.32
Burnout	44.95	16.22	29.95	29.95	10.24	30.83	30.83	9.31	9.31	17.26	17.26	10.85	17.48
Personal Burnout	43.05	21.44	29.02	29.02	14.44	29.39	29.39	12.41	12.41	12.44	12.44	14.66	11.52

Variable	HSS (n = 18)	HSS (n = 18)		Intermediate (n = 35)	Intermediate (n = 35)	Intermediate (n = 35)	Graduation (n = 52)	Graduation (n = 52)			Master (n = 15)	Master (n = 15)	Master (n = 15)
Work-related Burnout	47.42	15.09	32.35	32.35	9.21	34.20	34.20	11.99	11.99	23.33	23.33	8.84	12.83
Client-related Burnout	43.98	17.75	28.10	28.10	10.95	28.34	28.34	11.52	11.52	15.00	15.00	11.22	15.13

One Way ANOVA for Comparison among Education Level of Respondents with Self-efficacy, Life Satisfaction and Burnout (N=120)

Table 4.7 shows that significant education level differences revealed in self-efficacy, life satisfaction as well as in burnout. But, the mean score of self-efficacy and life satisfaction were significantly ($p < 0.05$) higher in master level of education of respondents as compared to higher secondary school certificate, intermediate and graduation level of education of respondents. Whereas, the mean score of overall burnout, personal burnout, work-related burnout and client-related burnout were significantly ($p < 0.05$) higher in secondary school certificate education level of respondents as compared to intermediate, graduation and master level of education among respondents.

Table 1.5

Variable	EMT (n = 30)	EMT (n = 30)		FR (n = 31)	FR (n = 31)			LFR (n = 24)	LFR (n = 24)	LFR (n = 24)			LTV (n = 35)	LTV (n = 35)	LTV (n = 35)
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>M</i>	<i>SD</i>	<i>SD</i>	<i>M</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>M</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>F</i>
Self-efficacy	31.73	5.83	34.90	34.90	4.62	4.62	32.04	32.04	5.25	29.66	29.66	29.66	7.26	4.35	4.35
Life Satisfaction	24.70	3.21	26.39	26.39	3.42	3.42	25.67	25.67	2.84	21.83	21.83	21.83	4.19	10.64	10.64
Burnout	31.27	11.54	24.42	24.42	9.48	9.48	30.09	30.09	12.36	37.21	37.21	37.21	15.05	5.90	5.90
Personal Burnout	29.72	15.62	20.65	20.65	13.97	13.97	29.34	29.34	15.71	36.28	36.28	36.28	17.81	5.31	5.31
Work-related Burnout	35.00	10.87	28.57	28.57	7.99	7.99	33.63	33.63	13.85	39.18	39.18	39.18	15.89	3.96	3.96
Client-related Burnout	28.47	12.43	23.36	23.36	11.78	11.78	26.72	26.72	12.86	35.83	35.83	35.83	16.97	4.79	4.79

One Way ANOVA for Comparison among Designation Level of Respondents with Self-efficacy, Life Satisfaction and Burnout (N=120)

Table 4.8 shows that significant designation level differences in self-efficacy, life satisfaction and also in burnout. But, the score of mean in self-efficacy or life satisfaction were significantly greater in FR designation of respondents as compare to EMT, LFR and LTV respondent's designation. Whereas, the score of the mean of overall burnout, personal burnout, work-related burnout and client-related burnout were significantly higher in LTV designation as compared to EMT, FR, or LFR designation.

Table 1.6

One Way ANOVA for Comparison among Job Nature (Shift) of Respondents with Self-efficacy, Life Satisfaction and Burnout (N=120)

Variable		Morning (<i>n</i> = 71)	Morning (<i>n</i> = 71)		Evening (<i>n</i> = 32)	Evening (<i>n</i> = 32)		Night (<i>n</i> = 17)	Night (<i>n</i> = 17)	
	<i>M</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>M</i>	<i>SD</i>	<i>F</i>
Self-efficacy	31.87	31.87	6.02	34.16	34.16	5.26	28.53	28.53	6.89	5.00
Life Satisfaction	24.32	24.32	3.58	24.75	24.75	4.45	24.71	24.71	4.41	.16
Burnout	32.03	32.03	12.13	27.38	27.38	13.22	33.49	33.49	16.13	1.77
Personal Burnout	30.38	30.38	14.40	26.14	26.14	18.62	30.10	30.10	22.01	.73
Work-related Burnout	34.65	34.65	12.78	31.02	31.02	12.11	38.87	38.87	14.82	2.12
Client-related Burnout	30.62	30.62	14.73	24.34	24.34	13.14	30.61	30.61	14.85	2.24

Table 4.9 shows that significant job nature (shift) differences in self-efficacy. While, the score of mean in self-efficacy and life satisfaction were higher in evening shift as compared to morning and night job shift. Whereas, the overall burnout mean score and work-related burnout were higher among night shift as compared to morning and evening shift. Meanwhile, the personal burnout mean score and client-related burnout mean score were higher among morning shift as compared to night and evening shift.

References

- Akhter, M. S. (2014). Firefighter's view on improving fire emergency response: A case study of Rawalpindi. *International Journal of Humanities and Social Science* , 4 (7), 1.
- Amin, M. (2018). EFFECTS OF JOB STRESS ON EMPLOYEE ENGAGEMENT AND ORGANIZATIONAL COMMITMENT: A STUDY ON EMPLOYEES OF EMERGENCY RESCUE SERVICE RESCUE 1122 DISTRICT PESHAWAR. *City University Research Journal* , 8 (2).
- Bibby, P. (2017). *Personal safety for social workers* . Taylor & Francis.
- Booth, R. T., & Lee, T. R. (1995). The role of human factors and safety culture in safety management. *Proceedings of the Institution of Mechanical Engineers, part B: Journal of Engineering manufacture* , 209 (5), 393-400.
- Claesson, A., Lindqvist, J., Ortenwall, P., & Herlitz, J. (2012). Characteristics of lifesaving from drowning as reported by the Swedish Fire and Rescue Services 1996–2010. *Resuscitation* ,83 (9), 1072-1077.
- Claesson, A., Lindqvist, J., Ortenwall, P., & Herlitz, J. (2012). Characteristics of lifesaving from drowning as reported by the Swedish Fire and Rescue Services 1996–2010. *Resuscitation* ,83 (9), 1072-1077.
- Cocking, C., Drury, J., & Reicher, S. (2009). The psychology of crowd behaviour in emergency evacuations: Results from two interview studies and implications for the Fire and Rescue Services. *The Irish Journal of Psychology* , 30 (1-2), 59-73.
- Cooper, D. C. (Ed.). (2005). *Fundamentals of search and rescue* . Jones & Bartlett Learning.

- Fanfarová, A., & Mariš, L. (2017). Simulation tool for fire and rescue services. *Procedia engineering* , 192 , 160-165.
- Denton, G., & Patrol, B. M. N. S. (1994). The human experience of avalanche rescue. In *Proceedings of the International Snow Science Workshop, Snowbird, UT* (pp. 431-438).
- Diener, E., Emmons, R. A., & Larsen, R. J. i Griffin, S.(1985). *The satisfaction with life scale* , 71-75.
- Dyrbye, L. N., West, C. P., & Shanafelt, T. D. (2009). Defining burnout as a dichotomous variable. *Journal of general internal medicine* , 24 (3), 440-440.
- Fagan, R. W. (1986). Modern rescue missions: A survey of the International Union of Gospel Missions. *Journal of Drug Issues* , 16 (4), 495-509.
- Fannin, N., & Dabbs Jr, J. M. (2003). Testosterone and the work of firefighters: Fighting fires and delivering medical care. *Journal of Research in Personality* , 37 (2), 107-115.
- Fogelman, E. (1998). The rescuer self. *The Holocaust and history: The known, the unknown, the disputed, and the reexamined. Washington, DC: United States Holocaust Memorial Museum* .
- Friedman, I. A. (2006). Classroom management and teacher stress and burnout.
- Hamilton, W. D. (1963). The evolution of altruistic behavior. *The American Naturalist* , 97 (896), 354-356.
- Hopkins, A. (2009). Thinking about process safety indicators. *Safety science* , 47 (4), 460-465.
- Jerusalem, M., & Schwarzer, R. (1979). The general self-efficacy scale.
- Kristensen, T. S., Borritz, M., Villadsen, E., & Christensen, K. B. (2005). The Copenhagen Burnout Inventory: A new tool for the assessment of burnout. *Work & Stress* , 19 (3), 192-207.
- Kumm, M., & Bergqvist, A. (2010). Fire and rescue operations during construction of tunnels. In *ISTSS-Fourth International Symposium on Tunnel Safety and Security, Frankfurt am Main, Germany, March 17-19, 2010* (pp. 383-394).
- Maher, K. (2019). Taking an Intervention Approach to Assess Job Redesign in the UK Fire and Rescue Service: The Impact of Alternative Crewing Methods. In *Applying Occupational Psychology to the Fire Service* (pp. 97-132). Palgrave Macmillan, Cham.
- Maslow, A. H. (1948). "Higher" and "lower" needs. *The journal of psychology* , 25 (2), 433-436.
- Matheson, K., Manning, R., & Williams, S. (2011). From brigade to service: an examination of the role of fire and rescue services in modern local government. *Local Government Studies* , 37 (4), 451-465.
- Mitchell, J., & Bray, G. (1990). Emergency Services Stress: Guidelines for Preserving the Health and Careers of Emergency Services Personnel. *CHEVRON PUBLISHING CORP., P. O. BOX 15, ELLICOTT CITY, MD(USA). 1990.*
- Murphy, P., & Ferry, L. (2018). Another turn of the screw: fire and rescue under the Coalition Government of 2010–2015. In *Fire and Rescue Services* (pp. 45-59). Springer, Cham.
- Murphy, P., & Greenhalgh, K. (2013). Performance management in fire and rescue services. *Public Money & Management* , 33 (3), 225-232.
- Nowbahari, E., & Hollis, K. L. (2010). Rescue behavior: Distinguishing between rescue, cooperation and other forms of altruistic behavior. *Communicative & Integrative Biology* , 3 (2), 77-79.
- Pines, A. M., & Keinan, G. (2005). Stress and burnout: The significant difference. *Personality and individual differences* , 39 (3), 625-635.
- Qirko, H. (2004). Altruistic celibacy, kin-cue manipulation, and the development of religious institutions. *Zygon®* , 39 (3), 681-706.

- Salters-Pedneault, K., Ruef, A. M., & Orr, S. P. (2010). Personality and psychophysiological profiles of police officer and firefighter recruits. *Personality and Individual Differences* ,49 (3), 210-215.
- Trivers, R. L. (1971). The evolution of reciprocal altruism. *The Quarterly review of biology* , 46 (1), 35-57.
- Wagner, S. L. (2005). The” Rescue Personality”: Fact or Fiction?. *Australasian Journal of Disaster and Trauma Studies* .
- Wagner, S. L., Martin, C. A., & McFee, J. A. (2009). Investigating the “Rescue personality”. *Traumatology* , 15 (3), 5-12.