

Original Research Article

Burnout and Job Satisfaction among Nurses Employed in a Public Sector Hospital under Indian Railways

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ABSTRACT

Background: There is popular public perception that a ‘railway job’ is one of the most secure jobs one can get. Within this context, we wish to see the levels of burnout and job satisfaction among the nurses in a railway hospital in Varanasi. The aim of the study was to quantify the levels of burnout and its sub-domains along with job satisfaction levels and to identify any demographic factors that have relationships with burnout and job satisfaction and the presence of correlations between demographic variables, burnout and job satisfaction.

Methodology: Institutional ethics committee of IMS, BHU approved the study. A total of 38 nurses were recruited. Demographic data, scores on Maslach’s Burnout Inventory (MBI) and Nursing Workplace Satisfaction Questionnaire (NWSQ) were collected and analyzed to assess relationships of and correlations between various demographic variables, MBI and NWSQ scores.

Results: No relationship found between age, years of experience and burnout levels. Similarly, no relationship found between age, years of experience and job satisfaction. Overall job satisfaction was high and levels of burnout was low among the subjects, with none in severe burnout bracket. Job dissatisfaction had a significant positive correlation with burnout ($r = +0.460$; $p\text{-value} = 0.004$; $N = 38$), Emotional Exhaustion ($r = +0.364$; $p\text{-value} = 0.025$; $N = 38$) and depersonalization ($r = +0.364$; $p\text{-value} = 0.025$; $N = 38$). Personal accomplishment had no correlation with job satisfaction but 71% of subjects very low levels of it.

Conclusions: We observed low levels of burnout and high levels of job satisfaction in all our subjects. Despite this, the sense of personal accomplishment was poor in 71% of the subjects. Burnout, emotional exhaustion and depersonalization scores showed a positive and significant correlation with job dissatisfaction.

Keywords: nurses, railway, burnout, job satisfaction, depersonalization.

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INTRODUCTION

Nursing is a demanding profession. It requires constant alertness, precision, physical labour and updated learning. The field is very diverse and different medical specialties demand different sets of skills. According to WHO, nursing encompasses autonomous and collaborative care of individuals of all ages, families, groups and communities, sick or well and in all settings [1]. Despite all the dedication that nurses may show, their efforts may often be taken for granted and even overlooked at times. Nurses deal with intense human aspects of health and illness [2]. Consequently, the stressful nature of nursing may ultimately lead to burnout and job dissatisfaction [3].

The term ‘burnout’ was first used by Freudenberger to describe a worker’s response to chronic work-related stress [4]. According to Maslach burnout is a “physical, emotional and mental exhaustion syndrome which develops a negative self-concept as well as negative attitude towards the profession, life and other people”

[5]. Maslach pointed out 3 domains that have a bearing on overall experience of burnout – emotional exhaustion, depersonalization, and reduced sense of personal accomplishment [6]. Many other factors mediate and moderate the experience of burnout, like general health and fatigue, job satisfaction, perceived social support, perceived stress, work environment, personal resilience etc [7-9]. But in the current study we are considering only job satisfaction. The relationship between job and life satisfaction seems to be reciprocal [10]. Job satisfaction is also related to several other workplace behaviours, such as work attendance, turnover decisions, retirement decisions, psychological withdrawal, pro-social behaviour, job performance etc. When burnout levels are low and job satisfaction is good there is a ‘spillover’ effect in life, improving life-satisfaction [8,10]. Job dissatisfaction and burnout are clearly identified as problems in human services that need to be addressed. In the current observational study, we wish to quantify the levels of these constructs in the nursing staff to improve their working conditions and optimize hospital resources.

METHODOLOGY

In this cross-sectional, observational study we intend to quantify the level of burnout among staff nurses who work in the hospital and quantify their level of job satisfaction. We shall also analyse how the two constructs correlate with each other and how their sub-domains interact with the demographic variables. The study was approved by the institutional ethics committee of IMS, BHU, Varanasi.

The hospital has a total of 45 staff nurses, who were all approached with a proforma that included demographic and professional details (like Age, Sex, Academic Qualification, Professional Qualification, Marital Status, Type of Family, Area of Job performance, Years of experience, Working Hours per day, Sleeping Hours per day, Exposure to Stress), Maslach’s Burnout Inventory (MBI) and Nursing Workplace Satisfaction questionnaire (NWSQ). The responses were collected in a ballot box to ensure anonymity. Total of 38 responses were received.

Maslach’s Burnout inventory (MBI) is a 5-point Likert-type scale with 22 items that evaluates job burnout of individuals and has three sub-dimensions, namely Emotional Exhaustion (EE), Depersonalization (DP) and Personal Achievement (PA). In this scale, scores obtained from each sub-dimension are evaluated separately – scores of personal achievement subscale are reverse coded (negatively framed questions), then the total score is obtained by adding the subscales. Score range is between 0 and 110 (higher the score, more the burnout) [11].

Nursing Workplace Satisfaction Questionnaire (NWSQ) is a 17 item 5 points likert-type scale with three domains – intrinsic, extrinsic and relational. Intrinsic domain looks at the issues that the individual suffers from within – 6 items, extrinsic domain quantifies the ‘work environment – it has 7 items, and relational looks at interpersonal issues – 4 items. Scores range between 0 and 85. Higher scores signify lower satisfaction levels [12].

Correlation studies between demographic variables, burnout (and its sub-domains) and job satisfaction were done using SPSS version 22.

RESULTS

Demographics

Total number of respondents (N) were 38, out of which 36 (94.7%) were female and 2 (5.3%) were male. The age range was between 33 years and 59 years with the average age of the sample population as 50.56 years (SD +/- 7.25 years). A higher proportion of the sample population fell in the upper age range, so age did not have normal distribution; it had a negative skew of -0.835, as 38% of the respondents fell in the age bracket of 54 – 56 years. Seeing this trend, we divided the age groups into a higher age group (more than 50 years) and lower age group (50 years and less) for comparisons. The higher age group had 23 (60.5%) respondents and lower age group had 15 (39.5%).

Other demographic variables included qualification, marital status, years of experience in work, type of family, working hours per day sleeping hours per day and subjective exposure to stress at work (refer to table 1). All these variables did not show any significant difference within their categories (except age), so no comparison groups (like based on gender, working hours, qualification, etc. could be derived).

Table 1: Distribution of various demographic variables of the subjects.

Demographic Attributes		No. of staff	%
Age	50 and less	15	39.5
	>50 years	23	60.5
Gender	Female	36	95
	Male	2	5
Academic Qualification	< Graduate	0	0
	Graduate	38	100
Professional Qualification	GNM	31	82
	B.Sc. (Nursing)	7	18
Marital Status	Unmarried	2	5
	Married	34	89
	Divorcee	1	3
	Widow	1	3
Type of Family	Nuclear	36	95
	Joint	2	5
Area of Job Performance	OPD	2	5
	IPD	21	55
	Emergency & ICU	8	21
	OT	3	8
	Administration	4	11
Years of Experience	< 10 years	4	11
	10-15 years	2	5
	15-20 years	7	18
	>20 years	25	66
Working Hours per day	8 hours	38	100
	> 8 hours	0	0
Sleeping Hours per day	8 hours	34	89
	< 8 hours	4	11
Exposure to Stress in work place	Occasionally	38	100
	Frequently	0	0

Age, Job Satisfaction and Years of Experience

Job satisfaction scores ranged between 20 and 54 points with mean score at 28.48 (SD = 6.97). We looked at the difference between job satisfaction scores of nurses above age of 50 and below 50 and found no significant difference in scores – with Student's T test showing $t = 0.004$ and $p = 0.996$ (df = 36). Correlation analysis between age and job satisfaction also showed no correlation -- Pearson's $r = -0.012$; p -value = 0.942; $N = 38$. Job satisfaction also showed no correlation with years of experience at work -- Years of Experience vs Job satisfaction: $r = +0.045$; p -value = 0.790; $N = 38$.

Age, Burnout and Years of Experience

The scores of respondents on Maslach's Burnout Inventory ranged between 26 and 51, with mean score of 35.81 (SD= 4.75). The comparison of burnout scores between respondents above and below the age 50 mark showed no significant difference ($t = 1.212$, $p=0.233$; df = 36). Pearson's correlation analysis between Age and Burnout scores also revealed no significant trend -- $r = +0.230$; $p = 0.165$; $N = 38$. Burnout scores and years of experience also showed no significant correlation ($r = +0.272$; $p = 0.09$; $N = 38$).

Burnout and Job Satisfaction

Burnout scores ranged between 26 and 51 with mean score at 35.81 (SD= 4.75). Burnout scores were further divided into its three sub domains: Emotional Exhaustion (EE), Depersonalization (DP) and Personal Accomplishment (PA). The scores of personal accomplishment were reverse coded so that more the score in this domain, more is the feeling of personal accomplishment. Scores of each of the domains are represented in the table 2 below.

Table 2: Mean scores and SDs of subjects in different domains of MBI.

MBI sub-domain	Range	Mean	Standard Deviation	Burnout level
Emotional Exhaustion	11-20	15.15	+/- 2.07	Low
Depersonalisation	2-21	5.18	+/- 3.46	Low
Personal accomplishment	11-19	15.47	+/- 2.04	Low

In Maslach's inventory burnout severity is high when PA scores are 33 or less, DP scores are 12 or more and EE scores are 30 or more. None of our respondents showed over all high severity of burnout in all three domains. The scores of EE and DP domains were low in majority of subjects, 34 (89.4%) and 29 (76.3%) respectively, but 27 out of 38 subjects (71.05%) had very low PA scores reflecting poor personal accomplishment (refer to table no. 3).

Table 3: Distribution of subjects in severity categories of each domain of MBI

	Emotional Exhaustion	Depersonalization	Personal Accomplishment (not reverse coded)
High N	EE score of 30 or more 0	DP score of 12 or more 2 (5.2%)	PA score of 33 or less 27 (71.05%)
Moderate N	EE score 18 – 29 4 (11.6%)	DP score 6 – 11 7 (18.4%)	PA score 34 – 39 11 (28.9%)
Low N	EE score 17 or less 34 (89.4%)	DP score 5 or less 29 (76.3%)	PA score 40 or more 0

The range of score of job satisfaction response was 20-54. A total of 95% staff nurses has responded as 'good' and 5% staff nurses as 'moderate' on job satisfaction criteria, with mean job satisfaction of 28.47 (SD +/- 6.17). This suggests that the staff nurses were satisfied with their job.

The 3 sub-sets of the questionnaire, viz. intrinsic, extrinsic and relational were calculated. The result is presented in Table 4 below:

Table 4: Level of job satisfaction in sub-domains of NWSQ (n=38)

NWSQ sub-domain	Response Score		
	Range	Mean	Standard Deviation
Intrinsic domain (How much do you enjoy your job)	6-14	9.00	+/- 2.24
Extrinsic domain (My work has grown more interesting)	9-23	11.76	+/- 3.08
Relational domain (The people you work with)	5-18	9.50	+/- 2.17

Correlation studies between burnout and job satisfaction were done and the findings are summarized below in table 5.

Table 5. Correlation between domains of MBI and Job Satisfaction.

MBI	Job Satisfaction Score	
	Pearson's co-efficient (r)	p-value
Overall Burnout	0.460	0.004*
Emotional Exhaustion	0.364	0.025*
Depersonalisation	0.449	0.001*
Personal Accomplishment	0.144	0.388

Higher scores on job satisfaction scale represent lower satisfaction. Overall burnout scores are observed to have a moderate positive and significant ($p=0.004$) correlation with job satisfaction scores, so higher the burnout lower is the job satisfaction. The emotional exhaustion and depersonalization subscales also have a positive and significant correlation with job satisfaction scores, although moderate.

DISCUSSION

In the current study, age of the subjects does not seem to be correlated with both, job satisfaction and burnout severity. The difference in burnout scores between the higher and the lower age groups (above and below mean age) is also insignificant, and same was the case with regards to age groups and job satisfaction scores. When it comes to age and burnout a lot of studies have shown significant relationship between them. Burnout is usually higher in younger age groups and decreases with increasing age, increasing years of work experience and financial and job insecurity [8-9]. Yet in the current study we observed no such correlation. This could be due to multiple reasons. Firstly, the respondents in the study have a high average age of 50 years to begin with (no bivariate normality) and as high as 84% of the respondents also had a work experience of more than 15 years. A meta-analysis of 15 studies on burnout in Indian healthcare professionals encompassing a total of 3845 subjects reported, 'younger age, female gender, unmarried status, and difficult working conditions were associated with increased risk of burnout' [13]. As can be seen in our study, our subjects are older, more experienced, almost all married but also almost all females.

Secondly, our subjects enjoy better job security: most of the respondents are permanent employees of the Indian Railways. This brings with itself a regular salary along with house allowance and travel allowance, time bound promotions, a good number of paid leaves and along with that, as majority of our respondents are older, they enjoy the benefits of the old pension scheme (applicable till 2004) which has a defined benefit pension of half the last pay drawn. It is not a surprise then that all the subjects reported good or, at worst, moderate job satisfaction. Though there are studies that look at job satisfaction in Indian railways do not paint a perfect picture [14], the railway hospital our study was conducted in is run by non-specialty carder of healthcare professionals, so most of the problematic cases are referred to 'higher centres or empanelled hospitals. This may contribute towards a low work pressure, although no comparative studies are available to support this claim.

There is one large scale study from Taiwan that compared the levels of burnout and job satisfaction in various groups of employees that included subjects from private and public sectors and groups based on how large the employing organization was. In all, the study included 15,000 workers and noted that the levels of burnout, psychosocial work conditions and job stability were significantly better in public sector workers than in private sector. Within this, large enterprise employees had the poorest indicators, and out of all contributing factors 'job stability' seemed to contribute the most towards lower levels of burnout [15]. In the current study, overall Burnout scores had moderate positive correlation with subjective job dissatisfaction and the correlation was statistically significant ($r = +0.460$; $p\text{-value} = 0.004$). Emotional exhaustion and depersonalization subscales also showed moderate positive and statistically significant correlation with job dissatisfaction but personal accomplishment scores showed no correlation with it. This holds true in a variety

of studies. A study from Indonesia (2019) that included 399 subjects tested the correlations between burnout, domains of job satisfaction and intention to leave; and found EE and DP to have a significant negative influence on job satisfaction, and that job satisfaction had a significant positive relation with performance [16]. Another study conducted on nursing teams (n=267) of 2 Brazilian paediatric hospitals evaluated the correlation of the scores of emotional exhaustion domain of MBI and work satisfaction. The study indicated significant relations and established that the lower the level of emotional exhaustion, the higher the job satisfaction [17].

PA seems to have no correlation with job satisfaction in our study. The reason could be that all the respondents scored less than 33 in PA subscale of MBOI (n = 38; see in the table above), so there was very low variation in this data and no correlation could be observed. Perhaps a larger sample size would have allowed for better distributed variable of PA scores. The correlation was not significant but the fact that all 38 participants had low personal accomplishment scores is alarming. Most of the respondents (84.2%) have more than 15 years of job experience. The average age is also high (age and PA). Questions related to PA in MBI reflect efficiency and interest in dealing with patients' problems, interaction with colleagues, having a positive influence in work place, attitude towards rewards and personal energy levels after work, etc [18]. A US based study that recruited 6682 healthcare professionals reported, "If we look at the length of time the respondents have operated in the healthcare sector, it becomes obvious that levels of PR lessen as time goes by, with percentages equal to 62.7% and 65.93% in those who have been employed for 1-5 years or over 15 years respectively [19].

Few steps that can be taken to increase the sense of personal accomplishment among the nurses include organizing more events where the accomplishments of individuals and various teams are acknowledged, rewarded and documented/displayed. Regular group activities and workshops that require employees from different departments to pool in their skills and communicate with each other helps fostering a more inclusive work environment. Also, providing more opportunities, like short exchange programs with higher tertiary care institutions, sponsored courses, skill-growth dependent bonuses, etc. will go a long way in improving personal accomplishment levels in the staff.

Limitations

The study had an observational/cross-sectional design with a small sample size, so the findings should be looked at with caution when generalizing it on a larger demographic of nurses. Also, since variables like age, gender, years of work experience, burnout scores and job satisfaction scores were all similar across all the subjects, no comparison groups could be formed. The indicators of job performance and work environment were not taken in consideration, so could not observe the moderating/mediating effects of these factors on high job satisfaction and low burnout in our study population.

CONCLUSION

The study was conducted to observe the levels of burnout and job satisfaction in nurses working in a public sector hospital under Indian Railways. Burnout, emotional exhaustion and depersonalization scores showed a positive and significant correlation with job dissatisfaction. We observed low levels of burnout and high levels of job satisfaction in all our subjects. Despite this, the sense of personal accomplishment was poor in 71% of the subjects and correlation studies showed no correlation between personal accomplishment and job satisfaction. Overall, the subjects had good job satisfaction and low burnout despite poor personal accomplishment.

REFERENCES

1. World Health Organization. Nursing and Midwifery. https://www.who.int/healthtopics/nursing#tab=tab_1. Accessed June 19, 2023.
2. Dolan N. The relationship between burn- out and job satisfaction in nurses. *J Adv Nurs* 1987;12:3–12.
3. Happell B, Martin T, Pinikahana M. Job satisfaction and burn- out: a comparative study of psychiatric nurses from forensic and a mainstream mental health service. *Int J Ment Health Nurs* 2003;12(1):39–4.

4. Herzberg F, Mausner B, Snyderman BB. *The Motivation to Work*. 12th ed. Transaction Publishers; 2011.
5. Maslach C, Leiter MP, Bakker AB. *Burnout at Work: A psychological perspective* Kindle Edition. 1st edition. Psychology Press; 2014:16–22.
6. Maslach C, Jackson SE, Leiter MP. *Maslach Burnout Inventory Manual*. 3rd ed. Consulting Psychologists Press; 1996.
7. Dyrbye LN, Shanafelt TD, Johnson PO, Johnson LA, Satele D, West CP. A cross-sectional study exploring the relationship between burnout, absenteeism, and job performance among American nurses. *BMC Nursing* 2019;18(57).
8. Amiri M, Vahedi H, Mirhoseini SR, Eghtesadi AR, Khosravi A. Study of the Relationship Between Self-Efficacy, General Health and Burnout Among Iranian Health Workers. *Osong Public Health Res Perspect*. 2019;10(6):359-67.
9. Kim S, Kim H, Park EH, Kim B, Lee SM, Kim B. Applying the demand–control–support model on burnout in students: a meta-analysis. *Psychol Schools* 2021;58:2130–47.
10. Wenceslao U, Marcos GE, Diego C, Juan OC, Andrés MS. Revisiting the Link between Job Satisfaction and Life Satisfaction: The Role of Basic Psychological Needs. *Front Psychol* 2017;8:1664-78.
11. Schaufeli WB, Bakker AB, Hoogduin K, Schaap C, Kladler A. On the clinical validity of the Maslach Burnout Inventory and the Burnout Measure. *Psychol Health* 2001;16(5):565-82.
12. Fairbrother G, Jones A, Rivas K. Development and validation of the nursing workplace satisfaction questionnaire (NWSQ). *Contemporary Nurs* 2010;34(1):10-8.
13. Kesarwani V, Husaain ZG, George J. Prevalence and Factors Associated with Burnout among Healthcare Professionals in India: A Systematic Review and Meta-Analysis. *Indian J Psychol Med* 2020;42(2):108-115.
14. Rayees MU. Modern Management, Applied Science & Social Science. *Int J Educn* 2019;1(4):7-13.
15. Yeh WY, Yeh CY, Chen CJ. Exploring the public-private and company size differences in employees' work characteristics and burnout: data analysis of a nationwide survey in Taiwan. *Ind Health* 2018;56(5):452-63.
16. Prajogo W. The relationship among emotional exhaustion, job satisfaction, performance, and intention to leave. *Adv Manage Appl Econ* 2019;9(1):21-9.
17. Alves DFS, Guirardello EB. Safety climate, emotional exhaustion and job satisfaction among Brazilian paediatric professional nurses. *Int Nurs Rev* 2016;63:328–35.
18. Brady KJS, Ni P, Sheldrick RC, Trockel MT, Shanafelt TD, Rowe SG, Schneider JI, Kazis LE. Describing the emotional exhaustion, depersonalization, and low personal accomplishment symptoms associated with Maslach Burnout Inventory subscale scores in US physicians: an item response theory analysis. *J Patient Rep Outcomes* 2020;4(1):42.
19. Petrelli F, Scuri S, Tanzi E, Nguyen C, Grappasonni I. Public health and burnout: a survey on lifestyle changes among workers in the healthcare sector. *Acta Biomed* 2018;90(1):24-30.

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