

THE IMPACT OF ROLE OVERLOAD ON JOB STRESS AND EMPLOYEE JOB SATISFACTION: A STUDY ON EMPLOYEES IN THE OIL REFINERY SECTOR OF ASSAM

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Abstract

The study examines the intricate connection between workplace stress, role overload, and job satisfaction among employees of oil refineries in Assam. The challenging nature of refinery operations, along with a high-risk environment, significantly contributes to occupational stress, leading to decreased job satisfaction. A structured questionnaire was administered to gather data from 224 executive personnel working in the four oil refineries in Assam. The data was then analysed to assess the impact of workload on employee stress and job satisfaction. The data reveals a strong connection between having too many responsibilities at work and experiencing job-related stress, which ultimately results in lower job satisfaction. The study underscores the significance of implementing effective stress management techniques and organizational interventions to decrease role overload and enhance job satisfaction among employees at the oil refineries in Assam. The study also explores the implications for management practices and policy recommendations aimed at creating a healthier and more productive work environment.

Keywords: role overload, job stress, job satisfaction, employee well-being, oil refinery employees

Introduction

Role overload occurs when employees are given more work than they can handle within the available time and resources. According to Bacharach et al. (1990), role overload is characterized by the need to complete a large volume of work in a limited amount of time, leaving employees to question whether they can efficiently execute their tasks within the given time frame. Goode (1960) describes role overload as a situation in which an individual assumes multiple roles, each with its own set of demands that surpass the individual's capacity due to inadequate resources to meet these demands (Mittal & Bhakar, 2018). This phenomenon is particularly common in high-risk industries such as oil refineries. Employees at oil refineries often face high job demands leading to significant stress. Their responsibilities include maintaining complex machinery, ensuring compliance with safety regulations, and meeting production targets. The constant pressure can result in role overload, where employees feel that the demands placed on them exceed their abilities and motivation to fulfil their job duties (Singh, 1998).

The increased workload can lead to chronic stress, affecting both the emotional and physical well-being

of workers. Workplace stress can manifest as worry, fatigue, and decreased job performance, creating a cycle of lower productivity and mistakes. Role overload contributes to job stress, which is associated with negative effects on employee health (Verburgh, 2017). Role overload is also linked to outcomes such as psychological stress, anxiety, depression, higher turnover rates, reduced organizational commitment, and poorer job performance of the employees (Tang & Vandenberghe, 2021).

According to Topper (2007), occupational stress is the feeling of not being able to cope with the demands of a job or work environment (Yaacob & Long, 2015). Stress is an adaptive response to external conditions that can cause physical, psychological, and behavioural problems among employees (Luthans, 2011). Some common job stressors include: having too much work to do, conflicting responsibilities, uncertainty about duties, pressure from colleagues or office politics, long work hours, poor physical work environments, challenging tasks, job insecurity, and non-work-related stressors such as family obligations (Rathi & Kumar, 2022). Occupational stress can lead to absenteeism, poor work performance, psychological issues, and physical symptoms like headaches, fatigue, and stomach problems (Mustafa, et al., 2015).

Job satisfaction and dissatisfaction are a function of the perceived relationship between what one wants from his job and what one perceives it as offering or entailing (Locke, 1969). Robbins and Judge (2007), defined job satisfaction as positive feelings about one's job resulting from an assessment of its characteristics (Abbasi, 2015). When employees feel overloaded, their job satisfaction suffers, leading to high turnover, low morale, and decreased overall efficiency. Employee job satisfaction is crucial because it leads to lower attrition rates, increased productivity, a positive work culture, lower absenteeism, and an improved brand image (Wanjare, Thorat, & Joshi, 2023). Businesses can enhance the satisfaction of its employees by being empathetic, motivating and providing bonuses and incentives to employees to reduce their work load and facilitate their job satisfaction (Haholongan & Kusdinar, 2019).

Rationale of the study

Oil refineries are significant contributors to India's energy sector, yet employees often face excessive workload and stressful conditions. Researching the connection between role overload, job stress, and job satisfaction can lead to finding out ways for improvements in employee well-being and operational efficiency. Understanding these dynamics is essential for developing targeted interventions to enhance job satisfaction and promote a healthier and more productive work environment in Assam's oil refineries.

Review of literature.

(Diamond, 2010) The study found that customer service representatives in call centres experience role stress due to role conflict and role overload. These work conditions affect their job satisfaction and lead to a desire to leave the job. (Nahar, Hossain, Rahman, and Bairagi, 2013) The study highlights that satisfied employees are more productive, whereas a poor work environment leads to anxiety of its employees. Additionally, the study revealed that female employees report lower job satisfaction compared to their male colleagues. Moreover, non-government employees are more likely to experience job stress due to employment uncertainty and a heavy workload. (Ali & Farooqi, 2014) A study of 207 employees at a public university found that work overload has a significant negative association with job happiness. On the other hand, job satisfaction is highly positively associated with employee job performance and job engagement. (Abbasi, 2015) The author revealed that work overload had a detrimental impact on job satisfaction and job stress. According to the study, stress can be reduced by maintaining a strong social support system, staying focused on one's life and work, and engaging in activities that promote balance and motivation. (Mittal & S.S.Bhakar, 2018) In a survey conducted by

the authors, it was found that female employees working in banking institutions in Raipur are experiencing stress due to role overload. This is because they are expected to juggle family responsibilities along with their professional duties, leading to stress and job dissatisfaction. Role overload results in inefficiency and poor performance among the stressed female employees. However, the study mentions that a certain level of role overload and stress can lead to good job performance but it will ultimately bring job dissatisfaction among the female respondents. (Haholongan and Kusdinar, 2019) The findings of the study indicate that role overload in the workplace, which is caused by increased effort and high expectations of the employees impacts the employees job satisfaction adversely. (Dodanwala, Santoso, & Yukongdi, 2023) The study found that there was no significant effect of role overload on job stress or job satisfaction among 520 construction workers in Colombo, Sri Lanka. This was because employees entering the construction sector were already familiar with the work environment and its challenges. They appreciated the work ethic and therefore did not consider a high workload on construction sites to be a threat. The study also revealed that job satisfaction and job stress directly influenced employees' intentions to leave their jobs.

Research Gap

After going through the extensive literature review, it has been found that no studies have been conducted so far to study the impact of role overload on job stress and job satisfaction of oil refinery employees in Assam. The present research study is an attempt to fulfil the research gap.

Research methodology

The study is descriptive in nature, utilizing both primary and secondary data. Primary data was collected from 224 respondents holding executive positions in Assam's oil refinery sector. The sample respondents are executive employees employed in the state's four oil refineries: Bongaigaon Refinery, Digboi Refinery, Guwahati Refinery, and Numaligarh Refinery Limited. The data was collected using a stratified random sampling procedure. The responses for role overload were obtained using six statements for the variable role overload from A K Srivastava and A P Singh's Occupational Stress Index. The job stress of the sample respondents was measured by using the Occupational Stress Index which includes the 12 factors of role overload, role ambiguity, role conflict, group or political pressure, person responsibility, under participation, powerlessness, poor peer relation, intrinsic impoverishment, status, strenuous working condition and unprofitability. The scale comprises of 46 statements with five-point Likert scale responses ranging from strongly disagree to strongly agree. Out of the 46 statements, 28 are true keyed, and 18 are false keyed. Data for job satisfaction is collected with the help of 20 variables which include physical working conditions, autonomy, coworkers and colleagues, recognition, superior, amount of responsibility, opportunity to use responsibility, inter organisation relationship, pay, promotion, management of the organisation, workers participation in management, hours of work, variety at work, job security, opportunity to help others, chances of learning new things, prestige in the job, decision making power and opportunity of achieving something worthwhile. The responses for the variables of the scale are taken using five-point Likert scale ranging from strongly disagree to strongly agree.

The Cronbach's Alpha values are as follows: 0.647 for Role Overload, 0.878 for the Occupational Stress Index, and 0.859 for the Job Satisfaction Scale. All these values are above 0.6, indicating internal reliability for the study's scales. Consequently, these variables and scales are used in the investigation. The survey respondents reported moderate levels of stress (mean=123.37) and job satisfaction (mean=76.98). The secondary data is gathered from published journals articles. The data is analysed using SPSS version 26 with descriptive statistics, correlation, and regression test.

Objectives

- To examine the relationship between role overload, job stress, and job satisfaction among executive respondents.
- To assess how role overload affects job stress and job satisfaction among executive respondents.

Hypothesis

H1: There is a significant impact of role overload on job stress among the executive respondents of the study.

H2: There is a significant impact of role overload on job satisfaction among the executive respondents of the study.

Discussion

Table 1: Demographic details of sample respondents

<i>Variables</i>	<i>Categories</i>	<i>Frequencies</i>	<i>Percentages (%)</i>
Gender	Female	27	12.1%
	Male	197	87.9%
Age	21 to 30 years	80	35.7%
	31 to 40 years	63	28.1%
	41 to 50 years	35	15.6%
	51 to 60 years	46	20.5%
Qualification	Graduate	31	13.84%
	Post Graduate	27	12.1%
	Professional Degree	166	74.1%
Years of experience	0 to 5 years	77	34.4%
	6 to 10 years	32	14.3%
	11 to 15 years	37	16.5%
	16 to 20 years	25	11.2%
	21 and above years	53	23.6%
Monthly Salary	Below ₹50,000	10	4.5%
	₹50,001-80,000	89	39.73%
	₹80,001-1,10,000	47	20.88%
	₹1,10,000 and above	78	34.8%
Marital Status	Married	148	66.1%
	Unmarried	76	33.9%
Family type	Joint	55	24.6%
	Nuclear	169	75.4%

Table 1 indicates the demographic details of the sample respondents. In the study's sample, (12.1%) of participants are women, while (87.9%) are men. The majority of respondents (35.7%) are between 21 and 30 years old, and (28.1%) are between 31 and 40 years old. In terms of qualifications, (74.1%) of respondents have professional degrees. Additionally, (34.4%) have been working in the refinery industry for less than 5 years, while (23.6%) have worked for more than 20 years. The survey shows that (39.73%) of respondents earn between ₹50,001-80,000 per month, while (34.8%) make more than ₹1,10,000. In terms of marital status, only (33.9%) of respondents are unmarried, while (66.1%) are married. Moreover, (75.4%) of the respondents are from nuclear families, while the remaining (24.6%) are from joint families.

Correlation analysis was performed to describe the intensity and direction of the linear relationship between role overload, job stress and job satisfaction.

Table 2: Correlation Matrix (N=224)

		Role Overload	Job Stress	Job Satisfaction
Role Overload	Pearson Correlation	1		
	Sig. (2-tailed)			
Job Stress	Pearson Correlation	.676**	1	
	Sig. (2-tailed)	.000		
Job Satisfaction	Pearson Correlation	-.381**	-.606**	1
	Sig. (2-tailed)	.000	.000	

** . P< 0.01 level (2-tailed).

Table 2 shows the correlation matrix which reveal that role overload is positively correlated with job stress ($r=.676$, $p=.000$), suggesting that as an employee's role load increases, so does their stress level. Furthermore, role overload has a negative correlation with job satisfaction ($r=-.381$, $p=.000$), indicating that role overload leads to reduced job satisfaction among the executive respondents in the study. Additionally, the study found a negative relationship between job stress and job satisfaction ($r=-.606$, $p=.000$), suggesting that as job stress rises, job satisfaction decreases.

Hypothesis testing 1:

Table 3: Regression Analysis Summary

Statistic	Value
Model Summary	
R	0.676
R ²	0.458
Adjusted R ²	0.455
Std. error of the estimate	15.06
ANOVA	
F Statistic	187.25
Degrees of Freedom (df)	1, 222
Significance (p value)	0.000
Coefficients	
Predictor	B
Intercept (Job Stress)	56.742
Predictor (Role Overload)	3.614

Table 3 indicates that 45% of job stress is significantly explained by role overload. The results implies that there is a significant impact of role overload over job stress as ($p=0.000<0.05$). For every unit increase in role overload, there will be a 36.14% increase in job stress of the respondents. Therefore, the alternative hypothesis is accepted that there is a significant impact of role overload on job stress.

Hypothesis testing 2:**Table 4: Regression Analysis Summary**

<i>Statistic</i>	<i>Value</i>
Model Summary	
R	0.381
R ²	0.145
Adjusted R ²	0.141
Std. error of the estimate	11.93
ANOVA	
F Statistic	37.60
Degrees of Freedom (df)	1, 222
Significance (p value)	0.000
Coefficients	
Predictor	B
Intercept (Job Satisfaction)	100.626
Predictor (Role Overload)	-1.282

Table 4 indicates that 14.5% of job satisfaction is significantly explained by role overload. The results implies that there is a significant impact of role overload over job satisfaction as ($p=0.000<0.05$). For every unit increase in role overload, there will be a 12.82% decrease in job satisfaction of the respondents. Therefore, the alternative hypothesis is accepted that there is a significant impact of role overload on job satisfaction.

Conclusion

Role overload is a significant issue among oil refinery personnel in Assam, leading to reduced job satisfaction. The nature of the work itself in the oil refinery industry create an environment where employees often face excessive workloads. The study results shows that role overload has a significant impact on job stress and job satisfaction of the executive employees in the oil refinery sector of Assam. Dealing with role overload and job stress requires a multifaceted approach. Additionally, organizations that foster a supportive work environment, where employees feel valued and understood, can significantly mitigate the negative effects of role overload. It is evident that addressing the challenges of role overload and job stress is crucial for the long-term sustainability and profitability of Assam's oil refinery industry.

Contribution

Identifying the impact of role overload on work stress will enable to provide recommendations for improving job satisfaction and employee well-being. The results can assist administration in implementing targeted interventions, such as improved personnel policies, stress management programs, and career development opportunities. The aim of the study is to cultivate a healthier, more engaged workforce, leading to improved productivity and efficiency in Assam's vital oil refinery sector.

Suggestion

Strategic interventions are required to address the ill effects of role overload, job stress and job dissatisfaction. Effective management of role overload and job stress involves implementing supportive measures such as adequate staffing, clear job role and access to mental health resources. Increasing staffing levels and enhanced distribution of workload will help to alleviate the pressure from an

individual employee. It is essential to refine job roles and responsibilities to ensure clarity and manageability of a job position. Clear demarcation of duties prevents employees from feeling overwhelmed by ambiguous or excessive tasks. Implementing comprehensive stress management programs like regular workshops on stress reduction techniques, easy access to professional counsellors, encouraging regular breaks of the employees and providing facilities of relaxation can mitigate the effects of chronic stress. Regular feedback sessions and open communication channels ensures employees that their concerns are addressed promptly and effectively. To survive the competitive market, organisations need to enhance the job-related opportunities and ensure that workers enjoy their work (Nahar, Hossain, Rahman, & Bairagi, 2013). Moreover, use of advanced technology is another way of reducing employee work load (Ali & Farooqi, 2014). By addressing these issues oil refineries can enhance job satisfaction, improve employee well-being, and ultimately boost productivity and safety in the operation. Organisations should focus on keeping factors like role overload at appropriate levels and increase the levels of organisational support (Verburgh, 2017).

Future scope

Future researchers could explore the impact of role overload on other job aspects such as employee performance, motivation, engagement, and commitment. In addition, researchers should consider conducting longitudinal studies to gain a better understanding of the effects of role overload on individuals and various aspects of their lives and work environments. Also, other industries can be considered for studying the variables' role overload, job stress and work satisfaction in the future.

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