STUDY ON THE OCCUPATIONAL STRESSORS OF INDIAN SEAFARERS

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ABSTRACT

The study aims to investigate the impact of the factors of occupational stress on the job satisfaction of seafarers. The occupational stress is considered as one of the most important workplace hazards for seafarers, which may have a detrimental effect on the job satisfaction. In the competitive 24-hour industry where shift work and long working hours are common, the potential for stress at sea is extremely high. Stress is associated with impaired individual functioning in the workplace and the negative effects of the stress include reduced efficiency, decreased capacity to perform, dampened initiative and reduced interest in working, increased rigidity of thought, a lack of concern for the colleagues and a loss of responsibility (Greenberg and Baron, 1995; Matteson and Ivancevich, 1982). Stress has been associated with important occupational outcomes of job satisfaction, organisational commitment and employee withdrawal behaviour (Naumann, 1993; Sullivan and Bhagat, 1992; Tett and Meyer, 1993; Williams and Hazer, 1986). High levels of work stress are associated with low levels of job satisfaction (Landsbergis, 1988; Terry et al., 1993) and the job stressors are predictive of job dissatisfaction and a greater propensity to leave the organisation. The study had analysed the occupational stress and its impact on the job satisfaction of the seafarers' using the dimensions of Job Description Index model.

Key words: Occupational Stress, Stressors, Job Satisfaction, Job Description Index (JDI).

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1. INTRODUCTION

The Job Stress is a common problem for all the transportation modes and industries. The effects of stress at sea are particularly dangerous due to the specialized nature of seafaring, which requires constant alertness and intense concentration from its seamen. Furthermore, the long periods away from home, limited communication among colleagues and consistently high workloads, separate seafaring profession from other industries. Working in these circumstances, the seafarers' health, even their life-span, may be affected by extreme stress and impaired performance (Smith, 2007).

The experience of stress reactions in the workplace is not an isolated phenomenon (Fletcher, 1988). A number of aspects of working life have been linked to stress and the different aspects of the work itself can be stressful, namely work overload (DeFrank and Ivancevich, 1998; Sparks and Cooper, 1999, Taylor et al., 1997) and role-based factors such as lack of power, role ambiguity, and role conflict (Burke, 1988; Nelson and Burke, 2000). The quality of the social environment in the workplace is associated with stress (Sparks and Cooper, 1999) as are certain behaviours of the leader (Carlopio et al., 1997; Cooper and Marshall, 1976). Threats to career development and achievement, including threat of redundancy, being undervalued and unclear promotion prospects are stressful (Nelson and Burke, 2000). The conflict between home and work and the work impact on personal relationships is stressful (Sparks and Cooper, 1999). Also, physical conditions such as high noise levels, overcrowding in the workplace or a lack of privacy have been associated with stress.

Furthermore, occupational stress creates to be endemic to the current workplace and there are a number of workplace factors, called Stressors that make jobs stressful and difficult for number of employees in all sorts of industries. Additional stressors related to interpersonal relationships at work are conflicts with supervisors, conflicts with colleagues, conflicts with subordinates and conflicts with management policies (Paul Spector, 2002). Kahn and Byosiene, (1992), Taylor, (1999) and Paul (2002) further pointed out that there are some other stressors in the organizational context, such as having insufficient resources to do the job (e.g., defective equipment or inadequate supplies), or low salaries structure. Research has clearly demonstrated that all of these stressors are connected with employees' health and well-being. As is characteristically found in various studies, higher levels of stressors (e.g., heavy workload and uncertainty about supervisors' expectations) were associated with physical symptoms, such as headaches, and poor job attitudes.

Job satisfaction is central to the work lives of seafarers' and to the effective use of personnel within organisations (Foster 2000, Koeske et al 1994). When satisfied at work, seafarers' are likely to be more stable, productive and accomplished towards organisational goals. According to research, human service workers who derive satisfaction from their work are more committed and provide better services, than those who are dissatisfied (Acker 1999). Job satisfaction involves employees' affective or emotional feelings, it has major consequences on their lives. Locke (1976) described the most common consequences of job satisfaction on employees as, the effects on the physical health and longevity; mental health and an impact on the employees' social life in general.

Several stress theories differ in their views of the major determinants of stress; some theories put emphasis on personal characteristics of human being (e.g., Friedman & Rosenman, 1974; Kobasa, 1979); others highlight that stress is the cause

of work environment (e.g., Siegrist, 1996; Edwards, Caplan, & Van Harrison, 1998; Demerouti, Bakker, & Schaufeli, 2001) and some view stress as a function of an interaction between person (worker) and environment (workplace). The Job Description Index (JDI) was developed by Smith, Kendall and Hulin in 1969 and is the most widely used instrument measuring employees' job satisfaction within organisations (Kreitner & Kinicki, 1995). Spector (2000) adds that the JDI is directed towards specific areas of satisfaction rather than merely global satisfaction and allows for different areas of the job to be independently measured.

2. RESEARCH OBJECTIVES

The objectives of the study were to analyze the impact of stress factors on the job satisfaction of the seafarers:

- To investigate the relationship between the facets of Work role, Disruption of everyday routine, Ship's environment, Disruption of Social life, Teamwork, Physical environment and the Job satisfaction of seafarers.
- To study the relationship between the facets of Job Descriptive Indices and the Job satisfaction of seafarers.

In order to achieve the objectives, this article is organized around the following working hypotheses:

- H₁: There is a significant relationship between the scores of stressors & job satisfaction.
- H₂: There is a significant relationship between the nature of the job, pay, supervision, promotion, and co-workers with job satisfaction amongst seafarers.

3. RESEARCH METHODOLOGY

The target population was considered as seafarers of Indian origin who were working at various levels/job categories on the deck side (Master, Chief officer, 2nd / 3rd officer, Bosun) and the engine side (Chief Engineer, 2nd / 3rd / 4th Engineer) of foreign going merchant vessels. The total sample size considered for the study was 385, which is arrived by using the sampling formula suggested by Cochran (1963) with 95% confidence level and $\pm 5\%$ precision. The sample responses were obtained by using quota sampling.

The study consists of two parts. In the first part of the study, a questionnaire was administered by specifying the dimensions of stressors & Job satisfaction such as *Work role* (Work expectations, Fair work assessment, Responsibility to carry-out the work), *Disruption of everyday routine* (Missed meals, Less exercise), *Ship climate* (High morale, No fear while on-board, Assisting peers), *Disruption of Social life* (Separation from family, No socialization), *Teamwork* (Group activities, Conflict with peers), *Physical environment* (Climatic conditions, Uncomfortable rest place), *Job satisfaction* (Payment, Appropriate rest, Working hours), were measured on a five-point likert scale.

In the second part of the study, Job Descriptive Index questionnaire (JDI) was administered to gather the data from the seafarers. JDI questionnaire requires the seafarers to describe their work as opposed to directly asking seafarers how satisfied they are, thereby ensuring that respondents have a job referent rather than a self-referent. The JDI measures satisfaction perceptions for five Job facets, namely: Pay, Promotions, Supervision, Co-workers and the Work itself (Spector, 2000). The

research instrument consists of 32 items – *Nature of the Job* facet comprises of 7 items such as "Routine, Hot (temperature), Tiresome, Challenging, On your feet, Frustrating, Gives a sense of accomplishment"; *Pay* facet comprises of 5 items such as "Adequate Income, Income provides luxuries, Insecure, Less than I deserve, Underpaid"; *Supervision* facet comprises of 8 items such as "Asks my advice, Impolite, Praises good work, Doesn't supervise enough, Quick tempered, Knows job well, Leaves me on my own, Lazy"; *Promotion* facet comprises of 6 items such as "Good opportunities for advancement, Opportunities somewhat limited, Promotion on ability, Good chance for promotion, Unfair promotion policy, Regular promotions"; *Co-workers* facet comprises of 6 items such as "Stimulating, Slow, Ambitious, Responsible, Talk too much, Lazy". To score the responses, seafarers are requested to indicate whether each item does or does not describe their jobs, by using a 3-point scale.

4. STATISTICAL ANALYSIS

In the first part of the study, the internal consistency and reliability of the scales were tested by computing the cronbach's alpha values. The scales of the factors such as Work role, Disruption of everyday routine, Ship climate, Disruption of Social life, Teamwork, Physical environment & Job satisfaction have good internal consistency & reliability with the alpha values of 0.89, 0.91, 0.82, 0.84, 0.92, 0.88 and 0.91 respectively.

Table 1 Cronbach's Alpha Values

Factors	Cronbach's Alpha
	0.91
Ship climate	0.82
Disruption of Social life	0.84
Teamwork	0.92
Physical environment	0.88
Job satisfaction	0.91

The Pearson's Product Moment Correlation Coefficients were calculated between the stressors and job satisfaction. The results (Table-2) showed a significant relationship (all r values were greater than +0.71 and all the corresponding p -values were less than 0.05) between stressors and job satisfaction. The correlation analysis indicates that the factors of stress considered in the study and the job satisfaction of the seafarers are statistically significant. Any modification of the factors (such as the work role, physical environment, everyday routine & ship's climate) in the adverse manner may definitely put the seafarer under stressful condition and ultimately the seafarer may become dissatisfied with the job.

In the second part of the study, the JDI facets such as Job, Pay, Supervision, Promotion and Co-workers have good internal consistency & reliability with the Cronbach's alpha values of 0.72, 0.84, 0.76, 0.89 and 0.77 respectively.

Table 2 Pearson's Product Moment Correlation Coefficients

Stressors		
	R values	p values
Work role	0.75	0.032
Disruption of everyday routine	0.83	0.021
Ship climate	0.72	0.028
Disruption of Social life	0.96	0.012
Teamwork	0.88	0.026
Physical environment	0.94	0.014

Table 3 Cronbach's Alpha Values of JDI facets

JDI Factors	Cronbach's Alpha
Job	0.72
Pay	0.84
Supervision	0.76
Promotion	0.89
Co-workers	0.77
Job Satisfaction	0.78

The Pearson's Product Moment Correlation Coefficients were calculated between the JDI facets and job satisfaction. The results (Table-4) showed a significant relationship (all r values were greater than +0.69 and all the corresponding p-values were less than 0.05) between the JDI facets and job satisfaction. Based on the analysis, it may therefore be specified that the job satisfaction depends on the JDI facets such as nature of the job, pay, supervision, promotion and co-workers cooperation.

Table 4 Pearson's Product Moment Correlation Coefficients

JDI Factors		
	R values	p values
Job	0.95	0.011
Pay	0.89	0.021
Supervision	0.70	0.028
Promotion	0.94	0.012
Co-workers	0.91	0.016

5. CONCLUSION

Seafarers' stress has become a global concern across the shipping industry. Stress is a complicated issue which is caused and affected by many factors. In light of these indications, a comprehensive identification of stressors was made through seafarers.

Seafarers under excessive stress tend to find their jobs less satisfying. Some of their intrinsic or extrinsic needs may be thwarted or not met sufficiently. It was found that a clear relationship existed between the facets of stress and job satisfaction. The subjects with lower job satisfaction were found to experience more stress in the form of overload, role ambiguity, role conflict, under participation, powerlessness and low

status compared to those with higher job satisfaction. Furthermore, Stress was experienced due to loss of control over obtaining desired outcomes on the job.

Emphasising the role of individual differences in relation to stress in the workplace could present the temptation to see stress as a personal weakness or failing not as a systematic problem of job design. The personality traits of external locus of control and behaviours are associated with higher perceived levels of stress originating from work place dimensions. Internal locus of control linked to better psychological health and a lower level of occupational stress, and greater job satisfaction.

Stress was consistently associated with poor sleep quality, negative environmental factors, high job demands and high stress. In addition, those on shorter tours of duty were consistently more likely to report high stress levels. Other factors found to be important included: frequent port visits, physical work hazards, working more than 12 hours a day, low job support and finding the switch to port work stressful. The additive combination of different risk factors proved most highly associated with stress and with its immediate consequences as job dissatisfaction.

The empirical findings from the study indicate that the factors such as pay, the nature of job, supervision, relationships with co-workers and opportunities for promotions have been found to contribute to job satisfaction of seafarers. Stress can impair the seafarers' performance at work, diminish their alertness, and affect their problem-solving and decision-making abilities.

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