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Occupational stress faced by the deep sea fishermen at Mangalore port of coastal Karnataka

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Abstract

Occupational stress is an integral part of every workers life. Moderate work stress is a symptom of a working individual's lifespan. Every job will have an amount of stress even if the worker has high level of interest in it. But when this stress becomes chronic it can be very devastating and dangerous to the physical and emotional health of the individuals. Stress has negative impact on the productivity of the employees. A detailed system is thus very well required in organisations to reduce employee stress and increase work performance (Altangerel, 2015). Stress is the answer to an event or situation. Parting from family, loneliness on board, fatigue, multi-nationality, limited leisure activity and sleep deprivation are the common reasons for increased stress in seafarers (Carotenuto, 2012). In the Exploratory Study consisting of 100 Deep Sea Fishermen of Mangalore Port at Coastal Karnataka, the researcher measures the amount of occupational stress faced by them. The study is also an effort to analyse the relationships between variables such as age, education, marital status and experience and the amount of stress faced by them at work.

Keywords: occupational stress, work stress, deep sea fishermen, seafarers, Mangalore port

1. Introduction

Occupational stress also known as job stress, has been defined as the experience of negative emotional states such as frustration, worry, anxiety and depression attributed to work related factors. Occupational stress is an individual experience, depending on the traits of individuals, in that not all people react to events the same way. It is also defined as the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker (NIOSH, 1999) [5]. Job stress produces negative effects for both the organization and the employee. For the organization, the results are disorganization, disruption in normal operations, lowered productivity, and lower margins of profit. For the employee, the effects are threefold: increased physical health problems, psychological distress, and behavioural changes (Rice, 1992) [6]. Occupational stress has become a serious health issue, not just in terms of an individual's mental and physical well-being, but also for employers and governments who have begun to assess the financial consequences of work stress. Lou and Shiao (1997) [4] estimate that occupational stress causes half of all absenteeism, 40% of turnover, and that 5% of the total workforce accounts for the reduced productivity due to preventable stress (300 billion dollars for the US economy annually). Occupational stress is seen in almost every occupation and fisheries sector is not spared from it too.

Indian Fisheries is regarded as the sunrise sector of Indian economy. It has been active in providing threefold support to our economy in terms of employment, food and nutritional security to all especially to the local poor. It is also an active member in contributing to export of products and earning foreign exchange. This sector has witnessed an inspiring growth from a subsistence traditional activity to a well-developed profitable and diversified organisation. From a domestic activity of 1950's it has moved on to be an industry from 1990's.

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Table 1: Details of last 3 years’ State budget, grant and expenditure and details of revenue are as under: (In Lakhs)

Year	Plan		Non Plan	
	Grant	Expenditure	Grant	Expenditure
2011-2012	17605.81	11000.98	1982.61	1972.06
2012-2013	19324.44	10146.18	2591.16	2538.67
2013-2014	20041.40	14551.63	2867.86	2808.23

Source: Performance Budget 2014-15- Fisheries department of Karnataka

Deep Sea Fisheries

Fisheries carried out in waters deeper than about 400m are generally considered to be deep sea fisheries. The history of deep sea fishing in India dates back to the early seventies when two Mexican trawlers imported from the United States of America were introduced to operate in Indian waters. At present the concept of Deep Sea fisheries has gained a lot of importance with the boats above 140HP operating in deep waters.

The No. of workers employed in deep sea fishing is also increasing day by day with the increase in the number of boats getting registered every year. Most of the men

employed in deep sea fisheries are strong in statute as they depend on physical stamina and skill for survival in deep waters for 8-10 days at a stretch. Being away from their families, habituating on the boats, and relying only on the luck to save themselves is some of their features. These workers though belonging to different culture and language share a very mutual coordinated relationship on the boat. Following the hierarchy where the captain of the boat takes the lead till the last worker, every person has his share in the smooth sailing of the boat and absence of interpersonal skills can be very dangerous in the deep waters where you don’t have access to any of else apart from your co-workers.

Table 2: Coastal Karnataka at present has the following number of deep sea boats operating in 9 ports.

Name of Place of Registries	Above 140 HP	(Average person in each vessels=8) Total Manpower
Mangalore	470	3760
Malpe	599	4792
Gangolli	93	744
Bhatkal	50	400
Honnavar	20	160
Tadri	17	136
Belekeri	13	104
Amadalli	0	0
Karwar	22	176
Total	1284	10,272

Labour Employed in Fisheries Sector

Fisheries sector has faring high in terms of its foreign exchange earning potential and employability of vast majority of coastal community in the primary, secondary and tertiary sectors associated with fishing. A National Marine Fisheries Census (NMFC) was conducted in 2005 by the CMFRI, Kochi (for mainland coastal States/UTs) and the Fishery Survey of India (FSI), Mumbai (for the two Island groups). As per the NMFC, 2005 the marine fisheries sector provides employment to about 0.9 million fishers in active fishing and about 0.7 million fishers in various other fishing operations. The number of people involved in marine fisheries related activities include nearly 0.2 million in fish marketing, 0.1 million in repairs of fisheries requisites, around 0.2 million in fish processing and 0.1 million in other ancillary activities. In all, an estimated 3.51 million people depend on marine fisheries for their livelihoods in India. Improvements in technology has led to unbridled capital investment in this sector and has attracted more people from the adjacent coastal transects who do not necessarily belong to the fishing community. Seafood exports from Karnataka is exploring new heights with increasing opportunities for value addition and branding of products. This has led to increasing in the number of export units employing large number of skilled and unskilled workers. Further over the years, there is increase into fishing and allied activities. Employment status and opportunities in marine fisheries sector of Karnataka has increased over the years along with mechanisation and increased replacement of labour intensive fishing technologies.

With the Blue Revolution as highlighted by PM Narendra Modi in March 2017, there has been a call to give tremendous emphasis on fisheries sector development along with Fisher folk development in our nation. In spite of the call for the development, the deep sea fisheries sector which consist the human resources too in its activities is not seem to be given much importance. With a good amount of fishermen population employed in deep sea fisheries in Coastal Karnataka District, the lack of facilities provided to them is seen at a larger note. Absence of welfare facilities, non- registration of the fishermen and negligence towards the health and welfare of these workers is common characteristics found while studying about them.

Objectives of the study

1. To measure the occupational stress level of the respondents
2. To find the relationship between the demographic features of the workers and occupational stress

Hypothesis

- H₀₁ = There is no significant difference between age and occupational stress of deep sea fishermen.
- H₀₂ = There is no significant difference between marital status and occupational stress of deep sea fishermen.
- H₀₃ = There is no significant difference between education and occupational stress of deep sea fishermen.
- H₀₄ = There is no significant difference between native and occupational stress of deep sea fishermen.

H_{05} = There is no significant difference between Experience and occupational stress of deep sea fishermen.

Methodology

The design of the study is exploratory in nature as it is an attempt to explore occupational stress of deep sea fishers. Universe of the study: Coastal Karnataka has nine (9) ports with altogether eleven thousand three hundred and eleven (11311) boats registered of various fleet lengths. There are purseine boats, motorised boats and the mechanised boats. For the current research study researcher will be considering the boats with more than 140 Horse Power (HP) capacities in the Mangalore Port of Coastal Karnataka. In Mangalore a total number of 470 Boats registered for Deep Sea Fishing with a total workforce of 3760 altogether (taking into consideration 8 workers in each vessel including the captain).

Sampling Method: The researcher has used snowball sampling method of data collection to collect the responses from 100 deep sea fishermen, in particular the Boat Captain and the Co-Captain working in the boats registered at Mangalore Fishing Port of Coastal Karnataka.

Snowball sampling method has been used by the researcher to select the captain and the co-captain of the boat taking into consideration the vast amount of experience they hold in their respective positions.

Data Collection

Researcher used a measurement tool ‘The Workplace Stress Scale’ by The Marlin Company, North Haven, CT, and the American Institute of Stress, Yonkers, NY 2008 a 5 point Likert Scale for collection of responses from the deep sea fishermen of Coastal Karnataka.

Results and discussion

Table 3: Demographic Profile of the respondents

Variables	Classifications	Frequency
Age	21 to 30years	01
	31 to 40 years	27
	41 to 50 Years	53
	51 to 60 years	19
	Total	100
Marital status	Married	84
	Unmarried	16
	Total	100
Education	Neo literate	12
	Primary	35
	Higher Primary	23
	High School	22
	PUC	08
	Total	100
Experience	5 years or less	13
	6 years to 10 years	52
	11 years to 15 years	19
	16 years to 20 years	11
	21 years and above	05
	Total	100

Table one shows the demographic profile of the respondents such as their age, marital status, education and experience. Most of the respondents are of 41-50 years of age as respondent has chosen them based on their position in the work i.e., the captain of the boat and the co-captain. These are the main two workers in the boat who handle most of the responsibilities and in most of the time occupy the position

due to the experience or maturity. In the study 84% of the respondents interviewed by the respondents are married and all the respondents are below PUC level. Highly qualified people do not take this occupation as they are aware about the other occupational options available to them. As this occupation in need of more of manual work, importance to education is given less of priority.

Table 4: Responses of the respondents

Variables	Never	Rarely	Sometimes	Often	Very Often
Conditions at work are unpleasant or sometimes even unsafe	0	0	23	50	27
I feel that my job is negatively affecting my physical or emotional well being	0	0	0	78	22
I have too much to do and/ or too many unreasonable deadlines	0	7	15	65	13
I find it difficult to express my opinions or feelings about my job conditions to my superiors	6	3	50	19	22
I feel that job pressures interfere with my family or personal life	0	0	45	19	36
I have adequate control or input over my work duties	30	35	35	0	0
I receive appropriate recognition or rewards for good performance	18	25	10	47	0
I am able to utilise my skills and talents to the fullest extent at work	12	23	63	2	0

Table 4 (a): Consolidated responses to stress levels

Stress Level	Frequency
No Stress	0
Low Stress	0
moderate stress	23
severe stress	75
potentially dangerous	2
Total	100

The above tables make it evident that most of the employees are severely stressed on the job that they perform. The total

number of respondents falls under the category of Moderate stress, severe stress or potentially dangerous stress. Most of the respondents feel that the conditions at work are unpleasant and unsafe most of the time. This is evident from the RTI reference number: 40/2016-17 issued by the Dy. Director of Fisheries, Mangalore that for the year 2015-16 there are no life jackets issued to the deep sea workers from the government as the scheme got cancelled. Basic requirement of safety at sea is not provided for these unorganised workers. Lack of welfare facilities are also making it obvious to the worker to feel stressed at his job.

Table 5: Distribution of Respondents' occupational stress on the basis of age

Age level	Stress level			Total	P Value (Significant Level 0.05)
	moderate stress	severe stress	potentially dangerous		
21-30	1	0	0	1	0.494
31-40	7	20	0	27	
41-50	11	40	2	53	
51-60	4	15	0	19	

Table 6: Distribution of Respondents' occupational stress on the basis of Education

Education	Stress level			Total	P Value (Significant Level 0.05)
	moderate stress	severe stress	potentially dangerous		
Neo literate	1	11	0	12	0.212
Primary	5	29	1	35	
Higher Primary	10	13	0	23	
High school	6	15	1	22	
PUC	1	7	0	8	

Table 7: Distribution of Respondents' occupational stress on the basis of marital status

Marital Status	Stress level			Total	P Value (Significant Level 0.05)
	moderate stress	severe stress	potentially dangerous		
Married	19	63	2	84	0.813
Unmarried	4	12	0	16	

Table 8: Distribution of Respondents' occupational stress on the basis of Experience

Experience Period	Stress level			Total	P Value (Significant Level 0.05)
	moderate stress	severe stress	potentially dangerous		
5 or less than 5	2	10	1	13	0.651
6 to 10	15	36	1	52	
11 to 15	4	15	0	19	
16 to 20	2	9	0	11	
21 and above	0	5	0	5	

In the above tables it is evident that the p value of the demographic variables is greater than the significant level 0.05 at degree of freedom 6. Hence Null Hypothesis is accepted. It indicates that there is no significant level of relationship between the variables such as age, education, marital status or experience with the amount of stress faced by the respondents. Irrespective of all the variables, the occupational stress experienced by the respondents does not change. It can be their role overload, role ambiguity, conflicting job roles, lack of influence over the work environment, inadequate work environment, and poor relationship with the colleagues which cause workplace stress.

Findings of the study

Irrespective of the demographic profile and general status experienced by the deep sea fishermen, the stress level of them is found high. Unpleasant work conditions at sea are stressing most of the fishermen and it is also a reason which causes a lot of harm to their physical and psychological

wellbeing. Deep sea fishermen are also burdened with a wider job profile which gives a burden on them throughout their work schedule and takes away any time of rest or leisure. Most of the fishermen also have a difficulty when it comes to expressing themselves to their superiors especially with regard to the difficulties they face at work and the measures they require in resolving the same. Interference of the job in the personal life of the fishermen is also a reason found commonly as stressful to the fishermen. Most of the fishermen feel that there is no reward given to them for their job and absence of due considerations from their superiors also stresses them.

Social work Implications

Giving due consideration to the issues faced by the unorganised labour, in particular by the deep sea fishermen is ignored by the policy makers and policy implementers. Social work with its varied methods such as Social Case work, Social Group Work, Community Organisation, Social Work Research, Social Work Administration and Social

Action can have an impact in reducing the occupational stress faced by the employees working in deep sea. Social group work can also be conducted on the workers engaged in deep sea fishing to understand the actual causes that cause harm to the occupation health of the respondents.

Disseminating this information's to the concerned authorities can also be done through articles and empirical works done through social work research. Case studies can be studied by the social workers and necessary suggestions to mitigate the same can be arranged.

Through social work research the issues of high importance has to be brought to the notice of the concerned fisheries authorities and follow up on the issues pertaining to it can be addressed wisely.

Conclusion

Reducing the job stress faced by the workers must be the top priority of any employer, though it is in organised sector or the unorganised one. Finding the level of stress and the causes and effects of it if not done accurately can be very dangerous for the worker as well as for the well-being of organisational growth too. Deep Sea fishing that is untouched by the researchers in the field of agriculture and allied occupations are the need of the hour, keeping in minds its growth and contribution to employment, revenue and nutritional security. Lower the stress level better will be the productivity.

Recommendation

The study conducted by the researcher points out that the stress level faced by the deep sea fishermen is severe but is not connected to their demographic features. There can be other work related reasons which work as stressors to the deep sea fishers. There can be further study done to probe more into the causes of stress among the deep sea fishermen and the impact of it on the health and social well-being of the workers.

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