

Short Communication

## JOB STRESS AND COPING AMONG FISHERMEN

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### Abstract:

**Introduction:** Fishing in Indian villages is considered one of the major occupations for the villagers. The work related health problems encountered by fishermen are vast. Long hours, extreme weather and working with heavy machinery contribute to a high mortality rate in fishermen. Despite a long standing acknowledgement of the dangers and mortality associated with fishing, there has been little research in this field

**Objectives:** The objectives of the study were to: assess the job stress and coping among fishermen, find the relationship between job stress and coping, find the association between job stress, coping and demographic variables such as age, religion, marital status, type of family, education, monthly income and work experience.

**Materials and Methods:** A descriptive survey was under taken among 140 fishermen using structured questionnaire. SPSS 16.0 software was used for data analysis. Frequency, percentage, Pearsons product moment correlation and Chi-square were used.

**Results:** Majority of the subjects had moderate stress (62.1%) and moderate cope (91.4%). It is found in the study that there is significant relationship between job stress and coping. There is significant association between job stress and work experience ( $\chi^2 = 6.90, p < 0.05$ ).

**Conclusion:** Fishermen who work for long hours in the sea without any contact with their families are prone to problems with their work and their personal life as it is unsafe at sea.

**Keywords :** Fishermen, job stress, coping.

### Introduction :

Fishermen are at higher risk of drowning and work related traumatic injuries, asphyxiation, skin allergies, gastric, skin and oesophageal cancers and lesions. Exposure (sun, weather extremes) conditions are also been observed to be health concerns for fishermen. Isolated working conditions, long shifts without sufficient rest, adverse weather, lack of formal safety training, inadequate personal protective equipment, and work related stress have been attributed to the increase risk associated with fishing. The workplace environment of fishermen is the

least safe among all the other occupations and the more dangerous the physical environment is the more the fishermen is at risk for stress.<sup>1</sup>

A comparative study was conducted in Great Britain

by the Department of Public Health of Oxford University to investigate the most hazardous occupation among all. Retrospective statistics of mortality were compared for the period between 1976-1995. The fishermen were 52.4 times more likely to have a fatal accident at work (95%) and seafarers were 26.2 times more likely, compared with other workers. Although the number of work related deaths has decreased in other occupation but fishing remains as hazardous as before. The study revealed that fishing is a dangerous occupation and many unfavourable working conditions were identified.<sup>2</sup>

A longitudinal survey study was conducted in Gdynia, Italy to evaluate the problem of work related accidents and injuries in fishermen. The study was conducted among deep sea fishing trawlers- factory ships of three large fishing companies for a period of 10 years. The population under study was 10,475 men and a control group of 4,073 workers employed on shore. 1688 work related accidents were recorded, including 33 fatal accidents. Incidence of

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work related accidents was 16.54 per 1000. In the control group the incidence was 27.98 per 1000 men (0.03 fatal accidents per 1000). There were more accidents recorded in the control group, than in fishermen. The incidence of fatal cases was about 10 times higher among fishermen than among worker employed on shore.<sup>3</sup>

A study done by Aneshensel, Rutter, and Lachenbruch in 1991, suggested that participants in shrimp fishing are at elevated risk for stress related health problems. The social stress model predicted elevated rates of mental health disorders as likely consequences of such stressful work. Their findings confirm the hypothesis that shrimp fishermen suffer mental disorders at more than twice the rate of the general male population, and at a rate significantly higher than that for male primary care patients. Shrimpers are especially vulnerable to mood and anxiety disorders, but are at no increased risk for alcohol abuse. This profile of disorders is rather unusual among North American men, who are generally more likely to be diagnosed with alcohol or other drug problems than with other mental disorders.<sup>4</sup>

A descriptive study was done on work related health problems and job satisfaction among fishermen of Udupi district by Ansuya. Data was collected from 100 fishermen from Malpe and Kodi Bengre of Udupi district, Karnataka. It was found that most of the subjects (48%) experienced moderate health problems. The health problems experienced by the fishermen are back pain, burning in the eyes, scratching and stings injury, skin allergy, shoulder pain and muscle cramps and knee joint pain. Majority of the subjects i.e.(86%) were having moderate job satisfaction in their profession.<sup>5</sup>

The objectives of the study were to assess the job stress among fishermen; assess the level of coping among fishermen and to find the relationship between job stress and coping. The findings of the study will help the professionals to plan an effective intervention to overcome the job stress and to enhance their coping.

#### Materials and Methods :

In order to find the correlation between the job stress and coping among the fishermen, the research design adopted for the study was a correlational survey design .

Convenient sampling was used to select 140 fishermen residing in Malpe and Kaup. The areas selected for the study were Malpe and Kaup from Udupi district. Malpe is located nine kilometres from Manipal. Majority of the population is engaged in fishing occupation. Kaup is located nineteen kilometres from Manipal. Majority of the population is engaged in fishing.

Demographic data were collected using a structured Demographic Proforma. The job stress scale was prepared by the researcher after reviewing research studies and discussion with experts in Mental Health Nursing. The coping was assessed by using a modified brief COPE by Carver .

Administrative permission and participant's informed consent was obtained from each subject and confidentiality was assured by the researcher.

Statistical package for social sciences software (SPSS 16.0) was used for statistical analysis of raw data. Frequency, percentage, mean standard deviation and Pearson's correlation test ( $p>0.05$ ) were applied.

#### Results :

Table 1 describes the sample characteristics. Most of the subjects 32.1% were in the age group of 36-45 years. In religion, majority of the subjects 87.9% belonged to the Hindu religion, most of them 39.3% had high school education and 37.1% earned between 1500-3000 Rs per month. Out of the 140 subjects 67.9% were from nuclear family and 50% had more than 16 years of experience in offshore fishing.

Figure 1 and 2 describes the percentage of job stress and coping among fishermen. Majority of the subjects (62.1%) had moderate stress and (91.4%) had moderate cope. Table 3 describes the mean percentage score and standard deviation obtained by fishermen in subareas of coping.

Further it was found in the study that there was significant relationship between job stress and coping ( $r = 0.189$ ) at 0.05 level. There was significant association between job stress and work experience ( $\chi^2 = 6.90, p < 0.0$ ).

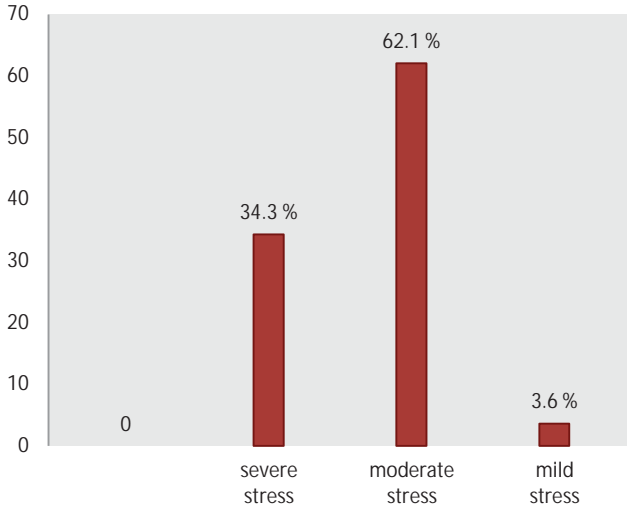


Figure 1. Bar diagram showing percentage of job stress in fishermen.

Table 1. Baseline characteristics of fishermen n=140

Sl.no	Demographic variables	Frequency(f)	Percentage(%)
1.	Age (in years)		
1.1	15-25	12	8.6
1.2	26-35	42	30
1.3	36-45	45	32.1
1.4	46-55	32	22.9
1.5	56-65	9	6.4
2.	Religion		
2.1	Hindu	123	87.9
2.2	Christian	11	7.9
2.3	Muslim	6	4.3
3.	Education		
3.1	Illiterate	5	3.6
3.2	Primary	29	20.7
3.3	Middle school	40	28.6
3.4	High school	55	39.3
3.5	PUC and above	11	7.9
4.	Monthly income in rupees		
4.1	<1500	8	5.7
4.2	1500-3000	52	37.1
4.3	3001-4500	32	22.9
4.4	4501-6000	32	22.9
4.5	>6000	16	11.4
5.	Type of family		
5.1	Joint	38	27.1
5.2	Nuclear	95	67.9
5.3	Extended	7	5.0
6.	Work experience in years		
6.1	1-5	13	9.3
6.2	6-10	29	20.7
6.3	11-16	28	20
6.4	>16	70	50

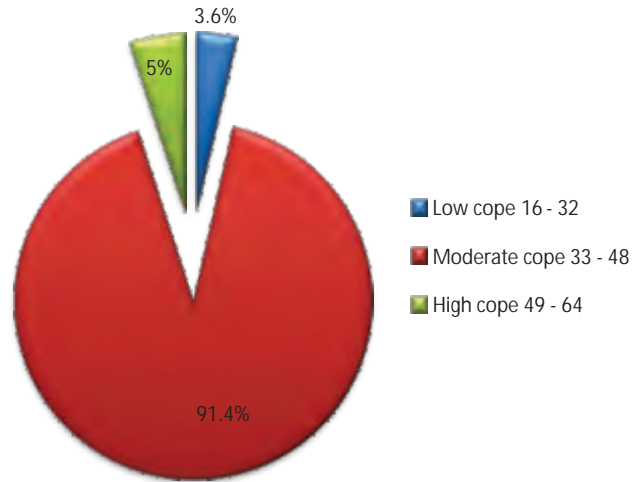


Figure 2. Percentage distribution of coping among fishermen.

Table 2. Mean percentage score and standard deviation obtained by fishermen in sub areas of coping. n=140

Dimensions of coping	No. of item	Maximum score	Mean percentage	Standard Deviation
Self distraction	1	4	58	0.91
Active coping	2	4	63	0.85
Denial	2	8	70.3	1.94
Substance abuse	1	4	65	0.82
Emotional support	1	4	65	0.82
Instrumental support	1	4	59	0.80
Behavioural disengagement	1	4	67.3	0.85
Venting	1	4	55.87	0.72
Positive reframing	1	4	63.5	0.86
Planning	1	4	60.35	0.91
Humour	1	4	54.62	0.81
Acceptance	1	4	53.5	0.78
Religion	2	8	68	1.53
Self blame	1	4	67.75	0.80

Discussion :

In this study the investigator found that out of 140 fishermen 62.1 % has moderate stress, 34.3 % has severe stress and 3.6 % has mild stress. Visser and Smets in their study on stress and stress related illness among medical specialist found that 55% had high levels of job stress.<sup>6</sup>

The present study revealed that there is a positive significant relationship between job stress and coping. This finding is contradicted by a study to explore the relationship between job stress and coping strategies of Hong Kong nurses working in an acute surgical unit. Data were collected from 98 Hong Kong surgical nurses using the Nursing Stress Scale and the Jalowiec Coping Scale.

Results showed that workload ( $M = 15.36$ ), lack of support ( $M = 13.32$ ), and inadequate preparation ( $M = 12.33$ ) are the most common stressors for Hong Kong surgical nurses. The most frequent strategies used by nurses to cope with stress can be characterized as evasive ( $M = 19.23$ ), confrontive ( $M = 17.46$ ), and optimistic ( $M = 15.81$ ), all of which are also rated as the most effective strategies in reducing stress levels. Only the confrontive, optimistic, supporting, and emotive coping strategies reveal significant correlations ( $p < .05$ ) with the stress levels of nurses, whereas the evasive, fatalistic, palliative, and self-reliant strategies showed no significant correlation with stress levels ( $p > .05$ ).<sup>7</sup>

The present study findings are also contradicted by another study conducted on correlation between stress, stress-coping and current sleep bruxism. Sixty-nine subjects, of which 48 were SB-patients, completed three German questionnaires assessing different stress-parameters and stress-coping-strategies. Results showed that different subscales of both the stress questionnaires and the coping questionnaire correlate significantly with SB. Regarding the coping strategies of subjects, the significant correlation found between the pixel score and the subscale 'escape' of the SVF-78 ( $r = 0.295$ ,  $p < 0.05$ ) indicated that the more the subjects fled their problems and did not deal with stress in a positive way, the higher was their SB-activity.<sup>8</sup>

The present study revealed that there is significant association between job stress and work experience. It

shows that 40 fishermen who has work experience of more than 11 years has severe stress as compared to the 8 fishermen below 11 years of work experience. This finding is supported by a study conducted in Poland to determine suicides among polish seamen and fishermen during work at sea. Retrospective data on 51 suicides of Polish seamen and fishermen in the years 1960-1999 during work at sea are presented. The impact of age, rank, and the period of service upon the incidence of these suicides are analysed. The calculated percentage share of suicides among all deaths registered at sea was compared with data referring to the general population. As regarded to the period of service only, the highest percentage of suicides was noted among merchant seamen with a period of service from 10 to 24 years, and among deep sea fishermen with the period of service of 10-14 years. The study has concluded that the suicidal tendencies and the planning of methods how to commit suicide are the effects of the extreme stress, exceeding the adaptation capabilities. Such a situation presents a serious hazard to the personal integrity and leads to the disappearance of the self-preservation instinct. Highly neurotic persons display low resistance to the isolation stress.<sup>9</sup>

#### Conclusion :

As stress increases, each individual adapt to the changes in their own way. If the individual adapts to the stressor in a positive way there will be a decrease in stress and there will be increased coping but on the other hand if the individual adapts to the stressor in a negative way then there will be an increase in the stress and an ineffective coping .

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