

Health Profile of Working Fishermen in Coastal City: A Cross-Sectional Study

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Abstract

Introduction: Fishing community is one of the unique, traditional and endemic community. Fishing is one the major occupation of Uttara Kannada district. Fishermen are a vulnerable group with some unfavourable life styles and vulnerable for injuries, skin and respiratory allergic manifestations and certain other diseases. Local surveys need to be conducted to understand the extent of morbidity patterns among fishermen and thereby devising a policy approach to suit the local needs

Methodology: This study was done as a population based cross - sectional study among the fishing community in Karwar which is located at coastal boundary of Uttarkannada district, Karnataka. The study was conducted for a period of 6 months from June to December 2019. All the families of Fishermen community coming under field practice area of Chittakula UHC of the Govt medical college of the district were constituted as a part of our study. A total of 472 families resided in the area constituting of 1419 population of which 724 working members in the occupation of fishing.

Result: Among them Percentage of male working members 33.1% (470) and 17.9% (254) were female working members. It was seen that 79.1% of males and 23.3% of females were literates. 32.1% were below the age of 20 years, 37.6% were between 21-40 years and 30.3% constituted above 40 years. It was found that 64.08% (464) of the working people in fishing sector had one or the other morbidity.

Conclusion: There is a high presence of musculoskeletal disorders, respiratory diseases, skin problems, non-communicable and communicable diseases in the fishermen community.

Key Words: Health, Fishermen, Coastal, city

Introduction

Fishing community is one of the unique, traditional and endemic community. Fishing is one

the major occupation of Uttara Kannada district. In the recent years there has been significant development in the standard of living in all the other communities due to the advancement of technology, but the

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development in fishing community is transient². The role of fisheries in Indian economy has gained momentum as a result of advanced techniques to increase the yield per unit area of water and earning foreign exchange. Coastline of Indian mainland is surrounded by Arabian Sea in the west, Bay of Bengal in the east, and Indian Ocean in the south.

Karwar which is the district headquarters of Uttarkannada is bounded by western ghats on one side and Arabian sea and Kali rive on the other. They usually live in unfavourable and challenging conditions and in the remote areas¹. Fisherman is the one who catches fish for living as an occupation or for sport. Fisherman usually takes up this profession from their ancestors. They are prone to infections due to unhygienic living condition which is a result of low Socio-Economic status and illiteracy and lack of awareness².

Fishermen are a vulnerable group with some unfavourable life styles and vulnerable for injuries, skin and respiratory allergic manifestations and certain other diseases. Majority of the morbidities in them are associated with their occupation and personal lifestyles, habits and lesser utilization of health facilities. In India, there has been no much advancement in studies on fisherman's health profile. The fact that this endemic population usually reside in the remote corners of the country where the access is pretty much limited¹

Fishing is an occupation where the occupants are exposed to both water and sunlight throughout their working hours, hence occupational diseases prevalent among the fishermen of Karwar is to be worked out. In India, the studies on fisherman are more concerned about their Socio-Economic status¹. It has been felt as the need of the hour to carryout systematic study on fisherman population and formulation of schemes to help them to improve the overall status. Local surveys need to be conducted to understand the extent of morbidity patterns among fishermen and thereby devising a policy approach to suit the local needs. Hence the current study will concentrate on health profile of fisherman in Karwar.

Materials and Methods

This study was done as a population based cross - sectional study among the fishing community

in Karwar which is located at coastal boundary of Uttarkannada district, Karnataka. Ethical clearance was obtained from institutional ethical committee. The study was conducted for a period of 6 months from June to December 2019. Fishermen population data was obtained from Central Marine Research Institute, Uttara Kannada district from the census 2007 data. All the families of Fishermen community coming under field practice area of Chittakula UHC of the Govt medical college of the district were constituted as a part of our study after taking informed consent. Universal sampling method was done. A total of 472 families resided in the area constituting of 1419 population of which 724 working members in the occupation of fishing. Thus our sample size constituted of 724 working members in fishing community.

Inclusion criteria: Only individuals working in fishing from the area for the last six months and had given the informed consent were included in the study

A written informed consent was obtained prior to the interview. Accordingly, 724 study subjects were selected. With regard to the illness if the study subject had suffered from one illness the details about that particular illness was enquired. If the study subject had suffered from more than one illness, any one illness was randomly selected using random number tables. The random selection of illness was adopted to avoid any kind of bias in selection of the illness and also would facilitate to obtain a fair mix of acute and chronic diseases.

Data entry and analysis was done using Statistical Package for Social Sciences (SPSS) version 15 software. Descriptive statistics were calculated for the various types of illness.

Findings:

A total of 472 families were interviewed. 1419 was the total population. The study included 724 individuals who were selected on the basis of working in fishing sector. It was found that among the entire population 789(55.6%) were males while 630(44.4%) were females. Among them Percentage of male working members 33.1% (470) and 17.9% (254) were female working members. It was seen that 79.1% of males and 23.3% of females were literates. 32.1%

were below the age of 20 years, 37.6% were between 21-40 years and 30.3% constituted above 40 years. It was found that 64.08% (464) of the working people

in fishing sector had one or the other morbidity. The details of the morbidity patterns is mentioned in table 1.

Table 1: Morbidity patterns among fishing community

SI.NO	SYSTEM INVOLVED	SPECIFIC ILLNESS	N (Individuals With morbidity)	PERCENTAGE %
1.	Orthopaedic & Musculoskeletal Disorders	Generalised body ache	22	3.1
		Fractures & dislocations	14	1.9
		Arthritis	14	1.9
		Spine disorders	8	1.1
		Tendon injuries	10	1.4
		TOTAL	68	9.4
2.	Non communicable diseases	Diabetes type II	19	2.6
		Hypertension	18	2.5
		Dyslipidaemia	13	1.8
		Rheumatic Heart disease	1	0.14
		TOTAL	51	7
3	Communicable diseases	Dengue	6	0.8
		Viral fever	14	1.9
		Typhoid	5	0.7
		Chikungunya	1	0.14
		Malaria	2	0.3
		Diarrheal diseases	4	0.55
		TOTAL	32	4.4
4	Other Medical diseases	Anemia	23	3.2
		Hypothyroidism	6	0.8
		Hyperthyroidism	2	0.3
		TOTAL	31	4.3
5	Dermatological manifestations	Fungal lesions	25	3.5
		Impetigo	10	1.4
		Contact dermatitis	8	1.1
		Scabies	6	0.8
		Keloids	5	0.7
		Acne	7	1
		Vitiligo	1	0.14
		Herpes	2	0.3
		Psoriasis	1	0.14
		TOTAL	65	9

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6	Surgical morbidities	Cellulitis	7	1
		Acid peptic disease	11	1.5
		Lipomas	5	0.7
		Gluteal abscess	4	0.55
		Non healing ulcer	4	0.55
		Hernias	3	0.4
		Appendicitis	1	0.14
		Haemorrhoids	3	0.4
		TOTAL	38	5.2
7.	Other morbidities	Eye diseases	31	4.2
		Gynaecological problems	18	2.4
		Dental problems	14	1.9
		Cardiac diseases	17	2.3
		Respiratory illness	56	7.7
		Casualty emergencies	33	4.5
		Psychiatric illness	10	1.4
		TOTAL	179	24.7
GRAND TOTAL			464	64.08

Discussion

This study was done on the fishermen community, the study sample included all the working population in the community. The point of interest of the study was to find out the different morbidities among the fishing working population.

In this study orthopaedic and musculoskeletal disorders (9.4%) was the highest among all the morbidities. Generalised body ache was the highest among them followed by Arthritis, Fractures and dislocation. A study conducted at Chennai had similar patterns with musculoskeletal disorders taking highest toll of 14.4%¹. This difference in the percentage could be because in their study the study population involved only those who had one or the other illness compared to ours were, we have studied the patterns in the working community. In the study conducted among fishermen by Dr. S. B. Rotti³, injuries following trauma were found to be 2.7% which is in concordance with our study, which shows that fractures, tendon injuries and dislocations following trauma to be 3.3% of the subjects. Toner et al in their work have also shown that subjective symptoms from the musculo-skeletal system were common among fishermen⁴. Increase in cases of

musculoskeletal and orthopaedic could be because of the style of their strenuous work which demands excess uses of body strength like pulling boats, nets, rowing and many more^{5,6,7}. Osteoarthritis of knee may result from working and living in the vertical environment of a moving boat⁸.

Skin infections like fungal infections, impetigo, contact dermatitis, scabies, herpes infections, folliculitis, psoriasis, keloids, Acne and vitiligo were found to be 9% among the working population. In the study done by Dr. S. B. Rotti³, allergic manifestations were found to be 2.7% while other skin diseases were found to be 3.4%. Overall, 6.1% had dermatological manifestation which is in terms with our study. Similar to our study, a study conducted at Chennai among fishermen had 9.7% suffering from dermatological manifestations. Skin infections were found to be more in this community because of reasons like unclean habits, overcrowding, unhygienic practices, long hours spent in humid regions, excessive sweating and lack of utilisation of health facilities.

In this study it was seen that 2.6% of them had Diabetes type 2 and 2.5% were suffering from Hypertension. Overall NCD's was seen among 7% of the population. However, in the study done by

Dr. S. B. Rotti³, endocrine diseases such as diabetes were found to be 0.4% and further hypertension was grouped under cardiovascular diseases. A study conducted at Chennai showed 5.3% of them affected by NCD'S. Rapid urbanisation, untimely and unhealthy food habits, excessive consumption of animal fats could be the reason for the same. In our study 4.4% of the study subjects were suffering from one or the other communicable diseases mentioned in Table 1. As the study was conducted in rainy season there were cases of dengue, malaria, diarrhoea and viral fever forming the majority. The reasons could be unhygienic environment with water collection areas leading to vector borne diseases, unsafe drinking water and improper waste and sewage disposal.

Respiratory diseases were found in 56 (7.7 %) subjects in the last six months. It is observed that upper respiratory tract infections, lower respiratory tract infections, asthmatic bronchitis, emphysema and pneumonia formed majority of the cases which is in concordance with the study done by Dr. S. B. Rotti³. This susceptibility to respiratory diseases among the subjects could be due to recurrent change from land to sea environment and also due to risk factor like smoking which was seen in most of these patients suffering from emphysema in this population.

Conclusion

There is a high presence of musculoskeletal disorders, respiratory diseases, skin problems, non-communicable and communicable diseases in the fishermen community. Varied weather conditions, physical stress, long and odd working hours, strain on handling the moving boat/ship, sun burns, exposure to irritants are some of the pivotal reasons for the presence of certain morbidities in this particular occupational community.

Conflict of interest: NIL

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Ethical clearance: Obtained from Institutional ethics committee, KRIMS KARWAR

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