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Original Research Article

Dermatoses in fishermen in Chennai

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ABSTRACT

Background: Fishermen play a major role in both food security and the local economy. However, because of their line of work, they are subjected to certain environmental and occupational risks. They are more susceptible to a variety of skin conditions known as occupational dermatoses as a result of prolonged contact with sunlight, seawater, humidity, and physical stress.
Aim: Our study aims to evaluate the various dermatoses among fishermen.
Materials and Methods: A cross-sectional study among 120 patients at a Tertiary care hospital in Tamil Nadu for the duration of 6 months. Based on the patient's history, clinical features, and investigations, the prevalence of dermatoses was found. IBM SPSS was used to tabulate and evaluate all of the acquired data. At the end of the data collection, the various prevention methods and awareness about skin health were explained.
Results: The most common dermatoses observed were Dermatophytosis 36.6% followed by scabies 12.6% and Acne vulgaris 10.8%. 7.5% of patients had Seborrheic Dermatitis and Eczema. Protective measures, such as the use of gloves and sunscreen, were not adopted by our study participants.
Conclusion: Fishermen are particularly vulnerable to occupational dermatoses, and their situation is made worse by a lack of protective gear. Accessible protective equipment and focused health education could aid in reducing these workplace risks. More research is necessary to create long-lasting therapies for this susceptible group.

1. Introduction

Fishermen are often put in dangerous situations due to environmental variables. They are continually exposed to elements that are detrimental to the health of their skin, including sand, ocean, salt, strong wind flow, and humidity. Their skin is at risk from a variety of potential dangers, including stings from aquatic creatures, contact with sea products, and sharp equipment used in marine jobs.[1] Fishermen have a higher risk of sustaining severe injuries and being stung, both of which may make it easier for infectious microbes to enter the body.[2] Fishermen are put in long hours of nonstop labour, and the occupation of fishing continues to be one of the most dangerous and demanding jobs available due to the tough physical circumstances, displacement, isolation, and less-than-ideal personal habits that are required of them. Because of their lower socioeconomic status and a higher rate of illiteracy, fishermen tend to have poorer overall health.[3,4] There haven't been many population-based studies done on fishermen, and even on a worldwide scale, the information

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on these topics hasn't been addressed thoroughly.[5,6] India has one of the largest populations in the world, and it ranks second and seventh in the world in total fish output from fresh and marine waterways respectively. This is since India has access to both fresh and marine water resources.[7,8] There is a paucity of research on the topic of the skin health of fishermen, despite the fact that one of the most crucial economic activities is fishing in India. There is a disproportionately high frequency of skin issues among the fishing community, but it has not received sufficient attention. As a consequence of this, we made the decision to carry out this study in order to ascertain the level of frequency of skin conditions among fisherman in Chennai

2. Materials and Methods

Our study was conducted as a cross-sectional study among 120 patients in a tertiary care medical college and hospital in the Chengalpattu district for the duration of 6 months. The study participants selected are the persons with fishing as a primary occupation attending Dermatology OPD. Ages above 80 and below 18, with systemic comorbidities and who refused to give written consent were excluded from the study. The participants were selected based on a convenient sampling method. All details of the study population including age, sex, occupation, clinical type, and site of involvement were noted. Based on the patient's history, clinical features, and investigations, a diagnosis of the underlying disease was made. All the data collected were tabulated & analyzed using IBM SPSS. The various prevention methods and awareness about skin health are explained at the end.

3. Results

Table 1: Sociodemographic characteristics

Variable		No of patients n = 120 (%)
Age (in years)	18 – 30	38 (31.6)
	30 – 50	57 (47.5)
	50 – 70	25 (20.9)
Gender	Male	84 (70)
	Female	36 (30)
Duration of work as Fisherman	<5 years	14 (11.7)
	5–10 years	37 (30.8)
	>10 years	69 (57.5)

Table 1 showed theSociodemographic characteristics of patients. Among 120 patients 47.5 % of them were aged between 30 – 50 years, 31.6% of the participants were between 18 – 30 and 20.9% of the patients belonged to 50 – 70 years. The majority of the patients were males. More than half of the patients worked as a fisherman for more than 10 years. Only 11.7 % of the patients worked less than 5 years as fishermen.

Table 2: Various dermatoses observed among fisherman

Diagnosis	No of patients n = 120 (%)
Dermatophytosis	44 (36.6)
Seborrheic Dermatitis	9 (7.5)
Scabies	15 (12.6)
Acne Vulgaris	13 (10.8)
Psoriasis Vulgaris	7 (5.8)
Eczema	9 (7.5)
Polymorphous Light Eruption	6 (5)
Melasma	6 (5)
Urticaria & Insect Bite Allergy	11 (9.2)

Table 2 depicts the various dermatological diseases observed among fishermen. The most common skin diseases found among fishermen were Dermatophytosis 36.6% followed by scabies 12.6% and Acne vulgaris 10.8%. Each 7.5% of patients had Seborrheic Dermatitis and Eczema. Among 120 patients 9.2% patients had Urticaria & Insect Bite Allergy. 5% of patients had photo-induced diseases like Polymorphous Light Eruption and Melasma. 5.8% of the patients had Psoriasis Vulgaris. The pictorial representation was shown in Figure 1.

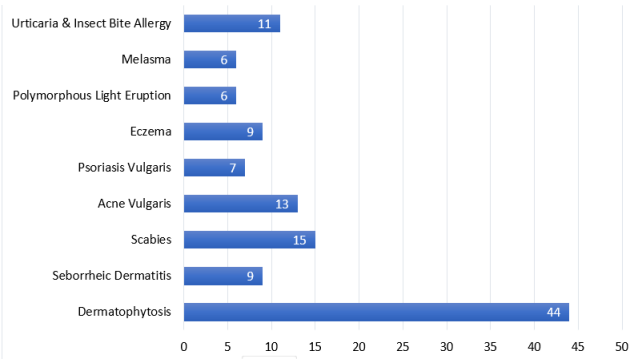

Figure 1: Various dermatoses observed among fisherman

Table 3: Association between Dermatoses with duration of years in Fishing as occupation

Dermatoses	> 10 years	< 10 years	p-value
Infection & infestation	42	26	0.740
Autoimmune and inflammatory	17	12	
Photo induced	9	3	
Miscellaneous	6	5	

Table 3 depicts the association betweenDermatoses and duration of years in Fishing as an occupation and we found an increased prevalence of Dermatoses among the participants who had more than ten years in Fishing as an occupation and we couldn't find significant.

4. Discussion

Figure 2: Tinea cruris

Figure 3: Seborrhoeic dermatitis

Our present study found dermatoses are very common among fishermen; Dermatophytosis and scabies were found to be more common. A similar study was done by Harshani SR et al among 465 fishermen and found the prevalence of skin disorders was 24% (95% CI: 20.1-27.8) and in their study most of the patients were above 35 years of age. Similarly in our study most of the patients have belonged to 30 – 50 years of age. In the same survey, most of them had worked in fishing for more than 10 years, which is close to our participant's duration of work as a Fisherman.[9]

Figure 4: Whealsin the forearm (urticaria)

Another study by Laraqui O et al found 44.4% had fungal infection, 4.1% had Seborrheic dermatitis, 1.2% had acne and 0.6% had Psoriasis whereas in our study 36.6% had dermatophytosis, 7.5% had Seborrheic dermatitis, 10.8% had Acne vulgaris and 5.8% had Psoriasis vulgaris which is close to their study findings.[10]

Another contrary study by Burke WA et al which was conducted among only male participants found 30% of Superficial Fungal infections and 37% of Eczema among them. We observed that 36.6% of people had Dermatophytosis which is the same as the previous study results and 7.5% of Eczema.[11]

Bernardes Filho F et al did a study and found Superficial Fungal infection, Psoriasis, Eczemas, scabies, Seborrheic Dermatitis, Solar melanosis and Eczema were common among fishermen which was similar to our study results.[12]

Fishermen are among the most vulnerable occupational groups to skin diseases, often referred to as dermatoses, due to their unique working conditions. According to our study, dermatoses are very common in fishermen, with fungal infections and Scabies being the most prevalent. The results are in line with prior research done in comparable coastal occupational groups, where skin-related morbidities are greatly influenced by exposure to environmental and occupational dangers.[13–15]

Table 4 shows that a study by Jayanthi et al., conducted among patients attending the dermatology outpatient department at a tertiary care center in North Chennai, reported that fungal infections were the most common skin condition, affecting 14.65% of patients. This was followed by eczema (7.40%), miliaria rubra (6.88%), scabies (5.99%), psoriasis (4.26%), Hansen's disease (3.37%), acne (2.85%), vitiligo (2.43%), and bullous disorders (1.43%), with 50.73% categorized as "others." In comparison, our study shows a higher prevalence of dermatophytosis, acne, seborrheic dermatitis,

Table 4: Comparison of the prevalence of dermatoses between the general population and fishermen

Dermatoses	Study by Jayanthi et al (General population)	Current study (Fishermen)
Dermatophytoses	14.65%	36.6%
Eczema	7.40%	7.5%
Scabies	5.99%	12.6%
Psoriasis Vulgaris	4.26%	5.8%
Acne vulgaris	2.85%	10.8%
Urticaria & Insect Bite Allergy	-	9.2%
Photodermatosis	-	5% (Polymorphous Light Eruption and Melasma)

psoriasis, eczema, and photodermatitis in the fishermen community compared to the general population, indicating distinct occupational and environmental influences on their dermatological health.[16]

Fishermen are at a high risk of developing dermatoses, as evidenced by the increased prevalence of fungal infections, scabies, acne, eczema, polymorphous light eruption (PMLE), and insect bite allergies within this population. This elevated risk is attributed to various occupational hazards, including prolonged sun exposure, contact with irritants like fishing nets, rubber gloves, and chemicals used in boat maintenance, as well as frequent exposure to contaminated water. Additionally, cuts and wounds from handling fish or equipment, humid and wet working conditions, and the potential for marine animal bites or stings further contribute to the vulnerability of fishermen to skin disorders.[17–21]

5. Conclusion

Due to the extended exposure to adverse environmental conditions, physical labor, and contact with irritants or allergens, dermatoses are a serious occupational health risk among fishermen. The burden of these disorders can be significantly decreased by early diagnosis, preventive interventions such as protective clothing and skincare practices, and focused health education. This susceptible occupational group will have a higher quality of life and be more productive if this issue is addressed comprehensively through workplace interventions and healthcare assistance.

6. Source of Funding

None.

7. Conflict of Interest

None.

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