Original article

SKIN CANCER: KNOWLEDGE, PRACTICES AND ATTITUDES OF FISHERMEN AND FISHERWOMEN REGARDING SKIN CANCER

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ABSTRACT: The present study aimed to describe fishermen's knowledge, attitudes and practices regarding skin cancer. It is a transversal, descriptive, exploratory and quantitative study using an interview script. It was undertaken in the *Colônia de Pescadores do Pina* (Pina Fishing Community), Recife, in the state of Pernambuco, in January – November 2014. Excel 2013 was used for the quantitative analysis of the data, with the support of the Epi Info software version 3.5.2. Of the 100% (90) fishermen and fisherwomen interviewed, 78% (71) were male, with a mean age of 28.4 years old, and 64.4% (58) had never participated in any educational event on the issue. In the sample, 84.4% (76) are exposed to the sun for five hours per day or over, and 62.2% (56) do not protect themselves against the sun. The fishermen and fisherwomen do not use effective measures for protecting themselves. As a result, access to means of protection and education and health may be instruments for encouraging practices for prevention against skin cancer.
DESCRIPTORS: Neoplasms; Skin; Public Health.

CÂNCER DE PELE: CONHECIMENTO, PRÁTICAS E ATITUDES DE PESCADORES

RESUMO: O presente estudo tem por objetivo descrever o conhecimento, as atitudes e as práticas a respeito da prevenção do câncer de pele em pescadores. Estudo transversal, descritivo, exploratório, quantitativo, utilizando roteiro de entrevista. Foi desenvolvido na Colônia de Pescadores do Pina, Recife, estado de Pernambuco, entre janeiro e novembro de 2014. Para análise quantitativa dos dados, foi utilizado o Excel 2013, com o suporte do Epi Info versão 3.5.2. Dos 100% (90) pescadores entrevistados, 78% (71) eram do sexo masculino, com média de idade de 28,4 anos, 64,4% (58) nunca participaram de um momento educativo. Na amostra, 84,4% (76) se expõem ao sol cinco horas ou mais por dia e 62,2% (56) não se protegem. Os pescadores não utilizavam medidas eficazes para sua proteção. Dessa forma, o acesso às medidas de proteção e a educação em saúde podem ser instrumentos de estímulo às práticas preventivas de câncer de pele.
DESCRITORES: Neoplasias; Pele; Saúde Pública.

CÁNCER DE PIEL: CONOCIMIENTO, PRÁCTICAS Y ACTITUDES DE PESCADORES

RESUMEN: Este estudio tuvo por objetivo describir el conocimiento, las actitudes y las prácticas de prevención del cáncer de piel en pescadores. Estudio transversal, descriptivo, exploratorio, cuantitativo, que utilizó guión de entrevista. Fue desarrollado en la Colonia de Pescadores de Pina, Recife, estado de Pernambuco, entre enero y noviembre de 2014. Para análisis cuantitativo de los datos, fue utilizado Excel 2013, con el soporte de Epi Info versión 3.5.2. De los 100% (90) pescadores entrevistados, 78% (71) eran del sexo masculino, con media de edad de 28,4 años, 64,4% (58) nunca participaron de un momento educativo. En la muestra, 84,4% (76) se exponen al sol cinco horas o más por día y 62,2% (56) no se protegen. Los pescadores no utilizaban medidas eficaces para su protección. Así, el acceso a las medidas de protección y la educación en salud pueden ser herramientas de estímulo a las prácticas preventivas de cáncer de piel.
DESCRIPTORES: Neoplasias; Piel; Salud Pública.

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INTRODUCTION

Cancer is a set of more than 100 diseases, which have in common the uncontrolled growth of cells, which invade tissues and organs. Dividing rapidly, these cells tend to be highly aggressive and uncontrollable, determining the formation of malignant tumors which may spread to other regions of the body. The different types of cancer correspond to the various types of the body's cells. The various types of skin cancer can form from more than one type of cell; if the beginning occurs in epithelial tissues, such as skin or mucosas, it is termed carcinoma, while if in connective tissues, such as bone, muscle or cartilage, it is termed sarcoma[1]. Among the different types of skin cancer, the following stand out: melanoma, basal cell carcinoma and squamous cell carcinoma[2].

Skin cancer is the most frequent cancer in Brazil, corresponding to 25% of all malignant tumors recorded in that country. Among the skin tumors, the nonmelanoma type has the highest incidence and the lowest mortality, and is more common in people aged over 40 years old, with fair skin, which is sensitive to the action of the sun's rays, and in people with previous skin diseases. It is relatively rare in children and blacks, with the exception of those who have previously had skin diseases[3].

It is in the skin that it is possible to identify the signs and symptoms which are clinical indicators in the identification of various pathologies. As a result, the clinical manifestations presented by this organ may be indicative of skin pathologies, even representing the first signs or late manifestations of a non-cutaneous pathology[4].

Generally speaking, cancer results from exposure to carcinogenic substances in people with specific genetic characteristics. The contribution from occupational exposure is a point which is feasibly possible to control and reduce to the maximum, which makes it a point which is particularly vulnerable to intervention measures[5].

Among the risk factors for skin cancer, one finds exposure to the following agents: arsenic, tar, creosote, soot, sunlight, polycyclic hydrocarbons, mineral oil, orthoarsenic, ultraviolet radiation, antineoplastic drugs and ionizing radiation, with the main occupations exposed to this risk being: welders, salespeople, agricultural workers, lifeguards, community health workers, traffic police and those who make their living by fishing, among others[5].

Fishing and harvesting shellfish, activities which are ancient and highly economically important, employing a large number of people, subject those who dedicate themselves to them to the above-mentioned risk factors; as a result they are affected by skin lesions, musculoskeletal problems, allergies and other pathologies. The use of personal protection equipment, such as sunblock and outer garments, is indicated for preventing and minimizing these health problems[6].

The prevention of skin cancer must be centered on avoiding exposure to the sun between the hours of 10 AM and 4 PM, the period in which the ultraviolet (UV) rays are most intense. However, even at other times it is necessary to use protection, such as hats, sunshades, sunglasses with UV protection and sunblock with Sun Protection Factor 15 or over[7]. As a result, the prevention and early initial diagnosis of skin cancer have an important relevance for public health and governmental policies[8].

Considering, in this perspective, that approximately one third of cases of cancer could have been avoided through prevention, it is inferred that the nurse, as a member of the health team, could act in various levels of care, undertaking actions in planning, coordinating or undertaking care, including nursing care and community and professional education. It falls to this professional to provide guidance regarding protection from reflective surfaces; the use of moisturisers following exposure to the sun, as well as hats, sunglasses, or a shirt and cap, avoiding excessive exposure to the sun and undertaking self examinations of the skin, a simple and easy method for diagnosing this type of cancer at an early stage[9].

In the light of this scenario, the guiding questions appear: How do people who make their living by fishing protect themselves against exposure to sunlight? What do they know about public policies for the prevention of skin cancer? What information do they have about skin cancer?

It is believed that this study can contribute through publicizing this disease related to Occupational

Health and, in that way, arouse the interest of public officials and of the fishing community of Pina, whose members spend at least one third of their long and exhausting work days exposed to the sun.

In this regard, the present study aims to describe the knowledge, attitudes and practices regarding the prevention of skin cancer of the people who make their living by fishing and who live in the city of Recife, in the state of Pernambuco.

METHODOLOGY

This is a transversal, descriptive study, with an exploratory character, using a quantitative approach, through interviews held with people who make their living by fishing associated with the Fishing Community Z1 of Pina, in January – November 2014. The community is located in the neighborhood of Pina, in Political-Administrative Region (RPA) VI of the municipality of Recife, in the state of Pernambuco. Approximately 1,200 workers in the area of fishing, of both sexes, resident in the neighborhoods of Pina, Brasília Teimosa, Santo Amaro and Ilha de Deus, are linked to this community.

The sample was nonrandom by convenience, undertaken with the fishermen and fisherwomen present in the Community on the days when data was being collected for the study, and had, as inclusion criteria: to be aged over 18 years old, to be registered in the community, and to agree to participate in the study after its objectives have been made clear. The exclusion criteria were: those who made their living by fishing who were not present on the days of collection, and those who declined to participate in the research.

The data were collected and interviews undertaken individually with each fisherman or fisherwoman by the researchers, with the aim of characterizing the subjects (sex, age range, educational level, marital status and family income), investigating what they knew about skin cancer, and evaluating actions for prevention referent to this cancer.

The data were tabulated on an Excel 2013 spreadsheet and were analyzed with the support of the Epi Info software, version 3.5.2, for the quantitative approach, with a confidence index of 95%. The results are presented in tables.

The norms and guidelines for undertaking research involving human beings were respected. The project was registered with *Plataforma Brasil*, and was sent to a research ethics committee for consideration. It was begun following approval under CAAE: 17788113.1.0000.5192. Regarding the research participants, they were asked beforehand to sign the Terms of Free and Informed Consent. The study uses a confidentiality agreement for preserving the data and the participating subjects and, therefore, confidentiality and anonymity will be maintained.

RESULTS

Among the 1,200 fishermen and fisherwomen registered in the Fishing Community Z1 of Pina, 7.5% (90) participated in the study.

Table 1 shows the characterization of the study sample, by socioeconomic aspects.

The characteristics of the interviewees' work process are described in Table 2. Among these, the mean number of years working in fishing was 28.4; in the group studied, 75.6% (68) fished five times or more per week, 12.2% (11) three times, 7.8% (seven) four times, and 4.4% (four), twice. Among these, 74.4% (67) fish on the open sea.

The majority of the fishermen and fisherwomen stated that they had not participated in health education events related to skin cancer prevention, related to their work, to exposure to the sun, and to risk factors.

It is known that participation in educational activities is highly valuable for the prevention of various pathologies, including skin cancer. Taking this into consideration, the participants were asked

Table 1 - Characterization of the fishermen and fisherwomen of the Z1 Community, of the community of Pina. Recife, PE, 2014

Variable	N	%
Gender		
Female	19	21.1
Male	71	78.9
Age		
18-25	3	3.3
26-35	17	18.9
36-45	18	20
46-55	21	23.3
Over 55	31	34.4
Color/Race		
White	11	12.2
Black	7	7.8
Mixed	70	77.8
Indigenous	2	2.2
Marital status		
Single	27	30
Divorced	7	7.8
Widowed	5	5.6
Married	27	30.0
Others	24	26.7
Educational level		
Illiterate	15	16.7
Literate	8	8.9
1st to 4th year of Primary School	36	40
5th to 8th year of Junior High	22	24.4
Senior High incomplete	4	4.4
Senior High complete	5	5.6
Monthly income		
Up to one minimum salary	41	45.6
Between 1 and 3 minimum salaries	49	54.4
Total	**90**	**100**

Table 2 - The work process of the fishermen and fisherwomen of the community of Pina. Recife, PE, 2014

Variable	N	%
Length of work		
1-15 years	22	24.4
16-25 years	21	23.3
26-35 years	16	17.8
Over 35 years	31	34.4
Total	**90**	**100**
Time spent on the open sea		
1-10 days	57	85.1
11-20 days	7	10.4
Over 20 days	3	4.5
Total	**67**	**100**
Work tool		
Boat	18	20
Jangada[1]	2	2.2
Fishing net	1	1.1
Boat and jangada	3	3.3
Boat and fishing net	30	33.3
Boat and others	10	11.1
Fishing net and others	4	4.4
Boat, jangada and fishing net	1	1.1
Others*	21	23.3
Total	**90**	**100**

[1]Traditional fishing boat of North Brazil. Translator's note.

*Referring to tipoia, PET bottles and fishing nets.

regarding their participation in health education activities: 64.4% (58) had never participated in any educational event.

Considering the guidance for the prevention of cancer and other skin diseases, 44.4% (40) had received guidance regarding the use of sunblock, and 55.5% (50) stated that they had never been given any advice regarding the use of this product. Among those who had received guidance for its use, 37.5% (15) had received it from a professional from the primary health care center, 22.5% (nine) from the media, 17.5% (seven) from friends and/or family members, 12.5% (five) from a dermatologist, and 2.5% (one) from the media and from professionals of the primary health care center; 5% (two) said nothing regarding this.

Risk factors

The fishermen and fisherwomen's time spent exposed to the sun is not less than 3 hours per day; 84.4% (76) are exposed to the sun for 5 hours or more per day, and 15.6% (14) for 3 to 4 hours/day; 92.2% (83) are exposed between 5 and 16 hours/day, 5.6% (five) are exposed to the sun for between eight and ten hours, or after 4 o'clock in the afternoon and 2.2% (two) between 10 and 16 hours/day. The types of protection against skin cancer and how these are used by the fishermen and fisherwomen of the community of Pina are described in Table 3.

Of the total of those who protect themselves (77.8% - 70), 58.6% (41) protect only their face, 35.7% (25) the face and the lower limbs and/or upper limbs, and 5.7% (four) the lower and/or upper limbs.

Regarding frequency of sunblock use, 70.6% (12) fishermen and fisherwomen use it only once a day, 17.6% (three) put it on three or more times per day, and 11.8% (two) twice a day.

Of the total sample, 83.3% (75) had nobody in their family with skin cancer; 7.8% (seven) had somebody in the family with this pathology, and 8.9% (eight) reported not knowing whether anybody in the family had been diagnosed with the disease.

In relation to the knowledge of the fishermen and fisherwomen regarding risk factors and preventive factors for skin cancer, 84.4% (76) of the interviewees reported having some knowledge of the harm caused by exposure to the sun, as presented in Table 4.

Among the interviewees, 86.7% (78) had already heard about skin cancer; however, only 51.1% (46) know what the factors are which predispose to skin cancer; of these, 91.3% (42) believe it to be exposure to the sun, 4.3% (two) to be failure to use sunblock, 2.2% (one) to be the genetic factor, and 2.2% (one) the fact of having little melanin in the skin; 52.2% (47) of the fishermen and -women mention knowing the signs and symptoms of skin cancer.

In relation to protection against skin cancer, 62.2% (56) reported not protecting themselves; 66.7% (60) believed that the development of skin cancer is not common in the population in general; 85.6% (77) stated that exposing oneself to the sun without protection facilitates the appearance of skin

Table 3 - Types of protection and how sunblock is used by those who work in fishing in the community of Pina. Recife, PE, 2014

Variable	n	%
Type of protection		
Hat	39	43.3
Sunblock	5	5.6
Longsleeved shirt	2	2.2
Hat and sunblock	5	5.6
Hat and longsleeved shirt	12	13.3
Hat, sunblock, and longsleeved shirt	6	6.7
Longsleeved shirt and sunblock	1	1.1
Do not protect themselves	20	22.2
Total	**90**	**100**
How they use sunblock		
Put on a fair amount and spread it around until it is not white	1	5.9
Put on a little and spread it around a little	8	47.05
Put on a fair amount and leave the skin whitened	8	47.05
Total	**17**	**100**

Table 4 - Knowledge of the fishermen and fisherwomen of the Pina Community regarding the harm caused by exposure to the sun. Recife, PE, 2014

Variable	N	%
Harm caused by exposure to the sun		
Skin cancer	20	22.2
Sunburn	7	7.8
Blemishes	9	10
Aging of the skin	10	11.1
Others	5	5.6
Skin cancer and sunburn	5	5.6
Skin cancer and aging of the skin	8	8.9
Sunburn and blemishes	3	3.3
Sunburn and aging of the skin	3	3.3
Sunburn and others	3	3.3
Skin cancer, aging of the skin and others	2	2.2
Skin cancer, sunburn and aging of the skin	1	1.1
Did not say	14	15.6
Total	**90**	**100**

cancer, and 64.4% (58) stated that the activity of fishing makes the professional more vulnerable to developing this neoplasia, as shown in Table 5.

Of the total of the fishermen and fisherwomen, 78.9% (71) had never heard about the self-examination for skin cancer; of these 31.6% (six) had heard about the self-examination for skin cancer in the primary health care center, 31.6% (six) through the media, 31.6% (six) had obtained information from others, and 5.2% (one) through another health service.

Table 5 - Knowledge of the fishermen and –women of the Pina Community regarding vulnerability from the activity of fishing, and its association with skin cancer. Recife, PE, 2014

Variable	n	%
Why are fishermen or fisherwomen more vulnerable?		
Exposure to the sun	52	89.7
Not using sunblock	3	5.2
Interaction of the sun's rays and seawater	3	5.2
Total	**58**	**100**

DISCUSSION

It was evidenced that 78.9% (71) of those who made their living by fishing, who made up the sample, were male, with a mean age of 47 years old. These data were similar to those of a study undertaken in six municipalities in the rural region of São Paulo, in which it was possible to observe that the majority of the professionals practicing fishing were male, with a mean age of 45.66 years old, in the municipality of Cananéia[10].

In the above-mentioned study, in the item related to educational level, the majority of those who make their living by fishing had not finished junior high school[10]. When compared with the data from this study, there is confluence, given that 40% (36) of the fishermen and fisherwomen interviewed had not finished junior high school. The low educational level found in the study constitutes a possible barrier to equality of access to information on health and prevention of ill health[11].

In relation to monthly family income, 45.6% (41) make up to one minimum salary, while 54.4% (49) make between 1 and 3 minimum salaries. Similar information was found in a study undertaken with fishermen and fisherwomen of the Tocantins River, in which 40% of the interviewees made up to one minimum salary, and 60%, between 1 and 3 minimum salaries[12].

The mean time working in fishing was 28.4 years, higher than that found in a study undertaken in two river communities in the Brazilian Amazon, in which the mean was 18 years and 21 years[13]. The mean found in this study is similar to that of a study undertaken in six municipalities in the state of São Paulo; in five municipalities, the mean was close, varying between 24 and 30 years; in Iguape the mean was 24.8 years, in Cananéia, 30.2 years, in Peruíbe, 24 anos, in Ilha Comprida, 24.6 years, and in Registro, 27.4 years[10].

In one skin cancer prevention campaign undertaken with fishermen and fisherwomen in Rio Grande do Sul in 2010, 2011 and 2012, including lectures, educational theater, dermatological examinations and other activities involving prevention, detection and treatment, there was consensus regarding the importance of knowing the daily levels of ultraviolet radiation, and their risks to health[14]. This is in contradiction with the data observed in this study, in which 64.4% (58) had never participated in any educational event.

The lack of awareness regarding the correct use of sunblock causes the individuals to run a constant risk entailed by direct exposure to the sun, at times of the day in which the levels of UV radiation are alarming. In the same way, the lack of knowledge relating to skin cancer and the risks arising from UV radiation cause the fishermen and fisherwomen to expose themselves to sunlight without the appropriate protection[15].

For the fishermen and fisherwomen who expose themselves to the sun for long periods, the reduction in immunity is not only epidermic, but systemic as a whole. This reduction would be beneficial if undertaken for a short period of time, and at times of the day in which the rays have an ideal intensity[16].

The focus of skin cancer prevention must be centered on avoiding exposure to the sun between 10 o'clock in the morning and 4 o'clock in the afternoon, when the rays are at their most intense. Even during the appropriate period, it is necessary to use protection, such as a hat, sunshade, dark glasses and sunblock with a sun protection factor of 15 or over. In occupational activities, the risk of exposure to the sun at inappropriate times of the day may make it necessary to reformulate the working days or the organization of the tasks undertaken over the day[5].

The risk factors for skin lesions have already been well discussed and defined, and include: fair skin, excessive exposure to the sun, living in hot sunny climates, a family history of skin cancer, a depressed immunological system and exposure to radiation[17]. It follows that the use of sunscreen is an ally in protection against UV rays, providing an efficient and stable protection during exposure to the sun[15].

In the fishermen and fisherwomen involved in this study, exposure to UV radiation was evidenced, mainly at times of the day which are not recommended, given this population's vulnerability. To this one can add the use – in an inadequate way – of sunscreen, recommended for the prevention of skin neoplasias.

This means of prevention must be used on the body uniformly, such as not to leave any part of the body unprotected, and be reapplied every two hours. Sunblock must be used regardless of the temperature and in conjunction with other mechanisms of protection such as hats, clothes and appropriate glasses[18]. In the study, only 18.9% (17) made use of sunblock; of these, 70.6% (12) put it on only once a day, or used some means of protection in isolation, which is not the ideal.

The fishermen and fisherwomen were questioned regarding susceptibility to develop skin cancer: 85.6% (77) consider that exposure to the sun without factors of protection makes the individual more susceptible. This level of knowledge is far higher than that revealed in a study undertaken in Rio Grande do Sul, in which 68.97% of the sample were unaware of the relationship between exposure to the sun and skin cancer[14].

One can perceive that the individuals who participated spend quite a lot of time exposed to the sun, and know of the risks; the lack of knowledge regarding measures of protection and the factors which predispose to acquiring the disease, however, is notable, the situation being worse still when this exposure is undertaken without barriers or protection[19].

In the present study, it was observed that the population making its living by fishing knows the risks caused by excessive exposure to the sun; however, only 46.67% (42) believe that skin cancer is developed due to the major exposure to the sun to which their work subjects them.

It is a fact that skin cancer is affecting more and more individuals. However, among the fishermen and fisherwomen studied, 66.7% (60) believe that the development of skin cancer is not common in the population. According to the Brazilian National Cancer Institute (INCA), the estimate for 2016 points to the occurrence of approximately 175,760 new cases, this being 80,850 men and 94,910 women[3]. In the light of this situational diagnosis, it will be possible to list alternatives capable of promoting health and preventing this neoplasia.

● CONCLUSION

Those who make their living by fishing in the Pina Community in Recife (PE) expose themselves to the sun for more than three hours over the course of the day, and have worked in fishing for a mean of 28.4 years, indicating a long exposure to the sun. They stated that they had knowledge, even if incipient, regarding skin cancer. They do not, however, use efficacious means for their protection; most protect only the face, exposing the other regions of the body to the sun without any means of protection.

Based on the level of knowledge of the same regarding skin cancer, the need becomes clear to provide the fishermen and fisherwomen with educational activities on the issue addressed in this study, considering its importance for the adoption of preventive methods, as well as for the early detection of malignant lesions.

Thus, education in health geared towards the fishermen and fisherwomen must be a strategy which allows access to knowledge regarding the harm caused by exposure to the sun, and the non-use of sunblock, the early identification of lesions which come to transform into malignant lesions, and encouragement for the self-examination for skin cancer, allowing better working conditions, health conditions, and quality of life.

This depiction of the current situation could provide support for actions which allow the fishermen and fisherwomen to understand the need for sunblock, being, therefore, a mediator of education and health, in addition to strengthening the role of the nursing professional in primary care and health education, with the aim of encouraging holistic practices for health promotion, stimulating the strengthening of public policies which reach this population effectively.

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