

PERCEPTION OF COMMUNITY HEALTH AGENTS ABOUT SKIN CANCER AND THEIR SKIN CARE HABITS

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Abstract

The present study aimed to evaluate the perception of Community Health Agents about skin cancer and their skin habits. The data collection was carried out with 76 Community Health Agents from certain Basic Health Units in Maringá-PR and Sabáudia-PR. A questionnaire sociodemographic and questionnaire with questions regarding sun exposure and skin cancer were applied. Most of them presented knowledge regarding sun protection, such as the ideal time for sun exposure, the importance of using sunscreen, and the appropriate frequency of application. Most participants had high level of knowledge about skin cancer, but there was no significant difference between the two cities. Community Health Agents have some knowledge about the risks related to skin cancer, many do not put preventive and self-care measures into practice, especially in relation to photoexposure and frequent use of sunscreen. Therefore, promoting awareness about the importance of occupational health and protection against sun exposure is important.

Keywords: Skin cancer; Sun protection; Community Health Agents; Self-care.

1. Introduction

In Brazil, non-melanoma skin cancer remains the most common cancer in the population (177,000 new cases) according to the National Cancer Institute (Inca, 2023). It points out that approximately one third of new cases could be prevented by reducing or even eliminating risk factors, such as environmental factors and those related to lifestyle habits (Inca, 2022; Inca, 2023).

There are millions of rural and urban agents who are routinely exposed to the sun, a situation that further increases concern about skin cancer and vulnerability to other problems, such as skin spots and burns, which can damage the individual's health (Malcher et al., 2019; Simões et al., 2011).

The Community Health Agent is one of the main professionals linked to society, being the professional who will accompany each individual in home care, strengthening the process of the Unified Health System (Faria & Paiva, 2020; Alonso; Béguini; Duarte, 2018). In this way, they contribute to improving the quality of health of the population, however, in their work routine they are exposed to the sun on a daily basis (Malcher et al., 2019; Nobre et al., 2016).

The Photoprotection Guide of the Brazilian Society of Dermatology, published on December 30, 2022, states that no individual is immune to solar radiation (Brazilian Society of Dermatology, 2022). Some professionals, such as Community Health Agents, are more exposed and should protect themselves from the sun, especially during their home visits, as they expose themselves for a long period of time on the street in order to reach the home in the area they are going to serve (Nobre et al., 2016).

The photoprotection guide states that people who work in the sun should always pay attention to their skin, avoiding the sun from 9 am to 3 pm, which can reduce the risk of skin cancer (Malcher et al., 2019). However, this time is when the Community Health Agents need to be doing their appointments, which makes it difficult to follow this instruction. It is therefore necessary to use other sun protection barriers such as mechanical barrier protectors and physical barriers (Nobre et al., 2016).

However, these sun protection measures are not always followed, which highlights the importance of this issue for health promotion, especially in terms of making these professionals aware of the importance of adopting preventive measures against skin cancer. In addition to preventing skin cancer among professionals, it is also important for Community Health Agents to acquire knowledge and be able to raise awareness among the population about the health risks of sun exposure and preventive measures for skin cancer.

In this way, this research is important, as it can help to provide information about sun exposure and the problems it can cause for people's health. It is of the utmost importance that Community Health Agents acquire this knowledge for their own self-care as well as to pass on to the population to which they provide advice. The objectives of this study are integrated with those of the National Health Promotion Policy, one of the purposes of which is to improve living conditions of the peoples, enhancing the health resources of individuals and the community, and reducing vulnerabilities and health risks arising from the environment in which they live (Brazil, 2018). Given this context, this study aimed to assess the perception of Community Health Agents about skin cancer and their skin habits.

2 Methodology

2.1 Study design

This was a quantitative observational cross-sectional analytical study.

2.2 Population

The survey was carried out with Community Health Agents from Basic Health Units in the municipalities of Sabáudia-PR (12 Health Agents from 4 Basic Health Units), and Basic health units in Maringá-PR (64 Health Agents from 22 Basic Health Units), totaling 76 participants. The sample was chosen non-probabilistically, intentionally and for convenience. The following inclusion criteria were adopted: Community Health Agents of both sexes who voluntarily agreed to take part in the study. Exclusion criteria: Community Health Agents who did not answer the questionnaire properly.

2.3 Ethical aspects

The project was submitted to Human Research Ethics Committee of the Unicesumar for approval under number 6.525.285. The research participants signed the Free and Informed Consent Form, and all the information was previously clarified.

2.4. Data collection instruments

The instruments used to collect the data were a sociodemographic questionnaire and a questionnaire to assess the perception of Community Health Agents of sun exposure and skin cancer. The sociodemographic questionnaire was used to characterize the Community Health Agents, with 6 questions referring to gender, age, marital status, schooling and monthly family income.

The second instrument was a questionnaire to assess the perception of Community Health Agents of sun exposure and skin cancer. The questionnaire was prepared and validated by Martins, Ivantes and Rocha-Brito (2021), based on the study by Kelati et al. (2017). The survey instrument includes 24 questions that were divided into 4 sessions: a) general knowledge of aspects related to skin and skin cancer - 3 items; b) knowledge about sun exposure and sun protection - 4 items; c) specific knowledge related to skin cancer - 12 items, and; d) engagement related to skin cancer - 5 items.

2.5 Data collection procedure

The questionnaires were printed out and administered in person to the Community Health Agents. Prior appointments were made at the Basic Health Units to inform them that the questionnaire would be administered by the researcher. The Community Health Agents read the questions individually and marked the answers that were correct in their opinion. The researcher was available to answer any questions that arose. Data was collected from December 2023 to February 2024.

2.6 Data analysis

Descriptive data was presented as absolute numbers and relative frequencies (%). To compare the data, the q-square test was used to compare the frequency of categories between the cities. To calculate the level of knowledge about skin cancer, 9 questions were used (7, 9, 10, 11, 12, 13, 14, 15 and 17). Each question scored 1.0 point, with a maximum score of 9.0 points. A score of 5.0 or more was considered a high level of knowledge. The normality of the knowledge level data was checked using the Shapiro-Wilk test and the data showed a normal distribution, so the parametric t-test for independent samples was used to compare the scores between the participants from the two cities. The analyses were carried out using SPSS version 21 statistical software, considering a significance level of 5% ($p < 0.05$).

3 Results and discussion

Table 1 shows the sociodemographic profile of the 76 Community Health Agents who took part in the survey. As shown, of the 76 participants, only 2 were male, representing 2.6% of the total, and these were from the city of Maringá. With regard to age, there was a significant difference between the two cities ($p < 0.05$), with the professionals in Maringá being older than the agents in Sabáudia. The largest number of participants in Maringá (64.1%) were aged between 42 and 59, while in Sabáudia the largest number were aged between 37 and 41 (41.7%).

Table 1 - Sociodemographic profile of Community Health Agents in Sabáudia-PR and Maringá-PR.

Sociodemographic data	Total (n=76)		Sabáudia (n=12)		Maringá (n=64)		p
	n	%	n	%	n	%	
Sex							0,535
Male	2	2,6%	0	0,0%	2	3,1%	
Female	74	97,4%	12	100%	62	96,9%	
Age							0,035
No answer	2	2,6%	1	8,3%	1	1,6%	
31 to 36 years old	12	15,8%	2	16,7%	10	15,6%	
37 to 41 years old	12	15,8%	5	41,7%	7	10,9%	
42 to 59 years old	45	59,2%	4	33,3%	41	64,1%	
Over 60	5	6,6%	0	0,0%	5	7,8%	
Marital status							0,711
No answer	3	3,9%	1	8,3%	2	3,1%	
Single	25	32,9%	5	41,7%	20	31,3%	
Married	42	55,3%	5	41,7%	37	57,8%	
With a partner	4	5,3%	1	8,3%	3	4,7%	
Widowed	2	2,6%	0	0,0%	2	3,1%	
Educational Level							0,255
Elementary school incomplete	1	1,3%	0	0,0%	1	1,6%	
Elementary school completed	3	3,9%	2	16,7%	1	1,6%	
High school incomplete	14	18,4%	2	16,7%	11	17,2%	
High school completed	31	40,8%	3	25,0%	26	40,6%	
Higher education incomplete	14	18,4%	2	16,7%	12	18,8%	
Complete university degree	13	17,1%	3	25,0%	10	15,6%	
Family Income							0,470
No answer	1	1,3%	0	0,0%	1	1,6%	
Up to 1 minimum wage	1	1,3%	0	0,0%	1	1,6%	
From 1 to 3 minimum wages	28	36,8%	5	41,7%	23	35,9%	
From 3 to 6 minimum wages	41	53,9%	5	41,7%	36	56,3%	
From 6 to 9 minimum wages	1	1,3%	0	0,0%	1	1,6%	
From 9 to 12 minimum wages	4	5,3%	2	16,7%	2	3,1%	

p<0.05: statistically significant difference

Of all the participants, 33.3% lived in the city of Sabáudia and 64.1% lived in Maringá. As for marital status, 55.3% of the participants were married, 41.7% from Sabáudia and 57.8% from Maringá. The level of education showed that the majority had completed high school, with a total of 38.2%, 25% from Sabáudia and 40.6% from Maringá. With regard to monthly family income,

53.9% of the Community Health Agents had an income of between 3 and 6 minimum wages, 41.7% from Sabáudia and 56.3% from Maringá. It was possible to see that there was no significant difference between Sabáudia and Maringá with regard to most of the sociodemographic variables, with the only difference being age.

Table 2 shows the results of the evaluation of the perception of the Community Health Agents of general knowledge of aspects related to skin and skin cancer, considering skin phototype, whether they know or have known someone who has had skin cancer, and what their reaction was to the person. It can be seen that in Sabáudia, the Community Agents were mainly phototype 1 (33.3%) and 3 (41.7%), while in Maringá, they were mainly phototype 2 (28.1%) and 3 (26.6%).

Table 2 - Perception of Community Health Agents regarding general knowledge of aspects related to skin and skin cancer.

	Total (n=76)		Sabáudia (n=12)		Maringá (n=64)		p
	n	%	n	%	n	%	
Your skin phototype							0,518
Phototype 1	16	21,1%	4	33,3%	12	18,8%	
Phototype 2	19	25,0%	1	8,3%	18	28,1%	
Phototype 3	22	28,9%	5	41,7%	17	26,6%	
Phototype 4	15	19,7%	2	16,7%	13	20,3%	
Phototype 5	1	1,3%	0	0,0%	1	1,6%	
Phototype 6	3	3,9%	0	0,0%	3	4,7%	
Do you know or have you known someone who has/had skin cancer?							0,618
No	15	19,7%	3	25,0%	12	18,8%	
Yes	61	80,3%	9	75,0%	52	81,3%	
What was your reaction to this person?							0,375
Removal	3	3,9%	1	8,3%	2	3,1%	
Indifference	2	2,6%	1	8,3%	1	1,6%	
Support	56	73,7%	7	58,3%	49	76,6%	
No answer	15	19,7%	3	25,0%	12	18,8%	

In the study carried out by Malcher et al. (2019), it was also found that most of the Community Health Agents interviewed in Belém-PA had phototype 3, and were subject to moderate and mild sunburn. Although phototype 3 corresponds to light brown skin, which burns and tans moderately and has normal sensitivity to the sun, it is not exempt from using sunscreen according to the Brazilian Society of Dermatology (2022).

On the question of whether they had ever known or knew someone who had skin cancer, 80.3% answered yes, 75% of them from Sabáudia and 81.3% from Maringá. With regard to their reaction to the individual with skin cancer, the majority reported having supported the person, with a total of 73.7% of the participants, 58.3% from Sabáudia and 76.6% from Maringá. According to the results shown in Table 2, there was no significant difference between the two cities on any of these questions.

Table 3 assesses the level of knowledge of the participants in the survey in relation to exposure to the sun and sun protection. Regarding knowledge of the most appropriate time to expose oneself to the sun, 73 participants answered yes, with 100% of the participants from the city

of Sabáudia and 95.3% from Maringá. The best time to expose yourself to the sun was from 7 am to 10 am, with 50% of the participants, 58.3% from Sabáudia and 48.4% from Maringá. The second most common time they indicated was up to 10 am and after 4 pm (34.2%). A worrying fact was that 7.9% of the participants were unable to answer the question, 8.3% from Sabáudia and 7.8% from Maringá.

Table 3 - Community health agents' level of knowledge about sun exposure and sun protection.

	Total (n=76)		Sabáudia (n=12)		Maringá (n=64)		p
	n	%	n	%	n	%	
Do you know the best time to expose yourself to the sun?							0,746
No	1	1,3%	0	0,0%	1	1,6%	
Yes	73	96,1%	12	100%	61	95,3%	
Don't know / Didn't answer	2	2,6%	0	0,0%	2	3,1%	
Best time							0,423
Only between 7am and 10am	38	50,0%	7	58,3%	31	48,4%	
Before 10 a.m. and after 4 p.m.	26	34,2%	4	33,3%	22	34,4%	
Only after 4pm	6	7,9%	0	0,0%	6	9,4%	
Couldn't answer	6	7,9%	1	8,3%	5	7,8%	
Do you know the difference between sun protection factors?							0,156
No	21	27,6%	3	25,0%	18	28,1%	
Yes	51	67,1%	7	58,3%	44	68,8%	
No answer	4	5,3%	2	16,7%	2	3,1%	
How often do you apply sunscreen?							0,850
1x a day	31	40,8%	6	50,0%	25	39,1%	
More than 1x a day	21	27,6%	2	16,7%	19	29,7%	
More than twice a day	9	11,8%	2	16,7%	7	10,9%	
Only when I remember	11	14,5%	2	16,7%	9	14,1%	
Never	3	3,9%	0	0,0%	3	4,7%	
Is it possible to expose yourself to the sun at times of high radiation without using sunscreen?							0,563
No	48	63,2%	8	66,7%	40	62,5%	
Yes	14	18,4%	3	25,0%	11	17,2%	
Don't know / Didn't answer	14	18,4%	1	8,3%	13	20,3%	

In a study carried out by Morais et al. (2019), it was reported that the research participants, who were teachers, staff and students at a university center in Santa Catarina, knew about preventive practices, frequency, the correct way to apply sunscreen, and how to take care of their skin. However, 65% of the population studied did not practice these measures, and reported that they sunbathed at inappropriate times, exposing themselves between 10 am and 4 pm, which is the most critical period.

As for the knowledge of the participants of the difference between sun protection factors, 67.1% said they knew the difference, 58.3% in Sabáudia and 68.8% in Maringá, and a considerable

number (27.6%) didn't know. As for how often participants apply sunscreen, the majority (40.8%) apply it once a day, 50% in Sabáudia and 39.1% in Maringá, while 27.6% apply it more than once a day. Only 3.9% of participants answered that they never apply sunscreen and 14.5% apply sunscreen only when they remember.

Research carried out by Malcher et al. (2019) also showed the lack of adequate protection from solar radiation by Community Health Agents in Belém-PA, who took part in the study. In addition to the lack of sunscreen use, it was observed that they used it without reapplying or only once a day, and that they did not consistently use sunscreen in their daily work routine. It is important to reapply sunscreen because they spend more than five hours in periods of high occupational exposure to the sun. In the study by Nobre et al. (2016), Community Health Agents in Araxá-MG, when asked about information on skin self-examination, 68.5% said they were aware of the test, however, only 19.2% had already carried out the self-examination. The Community Health Agents reported that they did not use sunscreen in their work routine, even though there were reports of skin blemishes among them. According to Nobre et al. (2016), only 9.6% of Community Health Agents used sunscreen according to the manufacturer's recommendations, which are described on the product label, which states, for example, that it needs to be reapplied; however, this is often not read by the user.

In a study reported by Bardini, Lourenço and Fissmer (2012) it was shown that 93% of the street agents interviewed did not use sunscreen and only 57% used some physical means of sun protection (cap, clothing or glasses). The period of sun exposure for these patients also exceeded at least 4 hours a day. Greater attention should be paid to preventing problems due to ultraviolet radiation among professionals exposed to the sun, such as Community Health Agents, since the provision of sunscreen is not mandatory by city halls, thus also reducing the incentive to use it, due to the lack of supply of the product (Malcher et al., 2019). In the municipality of Maringá, sunscreen is provided by the city hall, while in Sabáudia sunscreen is not offered.

We also assessed whether the participants were aware that it is possible to expose oneself to the sun without risking one's health, at times of high radiation, without using sunscreen, and the majority (63.2%) answered that it is not possible. However, a considerable number of Community Agents answered that it was possible (18.4%) or that they didn't know (18.4%). According to the results shown in Table 3, there was no significant difference between Sabáudia and Maringá in any of the questions.

Studies by Oliveira et al. (2011) and Farias et al., (2021), have shown that most individuals are aware of the risks and damage related to sun exposure and their means of protection, but expose themselves to these risks because they often have to work in the sun. The study by Farias et al. (2021) showed that most agents in a rural area in Rio Grande do Sul were aware of the risk to their skin due to frequent exposure to the sun, and many of them had negative impacts on their skin health due to high occupational exposure to the sun.

Table 4 shows the degree of specific knowledge of Community Health Agents related to skin cancer. The first question asked whether the participant had ever heard of skin cancer, and only 1 participant (1.3%), a resident of the city of Maringá, reported not having heard of skin cancer. The survey participants were asked if they knew whether it was dangerous to their health to have skin cancer, and 97.4% of them answered yes, 91.7% from Sabáudia and 98.4% from Maringá. However, this knowledge is not always available to professionals who work in the sun, as shown in the study by Bardini, Lourenço and Fissmer (2012). They reported a worrying fact in relation to street agents' knowledge of skin cancer, with 33% of the participants having no idea what skin cancer is, even though they are directly exposed to the biggest risk factor for the disease.

Table 4 - Specific knowledge of the Community Health Agents of skin cancer.

	Total (n=76)		Sabáudia (n=12)		Maringá (n=64)		p
	n	%	n	%	n	%	
Have you heard about Skin Cancer?							0,663
No	1	1,3%	0	0,0%	1	1,6%	
Yes	75	98,7%	12	100%	63	98,4%	
Do you know if having skin cancer is dangerous to your health?							0,062
No	1	1,3%	0	0,0%	1	1,6%	
Yes	74	97,4%	11	91,7%	63	98,4%	
Don't know / Didn't answer	1	1,3%	1	8,3%	0	0,0%	
Do you think skin cancer can kill?							0,681
No	3	3,9%	1	8,3%	2	3,1%	
Yes	65	85,5%	10	83,3%	55	85,9%	
Don't know / Didn't answer	8	10,5%	1	8,3%	7	10,9%	
Which of these clinical manifestations could be characteristic of skin cancer?							
Papules	46	60,5%	8	66,7%	38	59,4%	0,635
Nodules*	31	40,8%	8	66,7%	23	35,9%	0,047
Tumors	35	46,1%	6	50,0%	29	45,3%	0,765
Ulcers	40	52,6%	8	66,7%	32	50,0%	0,289
Blisters with pus	16	21,1%	2	16,7%	14	21,9%	0,685
Black spots	41	53,9%	4	33,3%	37	57,8%	0,118
Which of these signs and symptoms can be characteristic of skin cancer?							
Increase in size	52	68,4%	8	66,7%	44	68,8%	0,887
Color change*	52	68,4%	5	41,7%	47	73,4%	0,030
Resistance to usual treatment	34	44,7%	4	33,3%	30	46,9%	0,387
Itching	29	38,2%	6	50,0%	23	35,9%	0,357
Wounds that never heal	52	68,4%	8	66,7%	44	68,8%	0,887
Easy bleeding	24	31,6%	6	50,0%	18	28,1%	0,135
Which of these risk factors can lead to skin cancer?							
Exposure to radiation	67	88,2%	12	100%	55	85,9%	0,166
Skin color	50	65,8%	9	75,0%	41	64,1%	0,464
Age - older*	35	46,1%	9	75,0%	26	40,6%	0,028
Age - younger	5	6,6%	2	16,7%	3	4,7%	0,125
Sex - Men	10	13,2%	1	8,3%	9	14,1%	0,590
Sex - Women	21	27,6%	5	41,7%	16	25,0%	0,236
Genetic factors	56	73,7%	10	83,3%	46	71,9%	0,408
Chemical products	21	27,6%	4	33,3%	17	26,6%	0,63
Infection*	8	10,5%	3	25,0%	5	7,8%	0,075
Having had skin cancer*	42	55,3%	10	83,3%	32	50,0%	0,033
Smoking	36	47,4%	5	41,7%	31	48,4%	0,666
Immunodepression	22	28,9%	2	16,7%	20	31,3%	0,307
Can skin cancer involve the body's inner lining tissues (mucous membranes)?							0,270

No	13	17,1%	0	0,0%	13	20,3%	
Yes	48	63,2%	8	66,7%	40	62,5%	
It depends	3	3,9%	1	8,3%	2	3,1%	
Don't know / Didn't answer	12	15,8%	3	25,0%	9	14,1%	
Can skin cancer invade other tissues/organs (metastasize)?							0,047
No	9	11,8%	0	0,0%	9	14,1%	
Yes*	53	69,7%	7	58,3%	46	71,9%	
Don't know / Didn't answer	14	18,4%	5	41,7%	9	14,1%	
Sites likely to be invaded (metastasized)?							
Lungs	36	47,4%	5	41,7%	31	48,4%	0,666
Bone	21	27,6%	3	25,0%	18	28,1%	0,824
Liver	27	35,5%	2	16,7%	25	39,1%	0,137
Gastrointestinal tract	17	22,4%	3	25,0%	14	22,2%	0,833
Brain	17	22,4%	2	16,7%	15	23,8%	0,588
Lymph nodes	34	44,7%	5	41,7%	29	46,0%	0,781
What items should be assessed for possible skin cancer?							
Asymmetry	40	52,6%	8	66,7%	32	50,0%	0,289
Poorly delimited border	37	48,7%	8	66,7%	29	45,3%	0,174
Color	60	78,9%	11	91,7%	49	76,6%	0,239
Diameter	33	43,4%	7	58,3%	26	40,6%	0,256
Evolution	48	63,2%	7	58,3%	41	64,1%	0,706
Presence of hair along with spots	19	25,0%	2	16,7%	17	26,6%	0,468
Presence of pus or blood	22	28,9%	5	41,7%	17	26,6%	0,290
Skin lifting	46	60,5%	9	75,0%	37	57,8%	0,264
Do you know or have you heard about the ABCDE of skin cancer?							0,259
No	65	85,5%	9	75,0%	56	87,5%	
Yes	11	14,5%	3	25,0%	8	12,5%	
What types of skin cancer does ABCDE apply to?							0,765
Melanoma	7	9,2%	2	16,7%	5	7,8%	
Non-melanoma	3	3,9%	0	0,0%	3	4,7%	
Both	21	27,6%	3	25,0%	18	28,1%	
Don't know / Didn't answer	45	59,2%	7	58,3%	38	59,4%	

* There was a significant difference between the responses of the participants from Sabáudia and Maringá ($p < 0.05$).

On the question of whether skin cancer can lead to death, only 3.9% of participants said no. Regarding knowledge of the clinical manifestations that are characteristic of skin cancer, the presence of papules was the most indicated (60.5%), followed by black spots (53.9%) and ulcers (52.6%). The presence of tumors and nodules were indicated by 46.1% and 40.8% of the participants, respectively, and the nodule had a significant difference between Sabáudia and Maringá ($p < 0.05$), being indicated by 66.7% of the Community Health Agents in Sabáudia and 35.9% in Maringá. The least indicated clinical manifestation was the presence of blisters with pus, with only 21.1% of the participants.

As for the signs and symptoms that can be characteristic of skin cancer, an increase in size, a change in color and wounds that never heal were the most frequently mentioned, reported by 68.4%

of the participants. As for color change, there was a significant difference between Sabáudia and Maringá ($p < 0.05$), with 41.7% of Community Health Agents in Sabáudia and 73.4% in Maringá indicating it. The symptom easy bleeding was the least indicated by the participants (31.6%).

In relation to the risk factors that can cause skin cancer, all the factors presented were indicated, however, the factor exposure to ultraviolet radiation was the most indicated (88.2%), both by the Community Health Agents in Sabáudia (100%) and by the Community Health Agents in Maringá (85.9%). Genetic factors, which accounted for 73.7% of the participants, skin color, which was indicated by 65.8% of the participants, and having already had skin cancer, which was reported by 55.3% of the participants, also accounted for a considerable amount. With regard to this last factor, there was a significant difference between the two cities, with 83.3% of respondents from Sabáudia and 50.0% from Maringá. The least indicated factors were being young (6.6%) and having an infection (10.5%).

On the question of whether skin cancer can involve the body's internal lining tissues (mucous membranes), 63.2% answered yes, and if it can invade other tissues/organs, 69.7% answered that it can cause metastasis, with a significant difference between the two cities, 58.3% of the participants from Sabáudia and 71.9% from Maringá. As for possible sites of metastasis, the lungs and lymph nodes were the main ones mentioned, with values of 47.4% and 44.7% respectively.

With regard to knowledge about the items that should be assessed to suggest possible skin cancer, all the items were indicated, with color being the most indicated item, with 78.9% of respondents, followed by the evolution of the spot (63.2%), skin elevation (60.5%) and asymmetry (52.6%). The least indicated items were the presence of pus or blood (28.9%) and the presence of hair along with the spots (25%).

When asked if the Community Health Agents knew or had heard of the ABCDE rule for skin cancer, 85.5% reported that they did not know or had not heard of it, with 75.0% of the respondents being from Sabáudia and 87.0% from Maringá. As the majority were unaware of the ABCDE of skin cancer, the participants had difficulty answering the next question, which was about which types of skin cancer the ABCDE applies to, with the majority answering that they didn't know (59.2%) and 27.6% answering that it was for both types of skin cancer, both melanoma and non-melanoma. These results corroborate the study carried out by Martins, Ivantes and Rocha-Brito (2021), which also showed that almost all of the interviewees, who were employees and students at a higher education institution, said that they did not know about the ABCDE rule, and that those who did, 52.78%, said that it only applies to melanoma.

As described by the Brazilian Society of Dermatology (2022), the ABCDE rule for skin cancer analyzes the characteristics of the lesion, such as asymmetry, border, color, diameter and evolution, making it possible to identify a skin neoplasm. However, it only applies to melanoma skin cancer, and for non-melanoma skin cancer the lesions are usually itchy, scaly or bleed, change shape or size and color, and the wound does not heal within 4 weeks (Inca, 2022). However, despite being a technique for more easily identifying a possible skin neoplasm, it was seen that it is little known by Community Health Agents, and it is important to inform and train them in this technique, as it can help with early detection of the disease.

Table 5 shows the perception of Community Health Agents in relation to their commitment to skin cancer. When asked if they had or had ever had a lesion that they thought was suspicious, 40.8% of the participants said yes, and if they had sought medical attention because of the suspicious lesion, the majority had not sought medical attention (48.7%). As for the reason for not seeking medical care, 84.2% did not answer or could not answer, and 7.9% felt it was not necessary. In the study by Farias et al. (2021), it was assessed that many of the pre-existing lesions on the skin

of the rural agents participating in the research were potential lesions that could become skin cancer with exposure to ultraviolet radiation, which was being aggravated on a daily basis by the lack of adequate skin protection.

Regarding whether they had skin cancer, 96.1% said they had never had it and 3.9% had. When asked which health service they went to when they had skin cancer or suspected skin cancer, 7.9% went to the public health service and 88.2% didn't know or didn't answer. There were no significant differences between Sabáudia and Maringá in the answers to Table 5.

Table 5 - Perception of Community Health Agents regarding their commitment to skin cancer.

	Total (n=76)		Sabáudia (n=12)		Maringá (n=64)		p
	n	%	n	%	n	%	
Do you have or have you ever had a lesion that you thought was Health System suspicious?							0,946
No	45	59,2%	7	58,3%	38	59,4%	
Yes	31	40,8%	5	41,7%	26	40,6%	
If you have or have had an injury that you think is Health System suspicious, have you sought medical attention?							0,199
No	37	48,7%	7	58,3%	30	46,9%	
Yes	25	32,9%	5	41,7%	20	31,3%	
If you haven't sought medical attention, why not?							0,774
Due to the delay in health system service	1	1,3%	0	0,0%	1	1,6%	
Fear of acquiring a scar	1	1,3%	0	0,0%	1	1,6%	
Tried using cream/products they had at home or recommended by someone else	2	2,6%	0	0,0%	2	3,1%	
You think you can heal on your own	2	2,6%	1	8,3%	1	1,6%	
He didn't think it was necessary	6	7,9%	1	8,3%	5	7,8%	
Don't know / Didn't answer	64	84,2%	10	83,3%	54	84,4%	
Have you ever had or do you have skin cancer?							0,395
No	73	96,1%	11	91,7%	62	96,9%	
Yes	3	3,9%	1	8,3%	2	3,1%	
Don't know / Didn't answer	0	0,0%					
If you have/had skin cancer or have/had a Health System suspicion of skin cancer, which health service did you go to?							0,575
Public health system	6	7,9%	2	16,7%	4	6,3%	
Private health system	1	1,3%	0	0,0%	1	1,6%	
Health insurance	2	2,6%	0	0,0%	2	3,1%	
Don't know / Didn't answer	67	88,2%	10	83,3%	57	89,1%	

According to Despato et al. (2023), skin cancer is a public health problem in Brazil, and with the increase in cases, the public health system is being inefficient in treating it in many

municipalities. This is due to the increase in the number of daily treatments in which procedures need to be carried out and treatment carried out quickly, as well as the fact that it is becoming an economic problem. Its major treatment centers are located in some parts of Brazil, which means that patients have to travel and stay away from their homes. Patients who are less well-off are dependent on long waits for this process, a factor that can lead to non-adherence to treatment.

In relation to the level of knowledge of Community Health Agents about skin cancer, nine questions were used and a score of 5.0 points or more was considered a high level of knowledge. The total average score was 5.4 points, which suggests a high level of knowledge among Community Health Agents. When the questionnaires were administered to the Community Health Agents in the UBS, it was expected that there would be a large discrepancy in the results between the two cities of Sabáudia and Maringá. This is because many of the Community Health Agents had difficulties when answering the questionnaires, such as difficulty interpreting the questions and lack of knowledge of some terms about skin cancer. Even though the researcher explained and read the questions beforehand. However, there was no significant difference between the mean scores in the two cities ($p > 0.05$).

A study carried out by Malcher et al. (2019) also showed that the Community Health Agents who took part in the survey reported knowledge of the harmful effects of sun exposure, such as skin cancer. However, the presence of this knowledge conflicts with the low prevalence of daily sunscreen use by the participants, which was also demonstrated in this study. In the study by Morais et al. (2019), participants also had a high level of knowledge about skin cancer, but low adherence to preventive measures.

The study by Martins, Ivantes and Rocha-Brito (2021), showed the importance of increasing the dissemination of information about skin cancer, and projects to increase and stimulate population behavior change in relation to the prevention of this disease. In addition, according to Malcher et al. (2019) it is important to seek to know the need to promote an increase in population self-care through early diagnosis and to have the best prognosis of the disease.

According to Martins, Ivantes and Rocha-Brito (2021), there are several factors that can highlight the lack of understanding about skin cancer, such as the population's lack of search for medical services, lack of knowledge of the signs or symptoms, how it is triggered, the low use of sun protection factor and the non-recognition of information about the disease. In addition, there are possible confusions of skin spots with specific cancer lesions, clinical manifestations, as well as low knowledge of the ABCDE rule for skin cancer, as the main technical identifier to facilitate the diagnosis of melanoma-type skin cancer.

Thus, it is worth highlighting the importance of carrying out programs that act on this part of occupational health, which can be seen in the research carried out by Ávila et al. (2021), where teachers and students from the Pharmacy course in Goiânia (GO) in Brazil, carried out health education activities with agents with frequent exposure to the sun, about the correct use of sunscreens. Most of the participants in the survey reported that the health education program carried out with them had an impact on their lifestyle habits, since they said they had improved their care and photoprotection measures.

A study by Morais et al. (2019) also showed that multi-professionals can be involved in health campaigns to guide and prevent skin cancer in Brazil. In addition, campaigns to publicize the risks are an incentive for people to protect themselves from the sun at the hottest times with a high risk of exposure to ultraviolet radiation, which can be the beginning of prevention and early detection to reduce possible cancerous lesions on the skin.

In order for health education to be of high quality and for professionals to be able to present self-care as a possibility of reducing the development of skin cancer, such as the use of sun

protection, hats, glasses and work equipment, more investment is needed (Balogh et al., 2011). So much so that this study shows that prevention is still inefficient, partly due to the lack of health education programs on skin cancer.

Prevention of skin cancer, including melanomas, includes primary prevention actions, through protection from sunlight, which are effective and inexpensive. Self-examination also contributes to early diagnosis. If new spots/signs appear, or if there are any changes, the individual should go to the dermatologist. Health education, both for professionals and the general population, to alert them to the possibility of developing skin cancer and to enable them to recognize early changes suggestive of malignancy, is another accepted strategy (Bardini; Lourenço; Fissmer, 2012).

One of the main shortcomings found in this study was the lack of work carried out with reference to Community Health Agents on the subject of skin cancer and sun exposure. It is therefore necessary to increase the contribution of research on this subject in order to promote knowledge and change the habits of these professionals, as well as the population in general, which is of paramount importance in the health area.

4 Conclusion

In view of the high incidence of skin cancer, it is important that the population, and especially professionals who work for a long time exposed to the sun, such as Community Health Agents, have greater access to preventive and self-care information in order to prevent the disease from developing or at least promote its early diagnosis.

Most of the Community Health Agents in this study had knowledge of sun protection, such as the ideal time for sun exposure, the importance of using sunscreen, as well as the appropriate frequency of application. In addition, they also had knowledge of skin cancer, such as the clinical manifestations, that the main risk factor is sun exposure, and some had already had lesions suspicious of skin cancer.

Thus, most of the participants in the survey had a high level of knowledge about skin cancer, but there was no significant difference in the level of knowledge between the Community Health Agents in the municipalities of Sabáudia and Maringá. It was observed that although Community Health Agents had some knowledge of the harms and risks related to skin cancer, many did not put preventive and self-care measures into practice, especially in relation to photoexposure, such as the frequent use of sunscreen. This may be linked to the high cost of sunscreen and the lack of habit of using it.

To deal with sun exposure and possible impacts on the health of these professionals, some actions can be considered, such as: education and training on the possible effects of sun exposure and appropriate safety measures, provision of adequate personal protective equipment, such as sunglasses, hats and sunscreen, in order to minimize the risks to the health of agents exposed to solar radiation.

It is important to regularly monitor the health of Community Health Agents in order to identify and treat possible problems related to sun exposure at an early stage. In addition, work policies should be implemented to limit excessive exposure to solar radiation, if possible by scheduling activities at times when radiation is less intense. Above all, raise awareness of the importance of occupational health and protection against environmental risks, including exposure to the sun. These measures can help protect the health and safety of these professionals in relation to sun exposure. In addition, as Community Health Agents play a fundamental role in promoting

health and preventing diseases in communities, acquiring this knowledge about skin cancer is important to pass on to the population they assist.

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