

# Self-care with the skin of Community Health Agents

Georgia Stefani Cardoso de Camargo, Magna Cristina da Silva Fonseca, Sávia Denise Silva Carlotto Herrera, Najla de Oliveira Mahmud, Florence Germaine Tible Lainscek, Núbia Martins Correia, Wellington Bispo Nunes, Warly Neves de Araújo

**Abstract—** This document gives formatting guidelines for authors preparing papers for publication in the International Journal of Engineering and Applied Sciences. The authors must follow the instructions given in the document for the papers to be published. The margins must be set as follows: Top = 1.7cm, Bottom = 1.7cm, left = 1.7cm, Right = 1.7cm. Paper Title must be in Font Size 22, with Single Line Spacing. Authors Name must be in Font Size 11. Abstract should contain at least 250 words. Abstract explanation should be Times New Roman font, 09 Size, Bold, Single line spacing, text alignment should be justified. References and Author's Profile must be in Font Size 8, Hanging 0.25 with single line spacing.

**Index Terms—** Community health agent, Aging of the skin, Sun exposure /solar radiation, Skin injury.

## INTRODUCTION

The Community Health Agent (CHA) is an indispensable component in the Family Health Strategy Team (FHS), which is the main program that provides access to primary health care services (PHC) in the Unified Health System (SUS). The CHA is a fundamental member of the community, representing a link between the user and the health service. According to the National Primary Care Policy (MPCP, 2012) performs functions such as: registering and accompanying families restricted to their micro area, guiding them on the use of health services, promoting actions that seek integration between the FHS and the community; develop activities of health promotion, disease prevention, health surveillance, through home visits and individual and collective educational actions [1].

According to Martines [2], CHA tends to have a higher

**Georgia Stefani Cardoso de Camargo**, Graduate student in Physiotherapy, University of Gurupi UnirG, Avenue. Rio de Janeiro. N.º 1585-Sector. Central., Gurupi, 77403-090, Tocantins, Brazil

**Magna Cristina da Silva Fonseca**, Graduate student in Physiotherapy, University of Gurupi UnirG, Avenue. Rio de Janeiro. N.º 1585-Sector. Central., Gurupi, 77403-090, Tocantins, Brazil.

**Sávia Denise Silva Carlotto Herrera**, Physiotherapist. Teacher. Assistant I of Gurupi University – UnirG, Avenue. Rio de Janeiro. N.º 1585-Sector. Central., Gurupi, 77403-090, Brazil.

**Najla de Oliveira Mahmud**, in Physiotherapy from the Higher Education Unit of Southern Maranhão - UNISULMA-MA, Brazil

**Florence Germaine Tible Lainscek**, Master's Degree in Health Sciences, Federal University of Tocantins. Professor of the Physiotherapy Course of Gurupi University - UnirG, Gurupi-TO, Brazil

**Núbia Martins Correia**, Graduate student in Physiotherapy, University of Gurupi UnirG, Avenue. Rio de Janeiro. N.º 1585-Sector. Central., Gurupi, 77403-090, Tocantins, Brazil

**Wellington Bispo Nunes**, Graduate student in Physiotherapy, University of Gurupi UnirG, Avenue. Rio de Janeiro. N.º 1585-Sector. Central., Gurupi, 77403-090, Tocantins, Brazil

**Warly Neves de Araújo**, Graduated in Physiotherapy, University of Gurupi UnirG., Gurupi, Tocantins, Brazil

prevalence of signs of premature aging when compared to other members of the Basic Health Unit (BHU) such as the physician, nurse and nursing assistant who are inside the Unit and with a lower frequency of sun exposure. The CHA spends most of their hours on the streets exposed to solar radiation.

Although exposure to sunlight is essential in the lives of humans, as it benefits vitamin D production and melanin production stimulation, these effects depend on factors such as intensity, frequency, and exposure time. Excess and unprotected solar radiation promote changes in the body such as premature aging and even skin cancer [3].

According to Montagner and Costa[4] ultraviolet rays (UV) are divided into two types of solar radiation that exceed the ozone layer, RUV-B which is the biggest cause of skin cancer, and UV-A that alters cells and stimulates the development of malignant melanoma, in addition to favoring premature aging, both UV radiations can generate skin lesions due to free radicals in deoxyribonucleic acid (DNA).

With the expansion of industrialization and excessive pollution due to man's action, the ozone layer is increasingly thin and losing its role of protection against sunlight. In foods such as carrot, tomato, and papaya lies beta carotene sustância that increases the reaction of ultraviolet sensitivity photos [5] [6].

There is an increasing number of individuals with premature aging, as a large part of the population to develop their work activities is exposed to solar radiation in a long period during the day [7].

According to Carvalho [8], the skin aged due to extrinsic factors such as ultraviolet radiation differs from physiological aging, because it looks paler, rough the appearance of sagging is more remarkable, presents thicker wrinkles at the time of facial expression, it is remarkable the presence of hypo and hyperpigmented lesions (senile spots) in people with a history of excessive sun exposure.

## MATERIALS AND METHODS

This is bibliographical research carried out from the survey of articles in the database, Virtual Health Library (Medline, Lilacs), SciELO, about self-care with the skin. The following terms were used for the search: Community health agent; aging of the skin; sun exposure /solar radiation; skin injury. Twenty-seven articles were identified, of which only 13 articles contained the terms searched in the title of the study and were published from 2015 to 2020. The articles were read in full and used to compose the results and discussion of the present study.

During the bibliographic survey, the content of the articles eliminated was analyzed the articles that did not include the theme of self-care with the skin. The inclusion criteria defined for the selection of articles were: articles found in the language

Portuguese, published in the period from 2015 to 2020 years, available in full and that addressed the theme investigated.

The collected data were discussed by students responsible for the production of the article and with the help of Microsoft Word 2010 and Microsoft Excel 2010, arranged in the form of development for later confrontation with the literature.

The analyses of the results obtained by this study were based on the following bibliometric indicators: year of publication of the study, authors, type of study. In the present study, 27 articles were found, 13 of which were selected for the study. The following information was condensed: authors, year of publication, type of study, methodology, and outcomes, according to table 1.

RESULTS

NUMBER	AUTHOR/ YEAR	TYPE OF STUDY	OBJECTIVE	METHODOLOGY	OUTCOME
1	Cortez et al., 2016 [9]	Exploratory - descriptive with a qualitative approach.	To determine the level of instruction of professionals in the field of aesthetics regarding the use of sunscreen, and also identify the guidelines they pass on to their patients.	The municipality of Maringá-PR, southern Brazil, was elected as the study site, due to the large number of clinics and beauty salons it has, 196, from March to September 2013. The sample was random, composed of 30 female professionals, the mean age of 28 (19 to 41) years, technologists and technicians in aesthetics, physiotherapists, and physical educator.	The results showed that among the professionals interviewed there is a conscious use of sunscreens, who have good knowledge about these products and the importance and need of this product for the prevention of cutaneous neoplasms. It also showed the commitment of professionals to guide their users to the correct use of topical photoprotector.

2	Castro et al., 2018[10]	The quantitative approach, cross-sectional outline.	To be worth the prevalence and prevention habits of skin cancer in rural elderly.	An estimated sample calculation was performed for frailty syndrome using the following parameters: population of the city of Pelotas-RS - 328.2759, confidence level of 95%, the prevalence of frailty syndrome estimated at 19.9%, and acceptable error of 3%. With these data, the initial calculation base was 680, totaling 10% of losses, 10% of refusals, and 10% for control of confounding factors, 834 were totaled as sample calculation, and 820 elderly were interviewed.	The results of this study show that rural elderly is part of the risk group for skin cancer due to prolonged hours of sun exposure and few prevention measures are adopted. The prevalence of self-reported skin cancer by the elderly studied was 4.8%. Considering the prevention of skin cancer, the use of protective accessories, such as a hat and long pants, was more observed in females.
3	Rocha et al., 2018[11]	A cross-sectional descriptive study.	Evaluate the knowledge about sun exposure of medical students correlating with the applicability of this information in their habits.	Conducted with students enrolled in the medical course of the University of Passo Fundo (UPF), Rio Grande do Sul. Data were collected from July to December 2016. To calculate the sample size, the total number of students enrolled in the first semester of 2016 (525 students), an estimated prevalence of photoprotection practices of 50%, and 93% confidence level, resulting in a minimum initial sample of 203 students, was taken as a starting point. The sample obtained was 207 students, all of the age, at any stage of the medical course.	The data obtained in this work associated with information obtained in other studies allow us to conclude that both in our reality and in other locations the medical students are not aware of the importance of photoprotection, as they do not apply theoretical knowledge in everyday practice.

## Self-care with the skin of Community Health Agents

4	Rebello et al, 2018[12]	A descriptive, observational, cross-sectional, and quantitative study.	Identify the presence of premature skin aging in fishermen from Salinópolis/PA	Carried out with 275 volunteers from the Fishing Colony, from three beaches in the municipality of Salinópolis/PA. Beach fishermen, aged between 18 and 59 years, from phototype I to VI, according to Fitzpatrick's classification (1976), exposed directly to solar radiation and working for more than one year in the profession were included.	A prevalence of beach workers aged 26 to 35 years (36%, n = 98), smokers (59%, n = 161), alcoholics (78%, n = 237) and who did not have skin care (91%, n = 250) was observed.
5	Kaddourah et al, 2015 [13]	Case study, exploratory research.	To verify the relationship between the occurrence of irritative contact dermatitis and the use of Personal Protective Equipment (PPE), identifying risk factors and measures adopted	Held in São Paulo, the patients were selected from the company "INMETRA Occupational Safety Medicine and Engineering. We interviewed 100 patients aged 18 to 63 years (81 males and 19 females), 30 white, 26 black, and 44 brown. Regarding the level of education, 6 were illiterate, 37 completed only elementary school, 51 attended high school and only 6 entered higher education. The interviewees worked between 12 days and 39 years, and the positions with the highest incidence were related to the construction sector (50 helpers and/or construction assistants, masons, carpenters) followed by food workers (20 assistants/kitchen helpers, waiters, and bartenders) and the others held jobs in commerce and health.	The present study verified an incidence rate of dermatitis due to PPE use of 27%, pointed to hands as the place of greatest involvement, and observed that the major cause of dermatitis is the prolonged use of equipment by excessive working hours followed by exchanges with less than one day.

6	Almeida et al, 2018[14]	A cross-sectional, quantitative study.	Identify the socio-demographic and work profile of CHA and verify associations with the use of PPE.	It was held in the state of São Paulo, Brazil. The study population consisted of 166 CHA. The majority of CHA (94.16%) are women, with a mean age of 34.80 years (standard deviation - SD - 9.96; minimum 19 and maximum 62 years), where 71.53% were among 19 and 39 years old.	CHA is predominantly female and young adults. The average time of operation was three years and the mean, the most used means of transport for activities was the bicycle. Most reported using some type of PPE, the most frequent were sunscreen and closed shoes. The CHA with the longest service time is the ones that use PPE the most. There was a low frequency of wearing a cap, sunglasses, and raincoat.
7	Frighetto et al, 2018[15]	Exploratory descriptive cross-sectional approach quali-quantitative .	To verify the degree of knowledge among community health agents about the harmful factors caused to the skin through solar radiation and protective mechanism against skin cancer.	Carried out in the municipality of Ji-Paraná/RO, 3 UBS were selected the sample was probabilistic by convenience, composed of 34 CHA who worked in the selected UBS. A questionnaire adapted from Lo Turco (2010) was used as a data collection instrument. The municipalities of Ananindeua and Belém, Pará, were elected as the study site. The sample was due to non-probabilistic convenience sampling, so the research included CHAS that on pre-scheduled dates would be available to participate.	It concludes that due to the high sun exposure and lack of personal protective equipment adequately, skin lesions correlated with ultraviolet radiation exposure can be caused. Therefore, it emphasizes that more study with such a population and preventive measures of health education is necessary.

## Self-care with the skin of Community Health Agents

8	Araújo et al, 2016[1]	Cross-sectional study	Investigate skin lesions related to or aggravated with sun exposure in community health agents in two municipalities in the metropolitan region of Belém, State of Pará, relating them to some sociodemographic variables, and to evaluate the use of protection against sun exposure.	Carried out in the municipality of Ji-Paraná/RO, 3 BHU were selected the sample was probabilistic by convenience, composed of 34 CHA who worked in the selected BHU. A questionnaire adapted from Lo Turco (2010) was used as a data collection instrument municipality of Ananindeua and Belém, Pará was elected as the study site. The sample was due to non-probabilistic convenience sampling, so the research included CHAS that on pre-scheduled dates would be available to participate.	The results showed that there is no correlation between skin lesions due to the number of hours exposed to solar radiation. However, when dividing them into a time of service, he noticed that CHA working in the profession with more than 3 years, the presence of keratosis, and seborrhea was observed and that those who worked more than 10 years in the profession were 3.3 times more likely to develop melasma.
9	Pereira,2015 [17]	Bibliographic review	Guide the work doctor on the subject and improve occupational skin cancer prevention strategies.	Literature review, with descriptors: "occupational skin cancer", "skin cancer", "skin cancer epidemiology", "sunscreens", "occupational Sun exposure", "sunscreens", "skin cancer", "occupational skin cancer", "Epidemiology of skin cancer", "sun exposure in workers", the databases used were: PubMed, Cochrane, GoogleAcademic, Medical Literature Analysis and Retrieval System Online (MEDLINE), IARC, INCA, Ministry of Health, Ministry of Labor and Ministry of Social Security. Twenty-nine articles, 10 publications, and 6 legislations were selected.	Research shows that to reduce cases of skin cancer in workers exposed to the sun, preventive and continuous follow-up of the occupational physician is necessary

10	Souza, et al 2016[18]	Cross-sectional study.	To identify risk factors, sun exposure habits, photoprotection and skin changes in Community Health and Endemic Agents operating in the municipality of Mateus Leme, Minas Gerais, Brazil.	The research in the municipality of Mateus Leme/MG. The sample consisted of 33 CHA and 23 agents to combat ACE endemic diseases, a questionnaire containing an assessment of photo exposure habits, photoprotection and risk factors for skin cancer, associated with a brief physical examination of the parts of the body that are commonly most exposed to the sun: the face, neck, arms, hands, trunk, and back.	The results revealed that 50% of the CHA presented at least one skin alteration and 18% more than one alteration. Therefore, it is perceived the need to carry out prevention and skincare programs after the onset of lesions in the regions most exposed to radiation.
11	Malcher, et al 2019[19]	Descriptive quantitative, cross-sectional study.	To evaluate the photoprotection of Community Health Agents (CHA) of 5 family health strategy teams.	Two neighborhoods of the municipality of Belém, Pará, were elected. The study population was composed of 64 CHA. Data were collected through a self-administered questionnaire on sun exposure habits.	The results showed that CHA is exposed for a long period daily to solar radiation. When analyzing the form of photoprotection of CHAs, they were considered inadequate when using sunscreens and some professionals reported not using sunscreens.
12	Flumian, et al 2018[20]	This is qualitative research designed as exploratory action research.	To investigate the work of 8 community health agents based on the Focal Group Technique, seeking to know and analyze the sources and types of overloads arising from work activity, working conditions, employment, training, and attributions of this worker in the Family Health Strategy.	The study was carried out in a UBS in the interior of São Paulo. All CHAs (10) of two-family health teams in which one of the authors worked during the two years of her multi-professional residency in health (PRMSFC-UFSCar) was invited to participate in the study. The sample consisted of 08 CHA.	It is concluded that there is no recognition of the importance of these professionals and the lack of autonomy over their work contributes to the feeling of professional devaluation.

13	Garcia, et al 2019[21]	A descriptive, cross-sectional study with a quantitative approach.	Identify the profile and describe the work process of Community Health Agents (CHA).	The selected municipalities were Cariacica, Serra, Vila Velha and Vitória, in the state of Espírito Santo, the sample consisted of 291 CHA. For data collection, a questionnaire with the following variables was used: time of action; the number of families under the responsibility of the CHA; one considers the work stressful, work bond; search for another job; training course and activities practiced.	The results highlighted that many professionals report insecurity regarding the work bond, work overload due to the excessive amount of activities to be performed, and consider work very stressful.
----	------------------------	--	--	--	---

Table 1: Relationship between years of published articles and results obtained.

IV. DISCUSSION

CHA spends much of their work hours exposed, outside the basic health unit that works, with this have great exposures to the sun rays, along with other environmental factors. Sun exposure can provide health benefits and harms, in which the most noticeable are: premature aging, injuries, which can lead to skin cancer [22].

Most CHA works more than 6 hours a week in an external environment, prevailing the hours often in the morning and three in the afternoon, this daily and mandatory journey causes them to be exposed for a long time, thus increasing the risks of skin lesions [16].

In a survey conducted by Frighetto et al [15], showed that about sun exposure time 44% (n=15) is exposed from the period between 8:00 and 10:00 or after 16:00 hours, and 47% (n=16) are exposed at all times, regarding the frequency of sunscreen use, 6% (n=2) do not use sunscreen, 23% (n=8) use the times and 71% (n=24) use daily, regarding the number of times they use the protector 38% (n=13) use only once a day, 26.5% (n=9) twice, respectively three or more times. For the protection of ultraviolet radiation, devices such as; sunscreen, long clothing, hat or cap, sunglasses, and umbrellas, but only 9% (n=3) of the CHA use all these means, 14.71% (n=5) use only one means of protection, the others vary between two and four methods used to protect themselves. Regarding knowledge about skin cancer, 79% (n=27) have heard about it.

Sunscreens are indispensable prevention methods, but not all CHA have access due to several factors such as self-cost, not necessarily provided by municipal administrations, or make the misuse of it, which may have occurred due to lack of information on the importance and correct form for use. Another method that we can highlight as a form of prevention is mechanical protectors, such as hats, sun umbrellas, which,

like sunscreen, are not part of the daily lives of many [23].

According to Souza [18], most of the servants know the importance of using sunscreen, and what can happen with the non-use of them. However, disuse or incorrect application stands out with prevalence, requiring a protection alert with more information that enhances your care correctly.

In a study based on the evaluation of the skin of CHA, it was reported that half of them already had 1 type of skin lesion, and were affected either by immediate or late changes due to exposure, almost 20% of those evaluated found more than one alteration. And in this population, 5% have already been detected with skin cancer [24].

Brazil, due to its tropical climate, is with a high percentage of solar rays and together with this factor, one can also mention the little information focused on this theme and the Brazilian cultural issue of not making the use of sunscreens daily. Because of this, skin cancer has a percentage of 25% of other tumors present in all regions [25].

In New Zealand, it was proven through a study done with 1,061 workers of high sun exposure that, they make proper use of PPE and possess full support of employers by providing them and appropriate guidance for their protection realizing that the most used were hats, sunglasses and sunscreens [26].

When the skin passes through solar aggressions it tends to give apparent signs from spots, dryness, roughness, to lesions that can be classified according to the degree it is and maybe benign, premalignant, reaching even malignant [27] [28].

Skin aging can act as a warning sign, in which process is occurring in an accelerated manner and acting in similar to other factors, such as inadequate eating, stress, sedentary lifestyle, smoking, excess alcohol, pollution, or genetic predisposition [29].

According to Haack [30] research conducted in the city of Pelotas showed that 44.4% of the participants presented sensitivity when exposed to the sun, generating mild burns.

The other half of the individuals surveyed reported that they do not use sunscreens in the workplace and leisure.

According to the Brazilian Society of Dermatology [31], it is essential that CHA participate in campaigns or programs that bring information rich in health education more frequently, and that they show, from the main ways of performing self-care, showing the importance that this acts against daily solar radiation, to the consequences that this exposure without protection and inadequate maintenance of it can cause immediate or in the long term. So that they acquire a more acute self-care and are more aware and able to pass this on to the population that also needs this primary prevention.

The health promotion carried by the trained and well-oriented CHA has a fundamental and unparalleled role in the population, where in addition to providing knowledge, it becomes able to create a link of trust [32].

## V. CONCLUSION

It was found that most studies were conducted in the southeast region. It was observed that the vast majority of professionals who work in contact with sun exposure, do not use or improperly apply and maintain photoprotection, and do not use mechanical protective scans (clothes, hats, glasses, and sun umbrellas) together. Moreover, most of these workers present some type of skin lesion, generated by exposure to solar radiation for excessive and inadequate time.

In the face of this, this review raised two fronts of work and research. The first refers to the need to appropriate the results of research by managers and policymakers and, the second, to the need for investment in studies and constant training for difficulties faced by the CHA in its work, such as valuing the importance of self-care with health and the dissemination of these guidelines correctly for the entire population, helping to decrease the high percentage of skin lesions caused by solar radiation from the communities.

In this sense, new studies are important in Brazilian regions with different realities.

## REFERENCES

- [1] Brasil. Ministério da Saúde. PNAB: Política nacional de atenção básica. Brasília: Ministério da Saúde, 2012.
- [2] Martines, W.R.V. Compreendendo o processo de sofrimento no trabalho do Agente Comunitário de Saúde no Programa Saúde da Família. São Paulo: USP, 2005. Dissertação [Mestrado em Ciências da Saúde] -Escola de Enfermagem da USP, 2005.
- [3] Flor, J.; Davalos, M.R.; Correa, M.A. Protetores solares. Revista Química Nova, São Paulo, v. 30, n. 1, p. 153-158, 2007.
- [4] Montagner, S.; Costa, A. Bases biomoleculares do fotoenvelhecimento. Anais Brasileiros de Dermatologia, Rio de Janeiro, v. 84, n. 3, p. 263-269, 2009.
- [5] Gontijo, G.T.; Pugliesi, M.C.C.; Araújo, F.M. Fotoproteção. Surgical & Cosmetic Dermatology, Rio de Janeiro, v. 1, n. 4, p. 186-192, 2009.
- [6] Azulay, R.D. Dermatologia. 7. ed. Rio de Janeiro: Guanabara Koogan, 2017.

- [7] Meyer, P.F.; et al. Investigação sobre a exposição solar em trabalhadores de praia. Revista Brasileira em Promoção da Saúde, Fortaleza, v. 25, n. 1, p. 103-109, 2012.
- [8] Carvalho, G.F. et al. Avaliação dos efeitos da radiofrequência no tecido Conjuntivo. Revista brasileira de medicina, Rio de Janeiro, v. 68, p. 10-25, 2011.
- [9] Cortez, D.A.G. et al. O conhecimento e a utilização de filtro solar por profissionais da beleza. Ciência & Saúde Coletiva, v. 21, p. 2267-2274, 2016.
- [10] Castro, D.S.P.; Lange, C.; Pastore, C. A.; Carreira, L. et al. Câncer de pele em idosos rurais: prevalência e hábitos de prevenção da doença. Saúde e Pesquisa, v. 11, n. 3, p. 495-503, 2018.
- [11] Rocha, C. R. M.D.; Tronco, A.; Borba, F.W.; Lunelli, J. et al. Fotoexposição: Hábitos e Conhecimento de Estudantes de Medicina. Rev. bras. ciênc. saúde, p. 149-154, 2018.
- [12] Rebelo, E.B.; Lobato, T. M. X.; da Silva, W. G.; Bandeira, C. C. A. et al. Exposição solar e envelhecimento precoce em trabalhadores praianos do município de Salinópolis/PA. Estudos Interdisciplinares sobre o Envelhecimento, v. 23, n. 3, 2018.
- [13] Kaddourah, S. M. E. H.; Costa, F.; Fábrega, J. F.; Rabello, L. et al. Relação entre a ocorrência de dermatite de contato irritativa e o uso dos equipamentos de proteção individual. Revista Brasileira de Medicina do Trabalho, p. 120-125, 2015.
- [14] Almeida, M.C.S.; Barros, V. G.; Baptista, P.C.P.; Silva, A. et al. Fatores relacionados ao uso de EPI em agentes comunitários de saúde. Rev Bras Med Trab. 2018;16(3):346-52
- [15] Frighetto, A.V. et al. Câncer De Pele: Avaliação, conhecimento e Identificação em Agentes Comunitários De Saúde Do Município De Ji-Paraná-Ro. BrazilianJournal of Surgery and Clinical Research, Paraná, v.25, n2, p.38-42, 2018.
- [16] Araújo, F.C. et al. Avaliação dermatológica de agentes comunitários de saúde sujeitos à fotoexposição em região tropical do Brasil. Scientia Medica, v. 26, n. 4, p. 1, 2016.
- [17] Pereira, C.A. A importância da atuação do médico do trabalho na prevenção do câncer de pele ocupacional. Rev. bras. med. trab, p. 73-79, 2017.
- [18] Souza, M.C.M.R. et al. Câncer de pele: hábitos de exposição solar e alterações cutâneas entre agentes de saúde em um município de Minas Gerais. Revista de Enfermagem do Centro-Oeste Mineiro, 2016.
- [19] Malcher, C.M.S.R.; Tembra, A.L.; Amorim, F.C.; de Souza, T. R. M. et al. Fotoproteção em Agentes Comunitários de Saúde (ACS) de Belém-PA. Revista Brasileira de Medicina de Família e Comunidade, v. 14, n. 41, p. 1-9, 2019.
- [20] Flumian, R. B.; Fioroni, L.N.; Fioroni, L.N. Aproximações às vicissitudes e superações do trabalho do Agente Comunitário de Saúde. Tempus Actas de Saúde Coletiva, v. 11, n. 2, p. 179-198, 2018.
- [21] Garcia, A.C.P.; Lima, R.C.D., Lima, E.F.A.; Galavote, H.S. et al. Perfil e o Processo de Trabalho dos Agentes Comunitários de Saúde. Revista de Pesquisa: Cuidado é Fundamental, p. 339-344, 2019.
- [22] Kumar V.; Abbas A.K.; Aster J. C. Robbins & Cotran - Bases Patológicas das Doenças. 9ª ed. Rio de Janeiro: Elsevier; 2016.
- [23] Schalka, S.; et al. Brazilian consensus on photoprotection. Anais Brasileiros Dermatologia, Rio de Janeiro, v. 89, n. 6, p. 1-74, 2014. <http://dx.doi.org/10.1590/abd1806-4841.20143971>.
- [24] Milesi, Sabrine da S.; Guterres, Silvia Stanisçuaski. Fatores determinantes da eficácia de fotoprotetores. Caderno de farmácia. Porto Alegre, RS. Vol. 18, n. 2, p. 81-87, 2002.

- [25] Souza, S. R. P., Fisher, Frida M.; Souza, J. M. P. Bronzeamento e risco de melanoma cutâneo: revisão da literatura. *Revista de Saúde Pública* v.38, n.4, São Paulo, agosto 2004.
- [26] Reeder, A.I.; Gray, A.; Mccool, J.P. Occupational sun protection: workplace culture, equipment provision and outdoor workers' characteristics. *Journal of occupational health*, v. 55, n. 2, p. 84-97, 2013.
- [27] Silva, S.A.M; Michniak-Kohn, B; Leonardi, G.R. An overview about oxidation in clinical practice of skin aging. *Anais Brasileiros de Dermatologia*, São Paulo, v. 92, n. 3, p. 367-374, jun. 2017.
- [28] Batistela, M.A.; Chorilli, M.; Leonardi, G.R. Abordagens no estudo do envelhecimento cutâneo em diferentes etnias. *Rev. Bras. Farm.*, v. 88, n. 2, p. 59-62, 2007.
- [29] Pandolfo, M. O processo de envelhecimento. *Personalite*, [s.l.], v. 14, n. 71, p. 102-114, 2011.
- [30] Haack, R. L.; Horta, B. L.; Cesar, J. A. Sunburn in young people: population-based study in Southern Brazil. *Revista de saúde pública*, v. 42, n. 1, p. 26-33, 2008.
- [31] Sociedade Brasileira de Dermatologia. *Consenso Brasileiro de Fotoproteção*. 2013. Rio de Janeiro: SBD, 2013.
- [32] Nunes, M.O. et al. O agente comunitário de saúde: construção da identidade desse personagem híbrido e polifônico. *Cadernos de Saúde Pública*, v. 18, n. 6, p. 1639-1646, 2002.