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Nursing Care to Evaluate, Prevent, and Treat Cutaneous Xerosis in the Elderly*

Theme: Chronic care.

Scientific contribution to the discipline: It is expected that this study can contribute to guide nursing interventions, as well as to conduct future research and create protocols on the subject. Horta's Basic Human Needs Theory was presented as theoretical and conceptual basis, with the possibility of adding the care presented herein when considering hydration inherent to the set of psychobiological needs.

ABSTRACT

Objective: Identify nursing care performed by nurses to evaluate, prevent, and treat cutaneous xerosis in the elderly. **Materials and Methods:** Descriptive study with quantitative approach, conducted with 101 care nurses working in the medical clinic and in the intensive care units of four hospitals in Paraíba, Brazil. The data collection took place between July and September 2018 through an instrument composed of sociodemographic variables and by items related with nursing care. The statistical analysis was performed by distribution and frequency calculations, central tendency measures, standard deviation, and chi-squared test for categorical variables. **Results:** The majority stated always considering the age range (84.2 %), assessing skin color (83.2 %), evaluating skin turgor and elasticity (64.4 %), looking for the existence of skin fissures (53.5 %), and noticing the existence of lesions on the skin (90.1 %). Of the participating professionals, 83.2 % reported never having used imported equipment to evaluate skin hydration. **Conclusions:** The study showed that nurses emphasized the importance of considering age range, assessing skin color, being aware of areas with hyperemia, and noticing the existence of lesions, as well as the need for continuing education to improve the quality of care.


KEYWORDS (SOURCE: DeCS)

Nursing; nursing care; aging skin; therapy; health of the elderly.

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*Cuidados de Enfermería para evaluar, prevenir y tratar la xerosis cutánea en personas ancianas**

RESUMEN

Objetivo: identificar los cuidados de Enfermería realizados por enfermeros para evaluar, prevenir y tratar la xerosis cutánea en personas ancianas. **Materiales y métodos:** estudio descriptivo, con enfoque cuantitativo, realizado con 101 enfermeros asistenciales que ejercen actividades en la clínica médica y la unidad de terapia intensiva de cuatro hospitales de Paraíba, Brasil. La recolección de los datos ocurrió entre julio y septiembre del 2018 por medio de un instrumento compuesto por variables sociodemográficas y por ítems relacionados con los cuidados de Enfermería. El análisis estadístico se realizó por cálculos de distribución y frecuencia, medidas de tendencia central, desviación estándar y prueba chi-cuadrado para variables categóricas. **Resultados:** la mayoría afirmó siempre considerar el rango de edad (84,2 %), evaluar la coloración de la piel (83,2 %), evaluar la hinchazón y la elasticidad de la piel (64,4 %), buscar la existencia de hendiduras (53, 5 %), observar la existencia de lesiones en la piel (90,1 %). De los profesionales participantes, el 83,2 % dijo nunca haber usado equipo importado para evaluar la hidratación de la piel. **Conclusiones:** el estudio encontró que los enfermeros enfatizaron la importancia de considerar el grupo de edad, evaluar la coloración de la piel, estar atento a áreas con hiperemia y observar la existencia de lesiones, así como la necesidad de la educación continuada para mejorar la calidad del cuidado.

PALABRAS CLAVE (FUENTE: DeCS)

Enfermería; cuidados de Enfermería; envejecimiento de la piel; terapia; salud del anciano.

* Extraído de la disertación "Cuidados de enfermagem para avaliação, prevenção e tratamento da xerose cutânea em pessoas idosas", del programa de posgrados en enfermería de la Universidade Federal da Paraíba, 2019.

*Cuidados de Enfermagem para avaliar, prevenir e tratar a xerose cutânea em pessoas idosas**

RESUMO

Objetivo: identificar os cuidados de Enfermagem realizados por enfermeiros para avaliar, prevenir e tratar a xerose cutânea em pessoas idosas. **Materiais e métodos:** estudo descritivo com abordagem quantitativa, realizado com 101 enfermeiros assistenciais que exercem atividades na clínica médica e na unidade de terapia intensiva de quatro hospitais da Paraíba, Brasil. A coleta dos dados ocorreu entre julho e setembro de 2018 por meio de um instrumento composto por variáveis sociodemográficas e por itens relacionados aos cuidados de Enfermagem. A análise estatística realizou-se por cálculos de distribuição e frequência, medidas de tendência central, desvio-padrão e teste qui-quadrado para variáveis categóricas. **Resultados:** a maioria afirmou sempre considerar a faixa etária (84,2 %), avaliar a coloração da pele (83,2 %), avaliar o turgor e a elasticidade da pele (64,4 %), buscar a existência de rachaduras (53,5 %), observar a existência de lesões na pele (90,1 %). Dos profissionais participantes, 83,2 % disseram nunca ter usado equipamento importado para avaliar a hidratação da pele. **Conclusões:** o estudo demonstrou que os enfermeiros enfatizaram a importância em considerar a faixa etária, avaliar a coloração da pele, estar atento a áreas com hiperemia e observar a existência de lesões, bem como a necessidade da educação continuada para melhorar a qualidade do cuidado.

PALAVRAS-CHAVE (FONTE: DECS)

Enfermagem; cuidados de Enfermagem; envelhecimento da pele; terapêutica; saúde do idoso.

* Extraído da dissertação "Cuidados de enfermagem para avaliação, prevenção e tratamento da xerose cutânea em pessoas idosas", no âmbito do Programa de Pós-graduação em Enfermagem da Universidade Federal da Paraíba, em 2019.

Introduction

The age structure of the population has been marked in recent years by changes, especially regarding longevity. However, it is not enough to increase the number of years lived, but to improve the living conditions of the elderly so that they can enjoy an active and healthy old age with quality of life (1).

The aging process brings along numerous changes —physiological, morphological, biochemical, and functional— in the whole organism, making it more susceptible to intrinsic and extrinsic aggression. Within this context, dry skin or cutaneous xerosis is highly frequent and contributes to the occurrence of discomfort and changes in the visual and sensory appearance of the skin. Among the characteristics of cutaneous xerosis, the following may be noted: Peeling, fissures, tension, hyperemia, and occasionally bleeding (2).

Cutaneous xerosis has affected the quality of life of many older people and affects 15 % to 20 % of the global population; when severe, it may interfere with productivity at work and activities of daily living, especially, when the hands are affected. The basis of the treatment is skin rehydration and repair, important in restoring epidermal barrier function (3).

For the skin to function properly, two basic processes act together: Skin cleansing and hydration. Cleansing contributes to the removal of external debris, natural skin secretions, as well as microorganisms. Hydration, on the other hand, has the primary role of maintaining water content in the epidermis and keeping the epidermal barrier within the normal range (4).

Preventing, evaluating, and treating a lesion are important responsibilities inherent to the health staff, especially with regard to Nursing. In this sense, knowledge is needed about risk factors, physiology, anatomy, healing processes, and products for prevention and treatment. This knowledge becomes essential to make an accurate diagnosis and indicate appropriate technologies. Both prevention and treatment are dynamic and should follow scientific developments, and this aspect has been potentiated through the offer of courses and the foundation of care from the Nursing Process (NP) (5).

In order to guide, direct, and organize professional Nursing care, nurses find, in the NP, their work method, for which theoretical support is needed to subsidize the path of care. In Brazil,

the most widely used theoretical model has been the Basic Human Needs Theory (BHNT) by Horta, which guides Nursing care in the psychobiological, psychosocial, and psycho-spiritual dimensions (6).

Thus, within the context of the construction of a field of own knowledge, Standardized Nursing Language Systems (SNLS) organize information and are related with the development of knowledge in the Nursing discipline, given that they permit the construction of databanks in relation to Nursing diagnoses, interventions, or results, besides giving visibility to the contribution of nursing to people's health (7). Diverse SNLS exist to name Nursing phenomena, such as the NANDA-I Nursing Diagnosis Classification (8), the Classification of Nursing Interventions (9), and the Classification of Nursing Results (10).

It is a fact that there is a weakness regarding studies that specifically address products and technologies used by Nursing professionals to treat cutaneous xerosis; In addition, it is observed that the prevention and treatment of lesions already installed require great attention from the staff, are expensive, and require nurses to practice training and continuing education to qualify to work efficiently and effectively (11). Thus, this study sought to identify the nursing care conducted by nurses to evaluate, prevent, and treat cutaneous xerosis in the elderly.

Materials and Methods

This was a descriptive study with quantitative approach, conducted in four hospitals of the metropolitan region of João Pessoa, in the state of Paraíba, Brazil. The institutions were chosen because they routinely received a large number of elderly, in addition to serving as educational and training institutions for undergraduate students and multi-professional residency in hospital health care for the health of the elderly and critical patients.

The population was comprised of 120 nurses working in sectors medical clinic and intensive care unit (ICU) in the three work shifts. The non-probability and convenience sample consisted of 101 participants who met the inclusion criteria and agreed to participate in the research. Considering a 5 % sampling error and 95 % CI, the minimum sample considered sufficient was 92 subjects.

Inclusion criteria considered nurses who worked in the care units, being in the service for at least six months, using the Nursing

process as method for care, in addition to being active during the data collection period, which took place between July and September 2018. The study excluded nurses working only in administrative functions, or who were on leave or on vacation during the collection period.

The data collection used an instrument composed of two parts: The first with sociodemographic data to identify the participants and the second with objective questions grouped into three domains and classified through a five-point Likert scale, from 1 (never), 2 (almost never), 3 (sometimes), 4 (almost always) to 5 (always). The domains were: 1. evaluation of the skin of the elderly; 2. products used to prevent and treat cutaneous xerosis; 3. nursing care prescribed in the presence of the Nursing diagnosis "impaired skin integrity related to cutaneous xerosis".

The instrument constructed underwent content validation process by five judges, which permitted verifying the properties to measure the phenomenon studied. Content validation is indispensable for the development of measurement tools, given that it involves the process of elaboration and judgment by experts in defining the theoretical universe and the different dimensions of the concept to be observed and measured (12); in this study, it was performed to identify items that might not fit the proposed objectives.

After collection, the data were tabulated and stored in the Excel program for Windows and then transported to the Statistical Package for the Social Sciences (SPSS) software, version 25.0. For the data, descriptive statistical analyzes of distribution and frequencies were performed and measures of central tendency and standard deviation were calculated; for the categorical variables, the chi-squared test was performed.

The research was conducted according to Resolution 466/2012 of the National Health Council, which provides for ethics related to research involving human, directly or indirectly, certifying, among other things, the guarantee of the participants' right to privacy (13). It was approved by the Research Ethics Committee of the Center on Health Sciences at Universidade Federal da Paraíba, under the number of the Certificate of Presentation for Ethical Appreciation (CAAE, for the term in Portuguese): 89318318.3.0000.5188 and Opinion 2.731.985.

Results

The sample was comprised of 101 nurses with prevalence of female sex (84.2 %), with mean age of 36.51 years (SD = 7.67; minimum = 24, maximum = 62). The time of work engagement of the participants showed a median of 9.33 years (SD = 7.99; minimum = 6 months, maximum = 35 years), and it was observed that the majority had a degree of specialist (59.4 %).

It was found that 65 nurses (64.4 %) did not have any course in the area of prevention and/or treatment of skin lesions. Regarding the number of employment ties, most subjects reported working in more than one job (60.4 %) and, of these, 52 (85.2 %) reported having two jobs. The weekly work schedule varied between 20 and 74 h per week with a mean of 42.63 h (SD = 12.8), according to the data presented in Table 1.

Table 2 shows the distribution of response frequencies for items in the instrument. It is highlighted that the majority stated always considering the age range (84.2 %), assessing skin color (83.2 %), evaluating skin turgor and elasticity (64.4 %), observing the patient's temperature (54.7 %), considering excessive moisture (63.4 %), looking for the existence of skin fissures (53.5 %), noticing the existence of lesions on the skin (90.1 %), the presence of peeling (61.4 %) and of itching (63.4 %), being attentive to exposure to cold (52.5 %), and considering assessment of the skin to choose the type of moisturizer (53.5 %). Most of the nurses (83.2 %) report never having used imported equipment to evaluate skin hydration. Of the instrument's 34 items, only eight did not obtain scores above 50 % for care always or almost always prescribed, which can be related with the time of professional exercise, as well as with a good quality of university formation.

To assess the association between the choice of items and whether or not to take courses in the area of prevention and treatment of skin lesions, a chi-squared test was conducted and the respective *p* values were analyzed, as shown in Table 3.

After the test, statistically significant relationships were found in items 19, 20, 25, 28, 30, 32, 33, and 34, whose *p* values were, respectively, 0,014, 0,050, 0,024, 0,043, 0,001, 0,007, 0,017, and 0,007. The results reveal that, at 95 % significance level, the choice for these items is independent of whether or not a course is available in the area of prevention and treatment of skin lesions.

Table 1. Distribution of the sociodemographic variables of participating nurses (n = 101) in the city of João Pessoa, Paraíba, Brazil, 2018

Variable	N	%	Mean (standard deviation; min-max)
Age	101	100 %	36,51 (SD = 7,67; 24-62)
Sex			
Male	16	15,8 %	-
Female	85	84,2 %	-
Time of professional exercise	101	100 %	9,33 (SD = 7,99; 0,6-35)
Degree			
Undergraduate	33	32,7 %	-
Specialist	60	59,4 %	-
Masters	6	5,9 %	-
PhD	2	2 %	-
Years of exercise with Nursing process	101	100 %	7,48 (SD = 6,25; 0,6-35)
Has courses in the area of prevention and treatment of skin lesions			
Yes	36	35,6 %	-
No	65	64,4 %	-
Has more than one job			
Yes	61	60,4 %	-
No	40	39,6 %	-
If Yes, how many?			
2 jobs	52	85,2 %	-
3 jobs	9	14,8 %	-
Weekly work schedule, considering all jobs	101	100 %	42,63 (SD = 12,8; 20-74)

Source: Own elaboration.

Table 2. Frequency distribution of responses to the instrument in the city of João Pessoa, Paraíba, Brazil, 2018

Domain	Item	Never		Almost never		Sometimes		Almost always		Always	
		N	%	N	%	N	%	N	%	N	%
DI Evaluation of the skin of the elderly	1. I consider the age range.	-	-	2	2 %	1	1 %	13	12,9 %	85	84,2 %
	2. I assess skin color.	-	-	2	2 %	-	-	15	14,9 %	84	83,2 %
	3. I evaluate skin turgor and elasticity.	-	-	-	-	8	7,9 %	28	27,7 %	65	64,4 %
	4. I observe the patient's temperature.	2	2 %	-	-	16	15,8 %	25	24,8 %	58	57,4 %
	5. I don't consider excessive moisture.	64	63,4 %	6	5,9 %	9	8,9 %	7	6,9 %	15	14,9 %
	6. I look for skin fissures.	4	4 %	2	2 %	12	11,9 %	29	28,7 %	54	53,5 %
	7. I observe the existence of lesions on the skin.	-	-	-	-	4	4 %	6	5,9 %	91	90,1 %
	8. I notice the presence of skin peeling.	-	-	-	-	5	5 %	34	33,7 %	62	61,4 %
	9. I observe the presence of itching.	4	4 %	-	-	10	9,9 %	23	22,8 %	64	63,4 %
	10. I am attentive to cold exposure.	3	3 %	2	2 %	16	15,8 %	27	26,7 %	53	52,5 %
	11. I use imported equipment to assess skin hydration.	84	83,2 %	8	7,9 %	6	5,9 %	3	3 %	-	-
DII Products used to prevent and treat cutaneous xerosis	12. To choose the type of moisturizer, I do not consider the skin assessment.	54	53,5 %	15	14,9 %	11	10,9 %	3	3 %	18	17,8 %
	13. I use products based on essential fatty acids.	9	8,9 %	9	8,9 %	30	29,7 %	28	27,7 %	25	24,8 %
	14. I use urea-based creams at 10 % or 20 %.	32	31,7 %	19	18,8 %	19	18,8 %	20	19,8 %	11	10,9 %
	15. I use barrier cream.	10	9,9 %	11	10,9 %	30	29,7 %	21	20,8 %	29	28,7 %
	16. I use any moisturizer available.	16	15,8 %	12	11,9 %	24	23,8 %	18	17,8 %	31	30,7 %
	17. I apply Aloe Vera based formulations.	20	19,8 %	24	23,8 %	40	39,6 %	9	8,9 %	8	7,9 %
	18. I use medium chain triglyceride formulations.	27	26,7 %	29	28,7 %	26	25,7 %	17	16,8 %	2	2 %
	19. I apply mineral oil.	30	29,7 %	21	20,8 %	21	20,8 %	10	9,9 %	19	18,8 %
DIII Nursing care prescribed in the presence of Nursing diagnosis of "impaired skin integrity related to cutaneous xerosis"	20. I inspect the skin conditions daily.	2	2 %	8	7,9 %	5	5 %	16	15,8 %	70	69,3 %
	21. I record findings about the patient's skin.	1	1 %	2	2 %	6	5,9 %	12	11,9 %	80	79,2 %
	22. I identify patients at risk of skin lesions due to dryness.	1	1 %	5	5 %	8	7,9 %	11	10,9 %	76	75,2 %
	23. I moisturize the skin with the right products.	2	2 %	10	9,9 %	20	%	12	11,9 %	57	56,4 %
	24. I am aware of maceration areas.	1	1 %	4	4 %	3	3 %	27	26,7 %	66	65,3 %
	25. I am aware of areas of hyperemia.	-	-	2	2 %	3	3 %	10	9,9 %	86	85,1 %
	26. I carefully evaluate the lower limbs, especially the inter-digital spaces.	-	-	10	9,9 %	25	24,8 %	26	25,7 %	40	39,6 %
	27. I provide bodily hygiene whenever necessary.	-	-	-	-	8	7,9 %	15	14,9 %	78	77,2 %
	28. I provide intimate hygiene whenever needed.	3	3 %	-	-	2	2 %	16	15,8 %	80	79,2 %
	29. I remove the residue attached to the skin from fixatives.	6	5,9 %	4	4 %	6	5,9 %	23	22,8 %	62	61,4 %
	30. I discuss with nursing staff the need to increase oral or parenteral hydration.	3	3 %	6	5,9 %	15	14,9 %	26	25,7 %	51	50,5 %
	31. I advise family members about the signs of dryness of the patient's skin.	-	-	6	5,9 %	10	9,9 %	26	25,7 %	59	58,4 %
	32. I advise the nursing staff regarding the water temperature.	8	7,9 %	-	-	11	10,9 %	28	27,7 %	54	53,5 %
	33. I advise the nursing staff regarding the use of appropriate soap.	11	10,9 %	8	7,9 %	19	18,8 %	26	25,7 %	37	36,6 %
	34. I advise for self-care.	-	-	3	3 %	8	7,9 %	18	17,8 %	72	71,3 %

Source: Own elaboration.

Table 3. Analysis of the significance between taking courses in prevention and treatment of skin lesions in the city of João Pessoa, Paraíba, Brazil, 2018

Having courses in the in the area of prevention and treatment of skin lesions	Never	Almost never	Some-times	Almost always	Always	Total	χ^2	p-value
19. I apply mineral oil.								
Yes	17	5	8	4	2	36	12,425	0,014
No	13	16	13	6	17	65		
Total	30	21	21	10	19	101		
20. I inspect the skin conditions daily.								
Yes	1	0	4	7	24	36	9,414	0,050
No	1	8	1	9	46	65		
Total	2	8	5	16	70	101		
25. I am aware of areas of hyperemia.								
Yes	0	0	3	1	32	36	9,483	0,024
No	0	2	0	9	54	65		
Total	0	2	3	10	86	101		
28. I provide intimate hygiene whenever needed.								
Yes	3	0	1	8	24	36	8,145	0,043
No	0	0	1	8	56	65		
Total	3	0	2	16	80	101		
30. I discuss with nursing staff the need to increase oral or parenteral hydration.								
Yes	3	2	11	8	12	36	18,252	0,001
No	0	4	4	18	39	65		
Total	3	6	15	26	51	101		
32. I advise the nursing staff regarding the water temperature.								
Yes	6	0	6	12	12	36	11,991	0,007
No	2	0	5	16	42	65		
Total	8	0	11	28	54	101		
33. I advise the nursing staff regarding the use of appropriate soap.								
Yes	7	4	10	4	11	36	12,083	0,017
No	4	4	9	22	26	65		
Total	11	8	19	26	37	101		
34. I advise for self-care.								
Yes	0	0	6	2	28	36	12,117	0,007
No	0	3	2	16	44	65		
Total	0	3	8	18	72	101		

Source: Own elaboration.

Discussion

Changes that take place as a result of the reduction in the amount of water in the stratum corneum (SC) compromise the function of the trans-epidermal barrier and bring as complications desquamation and dryness. The SC has in its composition corneocytes with their natural moisturizing factors and an intracellular lipid bilayer that, when functioning in harmony, is capable of ensuring skin integrity and hydration (14).

Because hydration is an essential condition for life and necessary for homeostasis, it is intrinsically related with the BHNT by Wanda Aguiar Horta, whose principles are homeostasis, holism, and adaptation. It represents a methodological theoretical model that underlies the Nursing Care Systematization (NCS), assists in recognizing reality and defining roles that promote qualification and improve professional performance (15).

Identifying how nurses have performed Nursing care to evaluate, prevent, and treat cutaneous xerosis in the elderly is of great relevance, especially due to the incidence and prevalence of this disease in this population, as well as by the process of demographic transition that has been presented not only in developed countries but also in developing countries.

In this study, there was a prevalence of nurses with approximately a decade of experience in nursing care and with the degree of specialists. In recent years, there has been an increase in the search for specializations in the various fields of knowledge in Nursing, which reiterates that, to maintain quality in care practice, it is necessary for professionals to have increasing domain knowledge in the areas they work, which makes it possible to meet the social and health demands of the population. (16).

In contrast, 65 nurses (64.4 %) reported not having had any course on the prevention or treatment of skin lesions, which is relevant, given that nurses play an important role in the management of actions aimed at caring for people during the evaluation, prevention, and treatment of these lesions. Thus, by observing the importance of having or not having a specific course for skin care, it is possible to infer the need for continuing and permanent education as fundamental points to improve care quality.

From this perspective, it should be considered that only eight of the 34 items listed do not depend on whether or not the nurse has a course in the area of prevention and treatment of skin le-

sions, which reinforces that scientific progress in Nursing and health require specific knowledge and skills, as well as highlights the importance that nurses must have in keeping alert and present in improvement/qualification programs so that the care provided is efficient and effective. (17).

Of the participants, 85 (84.2 %) state always considering the age range of the elderly person, and these results corroborate that stated by several authors about the relationship between advanced age and the onset of skin lesions. A study conducted at the Triangulo Mineiro Clinical Hospital, Brazil, revealed that 44 % of the elderly in the medical or surgical units had some type of skin lesion (18).

In this regard, in this study, 70 nurses (69.3 %) stated that they always perform daily inspection of the skin conditions of the elderly. This care permits the prevention of lesions, given that a thorough assessment guides the implementation of effective measures (19).

Assessment of skin coloration was indicated as care performed by 84 (83.2 %) nurses, as well as always being alert to areas with hyperemia, indicated by 86 (85.1 %) participants. With advancing age, the number of melanocytes decreases and, consequently, the appearance of hypochromic spots, as well as the formation of freckles that appear on the face and body, especially in those with very light skin. Melanosis, hyperemia, pallor, cyanosis, jaundice, and dermatographism are often present. In more severe situations and in the presence of systemic complications, the coloration may signal necrotic states (2).

A total of 65 (64.4 %) nurses considered always evaluating skin turgor and elasticity of the elderly. A study proposes to build a scale that assesses skin turgor of the elderly in São Paulo used by health professionals to assess skin hydration. Water that hydrates the skin comes from the epidermis and dermis and evaporates from a phenomenon called "trans-epidermal water loss". The hydrolipid mantle allows the maintenance of hydration and prevents dryness. Hydrated skin has a normal turgor, represented by softness, elasticity and smoothness, which are related to the moisture content in the stratum corneum (20).

With regard to excess moisture, 64 (63.4 %) nurses stated this is a care they never fail to consider in relation to care for the elderly with cutaneous xerosis, as well as 66 (65.3 %) stated always being aware of maceration areas. This condition is corrobo-

rated with the results of a content validation study of the Nursing diagnosis "risk of pressure ulcer" in which 24 skin care experts pointed to moisture as an important risk factor, mainly when related to urine and feces, abrasion, friction, and shear forces, which increase maceration and predispose to ulceration (21).

Thermoregulation occurs mainly through temperature regulatory centers located in the hypothalamus and through the skin circulation, which contributes as a variable heat insulator. The closer to the skin, the greater the heat exchange, which characterizes a benefit in warm environments and a loss in the cold. In the elderly, with the thinning of the skin layer associated with dryness, it is observed that regulation becomes less efficient (22). Thus, 58 (57.4 %) nurses reported always observing the temperature and 53 (52.5 %) being aware of exposure to cold environments.

A study conducted in Berlin, Germany, with 280 elderly residents in long-term care facilities found that out of 60 dermatological diseases, cutaneous xerosis was the most common, accounting for a total of 99.1 % of these (23). Cutaneous xerosis has as morphological characteristics: Itchy, dry skin, with presence of fissures and peeling, which reiterates the importance given by 54 (53.5 %) nurses with regards to always looking for the existence of skin fissures, 62 (61.4 %) who observe the presence of peeling and 64 (63.4 %) who always observe the presence of itching.

In this study, 76 (75.2 %) participants stated they always identify the risk of lesions associated with dryness of the skin, and 91 (90.1 %) observe the existence of lesions. A study conducted in Curitiba, Brazil, with 19 care nurses on the physical examination of hospitalized elderly, revealed that the evaluation of skin integrity was the item most-often referred by nurses and, in this, are considered characteristics, such as moisture, texture, thickness, temperature, elasticity, sensitivity, and presence of lesions in various body regions. The state of the skin demonstrates the signs of aging from loss of supporting tissue, subcutaneous fat, thinning hair, sweat and sebaceous glands, making it more prone to injury and infectious processes (24).

Of the respondents, 84 (83.2 %) stated that they never used imported equipment to evaluate the skin hydration of the elderly. A study by pharmaceutical companies from the state of São Paulo, Brazil, indicated four instruments available in the market: The *Corneometer CM 825*, which is based on the principle of capacitance, the *Skincon 200 EX* and the *Dermalab*, which are based

on the principle of conductance, and – lastly – the *Nova Derm Phase Meter DPM 9003*, which uses the impedance method. The *Corneometer CM 825* has been proven as the most effective to evaluate dry skin (25); however, even in the absence of specific equipment, 70 (69.3 %) nurses stated that they perform daily inspection of skin conditions.

Eighty (79.2 %) nurses said they always record the findings in relation to the skin conditions of the elderly. The Nursing registry is a means of proving care and an indicator of care quality. Thus, incorrect completion and, above all, lack of periodicity are factors that irreversibly hinder assessment, certification, and even expert inquiry processes that may even legally support the professional and the institution (14).

For 54 (53.5 %) nurses, it is important to always consider the alterations observed during the evaluation to choose the type of moisturizer, which may have justified the variability of responses with respect to the products used. A study conducted with 50 patients between 61 and 70 years of age verified that 39.3 % used essential fatty acids to prevent or treat cutaneous lesions (26). In this study, we highlight Aloe Vera-based products, cited by 40 (39.6 %) respondents.

Regarding the guidelines for self-care, 78 (77.2 %) nurses emphasized body hygiene issues and 80 (79.2 %) intimate hygiene, as well as 54 (53.4 %) considered advising the Nursing staff on water temperature. Bathing with hot water should be avoided as it reduces natural oiliness and worsens the condition of dryness; in addition, the use of acid pH soap should be considered, which is the most recommended, as it has the least deleterious effect on the cutaneous microbiota (27).

In Berlin, a study conducted in hospitals and long-term care facilities (LTCF) with 835 subjects observed that 48.8 % of the elderly had dry skin, with a higher prevalence in LTCF and emphasizing the areas of the feet and legs, which highlights the importance of performing interventions focused on self-care (28).

Conclusions

The study permitted analyzing how nurses practicing in medical clinic and ICU have conducted Nursing care to evaluate, prevent, and treat cutaneous xerosis in the elderly. Among the care, we highlight the importance of considering age range, assessing

skin color, being attentive to areas with hyperemia, and observing the existence of lesions. The visual assessment focused on the existence of skin lesions reinforces the curative model and makes a counterpoint to preventive care, reinforced by the lack of equipment that can collaborate with the evaluation of the hydration degree and the establishment of behaviors.

With an average of approximately 10 years of vocational training and most participants without courses on prevention or treatment of skin lesions, it is inferred that the experience and the construction of knowledge during the professional practice may have contributed to better scores related with some items of the instrument, as well as with the development of digital technologies.

However, by observing the relevance of having or not having specific courses for skin care, it is concluded that there is a need for continuing education to improve the quality of care. Another important aspect is the lack of validated instruments or

protocols for the Nursing care process related to skin dryness conditions in the elderly.

Thus, this study seeks to contribute to the direction of interventions, as well as to the conduction of new research and the creation of protocols.

Study limitations

A study limitation to be considered was the sampling that, although significant, signals the need for a sample to cross geographic barriers and enable a real and expanded diagnosis. It should also be noted that in the case of care for the elderly with cutaneous xerosis, there is scant scientific production on the theme in Latin American countries, where it can be inferred that studies carried out on larger sample scales can lead to results influenced by cultural, academic formation, and economic issues inherent to each region.

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