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SELF-ASSESSMENT OF PRIMARY CARE NURSES ABOUT CARE FOR PEOPLE WITH VENOUS ULCERS: A CROSS-CUTTING STUDY

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ABSTRACT

Objective: To identify the self-knowledge of primary care nurses about care for people with venous ulcers. **Method:** This is a cross-sectional study with 40 nurses working in health units. Two data collection instruments were used: characterization, developed by the author, and self-assessment on venous ulcers. **Results:** All questions of the self-assessment instrument reached medians classified as little level of knowledge, except questions related to the application of elastic compression therapy, with the median = 3 (moderate), and the evaluation of lower limbs to investigate arterial involvement, with 3.50, between little and moderate. The item cleaning the lesion stood out, which obtained median = 4 (little) and the highest average found in the responses, 4.03 (little). **Conclusion:** The nurse's self-assessment reached moderate and low scores of clinical practice in terms of knowing (theoretical knowledge) and doing (practical knowledge) in the care of people with venous ulcers. Venous ulcer is a complex wound and requires knowledge from nurses about the pathophysiology and appropriate treatment, interfering with the improvement of the person's quality of life. It is believed that this study can encourage the reflection of this professional and education actions in the services.

DESCRIPTORS: Varicose ulcer. Nurses. Knowledge. Primary health care.

AUTOAVALIAÇÃO DE ENFERMEIROS DA ATENÇÃO PRIMÁRIA SOBRE ASSISTÊNCIA À PESSOA COM ÚLCERAS VENOSAS: UM ESTUDO DE CORTE TRANSVERSAL

RESUMO

Objetivo: Identificar o autoconhecimento de enfermeiros da atenção primária sobre assistência à pessoa com úlceras venosas. **Método:** Trata-se de um estudo de corte transversal com 40 enfermeiros lotados em unidades de saúde. Utilizaram-se dois instrumentos de coleta de dados: caracterização, elaborada pelo autor, e autoavaliação sobre úlcera venosa. **Resultados:** Todas as questões do instrumento autoavaliativo alcançaram medianas classificadas como nível de conhecimento pouco, à exceção das questões relativas à aplicação de terapia compressiva elástica com mediana = 3 (moderado) e à avaliação de membros inferiores para investigar comprometimento arterial, 3,50, entre pouco e moderado. Destacou-se o item limpeza da lesão, o qual obteve a mediana = 4 (pouco) e a maior média encontrada das respostas, 4,03 (pouco). **Conclusão:** A autoavaliação do enfermeiro atingiu os escores moderado e pouco da prática clínica no que tange ao saber (conhecimento teórico) e ao fazer (conhecimento prático) no cuidado à pessoa com úlcera venosa. A úlcera venosa é uma ferida complexa

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e exige do enfermeiro conhecimento sobre a fisiopatologia e o tratamento adequado, interferindo na melhora da qualidade de vida dessa pessoa. Acredita-se que este estudo possa fomentar a reflexão desse profissional e ações de educação nos serviços.

DESCRITORES: Úlcera varicosa. Enfermeiras e enfermeiros. Conhecimento. Atenção primária à saúde.

AUTOEVALUACIÓN DE ENFERMERAS DE ATENCIÓN PRIMARIA SOBRE LA ATENCIÓN A PERSONAS CON ÚLCERAS VENOSAS: UN ESTUDIO TRANSVERSAL

RESUMEN

Objetivo: Identificar el autoconocimiento de los enfermeros de atención primaria sobre el cuidado de las personas con úlceras venosas. **Método:** Se trata de un estudio transversal con 40 enfermeros que actúan en unidades de salud. Se utilizaron dos instrumentos de recolección de datos: caracterización desarrollada por el autor y autoevaluación sobre úlceras venosas. **Resultados:** Todas las preguntas del instrumento de autoevaluación alcanzaron medianas clasificadas como nivel de conocimiento poco, a excepción de las preguntas relacionadas con la aplicación de la terapia de compresión elástica con una mediana de 3,00 (moderado) y la evaluación de miembros inferiores para investigar arterial involucramiento con 3 .50, entre poco y moderado. Se destaca el ítem limpieza de la lesión, que obtuvo una mediana de 4 (poco) y el mayor promedio encontrado en las respuestas, con 4,03 (poco) también. **Conclusión:** La autoevaluación del enfermero alcanzó puntajes moderados y bajos de la práctica clínica en cuanto al saber (conocimiento teórico) y al hacer (conocimiento práctico) en el cuidado de personas con úlcera venosa. La úlcera venosa es una herida compleja y requiere del conocimiento del enfermero sobre la fisiopatología y el tratamiento adecuado, interfiriendo en la mejoría de la calidad de vida de la persona. Se cree que este estudio puede incentivar la reflexión de este profesional y acciones educativas en los servicios.

DESCRIPTORES: Úlcera varicosa. Enfermeras y enfermeros. Conocimiento. Atención primaria de salud.

INTRODUCTION

Venous ulcer is a public health problem because of its chronicity and high recurrence rate, the most prevalent wounds being the leg ulcer types, caused by chronic venous hypertension of the leg and characterized by edema, varicose veins, hyperpigmentation, lipodermatosclerosis and venous eczema, as well as recurrent episodes of erysipelas. The ulcer affects the internal supramalleolar region, is superficial and presents irregular borders and drainage of exudate in large quantity[1].

The clinical aspects of the ulcer, especially the exudate, size, and appearance, are factors that interfere with people's quality of life. Other limiting aspects that influence the daily and working life of these people are pain and difficulty in walking[2,3]. It is important that health professionals who provide care to people with venous ulcers identify the peculiarities of this type of injury and the associated symptoms that negatively impact quality of life to guide their care[2].

However, a study carried out in a medium-sized city in the Zona da Mata region of Minas Gerais found a prevalence of 0.164% of chronic lesions in the primary health care population. Of these, 50% were of venous origin[4].

Primary health care is the preferred entry point for ulcer patients to the Brazilian National Health System. It is a privileged space for managing people's care and plays a strategic role in the health care network, serving as the basis for its organization and for the implementation of integrality. Wound care is part of the routine of primary care professionals[5].

Patients still undergo venous ulcer treatment with conventional products that require daily dressing changes. Such conduct has the possibility of prolonging the duration of the lesions, however, the market has a variety of items that can be

used by professionals who seek to achieve success in the treatment. Besides topical treatment, several factors can interfere with the healing process[6].

To implement strategies to improve the care provided to patients with venous ulcers, it is essential to listen to one of the actors involved in this process, the nurse. Listening can occur through a validated tool, capable of providing a picture of the reality of the care provided by primary health care. Despite its importance, this action does not occur routinely. Therefore, it still requires research to obtain data to support changes in service delivery and in the adoption of behaviors for the early healing of venous ulcers.

In addition to treatment, health education carried out by nurses allows patients with venous ulcers to develop autonomy regarding their daily care and the prevention of recurrences. This is a very important measure, since the nurse is now able to stimulate the person's knowledge about his/her health condition and sensitize the user and the family to adhere to the treatment[7].

OBJECTIVE

To identify the self-knowledge of primary care nurses about the care of people with venous ulcers.

METHODS

This is a cross-sectional study developed in the primary health care area of a city in the state of Espírito Santo, Brazil. The population estimated for this municipality by the Brazilian Institute of Geography and Statistics for 2021 was 508,655 inhabitants. The census conducted in 2010 found a population of 414,586 inhabitants, with a demographic density of 1,973.59 inhabitants/km^2.

The aforementioned municipality has 19 basic health units distributed in five administrative health regions, among which nine adopt the basic health unit care model, nine are family health strategy, and one is a specific care and basic oral health unit. In addition, there is the *Programa de Prevenção ao Diabetes (PROPE)*, a reference in secondary health care in the treatment of people with complex wounds as a result of diabetes mellitus and lesions of vascular origin. A large part of the people with venous ulcers in the county are evaluated and treated by the program.

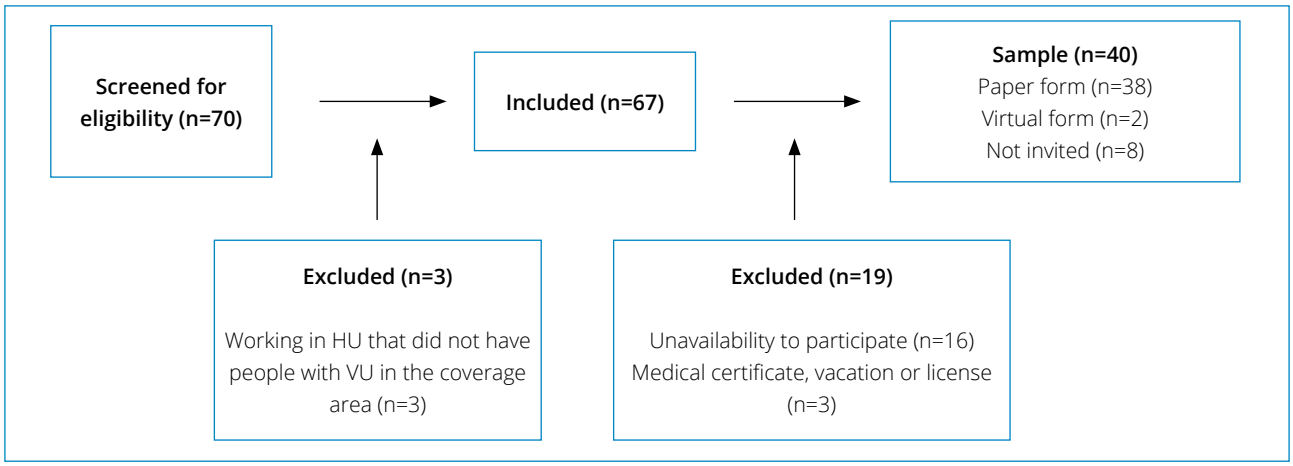
The total number of nurses working in the basic health units of the municipality was 70 at the time of data collection, from January to April 2021. The professionals invited to participate in the research were nurses working in these units and who were performing their work activities during the data collection period.

In this study, the inclusion criterion was nurses working in a health care unit where people with venous ulcers were cared for and treated. This data was obtained through the information available from the PROPE, as well as from information from the nursing staff of the units themselves. Of the 19 basic health units, one did not assist this user profile.

The following exclusion criteria were used: nurses with no time availability, absent during the data collection period, on vacation, on medical certificate, or on leave (health treatment, maternity, guardianship council, selective mandate, monitoring family health treatment).

The sample had the nonprobabilistic, intentional model. It included 40 nurses, who met the inclusion and exclusion criteria (Fig. 1). Because of the pandemic scenario by COVID-19, this phase was interrupted twice, to comply with restrictions imposed by the local government. For this reason, it became necessary to make the physical data collection instruments available in online format via Google Forms in the second interruption period, in which two responses were counted.

It should be noted that 19 nurses were excluded from the research due to unavailability of time to participate in the research during the data collection period, and eight were working in units with which it was not possible to establish telephone contact or visit, due to the time proposed for this phase of the research and the restrictions imposed by the COVID-19 pandemic.



HU: health unit; VU: venous ulcer.

Figure 1. Flowchart showing the acquisition of the study sample. Vitória (ES), Brazil, 2020.

Source: Elaborated by the authors (2022).

After the nurse signed the informed consent form, two instruments were used for data collection: one for characterization and the other for self-evaluation. The first contained variables on personal data (age, gender, marital status, education and training in the area of injury, time working in primary health care) and variables on the health care unit (number of wound and venous ulcer patients seen per month, coverage and supplies used for ulcer treatment).

The second self-evaluative instrument used was designed and validated by Brazilian researchers[8]. It was statistically tested, and the scale developed proved to be reliable, based on the psychometric indicators, to assess nurses' self-knowledge in terms of knowing and doing in the management of the individual with venous ulcer. They contain two questions regarding the topic of wounds ("How do you rate your mastery in the area of wound care?" and "How do you rate your mastery in the area of venous ulcers?") and 10 questions related to the nurse's care of the person with venous ulcer. The response options follow the Likert scale with the score range between 1 and 5, where 1 = excellent; 2 = good; 3 = moderate; 4 = not much; and 5 = none[8]. We chose to remove one question from the instrument that dealt with the Levine technique of collecting material for culture, because it is a test that is not offered by the municipality. The research participants answered the instruments without the interference of the researcher.

The items about the 10 questions linked to the care of the nurse and the person with venous ulcer are distributed in domains referring to knowledge and care practice. The theoretical content is covered by questions that evaluate the knowledge of professionals regarding the user's anamnesis and physical examination, venous ulcer, the choice of dressing, the need to change the dressing, and the lower limbs to investigate arterial and venous involvement. Regarding nurses' practice, the questions seek to understand their mastery on lesion cleaning, execution of conservative instrumental debridement (with scissors or scalpel blade) and application of elastic compressive therapy[8].

The data obtained by physical form (paper) and Google Forms were analyzed using IBM Statistical Package for the Social Sciences (SPSS Statistics), version 24, and STATA, version 14.0. The data analysis was done by simple frequency, percentage, minimum and maximum values, measures of central tendency and variability. The Kruskal–Wallis test compared the range of undergraduate years and the range of time working in primary health care with the venous ulcer care assessment instrument. When this obtained significance, Duncan's multiple comparisons test was used. The alpha level of significance adopted was 5% in all analyses.

All ethical principles of research involving human subjects were respected according to Resolution No. 466/2012, and the research was approved in the Research Ethics Committee under the number of the Center for Health Sciences, according to Certificate of Ethical Appreciation Submission 26680819.5.0000.5060 and opinion No. 3,757,251.

RESULTS

The characterization of the 40 nurses participating in the research revealed that 34 (85%) were female, with a mean age of 40 years (standard deviation - SD ± 7.8) and a median of 38 years. As for the year of graduation, 37.5% of them graduated in 2005 or less, and with regard to the place of work, 32.5% had worked in primary health care for six years or more. With the exception of one nurse who did not answer the question, all participants reported having pursued graduate stricto sensu and/or lato sensu degrees. Among the courses reported, two were in wound care and 18 in public health (collective health, primary health care, family health, public health, public management) (Table 1).

Table 1. Sample characterization (n = 40). Vitória (ES), Brazil, 2020.

Variables	Categories	n (%)
Year of graduation	≤ 2005	15 (37.5)
	2006–2010	11 (27.5)
	≥ 2011	14 (35.0)
Time of work in PHC (years)	< 1	9 (22.5)
	1-2	8 (20.0)
	3-5	8 (20.0)
	≥ 6	13 (32.5)
Postgraduation	Yes	39 (97.5)
	No	0 (0.0)
	No information	1 (2.5)
Number of graduate courses per nurse	1	20 (50.0)
	2	10 (25.0)
	3	5 (12.5)
	4.0	3 (7.5)
	No information	2 (5.0)
Graduate studies in wound care	Yes	2 (5.0)
	No	36 (90.0)
	No information	2 (5.0)
Participation in VU training in the municipality	Yes	7 (17.5)
	No	33 (82.5)

PHC: primary health care; VU: venous ulcer. Source: Elaborated by the authors (2022).

From the sample, 17 nurses reported the number of people with wounds seen in the health unit per month, which ranged from two to 200, median = 35, mean = 63.6 (SD ± 63.6), and 16 responded about the number of people with venous ulcers per month, which ranged from one to 150, median = 13.5 and mean = 35.6 (SD ± 51.7).

When asked about the three most used products in venous ulcer treatment, 16 reported having never treated this type of lesion, and, among the most used products, essential fatty acids and amorphous hydrogel were the most cited among the 51 products mentioned by the 24 nurses who answered the question (Table 2).

Table 2. Dressings/products most often cited by nurses for venous ulcer treatment. Vitória (ES), Brazil, 2020.

Cited dressings/products	n = 51 (%)
Essential fatty acids	14 (27.4)
Amorphous hydrogel	12 (15.6)
Unna's boot	6 (11.7)
Hydrocolloid	4 (7.8)
Common gauze	2 (3.9)
Papain	2 (3.9)
Saline solution	2 (3.9)
Silver sulfadiazine	2 (3.9)
Rayon with petrolatum	2 (3.9)
Bandage	1 (1.9)
Activated carbon	1 (1.9)
Collagenase	1 (1.9)
Negative pressure treatment	1 (1.9)

Source: Elaborated by the authors (2022).

All participants responded to the self-evaluative instrument (Table 3).

Table 3. Score of the responses of the self-evaluative instrument. Vitória (ES), Brazil, 2020.

Question	Minimum	Maximum	Median	Average	SD
How do you rate your mastery of wound care	1	5	4.0	3.46	0.79
How do you rate your mastery of venous ulcer	1	5	4.0	3.36	0.99
Venous ulcer theoretical knowledge domains					
Anamnesis and physical examination of the user	3	5	4.0	3.87	0.62
Ulcer assessment	3	5	4.0	3.67	0.66
Dressing choice	1	5	4.0	3.54	0.72
Assessment of the need for dressing change	1	5	4.0	3.66	0.78
Lower limb assessment to investigate arterial compromise	1	5	3.50	3.45	0.98
Lower limb evaluation to investigate venous involvement	1	5	4.0	3.50	0.86
Areas of venous ulcer practice knowledge					
Cleaning of the lesion	3	5	4.0	4.03	0.54
Execution of conservative instrumental debridement (scissors or scalpel blade)	1	5	4.0	3.62	1.06
Application of elastic compressive therapy	1	5	3	3.05	1.18
Items from the theoretical knowledge domain	1	5	3.50	3.55	0.74
Practical knowledge domain items	1	5	4.0	3.78	0.92

SD: standard deviation. Source: Elaborated by the authors (2022).

The theoretical knowledge domain achieved a median score of 3.50, and the practical knowledge domain achieved a median score of 4 and a higher mean score compared to the other domain (3.78; ± 0.92) (Table 3).

In the study, the variables time of training and time of work in primary health care analyzed by the statistical test with the questions of the instrument of self-assessment of care to the person with venous ulcer resulted in similar mean scores. The exceptions were the question wound care mastery ($p = 0.047$), for which the graduates in the year 2005 or less had the highest mean score, and assessment of the need for dressing change ($p = 0.030$), for which the highest mean scores were observed for the years 2010 or less.

DISCUSSION

The study allowed the identification of nurses' self-knowledge in the approach to the person with venous ulcer in health units of the municipality researched in moderate and little in the dimensions of knowing and doing. The median score was 4 for the domains wound care and venous ulcer management, which was considered to be poor. The weakness of participants' self-knowledge regarding the treatment of venous ulcer was reinforced by data regarding the use of dressings, products, and supplies.

The length of time working in primary health care did not show significance in the statistical tests applied in relation to the results of the self-evaluative instrument—52% of the nurses had worked in primary health care for three years or more—however, significance was observed regarding the longer time of training, with worse evaluation in the need for coverage change (2010 or less) and in the wound care domain (graduates in 2005 or less).

Wound care is a dynamic area of constant knowledge construction, linked to new approaches and updated clinical practices[9]. The survey data showed that few professionals had taken training in the municipality or specialized in the area, which may have influenced the worse results cited for nurses with a longer period of training.

The products in the oil and amorphous gel presentation were the most cited by the nurses. The classification of dressings generally depends on the main component used in its construction and the additional substances present. The ideal dressing should meet several attributes, such as providing thermal insulation to maintain the optimal temperature for healing; maintaining impermeability to bacteria; optimizing wound pH; minimizing wound infection and avoiding excessive sloughing; and absorbing and containing exudate without overflow to keep the wound moist but not macerated[10].

A network meta-analysis review evaluated the likelihood of complete venous ulcer healing associated with topical dressings and agents. The research involved a sample of 59 randomized controlled trials totaling 5,156 participants and evaluation of 25 different interventions. The overall results reflect the uncertainty of the component evidence and the paucity of studies, as the evidence was of low certainty. However, numerically, two treatments, sucralfate dressings and silver dressing, had more than a 50% probability of being the best for venous ulcer treatment[10].

The American Venous Forum Research Committee calls attention to topical venous ulcer treatment as a critical gap in knowledge and encourages researchers, practitioners, and industry to collaborate to fill this gap. The announcement came after conducting a literature review to summarize the methods with proven effectiveness in venous ulcer management. The systematic search was conducted to identify new evidence from randomized clinical trials reported from 2014 to 2021. A total of 43 randomized clinical trials were identified, with hundreds of topical products advertised for venous ulcer treatment, but the data were insufficient, scattered and weak, with significant methodological flaws[11].

The treatment procedures related to the use of dressings require prior knowledge, technical experience and dedication in order to achieve the appropriate cost/benefit ratio[12].

The excessive drainage of exudate in the venous ulcer is related to its pathogenesis. As a result of chronic venous hypertension of the leg veins, vascular permeability occurs, which allows the outflow of fluid and macromolecules into the interstitial space, forming the leg edema, which is one of the clinical signs of chronic venous insufficiency[3]. The reduction of exudate occurs with the regression of edema induced by the improvement of venous return via compression therapy. Only 15% of the nurses cited the use of the Unna's boot. This is a type of compression therapy classified as containment;

however, the multicomponent compression system, considered the gold standard for improving venous return[13], was not considered by the participants.

In certain countries the situation is different, for example in the United Kingdom. A study in that country showed that nurses treating patients with venous ulcers use a wide range of compression systems. The most commonly used systems are the elastic and inelastic two-bandage compression bandage systems, which are considered less bulky by patients. Two-layer socks were used less frequently and four-layer bandages were used infrequently. It was identified that nurses have concerns about competence in the application techniques of the various compression systems. These data provide some important clues about the issues surrounding the use of compression therapy, such as the overuse of potentially subtherapeutic therapy, such as "reduced compression"[14].

The non-implementation of compression therapy effectively by all nurses may be related to the organization of the venous ulcer patient care network in the municipality. The patient is initially evaluated by professionals from the PROPE, when treatment is prescribed. Follow-up treatment is provided by nurses in primary health care.

The theoretical knowledge domain achieved a median score of 3.50 and a mean of 3.55 (SD ± 0.74). The practical knowledge domain reached a median score of 4 and a mean of 3.78 (SD ± 0.92). Among the specific items of the two domains, the highest mean was for cleaning the lesion (4.03; ± 0.54) and the lowest was for applying elastic compressive therapy (3.05; ± 1.18), which are in line with the practical domain.

Nursing care, in its complexity, is based on an inseparable dialog between knowing and doing, the former being configured as a competent action, and the latter meaning ability. The development of these two aspects helps the nurse to provide resolute and targeted care to the needs of each person in which the main elements involved are clinical reasoning and decision making in caring for the individual[8].

The assessment of the person with a wound must occur in a systematic way by a professional with knowledge. In practice, this analysis is based on scientific knowledge and must occur by means of the clinical method, which includes the clinical examination (anamnesis and physical examination) and complementary exams to aid the medical and nursing diagnosis. During the nursing consultation, which is based on the nursing process, the prescription and the care plan are written. Therefore, the nurse systematically follows the evolution of the wound according to the proposed treatment[15].

To heal the venous ulcer in a shorter time, the professional should perform assertive assessment, implement good practices in the care of the ulcer, the surrounding skin, and the leg, and apply compressive therapy, with the multicomponent elastic system being preferred. Venous ulcer treatment should be comprehensive and well-organized, based on up-to-date standards and scientific evidence, and should involve elaborate treatment strategies[11].

Wound cleansing is considered an important step in the treatment of venous leg ulcers and is recommended in many international guidelines, but there is a lack of scientific evidence on the proper technique for this type of injury. In a review published in 2021 on venous ulcer wound cleansing, no randomized clinical trials were found comparing the effects of venous ulcer cleansing[16].

Holistic assessment of the person with a wound preceding the appropriate four-step hygiene technique (cleansing of the wound and perilesional skin, debridement, edge reconstruction and dressing) can bring benefits for the management of all types of wounds, including the so-called difficult-to-heal wounds[17].

The treatment of venous ulcers is a great challenge for nurses, who have contradictions and doubts about which treatment to use. Through nursing care technologies, the professional executes the steps of the nursing process. In the case of assistance to the person with chronic wound, such as venous ulcer, the goals are to promote wound healing, prevent complications, promote self-care, and reduce cases of lesion recurrence[18].

A thorough diagnostic process followed by appropriate treatment can result in markedly improved outcomes, with a cure rate of up to 67% in 12 weeks and up to 81% in 24 weeks. The continuity of therapeutic activities after healing of the ulceration is reflected in the marked decrease in recurrence rates, falling to 16% whenever the patient is actively involved in the therapeutic process[19]. The results of the study encourage the participants to reflect on the nurse's responsibility in managing the care of patients with venous ulcers.

In the study conducted to estimate the costs associated with treating patients with venous ulcers from the perspective of the UK National Health Service, resources were evaluated in monetary terms (pounds sterling). It was found that direct costs for the national service are considerable and represent 1.2% of the annual budget. Nursing visits are the main cost driver, with annual estimates of £ 67.8 million. Dressings and compression bandages are also the main cost generators, with annual estimates of £ 828,790. The direct cost of treating venous ulcer patients is £ 7,706 per patient per year. The main cost driver is the number of visits by district nurses[20].

In Brazil there is no precise data regarding the cost of annual treatment or treatment per patient for the public health system or supplementary health care, however the data from the UK National Health Service provoke the need to search for records capable of generating this information. Knowing how much is spent on the treatment of patients with venous ulcers is essential to encourage the development and publication of a national guideline for the evaluation, treatment, and prevention of venous ulcer recurrence.

However, in professional practice, nurses, due to conflicts when making decisions in primary health care, choose to neglect care actions and meet demands that require more urgent responses in daily life, linked to managerial issues. In this context, it generates a detachment of the professional from direct care, from the nursing process, from the reality of the health needs of the population[21].

The treatment offered in primary health care, most of the time, is essentially curative, not contemplating health promotion measures or relapse prevention. The early use of compressive therapy is described as a factor in preventing the chronicity of acute wounds in the lower limbs[22].

The need for the construction of protocols that can guide and contribute to the process of systematization of integral care for patients with venous ulcers is emphasized. Although the use of compressive therapy is recommended for the treatment and control of venous ulcer recurrence, many patients do not have access to this intervention. The protocols must contemplate the training of professionals and include indicators for evaluating the quality of care, such as, for example, adherence rate, healing and recurrence[23,24].

Two of the limitations of this study refer to the nontreatment of venous ulcers by nurses and the lack of knowledge by most nurses on the number of people with this type of injury and wounds in general in the area covered by the basic health unit. This may be related to the omission of that professional in the care of the user with wounds and venous ulcer in the work processes in primary health care and the existence of a reference service of care for the person with venous ulcer in secondary care.

In addition, because of the COVID-19 pandemic, some difficulties were encountered, preventing a larger number of nurses from participating in the survey. This was because many nurses were involved in the vaccination of COVID-19.

CONCLUSION

The self-assessment of nurses in this study reached moderate and low scores for clinical practice in terms of knowing (theoretical knowledge) and doing (practical knowledge) in the care of the person with venous ulcer. The venous ulcer is a complex wound and requires from the nurse knowledge about pathophysiology and adequate treatment, with an integral approach to the person, so that the healing time is reduced, interfering in the improvement of the person's quality of life.

It is believed that this study can support in-service education actions, the formulation of protocols, algorithms, as well as make professionals aware of the need for constant updating, not only in the care of the person with venous ulcer, but also in all areas of nursing practice.

AUTHORS' CONTRIBUTION

Substantive scientific and intellectual contributions to the study: Colombi AFA, Prado TN, Borges EL, Xavier FG and Bringuente MEO. **Conception and design:** Colombi AFA, Prado TN and Borges EL; **Data collection, analysis**

and interpretation: Colombi AFA, Prado TN and Borges EL; **Article writing:** Colombi AFA, Prado TN, Borges EL, Xavier FG and Bringuente MEO; **Critical review:** Colombi AFA, Prado TN and Borges EL; **Final approval:** Colombi AFA and Prado TN.

AVAILABILITY OF RESEARCH DATA

Data will be made available upon request.

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REFERENCES

1. Sánchez-Nicolat NE, Guardado-Bermúdez F, Arriaga-Caballero JE, Torres-Martínez JA, Flores-Escartín M, Serrano-Lozano JA, et al. Revisión en úlceras venosas: Epidemiología, fisiopatología, diagnóstico y tratamiento actual. Rev Mex Angiol 2019;47(1):26-38.

2. Torres SMDSSO, Araújo ROE, Costa IKF, Tibúrcio MP, Sousa AJG, Pergola-Marconato AM, et al. Health-related quality of life in patients with venous leg ulcer treated in primary care in Brazil and Portugal. PLoS One 2018;13(4). https://doi.org/10.5281/zenodo.1218356

3. Raffetto JD, Ligi D, Maniscalco R, Khalil RA, Mannello F. Why venous leg ulcers have difficulty healing: overview on pathophysiology, clinical consequences, and treatment. J Clin Med 2020;10(1):29. https://doi.org/10.3390/jcm10010029

4. Borges EL, Nascimento Filho HM, Pires Júnior JF. Prevalence of chronic wounds in a city of Minas Gerais (Brazil). Rev Min Enferm. 2018;22:e1143. https://doi.org/10.5935/1415-2762.20180074

5. Brasil. Portaria nº 2.436, de 21 de setembro de 2017. Aprova a Política Nacional de Atenção Básica, estabelecendo a revisão de diretrizes para a organização da Atenção Básica, no âmbito do Sistema Único de Saúde. Diário Oficial da União. 2017;Seção 1.

6. Cortez DN, Moraes JT, Ferreira IR, Silva EL, Lanza FM. Custos do tratamento de lesões cutâneas na Atenção Primária à Saúde. ESTIMA, Braz. J. Enterostomal Ther 2019;17(1):e2419. https://doi.org/10.30886/estima.v17.824_IN

7. Osmarin VM, Boni FG, Bavaresco T, Lucena AF, Echer IC. Uso da Nursing Outcomes Classification - NOC para avaliar o conhecimento de pacientes com úlcera venosa. Rev Gaúcha Enferm 2021;41(Esp.):e20190146. https://doi.org/10.1590/1983-1447.2020.20190146

8. Sousa ATO, Formiga NS, Oliveira SHS, Torres GVT, Costa MML, Soares MJGO. Validating an instrument to assess nurse knowledge related to preventing and treating individuals with venous ulcer. Invest Educ Enferm 2016;34(3):433-43. https://doi.org/10.17533/udea.iee.v34n3a02

9. Shoji S, Souza NVDO, Maurício VC, Costa CCP, Alves FT. O cuidado de enfermagem em Estomaterapia e o uso das tecnologias. ESTIMA, Braz. J. Enterostomal Ther 2017;15(3):169-7. https://doi.org/10.5327/Z1806-3144201700030008

10. Norman G, Westby MJ, Rithalia AD, Stubbs N, Soares MO, Dumville JC. Dressings and topical agents for treating venous leg ulcers. Cochrane Database Syst Rev 2018;6(6):CD012583. https://doi.org/10.1002/14651858.CD012583.pub2

11. Shaydakov ME, Ting W, Sadek M, Aziz F, Diaz JA, Raffetto JD, et al. Review of the current evidence for topical treatment for venous leg ulcers. J Vasc Surg Venous Lymphat Disord 2022;10(1):241-7. https://doi.org/10.1016/j.jvsv.2021.06.010

12. Oliveira BGRB, Castro JB, Granjeiro JM. Panorama epidemiológico e clínico de pacientes com feridas crônicas tratados em ambulatório. Rev Enferm 2013;21(5):612-7.

13. Mościcka P, Szewczyk MT, Cwajda-Białasik J, Jawień A. The role of compression therapy in the treatment of venous leg ulcers. Adv Clin Exp Med 2019;28(6):847-52. https://doi.org/10.17219/acem/78768

14. Oates A, Adderley U. Survey of registered nurses' selection of compression systems for the treatment of venous leg ulcers in the UK. J Tissue Viability 2019;28(2):115-9. https://doi.org/10.1016/j.jtv.2019.02.004

15. Caveião C, Hey AP, Sales WB, Tavares ELP, Souza E, Silva MMBG. Conhecimento do enfermeiro da atenção primária à saúde sobre a indicação de coberturas especiais. ESTIMA, Braz J Enterostomal Ther 2018;16(2):e3118. https://doi.org//10.30886/estima.v16.562_PT

16. McLain NEM, Moore ZEH, Avsar P. Wound cleansing for treating venous leg ulcers. Cochrane Database Syst Rev 2021;(3):CD011675. https://doi.org//10.1002/14651858.CD011675.pub2

17. Murphy C, Atkin L, Vega de Ceniga M, Weir D, Swanson T, Walker A, et al. International consensus document. Embedding Wound Hygiene into a proactive wound healing strategy. J Wound Care 2022;31(Supl.4a):S1-S19. https://doi.org/10.12968/jowc.2022.31.sup4a.s1

18. Rocha MNB, Serna Gonzalez CV, Borges EL, Santos VLCG, Rabeh SAN, Nogueira PC. Incidence of recurrent venous ulcer in patients treated at an outpatient clinic: historical cohort. Int J Low Extrem Wounds 2022:15347346211065929. https://doi.org/10.1177/15347346211065929

19. Mościcka P, Szewczyk MT, Cwajda-Białasik J, Jawień A. The role of compression therapy in the treatment of venous leg ulcers. Adv Clin Exp Med. 2019;28(6):847-52. https://doi.org/10.17219/acem/78768

20. Phillips CJ, Humphreys I, Thayer D, Elmessary M, Collins H, Roberts C, et al. Cost of managing patients with venous leg ulcers. Int Wound J 2020;17(4):1074-82. https://doi.org/10.1111/iwj.13366

21. Galindo Neto NM, Carvalho GCN, Castro RCMB, Caetano JA, Santos ECB, Silva TM, et al. Vivências dos professores acerca dos primeiros socorros na escola. Rev Bras Enferm 2018;71(Supl. 4):1678-84. https://doi.org/10.1590/0034-7167-2017-0715

22. Souza FJ, Aquino JFST, Silva MAG, Oliveira MF, Dantas SRPE. Noninvasive measures of venous ulcer recurrence prevention: integrative review. ESTIMA, Braz J Enterostomal Ther 2019;17:e1119. https://doi.org/10.30886/estima.v17.713_IN

23. Borges EL, Ferraz AF, Carvalho DV, Matos SS, Lima VLAN. Prevention of varicose ulcer relapse: a cohort study. Acta Paul Enferm 2016;29(1):9-16. https://doi.org/10.1590/1982-0194201600003

24. Liberato SMD, Araújo RO, Souza AJG, Marconato AMP, Costa IKF, Torres GV. Adesão ao tratamento de pessoas com úlceras venosas atendidas na atenção primária à saúde. Aquichán 2017;17(2):128-39. https://doi.org/10.5294/aqui.2017.17.2.2