

## VALIDATION OF THE CONTENT OF AN INSTRUMENT FOR NURSING CONSULTATION FOR PEOPLE WITH VENOUS ULCER

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### ABSTRACT

**Objective:** To validate the content of an instrument for nursing consultation with people with venous ulcers. **Methodology:** Methodological study of internal validation of content based on the judgment of enterostomal therapist judges, whose identification occurred through a search on the Lattes Platform. The process occurred in the months of January and February 2019 and 24 experts participated. Data regarding the evaluation of the query were compiled in Microsoft Office Excel spreadsheet and considered according to total and global agreement index, totaling 209 items and 2,400 variables of the query, dichotomous responses being adopted. **Results:** Regarding the characterization of the judges, a mean age of 36.6 years was obtained. Most were female and located in the state of Ceará. The main qualification observed was Master's degree (62.5%) and the judges worked in assistance and coordination of enterostomal therapy services. Two thirds had experience with validation of instruments (66.7%). Regarding the validation of the consultation, an overall agreement index of 92% and an alpha of 0.91 were obtained. **Conclusion:** The consultation has an adequate appearance to be used, is easy to apply, has a logical sequence, and enables a systematic nursing care.

**DESCRIPTORS:** Enterostomal therapy. Validation study. Varicose ulcer. Nursing theory. Office nursing.

## VALIDAÇÃO DO CONTEÚDO DE UM INSTRUMENTO PARA CONSULTA DE ENFERMAGEM À PESSOA COM ÚLCERA VENOSA

### RESUMO

**Objetivo:** Validação do conteúdo de um instrumento para consulta de enfermagem à pessoa com úlcera venosa (UV). **Metodologia:** Estudo metodológico de validação interna de conteúdo baseado no julgamento de juízes estomaterapeutas, cuja identificação se deu através de busca na Plataforma Lattes. O processo ocorreu nos meses de janeiro e fevereiro de 2019 e 24 especialistas participaram. Os dados relativos à avaliação da consulta foram compilados em planilha do Microsoft Office Excel e considerados conforme índice de concordância (IC) total e global, totalizando 209 itens e 2.400 variáveis da consulta, sendo adotadas respostas dicotômicas. **Resultados:** Com relação à caracterização dos juízes, obteve-se idade média de 36,6 anos. A maioria foi do sexo feminino e localizada no estado do Ceará. A principal titulação observada foi o mestrado (62,5%) e os juízes atuavam na assistência e coordenação de serviço de estomaterapia. Dois terços apresentavam experiência com validação de instrumentos (66,7%). Com relação à validação da consulta, obteve-se um IC global de 92% e alfa de 0,91. **Conclusão:** A consulta possui aparência adequada para ser utilizada, é de fácil aplicação, possui sequência lógica, além de possibilitar um cuidado de enfermagem sistemático.

**DESCRIPTORIOS:** Estomaterapia. Estudo de validação. Úlcera varicosa. Teoria de enfermagem. Enfermagem no consultório.

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# VALIDACIÓN DEL CONTENIDO DE UN INSTRUMENTO PARA CONSULTA DE ENFERMERÍA PARA PERSONAS CON ÚLCERA VENOSA

## RESUMEN

**Objetivo:** Validación de contenido de un instrumento para consulta de enfermería a personas con úlceras venosas

**Metodología:** Estudio metodológico de validación interna de contenido, a partir del juicio de jueces estomaterapeutas.

Su identificación se dio a través de una búsqueda en la Plataforma Lattes que tuvieran experiencia en la atención de personas con úlceras venosas. El proceso se llevó a cabo en enero y febrero de 2019, donde participaron 24 expertos.

Los datos relacionados a la evaluación de la consulta fueron recopilados en planilla de Microsoft Office Excel y analizados según el índice de concordancia total y global, totalizando 209 ítems y 2400 variables de consulta, siendo adoptadas respuestas dicotómicas. **Resultados:** En cuanto a la caracterización de los jueces se obtuvo una edad promedio de 36,6 años. La mayoría eran mujeres, así como del estado de Ceará. La principal titulación observada fue la de maestría, (62,5%) trabajaba en la asistencia y coordinación del servicio de estomaterapia. Dos tercios tenían experiencia con la validación de instrumentos (66,7%). En cuanto a la validación de la consulta se obtuvo un índice de acuerdo global del 92% y un alfa de 0,91. **Conclusión:** La consulta tiene una apariencia adecuada para ser utilizada, es fácil de aplicar, tiene una secuencia lógica, además de permitir una atención sistemática de enfermería.

**DESCRIPTORES:** Estomaterapia. Estudio de validación. Úlcera varicosa. Teoría de Enfermería. Enfermería de consulta.

## INTRODUCTION

The present research presents the creation and content validation of a nursing consultation tool to consolidate clinical care based on King's Theory for the person with chronic venous insufficiency (CVI). Considered a collective health problem, CVI is one of the most prevalent pathologies in the world<sup>1</sup>.

Changes associated with this disease are present in 10 to 35% of adults in the United States. This can lead to venous leg ulcers, affecting about 1% of the population. This prevalence increases to 4% in people over 65 years of age<sup>2</sup>. The incidence is between 2 and 5 new cases per 1,000 people per year. Its prevalence is higher in females at a rate of 7 to 10<sup>3</sup>.

CVI is defined as a set of clinical manifestations caused by the abnormality (vessel obstruction and/or reflux), which leads to blood reflux from the peripheral venous system (superficial, deep, or both), associated with venous hypertension, and mainly affects the lower limbs. Such a clinical finding can cause disability, edema, pain and in some cases lead to the incidence of stasis ulcers, also called venous ulcer (VU)<sup>4</sup>.

The wound, considered the most advanced stage of the disease, causes loss of tissue integrity, with destruction of the skin and a solution of continuity of the deeper tissues. This situation should be avoided as much as possible, since 50 to 75% of these ulcers take 4 to 6 months to heal, while at least 1/5 of them remain open for more than 2 years.<sup>1</sup>

In view of the expressive numbers and problems related to this disease, measures aimed at the development of systematic care are necessary, so that patients, aware of the impossibility of eradicating the disease by means of a cure, can adapt to the conditions of illness and minimize or eliminate possible complications<sup>4</sup>.

Thus, considering that the interaction nurse-patient during treatment will be for a prolonged time, it is understood that this professional must be aware of the personal, interpersonal, and social conditions of the patients, paying attention to their subjectivity, promoting empathy, help, and using systematic instruments to implement care.

Based on this reality, nurses need to value and use the systematization of nursing care, in order to organize their care, in addition to relying on scientific bases derived from nursing theories.

As recommended by Resolution 359/2009, the nursing process must be carried out deliberately and systematically in all environments, public or private, where professional nursing care occurs. The environments refer to

institutions providing inpatient hospital services, institutions providing outpatient health services, homes, schools, community associations, factories, and others. Thus, when performed in institutions providing outpatient health services, the nursing process corresponds to what is usually referred to in this environment as a nursing consultation<sup>5</sup>.

From this perspective, it is known that the conceptual basis of the nursing process is found in nursing theories, which constitute the set of theoretical foundations that explain and guide nursing care, ensuring its scientific rigor.

Among the major theories is Imogene King's achievement goal theory, which focuses on nurse-patient interaction in a care process based on goal setting and achievement. According to the theory, to achieve health goals, patients need information that focuses on disease prevention and comprehensive care, when they are unable to take care of themselves, and the therapeutic relationship is the art of establishing and achieving goals<sup>6</sup>.

Thus, there is a lack of publications involving the theme, which is worrisome, since the methodological instrument guides professional nursing care and documentation is necessary for planning, execution and evaluation of care, thus constituting a fundamental tool for nurses' work<sup>7</sup>.

The objective of this work was to construct and validate the content of an instrument for nursing consultation with the person with VU.

## METHODS

Methodological research with a view to reliability and validity in the creation of a nursing consultation instrument that had as its theoretical foundation the King's achievement goal theory, thus, its first stage, data collection, subdivided into: personal, interpersonal and social system, in which the dissertation study by Teixeira<sup>8</sup>, which described the nurse-patient interaction in the care of people with CVI and VU, cared for in a specialized enterostomal therapy outpatient clinic, was used as a foundation for the construction.

The theoretical framework was developed in the early 1960s, and is a far-reaching and easily operationalized nursing theory. It brings the achievement of goals from the nurse-patient interaction as the focus of action to seek quality of life. The theory describes a dynamic, interpersonal relationship in which a patient develops in order to pursue and achieve certain life goals<sup>6</sup>.

King<sup>6</sup> named the five stages of the goal-oriented registration nursing process, the first stage being investigation, defined by King as the data base collection stage. In this stage subjective and objective information is gathered, making the clients aware of their problem. So, this is the crucial step for the nurses, through clinical reasoning, to subsequently list the nursing diagnoses.

Thus, the data collection form model used by Teixeira<sup>8</sup> was adapted in nursing consultation and adapted to the nomenclature and steps of the nursing process according to Resolution 358/2009 for the content validation process<sup>5</sup>. Nursing diagnoses were judged and established by NANDA-I<sup>9</sup>. Their findings were grounded in the Nursing Outcomes Classification (NOC), and the interventions according to the Nursing Interventions Classification (NIC)<sup>10</sup>. The internal content validation method was based, necessarily, on the judgment of expert judges. Its identification was done by searching the Lattes Platform for enterostomal therapist nurses who had experience in caring for people with VU and by indication of other specialists, a technique called *snowball*<sup>11</sup>. Specialists with less than one year of experience in patient care were excluded from the sample.

For foreseeing losses in the return of the instruments, the invitation was made to 54 enterostomal therapist nurses, who were contacted through a multiplatform messaging application (WhatsApp), as well as by phone call and/or e-mail. The validation process took place in January and February 2019.

There is no consensus in the literature as to how many experts are needed for the validation process. However, the guidance of Lopes, Silva and Araujo<sup>12</sup>, who suggest the formula in Eq. 1 for calculating the minimum number of participants:

$$n = \frac{(Z\alpha^2 \times P \times (1-P))}{E^2} \quad (1)$$

Where  $Z\alpha$  refers to the confidence level adopted, considering  $Z\alpha = 1.96$  (95% confidence interval);  $P$  represents the expected proportion of experts indicating the adequacy of each item (85%);  $E$  the acceptable proportional difference from what would be expected (15%). Therefore:

$$n = \frac{1,96^2 \times 0,85 \times 0,15}{0,15^2} = 22 \text{ specialists}$$

At the end of the deadline, 24 enterostomal therapists responded in the allotted time, which constituted the final sample of the study.

To facilitate content analysis, the validation form was filled out in checklist format, so that it could be completed briefly and attentively. Five psychometric parameters were considered that were to be assessed with dichotomous “yes” or “no” answers according to their perception.

The criteria to be considered were:

1. Clarity and objectivity: Is the item presented clearly and objectively as to what it proposes?
2. Relevance: Is the existence of the item valid for the instrument?
3. Writing accuracy: Does the writing of the item conform to current literary standards? Does it correspond to standard technical terms in nursing? Is it easy to understand?
4. Executability: Is the item executable? Is this execution facilitated?
5. Relevance: Is the item important in order to achieve the expected results?

To assign the desired score all you had to do was click on one of the checkboxes, selecting only one box, YES or NO, for each proposed criterion.

**Table 1.** Item evaluation model. Fortaleza (CE), Brazil, 2019.

Item	Clarity and objectivity		Relevance		Writing accuracy		Executability		Relevance		Comments / suggestions
	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	
Item 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Source: Elaborated by the authors.

Absolute and relative frequencies were used to characterize the judges. The elements regarding the evaluation of the consultation were compiled in March 2019 in Microsoft Office Excel spreadsheet, and analyzed according to total and global agreement index (AI), totaling 209 items and 2,400 variables of the consultation, dichotomous answers of “yes” or “no” type were adopted, and the AI was used.

This procedure intends to measure the percentage of experts who agreed on certain aspects of the instrument and its items, reaching a minimum agreement of 80% and preferably more than 90%<sup>13</sup>.

Consultation in general was also evaluated. Thus, six statements were drawn up, to which scores on a scale of one to three points were to be assigned, according to the overview of the instrument in question. For the overall assessment of the consultation, a Likert type scale was used, with a score from one to three: 1. I disagree; 2. I partially agree; 3. Agree; and the calculation for the total AI is performed: total “I partially agree” and “I agree” responses divided by the total responses. The alpha statistical test was also performed to check the agreement. The study was approved by the Certificate of Ethical Consideration number 00175818.8.0000.5684, under opinion number 3,105,247. The participants were guaranteed the autonomy of voluntary participation, assuring them the right to privacy and confidentiality of their data. The experts received the denomination “E” (Enterostomal Therapist), followed by the ordinal number according to the order of receipt of the evaluation forms.

## RESULTS

### Sociodemographic characterization of enterostomal therapist judges

Table 2 shows sociodemographic data and the experts' education, occupation, and work experience.

**Table 2.** Sociodemographic characterization of the judges. Fortaleza (CE), Brazil, 2019.

Characteristics	f	%
<b>Sex</b>		
Male	3	12.5
Female	21	87.5
<b>Age</b>		
25-29 years	1	4.1
30-39 years	10	41.7
> 40 years	13	54.2
<b>State</b>		
Ceará	20	83.3
Others	4	16.7
<b>Qualification</b>		
PhD	5	20.8
Master's Degree	8	33.3
Master's Degree in progress	6	25.0
<b>Education time</b>		
< 10 years	5	20.8
11-19 years	8	33.4
> 20 years	11	45.8
<b>Period as enterostomal therapist</b>		
< 10 years	9	37.5
11-19 years	11	45.8
> 20 years	4	16.7
<b>Occupation</b>		
Enterostomal therapy assistance	10	41.7
Assistance and teaching	14	58.3
Assistance and coordination of enterostomal therapy service	15	62.5
<b>Time of experience with venous ulcer</b>		
1-5 years	7	29.2
6-10 years	8	33.3
11-15 years	3	12.5
16-20 years	4	16.7
> 20 years	2	8.3
<b>Experience with validation</b>		
Yes	16	66.7
No	8	33.3
<b>Publication themes</b>		
General enterostomal therapy	18	75.1
Venous ulcer	6	25.0
Nursing process	4	16.7
Nursing theories	3	12.5
None	4	16.7
<b>Participation in research lines</b>		
Yes	15	62.5
No	9	37.5

Source: Elaborated by the authors.

In view of the data listed, it is possible to see that the consultation instrument was validated by enterostomal therapists and experts in the field.

## Agreement index considering King's systems

Table 3 shows the validation of the nursing consultation items, related to the patients' sociodemographic and clinical data, in view of King's interacting systems.

**Table 3.** Validation of the nursing consultation items. Fortaleza (CE), Brazil, 2019.

Nursing consultation step	Personal system AI (%) TOTAL	Interpersonal system AI (%) TOTAL	Social system AI (%) TOTAL	Physical examination AI (%) TOTAL	AI (%) GLOBAL
1. Data collection	96	91	97	97	95
2. Nursing diagnosis	97	99	91	-	98
3. Goals/results	97	94	95	-	96
4. Interventions	97	95	91	-	96
5. Final evaluation	-	-	-	-	96

AI: Agreement index. Source: Elaborated by the authors.

Regarding the interview, in the data collection stage, most of the query items obtained an AI higher than 90%, revealing an overall AI of 95.0.

Related to the physical examination items directed at VU, they obtained an overall AI among the experts of 97.0%. Data such as the Clinical signs classification, etiology, anatomic distribution, pathophysiology (CEAP), types of debridements, presence of odor, adjacent skin assessment, and therapeutics received AI of 100%.

As for the judges' AIs related to the nursing diagnoses listed in the consultation, an overall AI of 98.0% was noted, demonstrating relevant results. The lowest AI was found to be related to the anxiety diagnosis with 80.0%.

In item 3, about the listed goals/results, a relevant overall AI of 96.0% can be verified. A value above the recommended value for the validation of nursing interventions was also observed, reaching an overall AI of 96.3%, indicating high homogeneity among the judges' responses regarding the items.

As suggested, the indicators for the final evaluation of the nursing goals/outcomes reached an overall AI of 96.0%, being: goal not reached, goal partially reached, and goal fully reached. It is noticeable that the judges' evaluation in this phase was arduous, and it was possible to observe their involvement in contributing to the improvement and strengthening of the nursing consultation.

## Nursing consultation concordance index in general

As presented in Table 4, the experts' opinion of the nursing consultation shows a satisfactory overall AI.

Table 4 evaluates the nursing consultation to achieve appropriateness and reliability. Therefore, an overall AI of 92.0% and a satisfactory alpha value of 0.91 were obtained.

Regarding suggestions for improving the instrument, 50% of the judges claimed that the consultation was too extensive for its applicability. Reports such as "*Adequate, but too long*" (E3); "*Comprehensive, but too long*" (E10); "*I know the need for a complete anamnesis, but it would be interesting to lean a little more*" (E6); "*I suggest a synthesis in the diagnoses*" (E13); "*Well structured, but too long*" (E8); "*Considering my previous experience with the elaboration and validation of nursing consultation I suggest that it should be leaner, making it feasible to execute in the daily practice of services*" (E5) were considered, the consultation

being shortened, keeping relevant and impressive aspects, showing to be useful to guide clinical nursing care to the person with VU, enabling systematic, standardized assistance and directing the integral intention in personal, interpersonal, and social aspects.

**Table 4.** General validation of the nursing consultation. Fortaleza (CE), Brazil, 2019.

Item	f	%	AI (%)
<b>1. The consultation has a suitable appearance to be used during a service.</b>			
I do not agree	2	8.0	92.0
I partially agree	5	21.0	
I agree	17	71.0	
<b>2. The consultation is easy to apply and allows the nurse to collect the necessary information for the execution of the nursing process in all its stages.</b>			
I do not agree	2	8.0	92.0
I partially agree	8	33.0	
I agree	14	59.0	
<b>3. The consultation has a logical sequence of its steps and items so that it does not cause confusion to the nurse applying it.</b>			
I do not agree	2	8.0	92.0
I partially agree	1	4.0	
I agree	21	88.0	
<b>4. The consultation facilitates and directs nursing care to the patient with venous ulcer providing holistic and quality nursing care.</b>			
I do not agree	1	4.0	96.0
I partially agree	3	13.0	
I agree	20	83.0	
<b>5. The nursing consultation makes it possible to address aspects related to promoting the achievement of health goals and the quality of life of patients.</b>			
I do not agree	2	8.0	92.0
I partially agree	1	4.0	
I agree	21	88.0	
<b>6. The nursing consultation can be performed in specialized nursing services, such as outpatient clinics, offices, and other modes of individual care for the CVI patient.</b>			
I do not agree	2	8.0	92.0
I partially agree	7	29.0	
I agree	15	63.0	
<b>Global AI (%)</b>			92.0
<b>Alpha</b>			0.91

Source: Elaborated by the authors.

Other suggestions related to spelling and grammar corrections, data additions and reductions, and standardization of terms, among other details, have been taken on board. Pertinent suggestions have come in for changes, corrections, and refinements to the consultation.

Figure 1 shows the final version of the nursing consultation, validated by the enterostomal therapist judges.

## NURSING CONSULTATION TO A PERSON WITH VENOUS ULCER

DATE: \_\_/\_\_/\_\_

## STEP 01 – INTERVIEW AND PHYSICAL EXAMINATION

## PERSONAL SYSTEM DATA

Name: Sex: ( ) M ( ) F Age: Admission: \_\_/\_\_/\_\_ Medical record:

Telephone contact: Origin/municipality: Transportation: ( ) Public ( ) Private Education: ( ) Illiterate ( ) Functional illiterate ( ) Complete elementary ( ) Incomplete elementary ( ) Comp. high school ( ) Incomp. high school ( ) Comp. higher education ( ) Inc. higher education Child(ren): ( ) Yes ( ) No. How many? \_\_\_\_

Marital status: ( ) Single ( ) Married ( ) Widower ( ) Stable union Previous hospitalizations: ( ) Yes ( ) No. Reason(s):

Routine medications: ( ) Yes ( ) No ( ) Doesn't know. Which one(s):

Compression therapy: ( ) Yes ( ) No. Which one: ( ) Unna's boot ( ) Band ( ) Elastic sock ( ) Multilayer Pain: ( ) Yes ( ) No. Scale 0–10: Preserved sleep: ( ) Yes ( ) No ( ) Sometimes

ABI: Systolic pressure of the posterior tibial or pedial arteries (the highest value)/Systolic pressure of the right or left brachial artery (the higher value)

Right leg: \_\_\_\_ ( )  $\geq 0.9$ –normal ( ) 0.71 a 0.9–mild obstruction ( ) 0.41–0.7–moderate ( )  $\leq 0.4$ –important.Left leg: \_\_\_\_ ( )  $\geq 0.9$ –normal ( ) 0.71 a 0.9–mild obstruction ( ) 0.41–0.7–moderate ( )  $\leq 0.4$ –important.

Weight: \_\_\_\_. Height: \_\_\_\_. BMI: mass/height<sup>2</sup> ( ) 18.5–24.9: normal ( ) 25.0–29.9: overweight ( ) 30.0–34.9: obesity class I ( ) 35.0–39.9: class II ( ) > 40.0: class III Latest lab test: \_\_/\_\_/\_\_ Hemoglobin: \_\_g/dL. \_\_/\_\_/\_\_ HbA1c \_\_/\_\_/\_\_ Glycemia: \_\_g/dL \_\_/\_\_/\_\_ Serum albumin: \_\_g/dL \_\_/\_\_/\_\_ Leukocytes: \_\_/\_\_/\_\_ PCR Others: \_\_/\_\_/\_\_

Vital signs: HR: \_\_bpm. RR: \_\_ripm. T: \_\_°C. BP: \_\_x\_\_mmHg. \_\_% O<sub>2</sub> saturation

Venous Doppler: ( ) Yes ( ) No. Result:

Arterial Doppler: ( ) Yes ( ) No. Result:

Time with the wound: \_\_months. \_\_years. Recurrence: \_\_x( ) Doesn't know ( ) Without

Feeling anxious: ( ) Yes ( ) No ( ) Sometimes. Irritated/stressed: ( ) Yes ( ) No ( ) Sometimes. Reason:

Mobility: ( ) Preserved ( ) With assistance: ( ) Cane ( ) Crutch ( ) Walker ( ) Others:

Problems with self-image: ( ) Yes ( ) No ( ) Sometimes

Most frequent daily posture:

Do you rest during the day? ( ) Yes ( ) No ( ) Sometimes

Performs physical activity: ( ) Yes ( ) No. Which one(s)? Frequency: \_\_x/week.

( ) Sitting ( ) Standing ( ) Lying down

Under use of sleeping medicine: ( ) Yes ( ) No. Which one(s):

Risk factors and comorbidities: ( ) Cancer \_\_\_\_ ( ) Anemia ( ) DM ( ) SAH ( ) Obesity ( ) Stroke ( ) Smoker \_\_\_\_years ( ) Physical disability \_\_\_\_ ( ) Family history \_\_\_\_ ( ) DVT ( ) Previous venous surgery ( ) Varicose veins ( ) Illicit drugs ( ) Deformity in lower limbs \_\_\_\_ ( ) CHF ( ) Cardiopathies ( ) Surgery or leg fracture ( ) Risky work activity ( ) Allergy ( ) None ( ) Others:

## INTERPERSONAL SYSTEM DATA

## SOCIAL SYSTEM DATA

Have family support/support: ( ) Yes. Kinship: ( ) No. Why? Is the caregiver willing and able to offer support, perform dressing changes and compression therapy? ( ) Yes ( ) No

Work activity: ( ) Yes ( ) No. Which one(s)? How many hours a day?

Followed up with a doctor: ( ) Yes Specialty: ( ) No

Religion: ( ) Yes ( ) No. Which one? \_\_\_\_ Attending church? ( ) Yes ( ) No

Can you talk to get questions answered: ( ) Yes ( ) No ( ) Sometimes. Why?:

Follow-up with a nurse: ( ) Yes Specialty: ( ) No

Monthly income: ( ) &lt; 1 MW ( ) 1–2 MW ( ) 3–4 MW ( ) &gt; 4 MW

Can you talk to get questions answered: ( ) Yes ( ) No ( ) Sometimes. Why?:

How do you perceive the service at the ambulatory? ( ) Great ( ) Good ( ) Bad Why? ( ) 1st x (NA)

Do you receive government benefits? ( ) Yes ( ) No. Which one(s)?

Good relationship with friends? ( ) Yes ( ) No. Do you stroll with them? ( ) Yes ( ) No

Other relevant observations:

How often: ( ) Rarely ( ) Frequently

Do you travel? ( ) Yes ( ) No. How often? ( ) Never ( ) Rarely ( ) Frequently

Sexually active? ( ) Yes ( ) No.

Do you perceive problems in the sexual relation? ( ) Yes ( ) No. Which one(s)?

continue...



continuation...

DATE: ___/___/___		Assessment of the injury(ies)	
VENOUS ULCER 1:		VENOUS ULCER 2:	
Location: _____, Dimensions: W ___ × L ___: ___cm <sup>2</sup>		Location: _____, Dimensions: W ___ × L ___: ___cm <sup>2</sup>	
Edema: ( ) Yes Pitting: ( ) + ( ) ++ ( ) +++ ( ) ++++ ( ) No		Edema: ( ) Yes Pitting: ( ) + ( ) ++ ( ) +++ ( ) ++++ ( ) No	
Wound bed		Wound bed	
( ) Black / wet or dry necrosis ___% ( ) Sloughs ___% ( ) Fibrinous exudate ( ) Granulation tissue ___% ( ) Hypergranulation ___% ( ) Epithelialization Others: _____.		( ) Black / wet or dry necrosis ___% ( ) Sloughs ___% ( ) Fibrinous exudate ( ) Granulation tissue ___% ( ) Hypergranulation ___% ( ) Epithelialization Others: _____.	
Edge ( ) Regular ( ) Irregular ( ) Adhered ( ) Detached		Edge ( ) Regular ( ) Irregular ( ) Adhered ( ) Detached	
Cleaning		Cleaning	
( ) 0.9% SS ( ) Chlorhexidine ( ) PHMB solution ( ) Other: _____		( ) 0.9% SS ( ) Chlorhexidine ( ) PHMB solution ( ) Other: _____	
Debridement		Debridement	
( ) Instrumental ( ) Mechanical ( ) Autolytic ( ) Enzymatic ( ) Other: _____		( ) Instrumental ( ) Mechanical ( ) Autolytic ( ) Enzymatic ( ) Other: _____	
<b>Odor:</b> ( ) Absent ( ) Discreet ( ) Accented		<b>Odor:</b> ( ) Absent ( ) Discreet ( ) Accented	
Exsudate		Exsudate	
<b>Quantity:</b> ( ) Abundant ( ) Moderate ( ) Mild ( ) Absent		<b>Quantity:</b> ( ) Abundant ( ) Moderate ( ) Mild ( ) Absent	
<b>Aspect:</b> ( ) Serous ( ) Purulent ( ) Sanguinopurulent ( ) Sanguinolent ( ) Serosanguineous		<b>Aspect:</b> ( ) Serous ( ) Purulent ( ) Sanguinopurulent ( ) Sanguinolent ( ) Serosanguineous	
<b>Color:</b> ( ) Greenish ( ) Brown ( ) Other: _____		<b>Color:</b> ( ) Greenish ( ) Brown ( ) Other: _____	
Adjacent skin		Adjacent skin	
( ) Intact ( ) Phlogistic signs ( ) Blisters ( ) Macerated ( ) Dry ( ) Edema ( ) Lipodermatosclerosis ( ) Telangectasia ( ) Varicose vein ( ) Pigmentation ( ) Stasis eczema ( ) Atrophie blanche ( ) Cellulitis/erysipelas ( ) Corona phlebectica ( ) Allergic dermatitis ( ) Flaking ( ) Other: _____		( ) Intact ( ) Phlogistic signs ( ) Blisters ( ) Macerated ( ) Dry ( ) Edema ( ) Lipodermatosclerosis ( ) Telangectasia ( ) Varicose vein ( ) Pigmentation ( ) Stasis eczema ( ) Atrophie blanche ( ) Cellulitis/erysipelas ( ) Corona phlebectica ( ) Allergic dermatitis ( ) Flaking ( ) Other: _____	
Topical and compression therapy		Topical and compression therapy	
( ) Hydrocolloid ( ) Hydrogel ( ) Papain ___% ( ) Nonadherent pad ( ) Silicone tape ( ) Calcium alginate ( ) Protective cream/spray ( ) Foam ( ) Essential fatty acid oil ( ) Silver hydrofiber ( ) Silver sulfadiazine ( ) Unna's boot ( ) Elastic band ( ) Other: _____		( ) Hydrocolloid ( ) Hydrogel ( ) Papain ___% ( ) Nonadherent pad ( ) Silicone tape ( ) Calcium alginate ( ) Protective cream/spray ( ) Foam ( ) Essential fatty acid oil ( ) Silver hydrofiber ( ) Silver sulfadiazine ( ) Unna's boot ( ) Elastic band ( ) Other: _____	

PUSH healing scale:																
L x W											Exsudate					
	0	1	2	3	4	5	6	7	8	9	10	0	1	2	3	
											Tissue					
	0 cm <sup>2</sup>	< 0,3 cm <sup>2</sup>	0,3-0,6 cm <sup>2</sup>	0,7-1,0 cm <sup>2</sup>	1,1-2,0 cm <sup>2</sup>	2,1-3,0 cm <sup>2</sup>	3,1-4,0 cm <sup>2</sup>	4,1-8,0 cm <sup>2</sup>	8,0-12,0 cm <sup>2</sup>	12,1-24,0 cm <sup>2</sup>	> 24,0 cm <sup>2</sup>	Absent	Small	Moderate	Big	
												Closed	Epithelial	Granulation	Slough	Necrotic

LESION 1 PROGRESSION								LESION 2 PROGRESSION							
Date								Date							
LxW								LxW							
Exsudate								Exsudate							
Tissue								Tissue							
<b>Total</b>								<b>Total</b>							
17								17							
16								16							
15								15							
14								14							
13								13							
12								12							
11								11							
10								10							
9								9							
8								8							
7								7							
6								6							
5								5							
4								4							
3								3							
2								2							
1								1							

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DIAGNOSES, EXPECTED GOALS/OUTCOMES (NOC), INTERVENTIONS AND NURSING ASSESSMENT				
Nursing diagnosis (NANDA-I)	Goals/expected results (NOC)	Nursing interventions (NIC)	Scheduling	Final evaluation
<b>PERSONAL SYSTEM</b>				
<b>1. Anxiety</b> ( ) Yes ( ) No	Report increased psychological and physiological comfort.	Use a reassuring approach during the sessions, clarifying doubts.		
		Listen to, encouraging the expression of feelings, perceptions, and fears.		( ) Not achieved
		Monitor changes in the anxiety level.		( ) Partially
		Ensure privacy and confidentiality.		( ) Totally
		Encourage physical exercise such as light walking, when possible.		
<b>2. Recreational activities decreased</b> ( ) Yes ( ) No	Show interest and get involved in leisure activities.	Provide music during care and dressing.		
		Encourage a change of environment, such as going out for a walk, having a conversation.		( ) Not achieved
		Encourage family involvement in recreation practices.		( ) Partially
		Advise light walking, outdoors, when possible.		( ) Totally
		Suggest involvement in support groups.		
<b>3. Self-neglect</b> ( ) Yes ( ) No	Report desire to change or initiate change.	Encourage verbal expressions of feelings, perceptions, and fears about taking responsibility for own health.		
		Assist in engaging own care and taking on new challenges.		( ) Not achieved
		Discuss the consequences for not dealing with own responsibilities.		( ) Partially
		Offer positive feedback for the acceptance to change behavior.		( ) Totally
<b>4. Chronic low self-esteem</b> ( ) Yes ( ) No	Express a positive view about the future.	Convey confidence in your ability to handle the situation.		
		Encourage care with personal appearance.		
		Set goals and help the patient to list and prioritize possible alternatives.		( ) Not achieved
		Praise the patient's progress toward achieving goals.		( ) Partially
		Suggest involvement in support groups.		( ) Totally
<b>5. Poor knowledge</b> ( ) Yes ( ) No	Report satisfactory improvement with the ability to communicate and understand the directions given.	Promote teaching and guidance about the health-disease process.		( ) Not achieved
		Use calm and reassuring approach and always clarify doubts.		( ) Partially
		Use appropriate language according to the patient's and caregiver's literacy.		( ) Totally
<b>6. Impaired walking</b> ( ) Sim ( ) Não	The individual should increase the walking distance, demonstrating safety in moving.	Assist in wearing shoes that facilitate walking and prevent injury.		
		Advise about availability of auxiliary devices.		( ) Não atingida
		Establish pain control in the lower limbs.		( ) Parcialmente
		Teaching exercises to improve venous return.		( ) Totalmente
		Refer to specialist for further investigation and care if ABI < 0.8 or > 1.3.		
<b>7. Body image disturbance</b> ( ) Yes ( ) No	Verbalize and demonstrate acceptance of appearance.	Determine the patient's expectations of body image.		
		Identify actions that improve appearance such as: appropriate and comfortable clothing, hygiene.		( ) Not achieved
		Stimulate self-esteem, self-confidence.		( ) Partially
		Help identify parts of their body with positive perceptions associated with them.		( ) Totally
<b>8. Disturbed sleep pattern</b> ( ) Yes ( ) No	Communicate the balance between rest and activity.	Determine the sleep pattern and number of hours of sleep.		
		Identify sleep medications and their effects on sleep patterns, adjust administration schedules.		
		Observe physical circumstances that interrupt sleep.		( ) Not achieved
		Guide the adaptation of the environment to promote sleep.		( ) Partially
		Encourage establishing a routine to ease the transition from wakefulness to sleep.		( ) Totally
		Advise to avoid foods and drinks at bedtime that interfere with sleep.		
Offer information on techniques to improve sleep.				

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DIAGNOSES, EXPECTED GOALS/OUTCOMES (NOC), INTERVENTIONS AND NURSING ASSESSMENT				
Nursing diagnosis (NANDA-I)	Goals/expected results (NOC)	Nursing interventions (NIC)	Scheduling	Final evaluation
<b>PERSONAL SYSTEM</b>				
<b>9. Chronic pain</b> ( ) Yes ( ) No	Implement nondrug measures for pain relief and report decreased pain intensity and frequency.	Perform a thorough pain assessment. Apply pain scale.		
		Implement analgesia during dressing change, as prescribed by the doctor.		
		Investigate the factors that relieve/worsen the pain.		
		Advise light walking.		
		During cleaning and debridement of the lesion apply topical analgesic.		( ) Not achieved
		Encourage adequate rest, with leg elevation, 3 times a day, for 1 hour.		( ) Partially
		Orient sleep with elevated lower limbs.		( ) Totally
		Refer to specialist for further investigation and care if ABI < 0.8 or > 1.3.		
		Teaching exercises to improve venous return.		
		<b>10. Impaired tissue integrity</b> ( ) Yes ( ) No	Report reduction in size or complete healing of lesions. Avoid recurrences.	Examine, compare and record at each visit the characteristics and changes in the lesion.
Assist the patient and family in obtaining the supplies needed to change the dressing.				
Select the type of dressing and decide how often to change the dressing.				
Educate the patient and family about storage and disposal of dressings and materials.				( ) Not achieved
Observe and/or manage odor, exudate in the lesion.				( ) Partially
Debride the lesion as needed.				( ) Totally
Advise adequate rest, with elevation of the legs, 3 times a day, for 1 hour.				
Guide care and moisturizing of the wounded skin.				
Guide to avoid trauma.				
Encourage use of compression therapy and guide care.				
<b>11. Risk of unstable blood glucose</b> ( ) Yes ( ) No	Understand optimal blood glucose values and corrective measures in cases of instability.	Encourage the use of compression socks for relapse prevention.		
		Give advice about the disease and the medicines.		
		Give advice on proper nutrition and suggest consultation with a nutritionist.		
		Encourage the consumption of adequate amounts of water.		( ) Not achieved
		Encourage self-monitoring of blood glucose levels and help the patient and caregivers interpret the values, recognizing the behaviors in hyperglycemia/hypoglycemia.		( ) Partially
<b>12. Risk of unstable blood pressure</b> ( ) Yes ( ) No	Understand the ideal blood pressure values and the health consequences of its elevation.	Suggest a consultation with an endocrinologist or family health physician.		( ) Totally
		Give advice about the disease, complications, and use of medications.		
		Guide proper nutrition, suggest consultation with a nutritionist.		( ) Not achieved
		Monitor blood pressure in the presence of signs and symptoms of hypertensive peaks.		( ) Partially
		Suggest regular follow-up by a cardiologist or family health physician.		( ) Totally
<b>13. Risk of infection</b> ( ) Yes ( ) No	Describe the risk factors associated with infection and the necessary precautionary measures. Absence of infection.	Instruct hand washing technique before and after wound handling to patient and caregiver.		
		Guide hygiene care and wound management.		
		Guide/monitor systemic and local signs and symptoms of infection.		
		Use antimicrobial dressings for local infection or for the prevention of infection in high-risk lesions (critical colonization).		( ) Not achieved
		Refer to a doctor for antibiotic prescriptions and discourage self-medication.		( ) Partially
		Observe and/or manage odor, exudate, and flogistic signs in the lesion.		( ) Totally
		Monitor blood glucose if the patient is diabetic.		
		Encourage rest with leg elevation, 3 times a day, for 1 hour.		
		Suspend compression therapy when suspected or infection is present.		

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DIAGNOSES, EXPECTED GOALS/OUTCOMES (NOC), INTERVENTIONS AND NURSING ASSESSMENT						
Nursing diagnosis (NANDA-I)	Goals/expected results (NOC)	Nursing interventions (NIC)	Scheduling	Final evaluation		
<b>PERSONAL SYSTEM</b>						
14. Risk of falls ( ) Yes ( ) No	Report few falls and less fear of falling.	Review the history of falls with the patient and family.				
		Suggest auxiliary devices (i.e., cane and walker).				
		Suggest adaptations at home to increase safety.		( ) Not achieved		
		Sugerir calçados seguros.		( ) Partially ( ) Totally		
15. Stress overload ( ) Yes ( ) No	Verbalize better acceptance and decreased stress level arising from the health condition.	Maintain measures to decrease and control pain in the lower limbs.				
		Evaluate the available support systems (i.e., family, community involvement, religious affiliations).				
		Assess individual need/desire for social support.				
		Encourage the person and family to talk about concerns about the wound.				
		Monitor the occurrence of physiological and psychological signs and symptoms of stress (anxiety, depression, increased demands and hopelessness).		( ) Not achieved		
		Encourage leisure activities, such as walking outdoors, listening to music, talking.		( ) Partially ( ) Totally		
		Assess the impact of lifestyle disruption and limitations caused by the wound.				
		Provide music during dressing changes.				
16. Overweight ( ) Yes ( ) No	Understand the consequences of being overweight on their health condition and demonstrate a desire to change.	Discourage decision making when the patient is very stressed, when possible.				
		Stimulate motivation to change eating habits and exercise.				
		Determine with the patient a (realistic) goal for weight reduction.				
		Weigh the patient and note the progress (encourage the individual to do the same).		( ) Not achieved		
		Encourage the use of sugar substitutes.		( ) Partially ( ) Totally		
17. Disabled family coping ( ) Yes ( ) No	Maintain a functioning system of mutual support with family members.	Encourage the consumption of adequate amounts of water.				
		Encourage consultation with a nutritionist (when possible).				
		Identify the degree of family support and financial support.				
		Assess the coping behaviors that are unhealthy for family members.		( ) Not achieved		
		Request the presence of a companion/family member at every appointment.		( ) Partially ( ) Totally		
		18. Impaired social interaction ( ) Yes ( ) No	The patient should report increased satisfaction with socialization.	Encourage improved involvement in relationships already created.		
				Foster relationships with people with common interests and goals.		( ) Not achieved
				Encourage participation in support groups.		( ) Partially ( ) Totally
Provide feedback on involvement in activities.						
Encourage the patient to change environments, such as going out for walks with friends/spouse/family members.						
19. Ineffective sexuality pattern ( ) Yes ( ) No	Resume previous sexual activity or engage in satisfying alternative sexual activity.	Encourage return to work when possible.				
		Create an accepting and nonjudgmental atmosphere.		( ) Not achieved		
		Discuss sexual behavior and appropriate ways to express feelings and needs to the partner.		( ) Partially ( ) Totally		
<b>SOCIAL SYSTEM</b>						
20. Impaired religiosity ( ) Yes ( ) No	Express continuity of spiritual harmony.	Encourage participation in interactions with family and friends.		( ) Not achieved		
		Encourage participation in support groups.		( ) Partially ( ) Totally		
		Encourage attendance at spiritual meetings, if desired.				
		Help the patient to expand their spirituality.				

Figure 1. Validated version of the nursing consultation. Fortaleza (CE), Brazil, 2019.

## DISCUSSION

Nursing care in enterostomal therapy involves not only hard but also soft technologies, such as the systematization of nursing care and the way in which the specialist uses the necessary learning about the use of equipment, covers and exercises to enable the person's improvement<sup>14</sup>.

Soft technologies have also been prioritized by the enterostomal therapist nurse, and the care goes through a good interpersonal relationship between professional and patient, being part of all the assistance performed in order to reach the agreed goals<sup>14</sup>.

From this contextualization, enterostomal therapist nurses have been achieving growth and excellent results in the area, acting as powerful opinion makers and being part of the scientific community, in order to intervene in the implementation of a humanized and quality care.

To construct the nursing consultation, all steps were subdivided into King's interacting systems, being the personal, interpersonal, and social systems.

The personal system contains the patients' sociodemographic and clinical data, as well as health-related data such as sleep, rest, and physical activity, and emotional/mental health-related data such as their perceived self-image, anxiety, sadness, and stress. Mental illnesses are among the chronic noncommunicable diseases that most directly cause disability and worsen quality of life. Among them, the most prevalent in the elderly is depression<sup>15</sup>. Thus, the nurse, during the anamnesis, should be attentive to the patients' questions and answers, because, in face of the lived context, they may report anxiety, depression and negative feelings about body image, associated with sadness, self-depreciation and restricted libido<sup>16</sup>.

In the interpersonal system, data is suggested that seeks balance in interaction with family, health professionals, and friends. Therefore, for King<sup>6</sup>, these groups can communicate verbally and nonverbally, helping them to set goals together. Questions regarding the relationship with family members, doctors, and nurses were asked at this stage of the consultation, as well as companionship with friends and spouse, and leisure activities.

In the social system, the data collected are related to the labor system, income, health system, and religious system. Thus, according to King, it is in this system that patients organize their lives and activities to achieve goals.

Still part of the data collection phase, there is the specific physical examination for the VU evaluation, which begins with the evaluation of the lesions, the CEAP classification, which is considered the most indicated classification for the disease.

Therefore, the P scale was chosen for the assessment of the healing process, and the Pressure Ulcer Scale for Healing (PUSH) was recommended for the purpose of assessing the healing process.

A review study showed that among the scales employed for this type of assessment, the PUSH scale was the most prevalent in the studies analyzed. So, it is a tool that quickly and safely assesses the size and depth of the wound, the amount of exudate, and the type of tissue present in the wound bed. Relating its form of measurement and interpretation, it ranges from a score of 0 to 17, where lower values represent wound closer to healing<sup>17</sup>. When submitted to cross-cultural adaptation for the Portuguese language, the PUSH scale presented excellent AI (kappa between 0.90 and 1.0) between the observations of nurses and enterostomal therapists for all its subscales and for the total score<sup>18</sup>.

Following the physical examination, assessments were proposed regarding appearance, type of debridement, exudate characteristics, adjacent skin, and therapy implemented, leaving room for two assessments if the patient had multiple lesions.

Some authors point out that "in practice, the thought process that leads to clinical reasoning must occur in all phases of the nursing process"<sup>19:691</sup>. Furthermore, the interpretation of the data collection stage becomes crucial for the follow-up process.

A nursing diagnosis is a clinical judgment about an individual's human response to health conditions/life processes, or vulnerability to such response<sup>9</sup>. Whereas for King<sup>6</sup>, diagnosis refers to the list of problems identified by the nurse in the data collection stage.

Nursing problems are identified in the data collection phase (interview and physical examination) as: communication failure, venous ulcer(s), wound risk and infection, risk for new injuries, lack of physical activity, edema in lower limbs, impaired circulation, lack of medical follow-up, pain in lower limbs, impaired social interaction, impaired body image,

anxiety related sadness, hopelessness to treatment, family disagreements, deficit of knowledge about the disease, prescribed medications and wound care and also about diet, obesity, hypertension, refusal to use compressive therapy, among others<sup>8</sup>.

To construct the first version of the query, the researcher approximated the findings with the NANDA-I classification and its results, based on the NOC and the NIC.

After exhaustive readings and literature analysis, nursing diagnoses were judged and established by NANDA-I, NOC, and NIC<sup>9,10,20</sup>. Used as the basis for this research, the NOC defines nursing outcome as a state, conduct, or perception of the person, family, or community that is measured along a continuum in the response to nursing care.

Thus, according to the NOC, the expected outcomes of the 20 nursing diagnoses listed in the study were defined. In this step, called by King as care plan, nursing interventions (NIC) were catalogued, defined as any treatment, based on judgment and clinical knowledge, performed by a nurse to improve patient's outcomes, denoting very strong link between NOC and NIC, because care, implemented based on judgment and clinical knowledge, will intensify the positive results obtained<sup>20</sup>.

The NIC can be used by nurses with any existing major theory, in any nursing institution and specialty, or health delivery model, regardless of philosophical orientation<sup>20</sup>.

Therefore, interventions include both direct and indirect assistance. In the research, direct care interventions were chosen, performed through direct interaction with the patient, which include both physiological and psychosocial actions, as well as manual actions and those of a supportive and counseling nature.

Measurement scales of Likert and selected references used in the development of the result should be used<sup>10</sup>. The selection of indicators to be analyzed in each patient is at the discretion of the caregiver. According to Moorhead et al.<sup>10</sup>, the outcome assessment validates whether patients are responding positively to nursing interventions and helps determine whether changes in care practice are needed.

In order to evaluate the results, this study used the vocabulary of Imogene King, divided into three responses, namely: goal not achieved, partially achieved, and fully achieved. A study with patients who presented CVI and active VU evidenced that, during the final evaluation, after performing the steps of the nursing process, 59.2% of the goals were fully achieved, showing effective means to achieve the expected results<sup>7</sup>.

Study shows that the use of systematized protocols for the care of patients with venous wounds improves healing rates, reduces treatment costs and assists the professional in choosing the most appropriate treatment<sup>21</sup>. Thus, it is important to note that tools for wound assessment should be easily accessible to professionals and inexpensive<sup>22</sup>.

Furthermore, COFEN Resolution 159/1993<sup>23</sup> defines in its 1st article that the nursing consultation, at all levels of health care, whether in public or private institutions, must be compulsorily developed in nursing care; while COFEN Resolution 358/2009 establishes the mandatory implementation of the nursing process in every public or private health care institution, and that all people seen in the units' dressing rooms must have access to the nursing consultation, from which the respective therapeutic plan is derived. Although the process of validation by consensus is effective because it allows for a richer discussion of the statements among the experts, this research revealed some difficulties regarding the availability of experts from other states, perhaps due to the long time used to answer the instruments, considering their length.

## CONCLUSION

This research highlights the following conclusions: the content validation of the consultation instrument reached an overall AI higher than 90%; regarding the content validation of the instrument regarding its appearance, applicability, logical sequence, targeting, and feasibility, an overall AI of 92% and an alpha of 0.91 were reached.

Meanwhile, the experts agreed that the consultation had an adequate appearance to be used during care; it is easy to apply; it has a logical sequence, because the researcher tried to adapt it to all the steps of the nursing process; it allows for holistic, quality nursing care, and the achievement of health goals to increase quality of life, believing that the consultation can be performed in nursing services.

As this is the first nursing consultation aimed at this population validated by enterostomal therapists and based on the Imogene King's achievement goal theory, the need for further research to strengthen nursing as a science is confirmed, as well as to allow for the exchange of specialized knowledge, pertinent to professional practice.

Therefore, it is urgent that nursing and its researchers use the knowledge revealed by the systematization of nursing care to improve the clinical care process itself, and consequently, to increase the levels of improvement in the quality of life of patients with chronic venous disease.

Therefore, this research can be considered a valuable contribution to clinical nursing care for people with VU, aiming to improve outpatient care in several aspects, not only focusing on the wound itself, but also helping nurses with diagnostic reasoning as a tool to achieve goals and control signs and symptoms of the disease.

## AUTHORS' CONTRIBUTION

**Substantive scientific and intellectual contributions to the study:** Teixeira AKS, Silva LF and Silva ANC; **Conception and design:** Teixeira AKS, Silva LF and Silva ANC; **Data collection, analysis and interpretation:** Teixeira AKS and Silva LF; **Article writing:** Teixeira AKS and Silva ANC; **Final approval:** Teixeira AKS.

## AVAILABILITY OF RESEARCH DATA

The data will be available upon request.

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