








Socioeconomic and clinical-epidemiological profile of people attended in an outpatient clinic for complex wounds

Perfil socioeconômico e clínico epidemiológico de pessoas atendidas em ambulatório especializado em feridas complexas

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ABSTRACT

Objective: to characterize the socioeconomic and clinical-epidemiological profile of people attended in an outpatient clinic specialized in complex wounds. **Methods:** cross-sectional study with 69 people with wounds, through the application of a questionnaire. Data analyzed using descriptive and analytical statistics. **Results:** most participants were male (55.1%), above 60 years old (55.1%), married (40.6%), income from one to three minimum wages (69.6%). Regarding clinical aspects, 50 (72.4%) had the injury for more than six months, 32 (46.4%) had a relative responsible wound dressing, 44 (63.8%) did not have difficulties in wound dressing. Regarding how long they had the wound, pain and arterial disease were statistically significant ($p=0.042$; $p=0.026$). **Conclusion:** most participants were male and above 60 years old. Pain and the presence of arterial diseases were significant with regards to people with chronic wounds.

Descriptors: Wounds and Injuries; Health Profile; Nursig.

RESUMO

Objetivo: caracterizar perfil socioeconômico e clínico epidemiológico de pessoas com feridas, atendidas em ambulatório especializado em feridas complexas. **Métodos:** estudo transversal, com 69 pessoas com feridas, mediante aplicação de questionário. Dados analisados por meio de estatística descritiva e analítica. **Resultados:** predominância do sexo masculino (55,1%), idade acima de 60 anos (55,1%), casados (40,6%), com renda entre um e três salários mínimos (69,6%). Quanto aos aspectos clínicos, 50 (72,4%) tinham a lesão a mais de seis meses, 32 (46,4%) algum familiar como responsável pelos curativos e 44 (63,8%) não apresentaram dificuldade com as trocas dos curativos. Em relação ao tempo da ferida, as variáveis dor e doença arterial apresentaram significância estatística ($p=0,042$; $p=0,026$). **Conclusão:** predominaram o sexo masculino e as pessoas acima de 60 anos. No tocante às características das lesões, a dor e presença de doença arterial apresentaram significância em relação às pessoas com feridas crônicas.

Descritores: Ferimentos e Lesões; Perfil de Saúde; Enfermagem.

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Introduction

Chronic wounds, here referred to as complex wounds, are lesions that are difficult to heal, caused by an interruption in the continuity of the stratum corneum, resulting from traumas or clinical problems; their healing process is long (more than six weeks) and has increasingly received attention from health professionals, who are directly involved in care and in the use of new technologies, and from managers in the field, since they considerably increase the costs of treatment, often prolonging hospitalization times⁽¹⁾.

Throughout the years, there have been socioeconomic and clinical-epidemiological changes that altered the profile of health in Brazil. Therefore, chronic diseases emerge in increasingly young individuals (starting at 30 years old). From 50 years old on, many people have at least three diseases⁽²⁾. A study has pointed out that 41.30% of avoidable deaths are caused by chronic non-transmissible diseases, especially cancer, ischemic diseases, diabetes, and hypertension⁽³⁾. Many of these diseases are risk factors for the development of chronic lesions. Another research showed a 28.0% prevalence of diabetic foot, a multifactorial complex wound, responsible for up to 70.0% of limb amputations⁽⁴⁾.

Considering the exposed, this study is relevant as the characterization of the clients who received attention in the specialized service can help understanding the health state of the patient, providing subsidies for the implementation of health policies and directing the planning of actions that can improve the quality of the assistance to the patients.

Another relevant aspect is being able to provide current and real data to health managers, so that the problems related to these clients can be dealt with. Therefore, the objective of this study is characterizing the socioeconomic and clinical-epidemiological profile of people attended in an outpatient clinic specialized in complex injuries.

Methods

Cross-sectional and analytical study carried out in an outpatient clinic of a university teaching hospital, in the city of Fortaleza, Ceará, Brazil, from August to November 2019. The sample was non-probabilistic and intentional, including a total of 69 18-year-old or older patients with complex wounds (venous, arterial, or neuropathic ulcers, and pressure lesions) who were undergoing regular follow-up consultations in the outpatient nursing clinic in stomal therapy and vascular surgery. Patients who had been undergoing treatment in this clinic for less than one month were excluded.

Data collection was carried out through the application of a socioeconomic and clinical questionnaire with structured questions, such as sex, educational level, income, marital status, profession, mobility, for how long has the patient had the lesion, among other aspects.

The depending variable was the classification of the wounds (acute and chronic), and the independent variables were sex, educational level, pain, difficulties in exchanging the wound dressing, practice of physical activities, body mass index, and the presence of comorbidities.

Data was analyzed using the software Statistical Package for the Social Sciences (SPSS), version 23.0. Descriptive statistics were used to synthesize clinical and economic data, and variables were analyzed descriptively, considering simple and relative frequencies, means, and standard deviations. Analytical statistics were also used, including Pearson's chi-square and Fisher's exact test. For the tests mentioned, the significance level adopted was 5%, with a $p < 0.05$. Data was presented in tables.

The study respected the formal requirements of national and international regulating norms of researches involving human beings, and was approved by the Ethics Committee, and was approved by the Universidade Federal do Ceará under opinion No. 2,699,599/2018.

Results

The analysis of the demographic characteristics of the sample analyzed showed that 38 participants (55.1%) were male and that the self-reported skin color of 42 (60.9%) of them was brown. Regarding their age, three (4.3%) were from 33 to 40 years of age, 27 (39.1%) were from 41 to 59, and 38 (55.1%) were above 60 years old, with a mean of 60.2% and $\mu=11.34$. From these, 28 (40.6%) had a partner. Regarding their profession, 41 (60.9%) were retired or received some form of assistance, 19 (27.5%) were unemployed, six (8.7%) were employed, and two people (2.9%) were in other situations.

Regarding their income, 48 (69.6%) reported to earn from one to three minimum wages. Concerning their educational level, 11 (15.9%) were illiterate and 24 (34.8%) had a low educational level (just knew how to read or had, at best, an incomplete elementary education). Catholicism was the religion of 45 (65.2%) participants, followed by 18 (26.1%) evangelical, and 6 (8.9%) participants who mentioned other religions.

Important clinical conditions were also investigated, such as the presence of comorbidities, the etiology of the wound, mobility, practice of physical activities, and body mass index. It was found that 58 (84.1%) people integrating the sample did not practice any type of physical activity. Accordingly, it was found that 38 (55.0%) participants had a body mass index classified as overweight/obesity (Table 1).

Nearly half the people in the sample stated that the person responsible for dressing their wound was a relative 32 (46.4%), while 44 (63.8%) reported not having problems to exchange the dressings. The characteristics of these lesions were also evaluated. The balance during their existence was verified, since 16 (23.2%) had the lesion for less than six months, while 11 (15.9%) had it for more than 10 years. Aspects related to the pain were also evidenced, being that 45 (65.2%) participants had this complaint. In a scale from 0 to 10, the mean level of pain was 4.51 and $\mu=3.78$ (Table 2).

Table 1 – Clinical characteristics of people with wounds, attended in the surgical outpatient clinic of a teaching hospital. Fortaleza, CE, Brazil, 2019

Clinical characteristics	n (%)
Comorbidities	
Diabetes mellitus	19 (27.5)
Systemic arterial hypertension	11 (15.9)
High cholesterol	2 (2.9)
Diabetes and hypertension	15 (21.7)
Others	4 (5.8)
No comorbidities	12 (17.4)
Did not answer	6 (8.8)
Etiology of the wound	
Arterial	19 (27.5)
Venous	31 (44.9)
Others	2 (3.0)
Undefined cause	8 (11.6)
Did not answer	9 (13.0)
Mobility	
Walks	23 (33.3)
Walks with assistance	20 (29.0)
Walks alone, but has difficulties in doing so	19 (27.5)
Does not walk	7 (10.2)
Physical activity	
Always/Sometimes	10 (14.4)
Never	58 (84.1)
Did not answer	1 (1.5)
Body Mass Index	
Thin/low weight	2 (2.9)
Normal/regular	17 (24.6)
Overweight/pre-obese	20 (29.0)
Obesity I	12 (17.4)
Obesity II	5 (7.2)
Severe obesity	1 (1.4)
Did not answer*	12 (17.4)

*Indicates it was impossible to calculate the body mass index because there was no information on the height or weight. Participants refused to measure one of these two elements

Table 2 – Characteristics of the wounds and of the care for people with wounds attended in the surgical outpatient clinic of a teaching hospital. Fortaleza, CE, Brazil, 2019

Characteristics of the lesion and care for the wound	n (%)
Time since the patient has the wound	
<6 months	16 (23.2)
From 6 months to 1 year	12 (17.4)
From 1 to 5 years	13 (18.8)
5 to 10 years	14 (20.3)
>10 years	11 (15.9)
Did not answer	3(4.4)
Previous amputation	
Yes	18 (26.1)
No	47 (68.1)
Did not answer	4 (5.8)
Responsible for exchanging the wound dressing	
Relatives	32 (46.4)
Friends	2 (2.9)
Professionals	15 (21.7)
Others	18 (26.1)
Did not answer	2 (2.9)
Difficulties in changing	
Always	5 (7.2)
Sometimes	18 (26.1)
Never	44 (63.8)
Did not answer	2 (2.9)
Pain	
Yes	45 (65.2)
No	21 (30.4)
Did not answer	3 (4.4)
Pain intensity (Mean/Standard deviation 4.5/3.78)	
0-5	37 (53.7)
6-10	31 (44.8)
Did not answer	1(1.5)

Statistical associations were searched between the chronic nature of the lesion and the variables sex, educational level, marital status, difficulties in changing the dressing, pain, the practice of physical activities, body mass index, and comorbidities. However, only the variables arterial disease (p=0.026) and pain (p=0.042) had statistical significance, as shown in Table 3.

Table 3 – Association between the classification of the wounds and the sociodemographic and clinical variables. Fortaleza, CE, Brazil, 2019

Variables	Wound classification		p-value
	Acute n (%)	Chronic n (%)	
Sex			
Male	8 (50.0)	30 (57.7)	0.588 [†]
Female	8 (50.0)	22 (42.3)	
Years of formal education			
Literate	13 (81.3)	45 (84.9)	0.708 [‡]
Illiterate	3 (18.7)	8 (15.1)	
Marital Status			
Has a partner	6 (37.5)	22 (41.5)	0.775 [†]
Does not have a partner	10 (62.5)	31 (58.5)	
Pain*			
Yes	7 (46.7)	38 (74.5)	0.042 [†]
No	8 (53.3)	13 (25.5)	
Difficulties in changing the wound dressing			
Yes	4 (25.0)	20 (37.7)	0.550 [‡]
No	12 (75.0)	33 (62.3)	
Practice of physical activities			
Yes	2 (12.5)	8 (15.1)	0.579 [‡]
No	14 (87.5)	45(84.9)	
Body mass index			
Normal	6 (37.5)	17 (32.0)	0.687 [†]
Not normal	10 (62.5)	36 (68.0)	
Comorbidities			
Yes	14 (87.5)	43 (81.1)	0.718 [†]
No	2 (12.5)	10 (18.9)	
Arterial disease			
Yes	8 (50.0)	11 (20.8)	0.026 [†]
No	8 (50.0)	42 (79.2)	

*Three did not respond; [†]Chi-squared test; [‡]Fisher's exact test

Discussion

Among the limitations of this study is the fact that it was restricted to a single municipality, or, more specifically, to a single sector in one hospital. That means its approach is not multicentric, be it in the regional or state level, preventing comparisons and restricting the possibility of associating the evidences between variables.

Regarding its contributions, the data from this study will make it possible for professionals to direct

actions for the reality of the life and the health conditions of each patient. These data are relevant for the decision-making process of the health team, especially considering the nurse, who is a protagonist in the health care to patients with wounds.

Regarding the predominance of a specific sex in people with wounds, no consensus has been found yet by literature. A study which outlined the profile of people with neoplastic wounds, in a public hospital from João Pessoa, Paraíba, Brazil, pointed at the predominance of males, with brown skin, elders, married, with incomplete elementary education, and retired⁽⁵⁾. A research carried out in São Paulo, Brazil, on the other hand, had a sample made up of 95% of women⁽⁴⁾.

Regarding age, there is an important prevalence of wounds in people from 70 to 80 years old⁽⁶⁾, since these are elders and, in general, have difficulties regarding their cognitive function and their manual dexterity, leading to direct interferences in the care to the wounds, which means that nurses need to provide a special type of care.

The fact that most participants were married is in accordance to the results of a research carried out in individuals with vasculogenic ulcers, which found that 50.0% of their participants were married or in a stable union⁽⁷⁾. It stands out that many elders with leg ulcers depend on others to carry out their daily activities and to exchange their wound dressings, which offers married individuals the safety and the support to care for themselves⁽⁸⁾.

Another piece of information that stands out is the educational level. A study carried out in Minas Gerais, Brazil, which also outlined the profile of patients, pointed at the fact that 60.0% had a lower educational level (up to four years of study) and lived with an income of one minimum wage⁽⁹⁾. It should be noted that lower educational levels directly reflect in the monthly income of the family. The sample of the study presented here showed a majority of professionals with one to three minimum wages. The professional must understand that this aspect directly interferes in the therapeutic approach, since the lack of financial re-

sources directs these individuals to undergo only the treatment offered by the public health system, often leading to the suspension of the treatment when there is a scarcity of materials, in addition to leading to an overload in the services.

Venous diseases are an important clinical issue for the development of many chronic wounds. This type of condition affects from 1 to 10.0% of the population of the world. It increases as age advances, and is responsible for significant costs for society, with regard to medical and surgical treatments and, especially, affecting productivity at work, due to the pain and to the disability that result from these diseases⁽¹⁰⁾. In a study carried out in São Paulo, venous ulcers (13.0%) were the third most prevalent among patients attended in the institution investigated; the only two wounds more common were the diabetic foot (28.0%) and pressure lesions (24.0%)⁽⁴⁾.

Regarding arterial diseases, one of the risk factors for them is the peripheral arteriosclerosis, which can be caused by advanced age and is more common in males and in people with hypertension and diabetes, comorbidities that were the most frequent among the participants of the study⁽¹¹⁾. The nurse must pay special attention to this condition, since patients with arterial impairments require complementary exams and multidisciplinary care in the treatment of the etiology of the problem, so that the therapy to care for the wound can be successful.

Another variable addressed was the practice of physical activities. A cross-sectional, analytical study, found that 76.1% of the patients attended in the Family Health Strategy in a large Brazilian city did not practice any physical activities and, as a result, were 2.3 times more likely to present wounds, especially vasculogenic ones⁽¹²⁾. International literature points at the fact that a body mass index outside normal standards is one of the significant factors of longer hospitalizations of people with diabetic foot⁽¹³⁾.

Obesity is a health condition that requires special attention, as it directly interferes in the healing of the wound, and the multiprofessional team must be

involved. The nutritional state of the individual should be assessed, and an intervention should be carried out through a dietary planning that can attend to the needs of the patient, since the fact that they are obese does not mean that they are adequately nourished, not to mention that there is a chance that their glyce-mic levels would become elevated, which also makes the healing process more difficult⁽¹⁴⁾.

The nursing care plan should include encouragement to the practice of physical activities, considering the clinical benefits of these practices, both to minimize the chances of wounds to appear, and to diminish obesity by associating these practices to dietary habits. The association of changes in one's habits with topical therapies is important to improve the clinical conditions of the wounds and consequently improve their healing.

Regarding how long it takes for the wound to heal, chronic lesions do not progress normally towards a cure, and their healing may be impaired by the presence of underlying conditions⁽¹⁵⁾. Diabetes is one of the underlying diseases that lead to long-lasting lesions that can even progress into amputation, as this study shows.

Considering this context, it is necessary for professionals in the primary care to partner with workers who are in the territory, close to the reality of the patient. This integrated work that includes referrals and counter-referrals is essential, since it guarantees the integrity of the service and strengthens the health networks.

In addition to the connection with primary care professionals, there must be an investment in improving the self-care of diabetic patients, changing the ways in which the problem is addressed and considering the best evidences for clinical practice. The nurse must work as an anchor, offering stable guidance and encouraging the patient to participate with regards to possible changes in their lifestyle, clinical control, care for their feet, and to aspects related to the dressing of the wounds, so the patient can become the protagonist of their own care.

The need for them to have the main role is also reflected in the variable "responsible for exchanging the dressings". For most people investigated, the wound dressings were exchanged by relatives, which is probably due to the site of lesion, which often does not allow for self-care, not to mention the fact that most participants were elders. Aging can lead to visual capacity impairments and limit the functioning of articulation, and chronic diseases may aggravate said disabilities⁽¹⁶⁾.

The maintenance of these abilities is extremely important for elders to have the ability to exchange the wound dressing themselves, when the location allows them to. Therefore, the implementation of specialized care, based on the systematization of nursing assistance, can help, promoting educational strategies for the development of abilities related to the care for the lesion and for the exchange of wound dressings.

Some conditions also impact on the capability of exchanging the dressings, as is the case of pain, an important component as one treats people with wounds. Pain is an unpleasant sensation that affects the quality of life and directly interferes in the treatment. It is one of the reasons for the lack of adherence to the weekly outpatient treatment with the nurses. Pain produces anxiety, suffering, and demotivation in the patients. It should be closely monitored by a nurse specialized in stomal therapy, who must implement the adequate conducts to minimize it⁽¹⁷⁾.

Therefore, it stands out that the nurse is responsible for evaluating and measuring pain before and after wound dressings are replaced, contributing to the adequate management of this experience to establish therapeutic analgesic strategies that can contribute to diminish pain and suffering. Pain relief may have positive impacts even in the acceptance of wound dressing exchange and in the potential practice of physical activities.

Stomal therapy, as a specialty, provides the professional with a solid formation to act in this field, since it considers the complexity of the patients as it addresses them and values nuances such as the aspect

of pain, which is often forgotten by general nurses, who frequently do not know the degrees and specificities of the treatment of complex wounds.

Conclusion

Most participants of this study were male, with self-reported brown skin, over 60 years old, and retired. Most did not practice any type of physical activity and, as this would lead to expect, there was a relevant number of people with high body mass index, classified as overweight/obese. The responsible for dressing the wounds was a relative in most cases, and a significant portion of participants reported having no difficulties in exchanging the dressings.

Regarding the characteristics of the lesions, we sought a statistical association with regard to the chronic nature of the lesion, finding significant results for the variables pain and presence of arterial diseases.

Collaborations

Cavalcante VMV was responsible for the conception and design of the project, data analysis and interpretation, and for the writing of the article. Alexandre SG collaborated through a relevant critical review of the intellectual content and with the final approval of the version to be published. Silva FAA aided in the conception and design of the project, and in the relevant critical review of the intellectual content. Santiago JCS and Coelho MMF contributed with the relevant critical review of the intellectual content. Avelino BMA and Costa FA took part in the analysis and interpretation of data.

References

1. Lima RVKS, Coltro PS, Farina Júnior JA. Negative pressure therapy for the treatment of complex wounds. *Rev Col Bras Cir.* 2017; 44(1):81-93. doi:https://doi.org/10.1590/0100-69912017001001
2. Christofolletti M, Duca GFD, Gerage AM, Malta DC. Simultaneity of chronic noncommunicable diseases in 2013 in Brazilian state capital cities: prevalence and demographic profile. *Epidemiol Serv Saúde.* 2020; 29(1):e2018487. doi: 10.5123/S1679-49742020000100006
3. Medeiros CRG, Koetz LCE, Grave MTQ, Raupp LM, Salvadori M, Freitag AL. Estratégia saúde da família e morbimortalidade por doenças crônicas evitáveis em pequenos municípios. *Rev Baiana Saúde Pública.* 2018; 42(1):a2589. doi: https://doi.org/10.22278/2318-2660
4. Sousa GO, Silva MR, Araújo MCFF, Barbosa DA, Silva TCGP. Profile of people with chronic wounds from a supplementary health care operator. *Rev Enferm UFPE on line.* 2018; 12(7):1859-69. doi:https://doi.org/10.5205/1981-8963-v12i7a231345p1859-1869-2018
5. Brito DTF, Macêdo EL, Agra G, Andrade FLM, Formiga NS, Costa MML. Sociodemographic, clinical and therapeutic profile of patients with neoplastic wounds. *Rev Enferm UFPE on line [Internet].* 2017 [cited May 13, 2020]; 11(8):3039-49. Available from: https://periodicos.ufpe.br/revistas/revista-enfermagem/article/viewFile/110207/22109
6. Martinengo L, Olsson M, Bajpai R, Soljak M, Upton Z, Schmidtchen A, et al. Prevalence of chronic wounds in the general population: systematic review and meta-analysis of observational studies. *Ann Epidemiol.* 2019; 29:8-15. doi: https://doi.org/10.1016/j.annepidem.2018.10.005
7. Araújo SNM, Nogueira LT, Figueiredo MLF, Andrade EMLR, Santiago RF, Silva ABR, et al. Sociodemographic and clinical characterization of patients with vasculogenic ulcers. *Biosci J.* 2017; 33(5):1362-70. doi: https://doi.org/10.14393/BJ-v33n5a2017-37250
8. Tavares APC, Sá SPC, Oliveira BGRB, Sousa A. Quality of life of elderly patients with leg ulcers. *Esc Anna Nery.* 2017; 21(4):e201701333. doi: https://doi.org/10.1590/2177-9465-ean-2017-0134
9. Borges EL, Nascimento Filho HM, Pires Júnior JF. Prevalence of chronic wounds in a city of Minas Gerais (Brazil). *Rev Min Enferm.* 2018; 22:e-1143. doi: http://doi.org/10.5935/1415-2762.20180074

10. Ouriel K. Central venous pathologies: treatments and economic impact. *Methodist Debakey Cardiovasc J.* 2018; 14(3):166-72. doi: <https://doi.org/10.14797/mdcj-14-3-166>
11. Nilson EAF, Andrade RCS, Brito DA, Oliveira ML. Custos atribuíveis a obesidade, hipertensão e diabetes no Sistema Único de Saúde, Brasil, 2018. *Rev Panam Salud Publica.* 2020; 44:e32. doi: <https://doi.org/10.26633/RPSP.2020.32>
12. Vieira CPB, Araújo TME. Prevalence and factors associated with chronic wounds in older adults in primary care. *Rev Esc Enferm USP.* 2018; 52:e03415. doi: <https://doi.org/10.1590/s1980-220x2017051303415>
13. Kim GT, Moon SY, Park MS, Keon SS, Junf KJ, Lee T, et al. Factors affecting length of Hospital Stay and mortality in infected diabetic foot ulcers undergoing surgical drainage without major amputation. *J Korean Med Sci.* 2016; 31(1):120-4. <http://dx.doi.org/10.3346/jkms.2016.31.1.120>
14. Chakravartty S, Vivian G, Mullholland N, Sidhu PS, Jaffer O, Patel AG. Preoperative liver shrinking diet for bariatric surgery may impact wound healing: a randomized controlled trial. *Surg Obes Relat Dis.* 2019; 15(1):117-25. doi: <https://doi.org/10.1016/j.soard.2018.10.001>
15. Russel D, Dowsett C, Fatoye F, Gardner S, Green J, Manu C, et al. Using a modified Delphi methodology to gain consensus on the use of dressings in chronic wounds management. *J Wound Care.* 2018; 27(3):156-65. doi: <https://doi.org/10.12968/jowc.2018.27.3.156>
16. Silva MH, Ribeiro DK, Jesus RR, Machado RET, Jesus MCP, Merighi MAB. Every day life of elderly with venous insufficiency, who use elastic compression socks. *Estima Braz J Enterostomal Ther.* 2019; 17:e1519. doi: https://doi.org/10.3086/estima.v17.736_IN
17. Garcia AB, Muller PV, Paz PO, Duarte ERM, Kaise GE. Perception of users on self-care of lower leg ulcers. *Rev Gaúcha Enferm.* 2018; 39:e2017-0095. doi: <https://doi.org/10.1590/1983-1447.2018.2017-0095>



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