



CHARACTERISTICS OF AMPUTATED PEOPLE CARED FOR AT A REHABILITATION CENTER

CARACTERÍSTICAS DAS PESSOAS AMPUTADAS ATENDIDAS EM UM CENTRO DE REABILITAÇÃO

CARACTERÍSTICAS DE PERSONAS AMPUTADAS ATENDIDAS EN UN CENTRO DE REHABILITACIÓN

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ABSTRACT

Objective: to characterize amputated people cared for at a rehabilitation center. **Method:** descriptive, quantitative and cross-sectional study, based on documentary records of a reference rehabilitation center in the State of Santa Catarina, Brazil, from 2000 to 2009. For the analysis, we used Microsoft Excel 2003 and SestatNet statistical program. The research was approved by the Committee on Ethics in Research of the Federal University of Santa Catarina (UFSC), Opinion No. 1024/2010. **Results:** the time between amputation and the date of first registration, from 4.73 to 6.53 years, shows that people accessed late to the rehabilitation process. The elapsed time between amputation and the registration in the services was greater for males. **Conclusion:** this study can contribute to the planning of care, with specific approach to this population. Multidisciplinary work is required in amputations and it must be carried out before, during and after the procedure. **Descriptors:** Amputation; Rehabilitation; Health Services; Health Personnel.

RESUMO

Objetivo: caracterizar as pessoas amputadas atendidas em um centro de reabilitação. **Método:** estudo descritivo, quantitativo e transversal, com base documental nos prontuários de um centro de reabilitação referência no estado de Santa Catarina, Brasil, no período de 2000 a 2009. Para análise utilizaram-se o Microsoft Excel 2003 e o programa estatístico SestatNet. A pesquisa foi aprovada pelo Comitê de Ética em Pesquisa da Universidade Federal de Santa Catarina (UFSC) sob o parecer nº 1024/2010. **Resultados:** o tempo entre a amputação e a data do primeiro cadastro, de 4,73 até 6,53 anos, evidencia que as pessoas acessavam tardiamente ao processo de reabilitação. O tempo decorrido entre a amputação e o cadastro nos serviços foi maior para as pessoas do sexo masculino. **Conclusão:** este estudo poderá contribuir para o planejamento do cuidado, com abordagem específica a essa população. É necessário o trabalho multiprofissional nas amputações, que deve ser realizado antes, durante e após o procedimento. **Descritores:** Amputação; Reabilitação; Serviços de Saúde; Pessoal de Saúde.

RESUMEN

Objetivo: caracterizar las personas amputadas atendidas en un centro de rehabilitación. **Método:** estudio descriptivo, cuantitativo y transversal, basado en registros documentales de un centro de referencia de rehabilitación en el Estado de Santa Catarina, Brasil, entre 2000 y 2009. Para el análisis utilizamos Microsoft Excel 2003 y el programa estadístico SestatNet. La investigación fue aprobada por el Comité de Ética en la Investigación de la Universidad Federal de Santa Catarina (UFSC), Opinión N° 1024/2010. **Resultados:** el tiempo entre la amputación y la fecha de la primera inscripción en los servicios, de 4,73 a 6,53 años, muestra que las personas accedían tarde al proceso de rehabilitación. El tiempo transcurrido entre la amputación y la inscripción en los servicios fue mayor para las personas de sexo masculino. **Conclusión:** este estudio puede contribuir a la planificación de la atención, con enfoque específico para esta población. Es necesario el trabajo multidisciplinar en amputaciones, que debe ser realizado antes, durante y después del procedimiento. **Descriptores:** Amputación; Rehabilitación; Servicios de salud; Personal de Salud.

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INTRODUCTION

Amputation is considered one of the oldest surgical procedures and has long been the only surgical option for man.¹ It is characterized by the removal of a body part, aiming at slowing down symptoms and provide improved function, enabling quality of life to the amputee.²

In Brazil, according to the 2010 Census conducted by the Brazilian Institute of Geography and Statistics (IBGE), approximately 24% of the Brazilian population has any disability investigated (visual, hearing, motor, mental/intellectual). Motor disabilities affect 6.95% of the population and of these, 66.5% have these disabilities causing at least some difficulty.³ This way, among the population of disabled people, those who suffer from the lack of a limb or part of it are equivalent to 5,32%.⁴ It is believed that the traumas related to traffic and occupational accidents, atherosclerotic diseases and diabetes mellitus (DM), are the main causes of amputation.¹ However, even with technological advances in the field of health, paradoxically, amputation continues to be one of the treatment options used.

In the State of Santa Catarina, Brasil, from 2008 to 2010, 6,280 amputations were carried out by the Sistema Único de Saúde (SUS) (*Unified Health System*), comprising 35.3% of lower limbs amputation/disarticulation; 8.1% of feet and tarsi amputation/disarticulation; 1.8% of hands and wrists amputation/disarticulation; 1.3% of upper limbs amputation/disarticulation (with exception of hands); and 0.4% of oncology-related amputation/disarticulation of lower limbs and 0.09% of upper limbs.⁵

Amputees are conditioned to experience biopsychosocial, spiritual and cultural changes, driven by different needs and feelings, which are converging or diverging, and still there is a duality between the need of the surgery and the refusal of losing a part of the body.^{1,6-9}

Care and health treatments provided to amputees require health professionals to develop specific skills concerning the problem of amputations, contextualized and developed with basis on public policies and their conjuncture with the availability of physical structure, personnel and procedures management, and reference and counter-reference services. It is understood that the professionals, effectively competent and engaged, can contribute in the right amputees have in order to live with dignity.

Knowing this population is of extreme importance for society, as well as to the development/strengthening of public health actions. These are intended to cover the population of disabled people, such as amputees, who despite having some weakness, should not be prevented from being inserted into the labor market, access to culture, leisure, appropriate transportation, among other factors that are considered fundamental to the condition of health and well-being.

The justification of the theme chosen for this study is based on the relevance of the issue, its articulation with the social impact and the effective multidisciplinary approach. It is worth noting that there is a lack of publications related to the theme in the field of nursing and that there is need for nurses to improve their insertion and expertise in care and necessary guidelines for prevention of clinical or traumatic health aggravations, which lead to the need for lower and/or upper limbs amputation and consequent secondary complications. In addition, nursing plays an important role, both in the preoperative and immediate care after amputation surgery and in the care of stumps, aimed at the use of the prosthesis and preparation for discharge, with the guidance to the patients and their families to an appropriate evolution of post-amputation rehabilitation. Therefore, the production of information related to the issue can contribute to the improvement of actions geared to care.

In this perspective, the question of the research was: Who are the people undergoing amputation of upper and/or lower limbs cared for at a state reference rehabilitation center? and the objective of this study was to characterize these amputated people.

METHOD

This is a quantitative, descriptive and cross-sectional study. In a cross-sectional study, measurements are performed in a single moment or in a short time.¹⁰ Data collection took place from January to July 2011, based on medical records of people cared for in a reference rehabilitation center in the State of Santa Catarina, from 2000 to 2009. The items considered were: age; gender; origin; cause; limb(s) amputated; reason for the demand; orthoses/prostheses requested; date of amputation; and date of the first care service.

The medical records analyzed were those whose primary cause of admission in this center had been amputation with notes that provided certainty that the initial cause had

been amputation of at least one limb or extremity. In 824 records, the root cause of demand had been amputation, and for the evaluation of the item "elapsed time between the injury and the date of the first care", 602 records containing the dates were identified.

For organization and data tabulation, we used Microsoft Excel 2003 and the SestatNet statistical program available online. Data were analyzed on the basis of uni- and bivariate descriptive statistics analysis.

We complied with the ethical aspects specified by Resolution No. 196 of October 10th, 1996, which delimits guidelines and regulatory norms for research involving human beings. The project was approved by the Committee on Ethics in Research of the

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RESULTS

The results were categorized according to: elapsed time between amputation and the first register; age; gender; and causes, according to the International Classification of Diseases (ICD-10). The average time between the event and the first registration was 5.63 years, with confidence interval of 4.73 to 6.53.

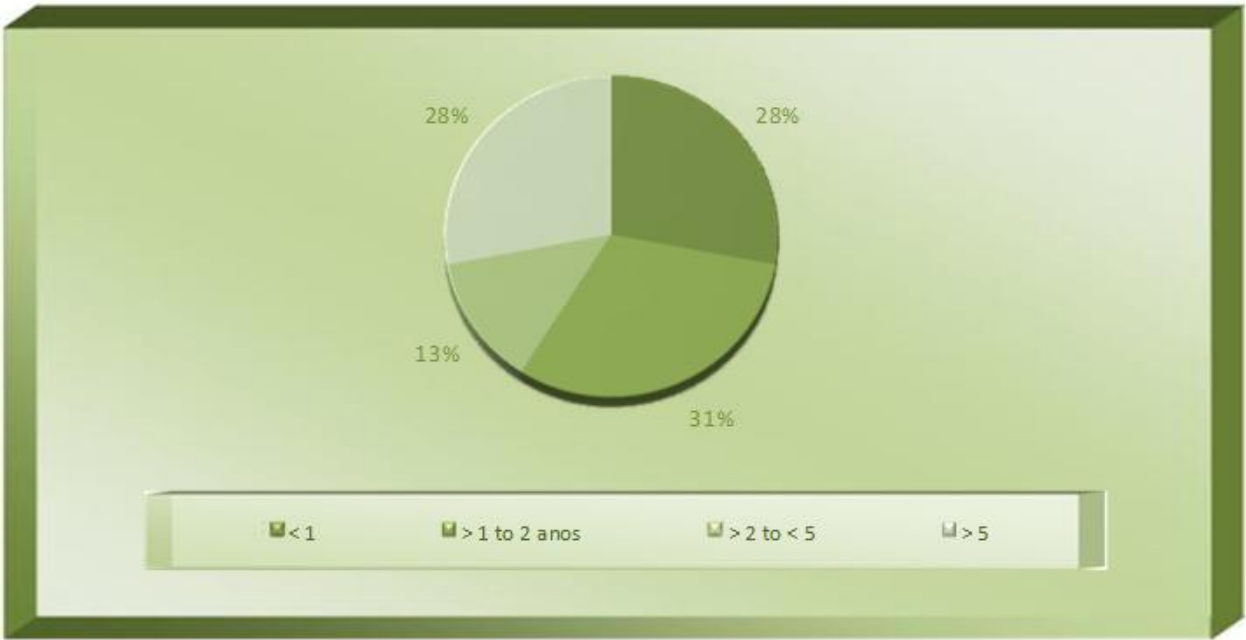


Figure 1. Time in years elapsed between the injury and the date of first registration of people with amputation cared for at the Catarinense Rehabilitation Center, 2000 to 2009/SC.

When this time is related to gender, it shows that males took longer than females between the injury and the first registration, confirming an average time of 4.7 years for females and 5.9 years for males.

When amputation was only examined under the aspect of gender, we observed that 75% of amputated people cared for were male. With regard to the age in which amputation was carried out, according to gender, males had an age average smaller than that of females, which was 48.99 years of age, i.e., 5.5 years earlier than women. When the comparison is made by median age, this time goes to 8.0 years.

Crossing the variables of gender, age and cause of amputation, we observed that the external causes determined the decrease in the average age of amputation, especially in males. From 40 years of age, the distribution becomes more even, both in relation to gender and cause. However, only after 70 years of age, amputation involved both genders equally, now associated with chronic-degenerative causes: DM and circulatory system diseases. Neoplasias were evenly distributed according to age groups, affecting two times more males than females.

Table 1. Amputations according to base cause, gender and age group, Catarinense Rehabilitation Center, 2000 to 2009.

Age/gender/cause	External causes		Diabetes mellitus		Circulatory system		Neoplasias		Others		Total	
	M	F	M	F	M	F	M	F	M	F	M	F
< 16 years	11	2					3	4	11	3	25	9
% age	4.07	3.70					18.7	50.0	29.7	3.80		
group/cause/gender							5	0	3			
% age group/gender	44.0	22.22					12.0	44.4	44.0	33.3	4.11	4.29
	0						0	4	0	3		
17 - 19 years	13	3			1		1		2		17	3
% age	4.81	5.56			0.70		6.25		2.53			
group/cause/gender												
% age group/gender	76.4	100.0			5.88		5.88		11.7		2.79	1.43
	7	0							6			
20 - 29 years	48	7			2		2	1	7	4	59	12
% age	17.7	12.96			1.41		12.5	12.5	8.86	5.06		
group/cause/gender	8						0	0				
% age group/gender	81.3	58.33			3.39		3.39	8.33	11.8	33.3	9.69	5.71
	6								6	3		
30 - 39 years	56	13			7	2	2		8	8	73	23
% age	20.7	24.07			4.93	4.26	12.5		10.1	10.1		
group/cause/gender	4						0		3	3		
% age group/gender	76.7	56.52			9.59	8.70	2.74		10.9	34.7	11.9	10.9
	1								6	8	9	5
40 - 49 years	69	15	11	4	13	3	1	1	18	8	112	31
% age	25.5	27.78	10.78	6.25	9.15	6.38	6.25	12.5	22.7	10.1		
group/cause/gender	6							0	8	3		
% age group/gender	61.6	48.39	9.82	12.90	11.6	9.68	0.89	3.23	16.0	25.8	18.3	14.7
	1				1				7	1	9	6
50 - 59 years	37	4	29	12	30	6	1		15	4	112	26
% age	13.7	7.41	28.43	18.75	21.1	12.7	6.25		18.9	5.06		
group/cause/gender	0				3	7			9			
% age group/gender	33.0	15.38	25.89	46.15	26.7	23.0	0.89		13.3	15.3	18.3	12.3
	4				9	8			9	8	9	8
60 - 69 years	26	4	35	20	54	11	3	1	9	7	127	43
% age	9.63	7.41	34.31	31.25	38.0	23.4	18.7	12.5	11.3	8.86		
group/cause/gender					3	0	5	0	9			
% age group/gender	20.4	9.30	27.56	46.51	42.5	25.5	2.36	2.33	7.09	16.2	20.8	20.4
	7				2	8				8	5	8
>70 years	10	6	27	28	35	25	3	1	9	3	84	63
% age	3.70	11.11	26.47	43.75	24.6	53.1	18.7	12.5	11.3	3.80		
group/cause/gender					5	9	5	0	9			
% age group/gender	11.9	9.52	32.14	44.44	41.6	39.6	3.57	1.59	10.7	4.76	13.7	30.0
	0				7	8			1		9	0
Total	270	54	102	64	142	47	16	8	79	37	609	210

Crossing variables of amputated limbs and gender, we observed that there was a predominance of lower limbs amputation, representing 91.42% of female amputees and 89.6% of amputations occurring in males.

DISCUSSION

In this study, two interconnected issues for analysis stood out: a) the time elapsed between the event and the first registration; and b) gender inequality. Regarding the elapsed time between amputation and the beginning of rehabilitation, studies¹¹⁻² point out that rehabilitation should take place as early as possible, since it implies different prognoses that depend on the elapsed time. Furthermore, the possibilities of readaptation for amputated people increase when rehabilitation is started even before the amputation–i.e., during the preparation of the stump—and continues during the perioperative (cutting shape of the stump) and immediate postoperative (dressings performed for the modeling of the stump) periods.¹¹⁻²

In this study, the time found between the amputation and the date of first registration,

which was between 4.73 and 6.53 years (confidence interval of 95%), shows that the vast majority of people accessed late to the rehabilitation process. This implies hampered prognosis for the very process of readaptation, with admission of people in the rehabilitation process already suffering from sequelae and complications due to the lack of early treatment. Therefore, existing complications in this population should be explored in more detail.

A study conducted in London¹³ showed that pain (chronic and phantom limb), negative psychological responses, reduced physical ability, impact on professional development and the increase of cardiovascular diseases are among the most prevalent complication of traumatic amputations. Still, this study reinforces the need for therapeutic interventions that can minimize such effects in the preparation for the surgery, such as bleeding control, prevention of pain, decreased contamination, in addition to the operative intervention itself. This situation worsens when the comparison is made between genders, in which males take longer to access the rehabilitation service, indicating

the likelihood that men have more complications at that moment.

With regard to gender inequality, this study found other aspects regarding the profile of amputated people that also identified men as the most affected group.¹⁴⁻¹⁶ This is possibly due to the fact that males are more exposed to physical traumas resulting from accidents and/or are the most affected by amputation caused by vascular complications.¹⁷

Apparently, there is a clear reason to justify such a situation; however, men have proved to be accessing health services less or taking more time to seek health care, as shown by other studies.¹⁸⁻²¹ The causes of this little demand or delay in search for health services on the part of men are centered in the hegemonic model of masculinity, because a man who take care of himself is seen as less manly.²¹ In the same study, other causes that stood out were: fear of discovering a serious illness; the shame of body's exposure to the health professional; and the organization of health services that are not adequate to meet the needs of men.

It was also evident that external causes affect men predominantly at a young age, which determines the reduction of males' average age when undergoing amputation by all causes. Of the total number of amputations by all causes in the age group under 49 years, 74.21% were undergone by men and due to external causes, data that is consistent with a study conducted in Guarapuava, State of Paraná, with individuals undergoing amputation of lower limbs, whose results showed that 41.18% belonged to a population of young adults.²²

Results of another study conducted on amputations and debridement of lower limbs, at the State University of Maringá, also identified that the majority belonged to a young male population.¹⁶ Such accidents occur in the most productive period of life, causing irreversible sequelae.²³ In this perspective, many researchers emphasize that traumatic amputations increasingly affect individuals with less than 50 years of age, due to increased exposure in the workplace and traffic.^{15, 24-5}

A research conducted at the Regional Hospital of Cascavel, State of Paraná, found highest rate of amputation because of clinical causes, arguing that advanced age, associated with some impairment of physical ability and the greater dependency, can justify such a finding.^{17,24} We also found a more advanced average age, demonstrating the importance of chronic-degenerative diseases in amputations, especially DM and vascular diseases. In the

age group over 60 years, amputations occur mainly in diabetic patients and tend to increase with aging.^{17,26}

As for the causes associated with the amputation of extremities, DM is the main one followed by vascular diseases. It is worth mentioning that DM is a factor that increases the risk of vascular insufficiency, narrowing the relationship with the amputation of extremities. The results of this study are consistent with those of other research, pointing these diseases as the main reasons for amputations due to clinical causes, for both men and women.¹⁶⁻⁷ Our findings suggest that these causes as more prevalent in more advanced age groups, decreasing gender difference and showing that both men and women are equally affected.

The founding of this study, that reinforces gender inequality, is that the time between amputation and the registration in the rehabilitation service is greater for males than for females. Men undergo more amputations with lower age and, moreover, they take longer to access the rehabilitation service. Studies²¹ have already observed the causes of this inequality, associating the male figure to the symbolism of invulnerability, no need for aid, and, on the other hand, the fear of being sick. However there are no studies associating the variables here analyzed with the greater time of men compared to women.

CONCLUSION

This study has highlighted some issues, such as the need for multidisciplinary work in the field of rehabilitation and the importance of nursing work in this area. The need for multidisciplinary work in amputations is evident and it must be carried out before, during and after amputations, in order to ensure quality of life for the people. Still, it is considered that despite little research has been conducted on the topic within the field of nursing, this study will contribute to the planning of care with specific approach to this population. Care should take into consideration the issues of age, gender and cause of amputations. In addition, health and education initiatives aimed at preventing the complications of chronic-degenerative diseases (DM and circulatory system diseases) can encourage the reduction of clinical amputations.

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