

Factors associated with the functional capacity of older adults with leprosy

Fatores associados à capacidade funcional de idosos com hanseníase
Factores asociados a la capacidad funcional de las personas mayores con lepra

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ABSTRACT

Objective: to investigate the association between socio-demographic and clinical factors and the functional capacity of older adults with leprosy. **Method:** cross-sectional analytical study conducted in Fortaleza, Ceará, Brazil, with 77 older adult patients with leprosy in a referral service, through interview, medical records and application of the Katz Index and the Lawton and Brody Scale. **Results:** the mean age was 68.23 years, with prevalence of men, in stable union/married, with mean monthly family income of 2.04 minimum wages, positive bacillary index, clinical dimorphic form and grade zero disability. In the Lawton and Brody scale, independence (58.5%) was predominant and associated to the variables "living arrangement" and "educational attainment". Total independence (87.0%) was predominant in the Katz Index and statistically associated to the variable monthly family income. **Conclusion:** most of the participants were classified as independent in the instruments used. Furthermore, the instruments pointed to a greater number of associations with socio-demographic and clinical factors not related to leprosy. **Descriptors:** Older adults; Geriatric Assessment; Leprosy; Elderly Health; *Mycobacterium leprae*.

RESUMO

Objetivo: investigar a associação de fatores sociodemográficos e clínicos à capacidade funcional de idosos com hanseníase. **Método:** estudo transversal, analítico realizado em Fortaleza, Ceará, com 77 idosos com hanseníase acompanhados em serviço de referência, através de entrevista, consulta ao prontuário e aplicação do Índice de Katz e Escala de Lawton e Brody. **Resultados:** a média de idade foi de 68,23 anos, com prevalência de sexo masculino, união estável/casado, renda familiar mensal média de 2,04 salários mínimos, índice baciloscópico positivo, forma clínica dimorfa e Grau de Incapacidade Física zero. Na escala de Lawton e Brody prevaleceu a independência (58,5%) com associação às variáveis "com quem reside" e "escolaridade". Destacou-se a independência total (87,0%) no índice de Katz, associando-se estatisticamente a variável renda familiar mensal. **Conclusão:** a maioria dos participantes mostrou-se independente nos instrumentos utilizados. Ademais, os instrumentos apontaram mais associações a fatores sociodemográficos e clínicos não relacionados com a hanseníase. **Descritores:** Idoso; Avaliação Geriátrica; Hanseníase; Saúde do Idoso; *Mycobacterium leprae*.

RESUMEN

Objetivo: investigar la asociación de factores sociodemográficos y clínicos a la capacidad funcional de los ancianos con lepra. **Método:** estudio transversal, analítico, realizado en Fortaleza, Ceará, realizado entre 77 ancianos con lepra mediante entrevista, acompañados en servicio de referencia, consulta al prontuario y aplicación del Índice de Katz y de la Escala de Lawton y Brody. **Resultados:** la edad promedio era de 68,23 años, con prevalencia del sexo masculino, unión estable/casado, renda familiar mensual promedio de 2,04 salarios mínimos, índice bacteriológico positivo, forma clínica dimorfa y grado de incapacidad física cero. En la escala de Lawton y Brody prevaleció la independencia (58,5%) asociada a las variables "con quien reside" y "escolaridad". Se

destacó la independencia total (87,0%) en el índice de Katz, asociándolo estadísticamente a la variable “ingreso mensual del hogar”.

Conclusión: la mayoría de los participantes demostró independencia de acuerdo con los instrumentos utilizados. Además, las escalas señalaron un número mayor de asociaciones a factores sociodemográficos y clínicos no relacionados con la lepra.

Descriptores: Persona Mayor; Evaluación Geriátrica; Lepra; Salud del Anciano; *Mycobacterium leprae*.

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INTRODUCTION

The increase in the proportion of older adults, observed worldwide, has a significant part in social, political, economic and health challenges. In developing countries, such as Brazil, these challenges are even more complex, as health services still do not have the necessary training to provide adequate care for the elderly population⁽¹⁾.

Aging is distinguished by gradual and inevitable changes; this process produces alterations with potential to increase vulnerability and susceptibility to diseases in older adults. Some conditions are able to trigger a progressive functional impairment. The functional capacity measures the ability and independence for executing activities directly related to self-care and social participation⁽¹⁾.

Among the diseases that influence the functional impairment in older adults, leprosy (Hansen's disease) stands out, as it is a disease that might be incapacitating and cause physical deformities when not properly treated. This chronic, infectious, dermato-neurological disease compromises the peripheral nerves and might aggravate functional difficulties⁽²⁾.

Epidemiological data on leprosy show that Brazil ranks second in the number of cases detected in the world, representing 13% of new cases worldwide⁽³⁾, with the highest number of new cases being in the Northwest region⁽⁴⁾.

In patients with leprosy, evaluation of disability is part of the treatment, since the disease is capable of compromising important functions. However, it is important to note that older adults with leprosy, even those without physical disability related to the disease, may present a decline in their functional capacity, related to the aging process. This condition requires care and actions capable of identifying preexisting functional limitations that may or may not be increased by the disabilities generated by the disease.

Therefore, the objective of this study was to investigate the association between socio-demographic and clinical factors and the functional capacity of older adults with leprosy.

METHOD

Ethical aspects

The local Research Ethics Committee of the research approved the research project.

Design, study locale and period

Cross-sectional and analytical study, conducted in Fortaleza (in the state of Ceará) from June to August 2015, with users of a service specialized in dermatology, Ceará's Health Department reference unit for the treatment of leprosy, recognized by the

Ministry of Health as National Reference Center for Sanitary Dermatology. This center develops assistance, teaching and research activities in the area of Dermatology, aiming to develop and support health care policies, especially regarding leprosy.

Population or sample: inclusion and exclusion criteria

The study population consisted of older adults with leprosy, considering as older adults individuals who were 60 years old or older⁽⁵⁾. The inclusion criteria were: no auditory deficit and/or alterations that compromise verbal communication; and attending the unit for a consultation on disability prevention. The exclusion criteria were: attending the unit only for laboratory tests, dressings or medical appointments. The sample was calculated based on a 15% prevalence of the phenomenon, resulting in 77 older adults.

Study protocol

Data were collected through individual interviews, in a room in the outpatient clinic, after the subjects left the consultation. Subjects who met the inclusion criteria were invited to participate in the study. The interviews were conducted by interviewers previously trained by the research coordinator.

The forms used contained questions about socio-demographic factors (age, gender, marital status, origin, living arrangement, educational attainment, occupation, monthly family income) and clinical characteristics (blood pressure [BP], blood glucose, Body Mass Index [BMI], comorbidities). The Katz Index and the Lawton and Brody Scale were used to assess functional capacity.

For the evaluation of BP, the subjects were classified as normotensive if, during the random check, they presented a Systolic Blood Pressure (SBP) < 140 mmHg and a Diastolic Blood Pressure (DBP) < 90 mmHg, according to the parameters of the Brazilian Cardiology Society. The BP classification was: normotensive SBP ≤ 120mmHg and DBP ≤ 80mmHg; prehypertension SBP 121 - 139mmHg and DBP 81 - 89mmHg; stage 1 hypertension SBP 140 - 159 mmHg and DBP 90 - 99 mmHg; stage 2 hypertension SBP 160 - 170 mmHg and DBP 100 - 109mmHg; and stage 3 hypertension SBP ≥ 180 and DBP ≥ 110⁽⁶⁾.

For the evaluation of blood glucose, the most recent fasting blood glucose test was considered, according to the following classification: normal blood glucose (< 100mg / dl), impaired glucose tolerance (> 100mg / dl to < 126mg / dl) and diabetes mellitus (≥ 126mg / dl)⁽⁷⁾.

For the calculation of the Body Mass Index (BMI), body weight was determined using an anthropometric scale and the stadiometer was used to measure height. The participant's BMI was calculated using the formula weight (in kilograms) divided by height

(in squared centimeters). The specific parameters for older adults were used, classifying them as underweight ($\leq 22 \text{ kg/m}^2$); normal ($> 22 \text{ e } < 27 \text{ kg/m}^2$) and overweight ($\geq 27 \text{ kg/m}^2$)⁽⁸⁾.

The Katz Scale comprises the Activities of Daily Living (ADLs), consisting of six items (bathing, dressing, toileting, transferring, continence control and feeding)⁽⁸⁻¹⁰⁾. For the results, we used the standardization proposed by the Hartford Institute for Geriatric Nursing, which classifies older adults as independent (six points), partially dependent (four to five points) and very dependent (less than three points)⁽¹¹⁾.

The Lawton and Brody scale comprises instrumental activities of daily living (IADLs), consisting of nine items (preparing meals, housekeeping, doing laundry, handling medications, going to places requiring walking for long distances, handling finances and using the telephone). Each question admits three answers: "independent" (three points), "needs assistance" (two points), "unable" (one point)^(8,12). The older adult can be classified as dependent (9 to 13 points), semi-dependent (14 to 22 points) or independent (above 22 points)⁽¹³⁾.

After the interview, the patient was consulted to record the clinical data about leprosy previous treatment, prior contact, bacillary index, clinical form, treatment regimen, leprosy reaction and Degree of Disability. Disability ranges from zero to two, considering the following: grade zero disability – no problem in the eyes, hands and/or feet resulting from leprosy; grade 1 disability – decrease or loss of protection sensitivity in the eyes, hands or feet; and grade 2 disability – impaired visual acuity, lagophthalmos and/or ectropion, trichiasis and/or central corneal opacity, as well as the presence of trophic and/or traumatic lesions, claw hands, absorption and disabilities such as the wrist drop and the foot drop⁽²⁾.

Analysis of results and statistics

The data were stored and organized in an electronic spreadsheet. Statistical analysis was performed using SPSS software, version 17.0. The frequencies of the variables and their respective confidence intervals were included. The likelihood-ratio test was used to investigate the association between socio-demographic and clinical variables and the functional capacity.

RESULTS

The mean age of the 77 (100%) older adults was 68.23 (± 6.11) years. There was a prevalence of men, 49 (63%); in stable union/married, 51 (66.2%); from Fortaleza, 46 (59.7%); living with spouse and child(ren), 41 (53.2%). The mean number of cohabitants was 3.79 (± 1.98), with predominance of the category three to four people, 35 (45.5%). Regarding education, there was a mean of 4.1 years of formal education; regarding occupation, 51 (66.2%) were retired. The mean monthly family income was of 2.0 minimum wages¹.

Table 1 – Distribution of the clinical features of older adults with leprosy, Fortaleza, Ceará, Brazil, 2015

Variáveis (N = 77)	n	%
Comorbidities (n = 55)		
Systemic hypertension	31	56.3
Diabetes <i>mellitus</i>	23	41.8
Cataract	21	38.1
Hypercholesterolemia	13	23.6
Arthritis/Arthrosis	10	18.1
Others	9	16.3
Hearing or visual impairment	4	7.2
Post-Stroke Sequelae	3	5.4
Osteoporosis	2	2.6
BMI $\bar{x} = 26.03$ S = 3.85		
Normal	37	48.1
Overweight	23	41.8
Underweight	17	22.1
Blood glucose (mg/dL) $\bar{x} = 108.14$ S = 49.39		
Normal	50	64.9
Impaired glucose tolerance	15	19.5
Diabetes <i>mellitus</i>	12	15.6
Blood pressure		
Prehypertension	22	28.6
Isolated systolic hypertension	20	25.9
Great	14	18.2
Normotensive	11	14.3
Stage 1 hypertension	8	10.4
Stage 2 hypertension	2	2.6
Had previous treatment for leprosy		
No	64	83.1
Yes	13	16.9
Had previous contact with person with leprosy		
No	52	67.5
Yes	25	32.5
Bacillary index $\bar{x} = 1.49$ S = 1.74		
Positive	40	51.9
Negative	37	48.1
Form of disease		
Dimorphic	40	51.9
Virchowian	19	24.7
Tuberculoid	15	19.5
Indeterminate	3	3.9
Treatment regimen		
Multibacillary	53	68.8
Paucibacillary	18	23.4
Alternative	6	7.8
Leprosy reaction		
No	62	80.5
Yes	15	19.5
Degree of Disability		
0	46	59.7
1	15	19.5
2	16	20.8

1 The minimum wage per month in Brazil corresponds to R\$ 937,00 *reais* or US\$ 297,81 American dollars according to the Central Bank of Brazil on April 12th, 2017.

Table 2 – Katz Index and Lawton and Brody Scale items and classification of older adults with leprosy regarding functional capacity, Fortaleza, Ceará, Brazil, 2015

Katz Index	Yes	No	Lawton and Brody Scale	Unable	Needs assistance	Independent
Bathing	75(97.4%)	02(2.6%)	Using the telephone	10(13.0%)	12(15.6%)	55(71.4%)
Dressing	73(94.8%)	04(5.2%)	Going to distant places	07(9.1%)	20(26.0%)	50(64.9%)
Toileting	74(96.1%)	03(3.9%)	Shopping	06(7.8%)	16(20.8%)	55(71.4%)
Transferring	74(96.1%)	03(3.9%)	Preparing food	14(18.2%)	15(19.5%)	48(62.3%)
Continence	72(93.5%)	05(6.5%)	Housekeeping	19(24.7%)	14(18.2%)	44(57.1%)
Feeding	75(97.4%)	02(2.6%)	Making small home repairs	17(22.1%)	19(24.7%)	41(53.2%)
			Doing laundry and ironing	21(27.3%)	16(20.8%)	40(51.9%)
			Handling medication	06(7.8%)	17(22.1%)	54(70.1%)
			Handling finances	05(6.5%)	20(26.0%)	52(67.5%)
Katz Index classification Katz \bar{x} = 1.03 S = 0.16	n°	%	Lawton and Brody Scale classification X = 22.34 S = 4.77	n°	%	
Independent	67	87	Independent	45	58.5	
Partially dependent	7	9.1	Semi-dependent	27	35	
Dependent	3	3.9	Dependent	5	6.5	

According to the table above, 55 (71.4%) of the participants had comorbidities. Of these, 31 (56.3) had hypertension, 23 (41.8%) had diabetes mellitus and 21 (38.1%) had cataract. The mean blood glucose level was 108.41 mg/dL and 50 (64.9%) of the blood glucose levels were classified as "normal". Regarding blood pressure, 22 (28.6%) were classified as "prehypertension". Regarding the Body Mass Index (BMI), 37 (48.1%) were classified as normal. Regarding leprosy, 64 (83.1%) participants reported having no previous history of treatment and 52 (67.5%) had no prior contact with a person with the disease. There was a predominance of intra-family contact in 20 (80.0%) out of the 25 (32.5%) cases with previous contact with the disease. A positive bacillary index was found in 40 (51.9%) participants, with a small difference in relation to negative indexes, 37 (48.1%). This is related to the concentration of dimorphic cases, 40 (51.9%), and of the multibacillary treatment, 53 (68.8%). Six (7.8%) of the older adults were in an alternative treatment due to complications related to Dapsone, mainly hemolytic anemia. Leprosy reactions occurred in 15 (19.5%) of the cases, with predominance of the reversal reaction (86.6%). Most of the participants, 46 (59.7%), presented grade zero; however, a considerable percentage of the cases, 31 (40.3%), presented some degree of physical disability.

Table 2 displays the assessment of functional capacity.

According to Table 2, the Katz scale presented a mean score of 1.03 (\pm 0.16), with prevalence of the classification "independent" (67; 87.0%, 95% CI = 76.9 - 93.2). The activities most performed without barriers were "bathing" and "feeding", both with 75 (97.4%) positive responses, and the most difficult activities were "continence" (05; 6.5%) and "dressing" (4; 5.2%).

The Lawton and Brody scale presented a mean of 22.34 (\pm 4.77) points, with the "independent" classification prevailing in 45 older adult subjects (58.5%) (Table 2). In all the questions, the answer "independent" was predominant. The items with the highest "needs assistance" answers were those related to mobility and handling finances, both with 20 (26.0%) answers. As for the answer "unable", there was a concentration in the item "doing laundry and ironing", 21 (27.3%), followed by the item "Housekeeping", 19 (24.7%), both referring to domestic activities.

Regarding the association of the functional capacity classifications by the Katz Index and the Lawton and Brody scale and socio-demographic and clinical variables, for activities of daily living only the variable "family income" presented association with the Katz index classification (p = 0.011). Total independence reached 92.0% (n = 23) of the older adults with less than 1 minimum wage income; 85.7% (n = 06) of the older adults with more than three minimum wages income; and 84.4% of the older adults (n = 38) with incomes between 1 and 2 minimum wages.

Regarding the Lawton and Brody Scale, Table 2 shows that the variables "age" (p 0.012), "living arrangement" (p 0.031) and "educational attainment" (p 0.041) were associated with the dependent and independent classifications for instrumental activities.

Regarding Table 3, for the "age" variable there is a decrease in independence related to older ages, while the "living arrangement" variable showed an increase in dependence related to the number of people available to help at home and their kinship with the older adults. However, it was observed that higher levels of educational attainment led to greater independence of the older adults.

Table 3 – Distribution of the older adults with leprosy according to the Lawton and Brody Scale and associated categorical variables, Fortaleza, Ceará, Brazil, 2015

Variables	Dependent	Independent	p* value
Age			
60-64 (n = 25)	01(4.0%)	24(94.0%)	0.012
65-70 (n = 28)	-	28(100.0%)	
71-83 (n = 24)	04(16.6%)	20(83.4%)	
Living arrangement			
Only with (a) child(ren) (n = 08)	01(12.5%)	07(87.5%)	0.031
Spouse/partner (n = 07)	01(14.2%)	06(85.8%)	
Living alone (n = 06)	01(16.6%)	05(83.4%)	
Spouse and child(ren) (n = 41)	19(46.3%)	22(53.7%)	
Other family arrangements (n = 10)	06(60.0%)	04(40.0%)	
Three generation arrangement (n = 05)	04(80.0%)	01(20.0%)	
Educational attainment			
Elementary education incomplete or completed (n = 39)	12(30.7%)	27(69.3%)	0.041
Secondary education incomplete or completed (n = 16)	06(37.5%)	10(62.5%)	
No schooling (n = 22)	14(63.6%)	08(36.4%)	

Table 4 – Lawton and Brody Scale Items associated to socio-demographic and clinical variables, Fortaleza, Ceará, Brazil, 2015

Lawton and Brody Scale	p* value
Using the telephone	
Cohabitants	0.043
Educational attainment	0.006
Going to distant places	
Age	0.013
Body Mass Index	0.010
Shopping	
Age	0.021
Preparing food	
Age	0.020
Systemic Blood Pressure	0.008
Cohabitants	0.024
Housekeeping	
Age	0.037
Marital status	0.048
Cohabitants	0.012
Making small home repairs	
Body Mass Index	0.037
Positive leprosy reaction	0.050
Handling medication	
Blood glucose	0.019
Blood pressure	0.026
Bacillary index	0.013

Note: * Likelihood-ratio test.

Table 4 shows the association of Lawton and Brody scale items with socio-demographic and clinical variables.

Regarding Table 4, the activity “using the telephone” presented an association with the variables “living arrangement”

($p = 0.043$) and “educational attainment” ($p = 0.006$), revealing that all the older adults who lived only with their children performed the activity unassisted, while 04 (40.0%) of the older adults in a three generation living arrangement and 02 (40.0%) of the older adults in other arrangements were unable to perform it. It was observed that 34 (87.2%) of the older adults with incomplete or complete Elementary School were able to perform the activity without help, while 07 (31.8%) of the older adults with no formal education failed to perform it.

The ability of “going to distant places” was associated with “age” ($p = 0.013$) and “BMI” ($p = 0.010$); 22 (78.6%) older adults between 65 and 70 years old performed this activity without help. On the other hand, the older adults between 71 and 83 years old found this activity more difficult to perform, since nine (37.5%) needed partial assistance and five (20.8%) were not able to do it. Most older adults with normal weight (26; 70.3%) and underweight (12; 70.6%) performed this activity without help, whereas the need for help was more present in the overweight older adults (10; 43.4%).

The ability of “shopping” ($p = 0.021$) was associated with “age”, and was performed without help in the majority of cases by the older adults between 65 and 70 years old, 24 (85.7%), while “inability to perform it” was the most reported answer by those between 71 and 83 years old, 03 (12.5%).

The activity “preparing food” showed association with “age” ($p = 0.020$), “living arrangement” ($p = 0.024$), and “blood pressure” ($p = 0.008$). Twenty-three (82.1%) older adults individuals aged between 65 and 70 years, living with a spouse/partner, 06 (85.7%), and with normal blood pressure, 10 (90.1%), performed the activity predominantly without help. The inability to execute the activity found higher percentages in the older adults between 71 and 83 years old, 08 (33.3%); and in those living in other family arrangements, 04 (40.0%); and in one (50%) with stage 2 hypertension.

Considering the elderly’s ability to perform household activities, the “housekeeping” variable was also associated with “age” ($p = 0.037$), with “living arrangement” ($p = 0.012$), and with

“marital status” ($p = 0.048$). The majority of the older adults aged between 65 and 70 years old (71.4%) did not need assistance for the execution of this activity; the largest number of reports of inability to execute this activity was among the older adults between 71 and 83 years old, 10 (41.7%). Still, 6 (100%) of the older adults living alone performed this activity without help; and among the older adults living in other family arrangements, 06 (60.0%) could not perform this domestic activity. As for the civil status, the single (3; 100.0%) and the widowed (13; 76.5%) did not present any difficulties regarding housekeeping, whereas the divorced were the majority, 03 (50.0 %) were unable to perform the activity.

The ability to make small home repairs was associated with “BMI” ($p = 0.037$) and “presence of leprosy reaction” ($p = 0.050$): underweight (06; 35.3%) or overweight (07; 30.4%), and with leprosy reaction (07, 46.7%). Elderly patients with normal weight (22; 59.5%) and no leprosy reaction (35-56.5%) were able to perform this activity without help.

As to the “ability to handle the proper use of prescribed medication”, there was an association with “blood pressure” ($p = 0.026$), “blood glucose” ($p = 0.019$) and “bacillary index” ($p = 0.013$); older adults with normal blood pressure and glucose did not present difficulties in this activity, as well as elderly patients with negative bacillary index.

DISCUSSION

The findings of this study demonstrated that the older adults with leprosy have socio-demographic features similar to the older adults without the disease. Conditions such as low income and low educational attainment prevailed, characteristics linked to the onset of the disease. The clinical characteristics related to leprosy in the participants were in agreement with the findings of other studies addressing non-elderly leprosy patients⁽¹⁴⁻¹⁵⁾.

The functional capacity of the older adults with leprosy in this study was satisfactory, and it did not directly influence the disease and the disability caused by it. However, new studies must be developed to address this relation, since the high number of participants with no disability in this study might explain this result. This result is consonant with a study that addressed the functional capacity of older adults⁽¹⁶⁾.

The associations found between functional capacity and socio-demographic and clinical characteristics are similar to the findings of other studies addressing older adults with other chronic conditions in the basic health care network. A study conducted with 388 older adults, using Katz Index and Lawton and Brody scale to assess predictive factors for functional incapacity, verified that functional incapacity for basic activities was associated with age and ethnicity and functional incapacity for instrumental activities was associated with age, educational attainment, income and health self-assessment⁽¹⁷⁾.

Another important finding is the association between age and the functional capacity of going to distant places, shopping and preparing meals. Studies show that all these activities can be affected by aging, which can be explained by the correlation between them: the act of going shopping is related to other factors, such as need for moving to distant places, ability to handle money and ability to carry the bought items.

Therefore, the prevalence of functional limitation in older ages is related to the natural changes of the aging process and to infrastructure factors such as streets and sidewalks architecture and urban transportation⁽¹⁸⁾.

Older adults living only with their children might have the role of provider for the family and need to develop skills such as using the television, the appliances and the telephone. The level of education has a fundamental role in the ability to acquire new knowledge, including using new technologies; therefore, there is a strongly positive correlation between years of formal education and better health conditions and self-care habits.⁽¹⁹⁾

In the older adults in this study the variables “advanced age”, “living in other family arrangements” and “having level 2 hypertension” were factors that impaired the performance of instrumental activities. These factors demonstrate the reality of older adults with comorbidities and need for assistance, since household/instrumental activities require greater effort and physical capacity, aspects impaired by aging and by the presence of comorbidities⁽²⁰⁾. In this subject, studies show association between low functional capacity and elevated blood pressure levels⁽²¹⁾.

Regarding the BMI, studies show association between nutritional status and functional dependence, reinforcing the findings of this study. Other studies show that underweight older adults had a dependence prevalence ratio 1.2 times higher than those with normal weight⁽²²⁾. Association between weight and ability to do small home repairs points to a possible decrease of muscle mass related to low weight and difficulties to perform activities that require physical effort for the overweight older adults.

Ability to do small repairs was associated with leprosy reaction. This result was expected, since this reaction might manifest with neuritis, hand edema, fever and malaise; this signs and symptoms can impair the performance of activities that require greater physical effort, thus interfering in the quality of life⁽²³⁾.

Inability to manage the use of prescribed medication was associated with situations in which blood pressure and blood glucose were not controlled and the bacillary index was positive. The difficulty to follow the prescribed treatment involves the patient’s predisposition and cognitive ability to understand the therapeutic treatment. These factors might be aggravated by the presence of comorbidities, since the patient needs to manage a larger number of medications. Added to this, the socio-demographic features presented by the older adults in this study increase this situation⁽²⁴⁾.

Study limitations

The cross-sectional design of this study is highlighted as a limitation, since it does not allow following situations related to environmental and behavioral factors, which could influence the process and installation of functional limitations in the participants. Therefore, future studies should follow and assess the influence of extrinsic factors on the decline of functional capacity in older adults with leprosy.

Contributions to areas of nursing, health or public policy

The growing prevalence of leprosy cases in older adults demands knowledge and preparation from health professionals, especially nursing professionals, in order to provide comprehensive care to these subjects. Thus, the evaluation of functional capacity

aspects should be included in older adults who were not evaluated according to the recommendations for patients with leprosy, also aiming to preserve the functionality and independence of patients.

CONCLUSION

Regarding the assessment of functional capacity, it is noteworthy that the majority of the older adults with leprosy in the

instruments used were independent. In addition, the instruments pointed to a greater number of associations with socio-demographic and clinical factors not related to leprosy.

Therefore, the importance of developing care for older adults with leprosy around the specific care needs of this stage of life is identified, so that they receive care and actions according to the pre-existing functional limitations that can be increased and/or aggravated by disabilities caused by leprosy.

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