

Physiotherapy prescription among elderly users of primary healthcare facilities

Uso de fisioterapia entre idosos usuários de serviços de atenção primária

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ABSTRACT

The physiotherapy has an important role in the health promotion and autonomy for the elderly, and the healthcare system should be able to provide adequate support for older age groups. Objective: The objectives of this cross-sectional study were to determine the lifetime prevalence of physiotherapy utilization among elderly users (60 years of age or more) of primary healthcare facilities in Ribeirão Preto, Brazil, and to investigate its association with variables such as sex, age, educational level and socioeconomic status. Methods: Data were collected during face-to-face interviews. Participants were invited to participate in the study while they waited for their medical appointment in a primary healthcare facility. Log-binomial regression models were used for adjusting the data. The sample was composed of 224 (63%) women and 133 (37%) men. Results: Overall, 141 (39.5%) individuals reported undertaking physiotherapy sessions some time along their lifetimes. The prevalence of physiotherapy utilization among women was 42.0% (95% CI: 35.4 - 48.7) and among men was 35.3% (95% CI: 27.2 - 44.1). The utilization of physiotherapy was more frequent among elderly who had health insurance coverage, higher socioeconomic status and higher educational level. This suggests that some groups of population have more access to physiotherapy due to a higher capacity to pay for healthcare when compared to uninsured people. Conclusion: The participation of physiotherapists in the primary care setting should be encouraged, in order to reduce inequalities in access to such resources.

Keywords: Primary Health Care, Old Age Assistance, Health Services, Physical Therapy Specialty

RESUMO

A fisioterapia ocupa um papel importante na promoção da saúde e da autonomia para os idosos, e o sistema de atenção à saúde deve estar apto a oferecer suporte adequado para as pessoas desta faixa etária. **Objetivo:** Determinar a prevalência de uso de fisioterapia entre idosos (60 anos ou mais) usuários de serviços de atenção primária à saúde de Ribeirão Preto, Brasil, e investigar suas associações com variáveis como sexo, idade, nível educacional e classe socioeconômica. **Métodos:** Os dados foram coletados por entrevistas pessoais. Os idosos foram convidados a participar do estudo enquanto aguardavam por um atendimento médico em uma unidade de saúde. Modelos de regressão log-binomiais foram utilizados para ajustar os dados. A amostra foi composta por 224 (63%) mulheres e 133 (37%) homens. **Resultados:** Ao todo, 141 (39,5%) idosos relataram ter usado fisioterapia em algum momento de suas vidas. A prevalência de utilização da fisioterapia entre as mulheres foi de 42,0% (IC 95%: 35,4% - 48,7%) e entre homens foi de 35,3% (IC 95%: 27,2% - 44,1%). A utilização de fisioterapia foi mais frequente entre pessoas idosas portadoras de plano de saúde, classe socioeconômica mais privilegiada e maior escolaridade. Isto sugere que grupos mais privilegiados da população possuem maior acesso à fisioterapia e maior possibilidade de pagar por atendimento que pessoas sem cobertura de planos de saúde. **Conclusão:** A participação de fisioterapeutas na atenção primária à saúde deve ser encorajada, objetivando reduzir as desigualdades no acesso a tais recursos.

Palavras-chave: Atenção Primária à Saúde, Assistência a Idosos, Serviços de Saúde, Fisioterapia

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INTRODUCTION

Official data¹ show that in 2000, people with 60 years or older accounted for 9.28% in the female population and 7.82% in the male population in Brazil. In 2010, these percentages increased to 11.75% and 9.8%, respectively. In addition, demographic projections show that in 2020, these percentages will be 15.2% for the female population and 12.4% for the male population, and in 2030 will be 20.3% and 16.9%, respectively. The rapid aging of the Brazilian population brings big challenges to health and social security systems² considering that this phenomenon is accompanied by an increased incidence of age-associated diseases, including cardiovascular diseases, rheumatic diseases, hypertension, cancer, diabetes, and some mental disorders.

In this context, the physiotherapy has an important role in the health promotion and autonomy for the elderly,^{3,4} and the healthcare system should be able to provide adequate support for older age groups.⁵ A population-based cross-sectional study carried out in the urban area of Pelotas, southern Brazil, showed that the lifetime utilization of physiotherapy was reported by 47.8% of the participants with 60 years or older.⁶ However, due the lack of population-based studies related to this issue, this study claims that further scientific researches are necessary to enhance the description of the patterns regarding physiotherapy utilization in the community. Studies focused on this topic might provide important information for better understanding the demand for physical therapy in geriatrics and help health managers to optimize the organization of the public health services.

OBJECTIVE

The objectives of the present study were to determine the lifetime prevalence of physiotherapy utilization among users of primary healthcare facilities in Ribeirão Preto, Brazil, and investigate its associations with variables such as gender, age, educational level and socioeconomic status.

METHODS

This cross-sectional study was conducted among subjects aged 60 years or older living in the municipality of Ribeirão Preto, Southeast

region of Brazil, users of primary health care services. Ribeirão Preto is a medium sized city of São Paulo state with approximately 674 thousand inhabitants, being among the thirty largest Brazilian municipalities, and has an economy based primarily on agricultural activities mostly related to sugar cane industry. Healthcare services in Ribeirão Preto are organized into five geographical areas (North, South, East, West and Central Health Districts) with distinct demographic characteristics. It is estimated that 52% of the urban population of the municipality has exclusive use of the public healthcare resources and 80% use these services at some time.⁷

In each of the five Health Districts, there is a Basic and District Health Facility (UBDS or, in Portuguese, Unidade Básica e Distrital de Saúde) that is the reference point for some medical specialties in the respective region. Assuming that people who frequent the UBDS seeking primary care represent the population of users of the primary healthcare units located in the coverage area of the corresponding Health District, the data collection was performed in each of the five UBDS of the municipality. The sample size was determined to be 357 respondents. Using formula for sample size for a proportion estimate with relative precision, this sample size is sufficient to estimate a proportion of elderly who reported to undergo physiotherapy during lifetime close to 0.5 (similar to that reported in (6)) with precision of approximately 10% and a confidence coefficient of 95%.⁸ Data were collected through face-to-face interviews conducted by three trained interviewers from January to February 2017. Participants were invited to participate in the study while they waited for medical care in the UBDS.

Socioeconomic status was assessed using the classification proposed by the Brazilian Association of Market Research Institutions, which is based on the acquisition of material goods and the schooling of the head of the household. Possible classifications are A, B1, B2, C1, C2, D and E, where people from more privileged socioeconomic classes are labeled by A. The educational level was classified into four groups: no schooling (including illiterates and people who have never attended school), elementary/middle (incomplete or complete), high school (incomplete or complete), and higher education (incomplete or complete). The International Physical Activity Questionnaire (IPAQ) modified for the elderly and adapted to the Brazilian-Portuguese language by Mazo and Benedetti⁹ was used for the classification of physical activity. IPAQ

classifies subjects into three categories: low physical activity, moderate physical activity, and high or vigorous physical activity. People with a given self-reported condition were defined as those who responded "yes" to the question: "Have you ever heard from a doctor, at some moment in your life, that you have/had X?", where X denotes the respective condition (hypertension, diabetes, hypercholesterolemia or high triglycerides, respiratory diseases, cancer, fibromyalgia, osteoarthritis, rheumatoid arthritis, heart attack, stroke, vascular diseases, heart diseases, osteoporosis and labyrinthitis).

Prevalence was estimated with its respective 95% confidence interval (95%CI) based on the exact method.⁸ Log-binomial regression models were fitted to the data,¹⁰ where prevalence ratios (PR) were used as measures of association between the independent variables and the dependent variable (lifetime utilization of physiotherapy). Inferences for the PRs were based on 95% confidence intervals. Those intervals that do not include 1 are interpreted as an association between respective variables at the 0.05 significance level (similar to $p < 0.05$). The statistical software used was SAS version 9.3. Research was conducted according to current ethical norms and the project was approved (Protocol 1.853.261) by the Research Ethics Committee of the Health School Center, Ribeirão Preto Medical School, University of São Paulo (USP).

RESULTS

The sample was composed of 224 (63%) women with mean age of 71.4 years (SD 7.5) and 133 (37%) men with mean age of 69.9 years (SD 6.8). Overall, 141 (39.5%) individuals reported to undergo physiotherapy during lifetime. The prevalence of lifetime utilization of physiotherapy among women was 42.0% (95% CI: 35.4 – 48.7) and among men was 35.3% (95% CI: 27.2 – 44.1).

The proportion of individuals who reported falls in the last six months was 27.7%. The prevalence of self-reported chronic conditions was as follows: hypertension, 58.8%; hypercholesterolemia or high triglycerides, 27.7%; diabetes, 26.1%; labyrinthitis, 19.9%; osteoarthritis, 19.1%; osteoporosis, 18.2%; heart diseases, 17.9%; vascular diseases, 13.7%; respiratory diseases, 11.8%; rheumatoid arthritis, 8.4%; cancer, 7.6%; fibromyalgia; 5.6%; and gout, 2.0%. Only one respondent reported having lupus. In addition, a prior history of stroke was reported

by 6.7% of the participants and heart attack was reported by 9.0%. Use of walking stick was reported by 6.2% of the respondents, and use of walker device was reported by four respondents. Only one respondent reported using crutches and only one reported using wheelchair, but in the second case, the participant reported not to make use all the time.

Table 1 shows the proportions of individuals that reported to undergo physiotherapy during lifetime, according to sex, age groups, possession of health insurance, educational level, socioeconomic status, smoking status, self-perception of health, IPAQ level, use of any device (walking stick, crutches, walker

device or wheelchair) and limitation to practice daily activities due to pain. The proportion ratios (PR) showed in Table 1 were adjusted by sex and age to remove possible confounding effects. Table 1 shows that lifetime utilization of physiotherapy is significantly higher among elderly people that have health insurance, people with higher socioeconomic status, respondents with regular or poor self-perception of health, and respondents that reported to have limitation to practice daily activities due to pain. No significant associations were found between the use of any device and the lifetime utilization of physiotherapy, possibly due to small number of device users. Lifetime utilization of physiotherapy is also higher among

women, respondents with 75 years age or more and individuals with higher educational level, although the corresponding 95% confidence intervals include the value 1.

Table 2 describes the association between the lifetime utilization of physiotherapy, the self-reported chronic conditions, and the reports of falls in the last six months, stroke and heart attack. Table 2 shows that lifetime utilization of physiotherapy is significantly higher among elderly people that reported having osteoarthritis, rheumatoid arthritis, episodes of heart attack and stroke, respiratory diseases and hypertension.

DISCUSSION

In Brazil, there are few studies that provide comparable data to the present research. In a household survey¹¹ carried out in the urban area of Guarapuava, southern Brazil, the prevalence of lifetime utilization of physiotherapy among women aged 60 years or more was 38.8%. In a population-based cross-sectional study, including subjects of both sexes living in the urban area of Pelotas, southern Brazil, the equivalent percentage was 47.8%.⁶ In the present study, the prevalence of lifetime utilization of physiotherapy among women was 42.0% and among men was 35.3%.

The present results showed that lifetime utilization of physiotherapy is more frequent among elderly persons who have health insurance coverage, higher socioeconomic status and higher education. This suggests that more privileged groups of the population have more access to physiotherapy and a higher ability to pay for healthcare than uninsured people. Considering that 52% of the urban population of Ribeirão Preto make exclusive use of public healthcare resources,⁷ it can be inferred that the lack of physiotherapeutic resources at the primary healthcare facilities leaves a large part of the population deprived of a range of benefits that include the functional disability prevention and the treatment of chronic-degenerative and traumatic diseases. In general, low socioeconomic level has been related to lower utilization of health services in Brazil.^{6,12,13} This issue becomes more serious given the known association between poverty and some health conditions, such as hypertension, leisure-time physical inactivity, obesity, and osteoporosis.⁶

Numerous studies have been showed that the physiotherapy is useful in the management of patient with osteoporosis,^{14,15} osteoarthritis,¹⁶ rheumatoid arthritis,^{17,18}

Table 1. Proportion of individuals that reported to undergo physiotherapy during lifetime, according to sex, age groups, and other variables

		Lifetime utilization of physiotherapy			Adjusted Proportion	
		Total	n	%	PR	95% CI
Sex	Men	133	47	35.3	Ref.	
	Women	224	94	42.0	1.21	(0.92 – 1.60)
Age group (years)	60 – 65	93	31	33.3	Ref.	
	66 – 74	156	64	41.0	1.24	(0.87 – 1.74)
	75 or more	108	46	42.6	1.31	(0.91 – 1.88)
Have health insurance	No	303	113	37.3	Ref.	
	Yes	54	28	51.8	1.36	(1.01 – 1.83)*
Educational level	No schooling	25	8	32.0	Ref.	
	Elementary school	238	92	38.7	1.36	(0.74 – 2.50)
	Intermediate school	68	27	39.7	1.45	(0.75 – 2.79)
	Higher education	26	14	53.9	1.92	(0.97 – 3.79)
Socioeconomic status	A, B1 or B2	92	45	48.9	Ref.	
	C1	115	43	37.4	0.75	(0.55 – 1.02)
	C2	95	41	43.2	0.82	(0.59 – 1.11)
	D or E	55	12	21.8	0.42	(0.24 – 0.71)*
Smoking status	Current smoker	54	17	31.5	Ref.	
	Never smoked	193	76	39.4	1.41	(0.90 – 2.21)
	Ex-smoker	110	48	43.6	1.17	(0.75 – 1.81)
Self-perception of health	Good	150	45	30.0	Ref.	
	Regular	153	68	44.4	1.44	(1.06 – 1.96)*
	Poor	54	28	51.9	1.70	(1.17 – 2.44)*
IPAQ level	Low	58	27	46.6	Ref.	
	Moderate	196	72	36.7	0.89	(0.58 – 1.12)
	High	103	42	40.8	0.95	(0.65 – 1.37)
Use of any device	No	332	128	38.6	Ref.	
	Yes	25	13	52.0	1.27	(0.84 – 1.90)
Limitation due to pain	Never	143	47	32.9	Ref.	
	Rarely	36	9	25.0	0.71	(0.38 – 1.32)
	Occasionally	73	32	43.8	1.31	(0.92 – 1.85)
	Often	47	27	57.5	1.76	(1.25 – 2.47)*
	Always	58	26	44.8	1.32	(0.90 – 1.90)

(a) PR adjusted for sex and age. * 95% CI does not cover the value of 1, suggesting a significant effect (similar to $p < 0.05$).

Tabela 2. Association between the lifetime utilization of physiotherapy and self-reported chronic conditions, reports of falls in the last six months, stroke and heart attack

		Lifetime utilization of physiotherapy			Adjusted Proportion Ratio (PR) (a)	
		Total	n	%	PR	95% CI
Osteoarthritis	No	289	98	33.9	Ref.	
	Yes	68	43	63.2	1.87	(1.43 – 2.43)*
Rheumatoid arthritis	No	327	121	37.0	Ref.	
	Yes	30	20	66.7	1.73	(1.27 – 2.35)*
Heart attack	No	325	122	37.5	Ref.	
	Yes	32	19	59.4	1.60	(1.17 – 2.19)*
Stroke	No	333	127	38.1	Ref.	
	Yes	24	14	58.3	1.48	(1.02 – 2.13)*
Respiratory diseases	No	315	117	37.1	Ref.	
	Yes	42	24	57.1	1.47	(1.08 – 2.00)*
Hypertension	No	147	45	30.6	Ref.	
	Yes	210	96	45.7	1.44	(1.08 – 1.93)*
Fibromyalgia	No	337	130	38.6	Ref.	
	Yes	20	11	55.0	1.38	(0.90 – 2.11)
Vascular diseases	No	308	117	38.0	Ref.	
	Yes	49	24	49.0	1.22	(0.87 – 1.70)
Heart diseases	No	293	112	38.2	Ref.	
	Yes	64	29	45.3	1.16	(0.84 – 1.58)
Cancer	No	330	129	39.1	Ref.	
	Yes	27	12	44.4	1.15	(0.74 – 1.79)
Falls in the last six months	No	258	104	40.7	Ref.	
	Yes	99	37	37.4	1.13	(0.84 – 1.52)
Osteoporosis	No	292	111	38.0	Ref.	
	Yes	65	30	46.1	1.11	(0.80 – 1.54)
Labyrinthitis	No	286	111	38.8	Ref.	
	Yes	71	30	42.3	1.07	(0.78 – 1.45)
Hypercholesterolemia or high triglycerides	No	258	104	40.3	Ref.	
	Yes	99	37	37.4	0.91	(0.67 – 1.22)
Diabetes	No	264	108	40.9	Ref.	
	Yes	93	33	35.5	0.86	(0.62 – 1.17)

chronic low back pain,¹⁹ shoulder pain²⁰ and other morbidities. Physiotherapy is useful in a multidisciplinary treatment approach to improve the quality of life, maintain mobility, prevent falls and improve the functional ability of elderly people. In addition, physiotherapy is used to treat frailty syndrome in the elderly and to prevent their adverse reactions (falls, hospitalization, institutionalization, functional decline, and death).^{21,22} However, the present results suggest that a significant proportion of elderly people with some chronic condition not have access to a physiotherapy care. Only 37.4% of the individuals who reported falls in the last six months and 46.1% of those who reported osteoporosis stated the utilization of physiotherapy in their lifetime.

These results suggest that the participation

of physiotherapists in the primary care setting should be encouraged, in order to reduce inequalities in access to these resources. The role of the physiotherapist includes actions of health education, individual attendance, group activities, home activities and “sheltering”, aiming the prevention and health promotion.^{23,24} In the context of the primary healthcare facilities, these professionals can be involved in searching for vulnerable groups for chronic diseases, promoting actions and campaigns to stimulate healthy lifestyles, offering support and guidance to caregivers in the falls prevention, and in construction of areas for the practice of physical activity practices, among other activities.^{25,26} The potential barriers to inclusion of physiotherapists in the public primary

healthcare include the lack of prioritization in the allocation of budget funds²⁷ and a limited knowledge toward physiotherapy field among the users of the services.²⁸ Despite these problems and considering the elderly population, it is known that the advances in primary care can influence the reduction of hospitalizations due to sensitive conditions to primary care,^{29,30} and the physiotherapy plays a key role in this process.

The limitations of the presented study include its cross-sectional character, which precludes establishing any causal relationship between lifetime utilization of physiotherapy and the variables of interest. In addition, the respondents were not questioned as to the reasons for the search for physiotherapy, type and duration of the treatments, satisfaction and other details about their experience with the treatment. Despite this, we believe that the present study can be considered as a small contribution for future studies about the importance of the participation of physiotherapists in the primary care setting.

CONCLUSION

On the basis of the results presented, we are in agreement with the conclusions of the study by Siqueira et al.⁶ which claimed that physiotherapy should be included in the Brazilian strategies of primary healthcare. Beyond the importance for health prevention and education strategies, the inclusion of physiotherapy in the Family Health Program also can be very beneficial to elderly individuals with chronic conditions.

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