



Original article

Walking speed and balance performance are associated with Short-Form 8 bodily pain domain in Brazilian older female



Ricardo Aurélio Carvalho Sampaio ^a, Priscila Yukari Sewo Sampaio ^a,
 Marco Carlos Uchida ^{a, b}, Paula Teixeira Fernandes ^c, André Luis Rodrigues Santos ^d,
 Aurinice Sampaio Irene Monte ^e, Solange Maria Ribeiro Nunes Lages ^e,
 Gustavo Luis Gutierrez ^a, Hidenori Arai ^{f, *}

^a Department of Adapted Physical Activity, State University of Campinas, Faculty of Physical Education (UNICAMP), Campinas, Brazil

^b Department of Human Health Sciences, Kyoto University Graduate School of Medicine, Kyoto, Japan

^c Department of Sport Sciences, State University of Campinas, Faculty of Physical Education (UNICAMP), Campinas, Brazil

^d Department of Physical Education, Methodist University of Piracicaba (UNIMEP), Piracicaba, Brazil

^e Department of Physical Education, State University of Piauí (UESPI), Teresina, Brazil

^f National Center for Geriatrics and Gerontology, Obu, Japan

ARTICLE INFO

Article history:

Received 13 February 2015

Received in revised form

25 February 2015

Accepted 26 February 2015

Available online 25 April 2015

Keywords:

bodily pain
 older women
 one leg stand
 Short-Form 8
 walking speed

ABSTRACT

Background/purpose: Chronic pain is commonly associated with disability and poor quality of life (QOL). This condition has a significant impact on the physical, psychological, and social well-being of older adults. However, the studies carried out in Brazil are insufficient to represent the multicultural characteristics of the country. It is believed that cultural/environmental differences may influence health management quality, with implications for older adults' health and QOL. Therefore, the aim of this study was to assess the factors related to bodily pain in older female participants in a recreational program in Brazil.

Methods: This study used a cross-sectional design. The participants were community-dwelling women (60 years or older, $n = 99$), categorized by low ($n = 68$) or high ($n = 31$) bodily pain. They answered questionnaires regarding their general health and lifestyle, and performed several physical tests. Data were analyzed with Chi-square test or Fisher's exact test for categorical variables and Mann–Whitney U test for continuous variables. Logistic regression was performed to identify confounding factors.

Results: A fully adjusted logistic regression analysis demonstrated that walking at maximum speed [odds ratio (OR), 0.03; 95% confidence interval (CI), 0.003–0.35; $p = 0.005$], one leg stand (OR, 0.93; 95% CI, 0.88–0.99; $p = 0.03$), and the QOL physical functioning domain (OR, 0.92; 95% CI, 0.87–0.98; $p = 0.01$) were all associated with bodily pain.

Conclusion: In summary, bodily pain is significantly associated with poor maximum walking speed, balance, and QOL physical functioning; these findings are reflective of poor QOL. Assessing bodily pain is simple and can help diagnose further problems. Moreover, improvements in physical conditioning may promote greater health and QOL in this population.

Copyright © 2015, Asia Pacific League of Clinical Gerontology & Geriatrics. Published by Elsevier Taiwan LLC. Open access under [CC BY-NC-ND license](https://creativecommons.org/licenses/by-nc-nd/3.0/).

1. Introduction

Reports have shown that up to 50% of community-dwelling older adults suffer from chronic pain.¹ This condition has a

significant impact on the physical, psychological, and social well-being of older adults.

Many original and review studies have assessed chronic pain and verified its association with several health outcomes, including

* Corresponding author. National Center for Geriatrics and Gerontology, 7-430 Morioka-cho, Obu, Aichi 474-8511, Japan.
 E-mail address: harai@ncgg.go.jp (H. Arai).

nonpharmacological and pharmacological interventions.^{1–4} However, most studies have been conducted with developed populations or aimed to demonstrate that pain is a consequence of chronic conditions in institutionalized or community-dwelling older adults.^{5–9}

Thus, pain is frequently associated with poor quality of life (QOL) and negative health outcomes such as disability, morbidities, inflammation, poor social well-being, depressive symptoms, and others.^{10–14} Although morbidities seem to account for the high incidence of pain, we believe that chronic bodily pain is not a compulsory consequence of morbidities and is more frequent in older adults' daily lives than expected.

The study of pain has also received attention in Brazil, and several studies have recently been published in this country.^{11,12,15,16} However, these studies have been conducted in developed areas of the country and cannot be extended to other regions such as the northeastern part. Cultural and environmental differences throughout the country led us to assume that variability may exist in the quality of health management. This variability may have profound implications for older adults' overall health and QOL.

Owing to the increase in the older population, it was hypothesized that the important health variables such as physical functioning, QOL, self-reported sleep duration and quality, and comorbidities, are related to general bodily pain in older women who participated in a recreational group. Identifying factors associated with chronic bodily pain is essential to developing and applying punctual health interventions. These interventions are particularly important for older adults because the aging process is commonly associated with several adverse health outcomes. Therefore, this study aimed to assess factors related to bodily pain in older women who participated in a recreational program in Brazil.

2. Methods

This study used a cross-sectional design.

2.1. Participants

The study participants consisted of older, community-dwelling women from Brazil. These women were recruited for recreational activities in northeastern Brazil. The recreational group is part of a state university initiative created to promote health and QOL through physical, cultural, and leisure activities. Activities were performed in four groups, twice per week, for 1 hour per session. Activities were coordinated by teachers of the physical education undergraduate school, and students were selected from the physical education and medicine courses. Physical activities, such as low-impact aerobics activities (using alternative materials; e.g., chair, balls, elastic bands), dance, and recreational games, were performed during the classes. Social activities were performed on special occasions, such as Christmas, Mother's day, Father's day, and birthdays.

The research protocol was explained to all participants prior to data collection. The participants were aided by trained assistants during the tests. Only women were included in our study because the majority of participants in these groups were female. In this study, only women were selected so as to avoid the low statistical power resulting from sex division owing to the small number of male participants. Women, aged 60 years or older, who participated in recreational activities, could carry out normal activities of daily living (ADLs), and fill out the questionnaires were eligible for this study. In the event that participants were illiterate, questionnaires were conducted using the interview format. Participants were excluded from the study if they had any of the following: (1)

uncontrolled cardiovascular, pulmonary, or metabolic diseases; (2) any orthopedic conditions that could detract them from normal ADL; (3) if the participants had undergone any type of surgery in the past 3 months; (4) if the participants were forced to bed rest in the past 3 months; or (5) received concurrent treatment for cancer. Written consent was obtained after all participants were informed of the purpose and procedures of the study. A total of 120 participants were recruited to participate in this research. However, 21 of them were excluded from the analysis because they were younger than 60 years and/or had missing data in their questionnaires. A total of 99 participants met the inclusion criteria for the study and were willing to follow the procedures. This study followed the ethical guidelines of the Declaration of Helsinki and was approved by Kyoto University Graduate School of Medicine Ethics Committee, Kyoto, Japan (E1470).

2.2. Bodily pain

Bodily pain was assessed by asking, "How much bodily pain have you had during the past 4 weeks?" Answers were provided according to a 6-point Likert scale with the following options: (1) none; (2) very mild; (3) mild; (4) moderate; (5) severe; and (6) very severe. This question is part of the Short-Form 8 (SF-8) assessment and represents the bodily pain domain. Only this question was used to determine whether a single item could accurately assess bodily pain and its related factors in older women. Participants were then divided into two groups: low bodily pain (none, very mild, and mild; $n = 68$; coded as 0) and high bodily pain (moderate, severe, and very severe pain; $n = 31$; coded as 1).

2.3. General assessments

Participants answered a self-administered questionnaire regarding their (1) sociodemographic characteristics, such as age, living situation, educational level, and current work and financial satisfaction; (2) lifestyle and health factors, such as smoking and alcohol consumption, self-reported sleep duration and quality, minutes of physical activity per week, number of consultations in the past 6 months, polypharmacy (considered to be 4 or more concurrent medications), and morbidities; and (3) other relevant health indicators, such as QOL (by the other domains assessed by the SF-8). Body mass index (BMI) and several physical function tests (i.e., walking at usual and maximum speed and one leg stands) were also collected.

Participants were asked about the presence of several morbidities (e.g., lower back pain, osteoporosis, hypertension, hyperlipidemia, arthropathy). The responses were incorporated into the analysis if the participants were assumed to use prescribed medications for a specific morbidity. The presence of more than one chronic condition was also included in the analysis.

Self-reported sleep duration and quality referred to the amount of time participants slept at night during the past month, and was used to determine their subjective evaluations of the quality of sleep. Height and weight were measured. BMI was calculated as bodyweight divided by height squared.

QOL was measured using the SF-8, which is an abbreviated version of the SF-36 and consists of eight domains, including general health, physical functioning, role-physical, bodily pain, vitality, social functioning, mental health, and role-emotional. These domains are considered to be physical and mental component summaries, as previously specified.¹⁷ A higher score on the SF-8 indicates better QOL. The bodily pain domain was given a particular emphasis in our analyses. Because physical and mental component summaries were calculated from specific domains, they were not considered for analytical purposes.

Download English Version:

<https://daneshyari.com/en/article/3325681>

Download Persian Version:

<https://daneshyari.com/article/3325681>

[Daneshyari.com](https://daneshyari.com)