

HOSTED BY

Available online at www.sciencedirect.com

ScienceDirect

journal homepage: <http://www.elsevier.com/journals/international-journal-of-nursing-sciences/2352-0132>

Original Article

Factors associated with activities of daily living among the disabled elders with stroke



Li Pei, Xiao-Ying Zang, Yan Wang, Qian-Wen Chai, Jun-Ying Wang, Chun-Yan Sun, Qing Zhang*

School of Nursing, Tianjin Medical University, Tianjin, China

ARTICLE INFO

Article history:

Received 20 February 2015

Received in revised form

7 December 2015

Accepted 26 January 2016

Available online 16 February 2016

Keywords:

Activities of daily living

Disabled persons

Frail elders

Stroke

ABSTRACT

Objective: To determine the factors associated with activities of daily living (ADL) among the disabled elders post-stroke.

Methods: A total of 158 patients were chosen from community health service stations in eighteen regions of Tianjin city by convenience sampling from March to November in 2013. The Barthel Index (BI) and the short-form mini-nutritional assessment (MNA-SF) were used to evaluate the ADL, the nutritional status respectively. Statistical analysis was performed using independent sample t-test, one-way ANOVA, Pearson correlation and multiple linear regression analysis. Barthel ADL index was the main outcome.

Results: The mean score of ADL was 50.50 ± 27.125 . The multiple linear regression showed that the factors which had significant impact on ADL were stroke frequency, types of stroke, nutritional status, financial status, and age.

Conclusions: Disabled elders with recurrent strokes, hemorrhagic stroke, dependent financial resources, older age, worse nutritional status and living with family had poorer stroke-related outcome. Healthcare providers can discover the high-risk groups of disability and implement individualized preventive interventions in accordance with the related factors.

Copyright © 2016, Chinese Nursing Association. Production and hosting by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

1. Introduction

Stroke is a medical emergency characterized by the WHO as “rapidly developed clinical signs of focal (or global) disturbance of cerebral function, lasting more than 24 hours or leading to death, with no apparent cause other than of vascular origin” [1]. Patients with stroke have a high rate of

disability. Approximately 50 million stroke survivors worldwide have physical, cognitive, and emotional problems, about 25%–74% of whom are dependent in activities of daily living (ADL) [2]. The outcome of stroke is heterogeneous. In China, approximately 1.5 million patients die and 7 million survive from stroke each year. Three-quarters of the survivors suffer from various degrees of sequelae [3]. Furthermore, more than

* Corresponding author.

E-mail address: snzhangqing@tjmu.edu.cn (Q. Zhang).

Peer review under responsibility of Chinese Nursing Association.

<http://dx.doi.org/10.1016/j.ijnss.2016.01.002>

2352-0132/Copyright © 2016, Chinese Nursing Association. Production and hosting by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

two million patients experience a stroke attack each year, and the incidence rate increases by 6.7% every year [4].

Age is a known risk factor for stroke; that is, the incidence of stroke increases with age [5]. Stroke is also more threatening for elders. Elderly stroke patients have a higher mortality and receive a lower quality of care than young stroke patients [6]. Stroke is a major cause of disability in people older than 60 years [5]. The population of elders in China had reached 178 million, accounting for 13.26% of the total population in 2010 [7]. In addition, the total number of elders dealing with stroke-related disability had reached 33 million, accounting for 19% of the total elderly population [7]. These data indicate that stroke-related disability is an important public health problem that requires measures from the government, public, and health service agencies to be solved.

Disability is characterized by a difficulty in doing activities in any domain of life (from hygiene to hobbies, and errands to sleep) because of a health or physical problem [8]. Both chronic and acute conditions could influence the bodily function and ADL of a patient [8]. Stroke was ranked as the third cause of disability after musculoskeletal and mental disorders, and it might be the most common cause of complex disability [9]. On average, stroke survivors would suffer at least 0.86, 1.24, and 1.39 years with mild, moderate, and severe disabilities, respectively [10]. Thus, the primary goal of caring for elders with stroke is to regain their abilities to perform ADL, such as feeding, dressing, moving in and out of bed, toilet using, mobility, and bathing, which are necessary for survival [8].

Maintaining independence in ADL is an important factor for the quality of life. Stroke survivors who need assistance for ADL always feel socially isolated, overwhelmed, and abandoned [11]. Gillespie et al. [12] indicated that patients who are disabled post-stroke also place burden to their family caregivers, thereby affecting family relationships.

Stroke is a costly and bothersome disease that entails serious financial burden worldwide. In 2008, more than \$65 billion of direct and indirect costs were consumed by stroke in the United States [5]. The expenditures included cost from hospitalization, nursing homes, physicians and other healthcare professionals, home healthcare, drugs and other medical durables, and lost productivity because of morbidity or mortality [5]. Disability also causes a considerable loss of medical costs. In 2011, the total cost of long-term care for disabled elders was \$57.1 billion in China [13]. However, the dependence in ADL of elders with stroke can be prevented. Therefore, exploration of ADL factors and effective measures to promote stroke recovery is extremely urgent.

Considering that stroke has become the leading cause of dependence in ADL worldwide in recent years, several scholars focused on stroke-related disability and factors. Jia et al. [14] indicated that age, education, caregivers, history of past illness, history of smoking, and muscle strength are influencing factors of ADL for stroke patients. Zheng et al. [15] found that ADL negatively correlates with the degree of neurological impairment and stroke duration but positively correlates with the total time of weekly rehabilitation training for patients post-stroke. Nevertheless, studies on ADL focused on ordinary old people or stroke patients regardless if they are disabled or not. A study focusing on the outcome of disabled elders is lacking. Thus, studies that determine the relevant

factors of ADL for disabled elders post-stroke are needed. Accordingly, the present study aims to identify the demographic and clinical factors associated with ADL among disabled elders post-stroke.

2. Methods

2.1. Participants

This study was carried out from March 2013 to November 2013. A total of 360 disabled elders were chosen from community health service stations in 18 regions of Tianjin City through multi-stage cluster sampling; 158 of these elders were disabled because of stroke. The inclusion criteria for the patients are as follows: 1) diagnosed with stroke; 2) aged 60 or over; 3) disabled, which refers to dependence on assistance in one or more ADL, including feeding, dressing, moving in and out of bed, toilet using, mobility, and bathing; 4) permanent residence in Tianjin City; and 5) conscious and can answer questions clearly. Patients were excluded from the study if they had mental illness, aphasia, cognitive dysfunction, or refused to participate.

2.2. Instrument

A structured questionnaire related to the socio-demographic characteristics, clinical information, nutritional status, and ADL of the participants was designed by the researchers.

The socio-demographic characteristics of the participants included age, gender, education level, marital status, number of children, occupation, living alone or not, and financial status. The clinical information of the participants included types of stroke, stroke frequency, medical insurance, number of chronic diseases, and disability duration. We graded the nutritional status of the participants using the short-form mini-nutritional assessment (MNA-SF), which could be completed in approximately 3 min. The scale consisted of six items as follows: BMI < 23, recent weight loss > 1 kg, acute illness or stress, housebound, and dementia or depression. The total score of MNA-SF ranges from 0 to 14. A score within the range of 12–14 indicates normal status, whereas a score of 11 or less means at risk of malnutrition [16]. The scale was translated into Chinese by He et al. [17] and validated with satisfactory reliability and validity. The sensitivity, specificity, diagnostic accuracy, and correlation coefficient of MNA-SF are 85.7%, 96.0%, 87.5%, and 0.933, respectively [17].

The ADL was measured using the Barthel index (BI), which assessed 10 aspects of ADL: feeding, moving from wheelchair to bed and return, personal toilet, getting on and off the toilet, self-bathing, walking on level surface, ascending and descending on stairs, dressing, controlling bowels, and controlling bladder. The total score ranged from 0 (total dependence) to 100 (total independence). A higher BI indicates a higher level of ADL [18]. Participants were classified into four categories based on their BI scores: severe disability (BI ≤ 55), moderate disability (BI: 60–85), mild disability (BI: 90–95), and no disability (BI = 100) [10]. BI is widely used for stroke patients in China. The Cronbach's alpha coefficient and KMO statistical

Download English Version:

<https://daneshyari.com/en/article/2652750>

Download Persian Version:

<https://daneshyari.com/article/2652750>

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