Asian Nursing Research 11 (2017) 150–157

Contents lists available at ScienceDirect

Asian Nursing Research

journal homepage: www.asian-nursingresearch.com

Research Article

A Community Based Program for Family Caregivers for Post Stroke Survivors in Thailand

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ARTICLE INFO

Article history:
Received 9 January 2017
Received in revised form
28 April 2017
Accepted 26 May 2017

Keywords:
stroke
recovery
family caregivers
skills
community

SUMMARY

Purpose: The purpose of this study was to evaluate the effectiveness of the post-stroke care program within the community setting in Thailand.
Methods: This quasi-experimental study was a nonequivalent control group pre-test and post-test design. A total of 62 pairs of post-stroke patients and their family caregivers were recruited to the study (31 pairs per group). The intervention consisted of a four-week program that included distributing pertinent information, providing skill practice during post-stroke care sessions and utilizing strategies to enhance motivation and behavioral skills of family caregivers based on the information-motivation-behavioral skills model. The family caregivers' post-stroke care skills were evaluated. The patients' activities of daily living (ADLs) and complications were evaluated at baseline and immediately and 2-month post-intervention. Statistical analysis included chi-square test, Fisher's exact test, independent t-test, and two-way repeated measures' analysis of variance.
Results: After participating in the program, family caregivers in the experimental group significantly improved their post-stroke care knowledge and skills as compared to those in the control group ($F = 585.81$, $p < .001$). ADLs among post-stroke patients in the experimental group significantly increased over time and were higher than those in the control group ($F = 46.01$, $p < .001$). Moreover, complications among patients in the experimental group were less than those in the control group.
Conclusions: The post-stroke care program improved family caregivers' post-stroke care skills which resulted in improved functional status and decreased complications among post-stroke patients.

Introduction

Stroke is a critical public health problem worldwide. Each year, approximately 5.5 million people die from stroke, and 44 million people have lost disability-adjusted life years [1]. In Thailand, stroke is the fourth cause of death and disability and the number of stroke patients increases every year with an incidence of 352.3 per 100,000 population in 2014 [2]. Nearly 50% of post-stroke patients have moderate to severe impairment, have developed paralysis and are not able to take care of themselves [3], or have developed other physical complications such as aspiration pneumonia, joint contracture and pressure ulcer as well as various psychological conditions such as anxiety, stress, or depression. These psychological distresses are often the result of physical disabilities [4].

Within the range of moderate to severe disability, post-stroke patients are totally dependent upon assistance. Therefore, family caregivers become the key persons to care for them. A crucial aspect in caring for patients after stroke is to promote early recovery and to prevent complications. If patients receive correct and proper care within the golden period (3–6 months), stroke recovery will be significantly improved [5,6]. Previous studies on home rehabilitation programs for stroke survivors show that post-stroke care is complicated and different from caring for patients with

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http://dx.doi.org/10.1016/j.anr.2017.05.009

other chronic illnesses [7,8]. Family caregivers have to become knowledgeable and acquire skills about prevention of complications, activities of daily living (ADLs), mobility, rehabilitation, and emotional and stress management [9,10].

In Thailand, stroke patients are routinely admitted to a hospital for approximately one week. Prior to discharge, a hospital will prepare both the patient and caregiver as outlined in the discharge planning agenda. However, it was found that family caregivers frequently received an inadequate preparation of knowledge and skills and confessed to lacking confidence to care for patients [11,12]. These factors affected the quality of care as well as the patient's safety.

Moreover, there are problems in care implementation for patients after stroke in communities such as delay in referring patient's medical documents from a hospital to the Community Health Centers (CHCs) as well as a shortage of human resources, especially in rural areas. Many patients and family caregivers were not included in post-stroke care and follow-up at home [7], causing further health complications, particularly pressure sores, urinary tract infections (UTI), joint contraction, aspiration pneumonia, and recurrent stroke, leading to readmission [10].

In the Thai community, family caregivers need knowledge regarding how to manage and prevent complications after stroke, support a patient's ADLs, and access rehabilitation services and what community services are available [12,13]. They also require training to provide nursing care relevant to patients' problems and needs including feeding technique, aspiration prevention, pressure ulcer prevention, and wound care. Social supports such as compassion, advice, and equipment for patient care and rehabilitation from family, health care providers, and community are also needed [6,13].

Previous studies conducted in Thailand focused on emotional distress amongst family caregivers including stress, depression, and caregiving burnout, and their physical rehabilitation skills [14–16]. The studies related to community based programs for stroke patients emphasized providing knowledge and training for physical rehabilitation [6,13]. However, research studies regarding skill development and the assessment of caregivers' skills, including the assessment of patients' outcomes during the golden period of stroke recovery, are scant [7,11]. Furthermore, family caregivers' skill development and assessment concerning feeding and aspiration prevention, pressure ulcer prevention, wound care, fall prevention, mobility, and rehabilitation have not typically been integrated in post-stroke care guidelines, resulting in inadequate acquisition of the necessary post-stroke care information and skills for family caregivers.

Thus, the purpose of this study was to evaluate the post-stroke care program, which was designed based on the information-motivation-behavioral skills (IMB) theory. The IMB theory posits that there are three factors that influence behaviors of individuals: 1) information which directly translates into behavioral skills and performances; 2) motivation to act on such information and to perform those acquired skills; and 3) behavioral skills to confidently implement the desired outcomes (Figure 1). The information provided to individuals should contain specific knowledge about disease management. Motivation is comprised of two components: personal motivation and social motivation. Personal motivation is a function of one's beliefs about the consequences of a behavior and social motivation involves receiving social support for health behavior implementation. Behavioral skill is an individual's ability to perform the skills, promoted via teaching, demonstration, and/or training followed by practice [17].

According to the IMB theory, the intervention program for family caregivers in this study focused on: 1) providing necessary information about post-stroke care; 2) motivating caregivers to perform patient care and recovery; and 3) providing skills training necessary to take care of patients. These components were presumed to improve the behaviors of family caregivers in order to correctly and consistently care for stroke survivors.

The following four hypotheses in the study were posited after participation in the intervention program: (a) family caregivers demonstrate improvement in post-stroke care skills compared to pre-intervention, (b) family caregivers show improvement in post-stroke care skills compared to those in the control group, (c) patients will enhance ability to perform ADLs and will experience reductions in complications post-intervention compared to pre-intervention, and (d) patients will enhance ability to perform ADLs and demonstrate reductions in complications compared to those in the control group.

Methods

Study design

A quasi-experimental study with a nonequivalent control group, pre-test and post-test design was conducted from November 2015 to June 2016. Post-stroke patients and family caregivers were recruited from their communities. All data were collected for three phases: before and after joining the program and within the two-month follow-up period (Figure 1).

Setting and sample

The study sample was comprised of family caregivers and post-stroke patients in Kamphaeng Phet, a province in the north of Thailand. In the research setting, there were four districts containing the highest number of stroke patients. The simple random sampling by lottery method was used to divide the four districts in two groups (experimental and control). Following that division, the participants who met the inclusion criteria were recruited in the study based on purposive sampling. The inclusion criteria for family caregivers were (a) primary caregivers of the first episode of post-stroke patient, (b) living in the same house with the patient, (c) willing to participate during the entire study period, and (d) willing

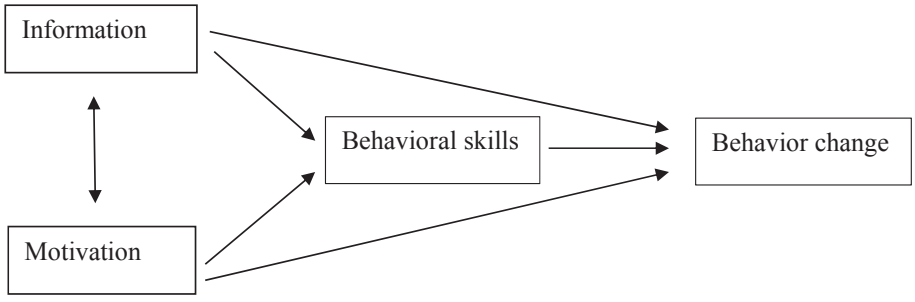

Figure 1. The information-motivation-behavioral skills model.