

ARAŞTIRMA

EFFECTS OF EMPOWERMENT PROGRAM ON THE PERCEPTION OF EMPOWERMENT AND SELF CARE BEHAVIORS AMONG PATIENTS WITH OSTEOARTHRITIS OF THE KNEES

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ABSTRACT

The purpose of this quasi-experimental study was to examine the effects of empowerment program on the perception of empowerment and self care behavior among patients with osteoarthritis of the knees. To examine the effects of the empowerment program data were collected from 40 patients in a primary care unit in Phitsanulok Province, who met the criteria of osteoarthritis from October to December, 2007. The samples were matched into experimental group and control group with 20 patients in each group. The experimental group received the empowerment program. The control group received a routine services program. The instruments used to collect data consisted of a screening instrument, a daily activity record, a perceived empowerment questionnaire and an experimental instrument. Participants were also provided with a handbook regarding osteoarthritis of the knees. Data were analyzed by using descriptive statistics, percentage, standard deviation, paired sample t-test, independent t-test, and ANOVA.

The results revealed that; the osteoarthritis patients who were in the experimental group had significantly higher scores of the perceived empowerment and the self care behavior than those before the intervention ($p < .05$). The osteoarthritis patients who were in the experimental group had significantly higher scores of the perceived empowerment and the self care behavior than the patients who were in the control group ($p < .05$).

This study shows that the empowerment program increase the patients' perception of the empowerment and the self care behavior among patients with osteoarthritis of the knees. The results suggest that the program could be used effectively to promote health among other osteoarthritis patients.

Keywords: Empowerment, perception, self care behaviors, osteoarthritis of the knees

INTRODUCTION

Knee osteoarthritis is a chronic disease resulting from degeneration of articular cartilage in the knee joint. The most common symptom that leads the patient to visit a physician is knee pain (Carol 2001, Paul and Kenneth 2003). Osteoarthritis is characterized by destruction of cartilage with result and decrease in the joint spaces and bony over growth. The incidence of knee osteoarthritis is significant in United States of America where increases in the elderly population is has lead to increased incidence of knee osteoarthritis. Among this incidence group, 80 percent were found change in knee pathophysiology with 5-10 percent of these expressing the clinical symptoms (Felson et al. 2000, Jinks et al. 2002). Joint dysfunction can directly be a cause of knee pain. Nearly 49 million Americans, one out of every four adults have been diagnosed with arthritis by a medical

provider (CDC 2004). Presently in Thailand, 47.5% of older adults have osteoarthritis and this disease is found more often in women more than in men (Wiboonponprasert 2007). The Out Patient Services Unit of the Sirindhon National Medical Rehabilitation Center found that from 2003 -2005 there were 169, 959, 9450 diagnosed cases of osteoarthritis of the knee. This group also found that patients with higher symptom severity had more pain (Brandt and Mankin 1998).The characteristics of knee osteoarthritis' pain include deep pain that lasts throughout the day and during the night. It has been noted that patients who have increased pain have a poor prognosis. The major symptoms of knee osteoarthritis' patients are limitation of joint and pain. Pain from osteoarthritis of the knee influences physical, psychological, psychological, social and economic status as well as reduced work effectiveness, decreased

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body balance and movement and inability to complete activities. Osteoarthritis is caused by uncontrollable factors such as age, sex, bone mass density, hormone, family history and controllable factors such as career, smoking, obesity and weak muscle. Besides these, Stenmark (1995) suggests that enhancing self-efficacy is perhaps the most important aspect of patient education in arthritis. Boon-Im (2002) studied physical therapist practices in enhancing self-efficacy among knee osteoarthritis patients. The results showed that most of the physical therapists is moderate to low levels of self-efficacy enhancement and outcome expectation enhancement with patients. This finding revealed that physical therapists still lacked a social science perspective, especially as it concerns self-efficacy concepts.

In a study by Waewaram (2005) using a clinical nursing practice guideline for teaching self-care to the elderly with osteoarthritis of the knees demonstrate that nurses are important to ameliorate disabilities from osteoarthritis of the knee. Education about disease processes and how to remain active is important for those with osteoarthritis so that they can take care of themselves. Education for this group should include: Exercise behavior for Activities Daily Life, medication and follow up by doctor. Taveechai (2000) revealed a relationship between self-care behavior and the severity of a knee pain and found that behaviors associated with worsened knee pain included over working the joint and that rest of the knee can decrease symptoms. According to Taveechai's study, self-care behaviors can reduce symptoms and relieve the pain in older adults with osteoarthritis of the knee. The three dimensions of self-care behaviors, namely the universal self-care behaviors, the developmental self-care behaviors, and health deviation self-care behaviors of knee osteoarthritis elderly, were important in this study. The Universal self-care behaviors are associated with life processes, the maintenance of the integrity of human structure and function and with general well-being. Examples of universal self care behaviors include breathable air, adequate nutrition, clean water, relaxation and freedom from fear and anxiety. Developmental self-care requisites are associated with human growth and developmental processes and with conditions and events occurring during various stages of the life cycle and situations that can adversely affect

development. Health deviation self-care requisites are related to genetic and constitutional defects and human and structural and functional deviations such as learning to live with effects of pathologic conditions and states and the effects of medical diagnostic and treatment measures in a life style that promotes continued personal development (Orem 2001).

In this study there was a negative relationship between self-care behaviors and severity of knee osteoarthritis (Taveechai 2000). Jansoontraporn (2005) found that most patients used a combination of strategies to manage knee pain. Rest and medication were two strategies commonly used by patients. In this study the outcomes of self management of knee pain management included a reduction in pain levels and a low functional status. The functional status depended on knee pain level. The three activities which most commonly induced severe knee pain were sitting on the heels for a long time, sitting on the heels for a moment and squatting on the floor in a polite attitude, respectively.

At present, the treatment of osteoarthritis is divided into three kinds: non-pharmacologic therapy, pharmacologic therapy and surgery. Most patients seek curative methods either traditional or conventional treatment in order to reduce pain. Patients may use medication, physical therapy, hot or cold compression, behavior adjustment, and other therapies to relieve pain. The best approach to knee pain management is the combination of various treatments, aimed to relieve the knee pain, maintain or manage the symptoms and to prevent increased osteoarthritis of the knee (Carol 2001). Moreover, some studies showed that medicinal herbs with massage were other choice for osteoarthritis patients and there is a significant reduction of pain and increase range of knee movement after seven days of treatment.

Community nurses are available to educate and treat patients with osteoarthritis. These nurses care for patients and carry their treatment and rehabilitation, as well as health promotion and prevention in the community. For knee osteoarthritis the nurse can educate the patients to know about the nature and prognosis of their disease in order to get their cooperation. Nurse also teach and empower them to exercise in order to increase muscle strength and mobility. Currently community nurses do not have enough interaction with older adults with osteoarthritis of the knee to fully provide the

care and education required. This study aims to modify the process of empowerment of Gibson (1995) to create an empowerment program to support the patients to enhance the perceived power and self care behavior in osteoarthritis patients.

Research Questions

The research question in this study is how does an empowerment program for patients with osteoarthritis of the knee enhance perceived power and improve and strengthen self care behaviors?

Purpose of the Study

The purpose of this quasi-experimental study was to examine the effects of empowerment program on the perception of empowerment and self care behavior among patients with osteoarthritis of the knees.

Scope of the Study

This research is to study the results of an empowerment program for osteoarthritis patients. The sample was generated from patients who received treatment services in the primary health care unit in Amphur Bankathom, Phitsanuloke. All of the participants in this study were between the ages of 48-65.

Hypotheses

The hypotheses of this study are as follows:

1.The patients who participated in the empowerment program had more perceived sense of power in self care behavior than those who did not.

2.The patients who participated in the empowerment program had more self care behavior than those who did not.

Conceptual Framework

The concept of empowerment has been analyzed in nursing science resulting in several different definitions such as the process of enhancing the abilities to the person or group of persons (Rodwell 1996, Wallerstein 1992). Gibson (1991) viewed empowerment as the process of promoting and enhancing personal abilities in order to meet desires and to be able to perceive the situations and perform in accordance with the reality of the plan. In this definition several constructs were identified including; **Discovering reality**, the patients accepted the results of diagnosed chronic disease, with three levels of response ,emotional, intellectual perception and behavioral responses; **Critical reflection** frustration will bring the patients to change meaning causing patients to evaluate themselves and analyze situations and change care habits; **Taking charge** patients perceived of their own strength and capabilities, patients are ready to manage all situations, this required advocacy, learning the ropes, learning to persist and negotiating;

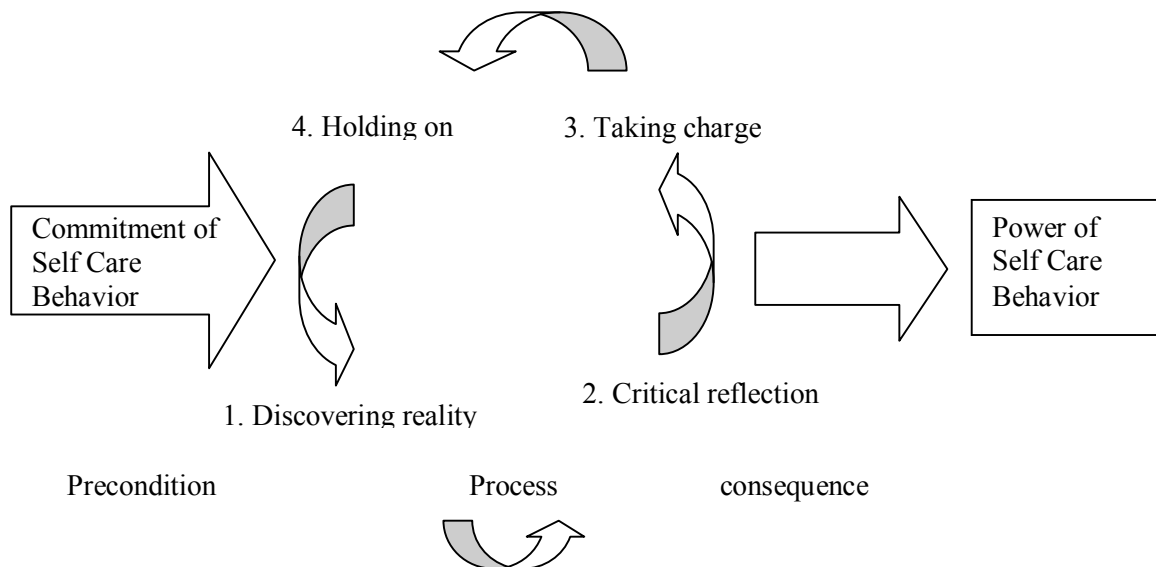


Figure 1. The process of empowerment for Osteoarthritis patients

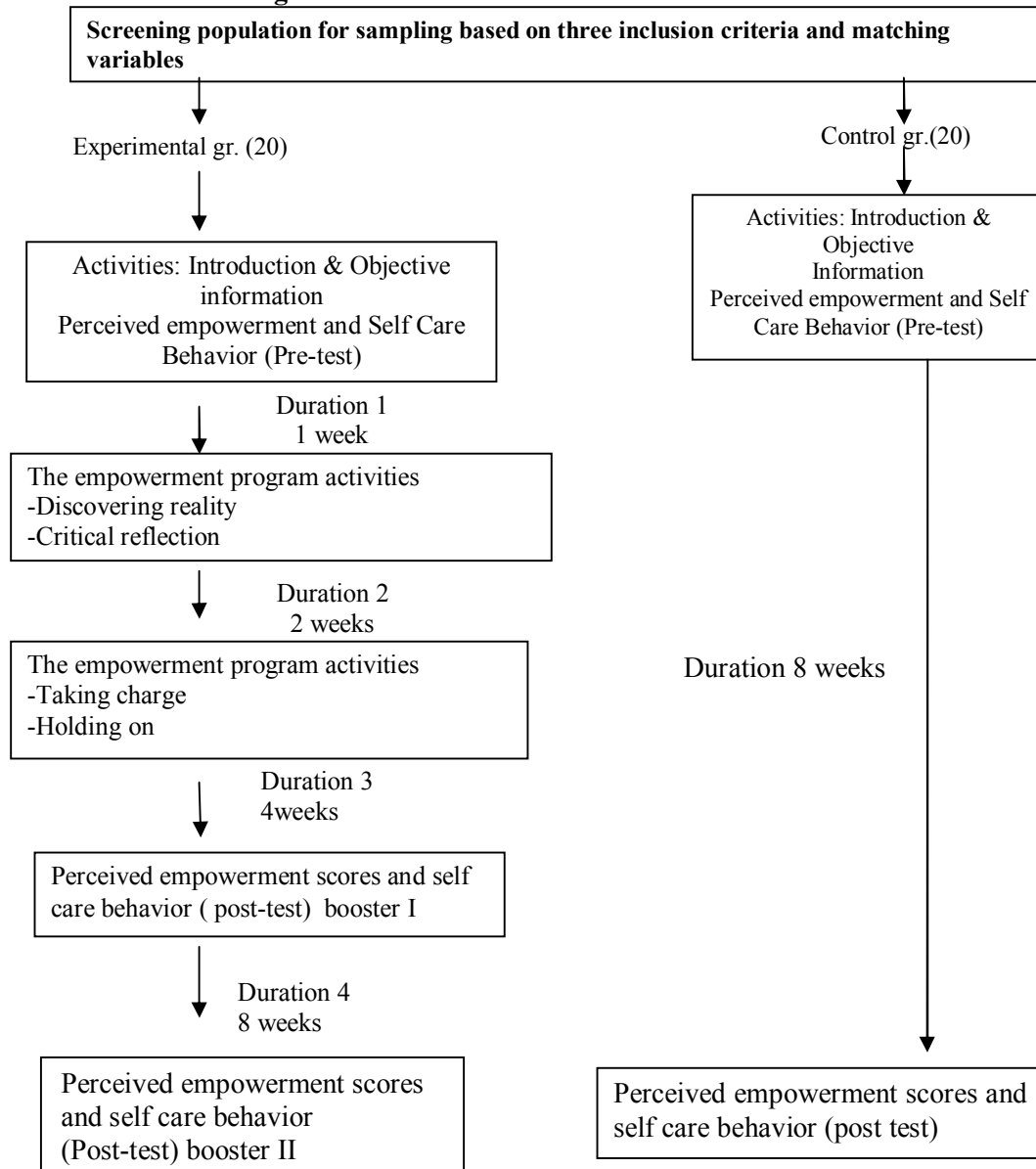
Establishing partnership; **Holding on** the empowerment is resulted form patients' perception self-strength. Base on the results, the researcher seek to effects of empowerment program on the Perception of Empowerment and Self Care Behaviors among Patients with Osteoarthritis of the knees. Thus, this study was to examine the effects of empowerment program on the perception of empowerment and self care behavior among patients with osteoarthritis of the knees.

Amphur Ban Ra Kom, Phitsanulok were divided into two groups using the matched pair technique. Simple random sampling technique was used for both the experimental (N=20 and control group (N=20). The experimental group participated in the empowerment program according to Gibson's theory emphasizing four concepts: 1) discovering reality 2) critical reflection 3) taking change and 4) holding on. The experimental group practiced for eight consecutive weeks using a manual produced by the researcher specifically for this program. The control group received a manual and routine guidance. Data collection instruments consisted of a screening instrument, a daily activity record, and a perceived empowerment questionnaire.

METHODOLOGY

This study, using a randomized two group pre and post test design. Forty patients who met the criteria of knee osteoarthritis at

Research Design



The assessment was performed by using the perceived empower in caring developed by the researcher. The scales consisted of 20 items with a response scale ranging from 1-5. Cronbach's Alpha Coefficient for the questionnaires was 0.95. Post testing was done immediately following the intervention. Descriptive statistics were used to assess the demographic information. Data collection was done using a Personal Data Form, perception of empowerment Questionnaire and behavior of self care Questionnaire. The difference of perception of empowerment mean scores between, before, and after intervention within groups was analyzed using t-test for dependent sample, ANOVA (Repeated Measures). The

between experimental and control groups was analyzed using t-test for independent sample and ANOVA (Repeated Measures)

Ethical considerations

The ethical consideration was approved by the committee of ethical of Naresuan University, Project # 51 02 04 0064

RESULTS

Demographic characteristics of the osteoarthritis patients were shown the number and percent about personal data. In this table, the most of age of the experimental group and the control group are 51-60 years (40 percent VS 35 percent).

Table 1. Demographic Characteristics of the Caregivers

Characteristics	Experimental group (n=20)		Control group (n=20)	
	n	Percent	n	Percent
Sex				
Male	7	35	7	35
Female	13	65	13	65
Age				
45-50	5	25	5	25
51-55	8	40	7	35
56-60	7	35	8	40
Characteristics	Experimental group (n = 20)		Control group (n = 20)	
	n	Percent	n	Percent
Education				
None	1	5	1	5
Primary school	18	90	16	80
Secondary school	1	5	3	15
Occupation				
Employee	6	30	7	35
Agricultural sector	14	70	13	65

The marital status was mostly married. The most graduation shows that primary school was 90 percent in the experimental group and in the control group show was 80 percent. Most of occupation of the experimental group was agricultural sector (70 percent) and so did the control group (65 percent).

The findings of the effect of empowerment program demonstrated that the osteoarthritis patients who were in the experimental group had significantly higher post-test scores of the perceived self-efficacy than that the pre-test score at .01 at week 4. At

week 4 and 8 post-test scores were significantly higher than the pre-program at .01 levels. The instruments used in this study were: 1) The Osteoarthritis of the knees' patients screening tool. 2) The self perception of empowerment questionnaire and 3) self- report of self care behaviors in nutrition, exercise, weight, and activities. The researcher developed the instrument for assessment the perceived of empowerment and self care behavior by reviewing the literature and focus group interview according to the concept of empowerment.

Table 2. Means and Standard Deviations of Perceived Empower in Osteoarthritis Patients of the Experimental and Control Groups at the Pre-test, 4th and 8th Weeks

Data	Experimental Gr. (n=20)		Control Gr. (n=20)		Independent t-test
	Mean	SD	Mean	SD	
Perceived of empowerment					
pre-test	16.40	1.67	16.82	1.89	-.827
post-test at 4th weeks	17.08	1.02	16.90	1.74	2.43 **
post-test at 8th weeks	18.70	0.73	17.35	1.56	3.82 **

Table 3. Means and Standard Deviations of Self Care Behavior in Osteoarthritis Patients of the Experimental and Control Groups at the Pre-test, 4th and 8th Weeks

Data	Experimental Gr. (n=20)		Control Gr. (n=20)		Independent t-test
	Mean	SD	Mean	SD	
Self Care Behavior					
Pre-test	89.12	9.10	89.66	9.72	-.204
Post-test at 4th weeks	119.58	6.02	100.60	9.68	4.42 **
Post-test at 8th weeks	118.93	5.98	102.27	9.02	5.12 **

The experimental group had empowerment program and the control group had routine care by using the public health care guideline.

The statistic was applied by using Repeated Measurement to analysis the data from Pre-test. Four and eight weeks after experimental.

DISCUSSION AND CONCLUSIONS

This study showed that an empowerment program could effectively increase perceived empowerment and self care behaviors among patients with osteoarthritis of the knees. The empowerment program is another way nurses can assist osteoarthritis patients to help themselves reduce pain and have a quality of life. At the first stage of the program the participants were quite confused and frustrates about their pain, symptoms, and treatment. Therefore, nurses should empower them to achieve the goals by using the four stages of empowerment to make them having self confidence to self care themselves. The findings of this study are consistent with findings that empowerment programs are effective to decrease stress in the caregivers of elderly stroke patients In this instance researchers found that the post-test scores on perception of empowerment in the experimental group during immediately after the experiment and one month after the experiment were higher than before using empowerment

group and the post-test scores on the level of stress in the experiment group during immediately after the experiment and one month after the experiment were higher than before using empowerment group. Other research found that the effects of empowerment program on caring behavior and perceived empowerment among caregivers of patients with chronic obstructive pulmonary disease found that essential caregivers who participated in the empowerment program had significantly higher scores of the caring behavior and perceived empowerment than the group participating in the routine perceived program ($p < .05$) (Wattana 2002). The results from several researches were congruent and supported the process of empowerment to promote self care. This research supported the theoretical validity of Gibson's empowerment process (Gibson 1991, 1995) that empowerment processes were cognitive process that allowed the person to perceived the ability to be able to solve problems and manage sources of benefit under their control (Gibson1991).

Empowerment programs for patients with osteoarthritis patients should be based on self – reflection, and negotiation to allow for the appropriation of knowledge and the reinforcement of psychosocial skills. As osteoarthritis patients become more empowered they may develop the ability to

empower themselves and improve self care behaviors, and express changes life priorities and values. As a result of their empowerment process, the osteoarthritis patients can expect better good health.

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