Doctoral Thesis Abstract

Thesis Theme

Practice model of pain management for older adults with cancer and dementia

March, 2020

Department of Graduate School of Nursing & Social Services,
Health Sciences University of Hokkaido
Nursing

Nami SAKURABA

Purpose:

This study verified the effectiveness of a "practice model of pain management" in elderly cancer patients with dementia, with a view to establishing a nursing practice model for pain relief in such patients. For clearly defining the study's objectives, Study 1 was conducted to develop a "practice model of pain management;" and thereafter, Study 2 was implemented to verify the model's effectiveness in nursing practice.

Definition of terms:

Older adults with cancer and dementia: Patients aged 75 years or older who had been diagnosed with cancer and were considered to have cognitive impairment.

Ethical considerations:

Approvals were obtained from: the Ethics Committees of the Graduate School of Nursing and Social Services, Health Sciences University of Hokkaido (Approval No. 16N032031) as well as each hospital (Approval No. 29-13, 001).

Methods and results of Study 1 and Study 2:

Study 1: Development of a practice model of pain management

The author carefully read 14 papers that described nursing practices for pain relief in older adults with cancer and dementia. A "practice model of pain management" was structured based on "the objective of the nurses" and "the content of nursing practice." The objective of the nurses was to be able to assess the pain levels and the current lives of older adults with cancer and dementia on the basis of their usual lives; and to be able to practice pain relief by selecting either drug or non-drug therapies. Regarding the content of the nursing practice, three steps were identified with reference to the Confusion Assessment Method (CAM), Doloplus 2 (Japanese version), and Serial Trial Intervention (STI): "confirming the patients' readiness;" "understanding the patients' usual lives;" and "determining the cause of the patients' pain and starting nursing interventions." A protocol for the use of the model was developed, and an educational program for nurses was created. Additionally, 48 items covering 7 domains were listed for the evaluation of pain relief practice, and their content validity was examined (coefficient α: 0.67~0.87).

Study 2: Verification of the effectiveness of the pain relief practice model in nursing practice

1. Study design: The data collected before the deployment of the model versus after its deployment was compared. The questionnaire's quantitative measurement was combined with the interpretation of qualitative data obtained by interviewing the nurses.

2. Participants and setting: Forty-four nurses practicing pain relief for elderly cancer patients with dementia at Hospitals C and D in Cities A and B, respectively.

3. The educational program was implemented by first introducing the program, and then giving lectures and completing the observation sheets for recording patients' usual lives. On the basis of the model's protocol and documents on a judgment

algorithm, it took 45 to 60 minutes to conduct the educational program.

4. Data collection procedure and period:

1) Survey items: ①Demographics of participants: Data were collected regarding gender; age; years of clinical experience; years of cancer nursing; years of dementia nursing; participation in courses on cancer and dementia nursing; practice of nursing care for older adults with cancer and dementia; and the availability of a system for consulting experts. ②The "confidence" in practice was evaluated on a scale of 0 (= not confident) to 10 (= confident). ③Nursing practice was evaluated on a scale of 1 (easy) to 5 (difficult). ④After the model was used; semi-structured interviews were conducted to understand the nurses' ideas about nursing care for older adults with cancer and dementia.

2) Data collection period: The educational program took place from January to December 2018. Data on survey items ① to ③ were collected before attending the educational program, i.e., before the intervention; whereas data on survey items ② to ④ were collected 16 weeks after attending the educational program, i.e., after the intervention. A personal identification number was assigned to the survey form to enable data tracking.

5. Data analysis

The Wilcoxon signed-rank test was used for making comparisons of confidence in nursing practice before versus after the use of the model, scores of 48 items covering 7 domains for the evaluation of pain relief practice, and total scores of nursing practice. The significance levels were set at $p < .01$ and $p < .05$. Nurses' ideas about nursing practice before versus after use of the model were qualitatively and inductively analyzed.

6. Results

The participating nurses consisted of 40 females and 4 males, with an average age of 36.8 years. The scores of "confidence" increased after the "Practice model of pain management" was introduced ($p < .05$.) With regard to the changes in the scores of 48 items of nursing practice after the model was used; the scores in the following 7 items decreased: choosing a problem of the highest priority from among the patients' many problems ($p < .01$); understanding the reasons for the patients' rejection or resistance ($p < .01$); inferring the patients' emotions—anger, grief, anxiety, etc.—to ensure that the patients could stay calm ($p < .01$); being able to recognize changes in the patients' lives on the basis of an understanding of all aspects of their usual everyday lives (eating, toileting, sleep, and other activities) ($p < .01$); conducting nursing interventions that met the patients' needs ($p < .05$); being able to handle unexpected reactions from the patients ($p < .05$); and relieving the patients' pain without taking much time ($p < .05$). The total score of all items also decreased ($p < .05$).

After the model was used, out of the 7 domains for the evaluation of pain relief practice, scores decreased in the following 3: being able to prioritize nursing interventions ($p < .01$), being able to understand changes in the patients' emotions ($p < .05$), and being able to conduct nursing interventions while understanding the meaning of the patients' emotional changes ($p < .05$). With

regard to nurses' ideas about nursing practice, the following 9 categories were extracted: understanding what other nurses regarded as the patients' usual lives, trying to understand the patients' usual lives in cooperation with other nurses, reconsidering the definition of the patients' usual lives, paying close attention to the meaning of words, recognizing pointless practices of the past, addressing the patients' pain from a different point of view, reconfirming the patients' pain, finding things that nurses can do but have not done as yet, and reaffirming the importance of involvement with the patients.

Discussion

After the introduction of the pain relief practice model, it became easier for the nurses to conduct nursing interventions while addressing the patients' reactions and the meaning of the changes in the patients' reactions. The nurses' confidence in nursing practice also increased. It has been said that a patient's report of pain is the gold standard for cancer pain assessment. However, nurses had difficulty in understanding or interpreting the pain reports of elderly cancer patients with dementia. This study suggests that the pain relief practice model is effective in encouraging nurses to be involved with elderly cancer patients with dementia in a less biased manner and also making it easier for them to bring about minor emotional or behavioral changes in these patients. While pain is a patient's subjective experience, pain assessed on the basis of a patient's reactions and behavioral changes is objectively observed pain. Thus, it is sometimes noted that no perfect tool for pain relief practice can be developed. However, the practice model for pain relief in elderly cancer patients with dementia that was developed and used in this study has potential as an indicator that helps to approximately understand patients' pain levels and to continually assess the effectiveness of nursing interventions.

Limitations of the study and future challenges

For the purpose of giving a clear understanding of the impact of nursing practices on patients, it is necessary to examine the study's criteria for selection of patients. Additionally, decisions made by nurses and changes in their decisions need to be qualitatively described so that the impacts of nursing practice on the decisions that nurses consecutively make and the cycle of nursing interventions can be presented. For verifying the usefulness of the pain relief practice model, the items of nursing practice listed should be refined in the future.