Examining a Patient with Alzheimer's Disease Receiving Home Care According to Imogene King's Conceptual System: A Case Report

Evde Bakımda Alzheimer Hastasının Imogene King'in Kavramsal Sistem Modeline Göre İncelenmesi: Olgu Sunumu

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SUMMARY

This study is a case report about a patient with Alzheimer's disease who received home nursing care according to Imogene King's conceptual system. It was conducted between January and March, 2015 and included a patient who was registered to the home care unit of a community hospital and diagnosed with Alzheimer's disease. During this process, the patient was followed up once a week with 12 home visits. The study data were collected using an introductory information form, the Katz Index of Activities of Daily Living and the Standardized Mini-Mental State Examination, which were prepared by the researchers in accordance with the literature. Care plans were prepared and interventions were implemented using the data obtained and with the help of NANDA nursing diagnoses according to Imogene King's conceptual system. This case report concluded that nursing care provided to the patient with Alzheimer's disease according to King's conceptual system supported the interaction between the patient and the caregiver/nurse.

Keywords: Alzheimer's patient; home care; Imogene King's conceptual system.

ÖZET

Bu çalışma evde bakım hizmeti alan bir Alzheimer hastasına Imogene King'in Kavramsal Sistem Modeli'ne göre hemşirelik bakımı sunmak amacıyla yapılmıştır. Araştırma bir kamu hastanesinde evde bakım birimine kayıtlı Alzheimer tanılı hasta üzerinde Ocak-Mart 2015 tarihleri arasında yürütülmüştür. Bu süre içerisinde hasta, haftada bir kez olmak üzere toplam 12 kez ev ziyareti ile izlenmiştir. Verilerin toplanmasında araştırmacılar tarafından literatür doğrultusunda hazırlanan "Tanımlayıcı Bilgi Formu", "Katz Günlük Yaşam Aktiviteleri Ölçeği" ve "Standardize Mini Mental Test" kullanılmıştır. Elde edilen veriler doğrultusunda Imogene King'in kavramsal sistem modeline göre NANDA'nın hemşirelik tanıları konularak, bakım planı hazırlanmış ve girişimler uygulanmıştır. Bu olguda, King'in Kavramsal Sistem Modeli'ne göre Alzheimer hastasına uygulanan hemşirelik bakımının, hasta/bakım verici-hemşire etkileşimini desteklediği belirlenmiştir.

Anahtar sözcükler: *Alzheimer hastası; evde bakım; Kavramsal Sistem Modeli.*

Introduction

Alzheimer's disease is a disease that occurs in an old age and is characterized by cognitive dysfunction, self-care disabilities and several neuropsychiatric and behavioral disorders. It accounts for 50%–75% of all dementia types.[1–4] The rate of Alzheimer's disease is increasing day by day with the aging population in Turkey and around the world. It was estimated that 700,000 people would die of Alzheimer's disease in 2015 in the US.[5] According to Turkish cause of death data, the rate of the elderly population who died of Alzheimer's disease was 2.9% in 2011, increasing to 3.4% in 2012 and to 3.6% in 2013.[6]

Alzheimer's disease results in memory disorder and mental dysfunction, personality changes and, in the final stage, the loss of verbal and motor skills, which makes sufferers fully dependent.[7,8] Therefore, in home care practices, supporting the daily life activities of the patients and enabling them to make use of their spare time have vital importance to help them hold on to life.[4] Patients' family members need support for enabling patients' self-care, managing behavioral changes and determining the patient's needs.[9] Therefore, home care is important for nurses to maintain the healthy condition, functionality and comfort of the patients with Alzheimer's at the highest level.[10] Providing nursing care based on a model increases its effectiveness.[11]

Intense cognitive breakdown in Alzheimer's disease leads to major problems with communication.[12] Since King's conceptual system is a communication-based model, it can be used to provide home care for patients with Alzheimer's disease. King believed that nurses who are familiar with her conceptual system will be more successful at perceiving developments with patients and their families and at coping with problems.[13] The conceptual system is a theory of interpersonal relations that focuses on the relationship between the sick/healthy individual and the nurse.[14] This model is composed of three interaction systems: personal,

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interpersonal and social.[15] The personal system is composed of individuals, the interpersonal system is composed of the interaction between the individuals, and the social system is composed of the communication between groups and society.[14,16] The main component of the theory is the examination of the relationship between two people coming together to provide help and receive help within a health organization as parts of an interpersonal system.[15,16] Interpersonal relations are the basis of the interaction between the nurse and the sick or healthy individual in this theory.[16]

King defined nursing as, "helping individuals of all ages and socioeconomic groups to maintain their daily lives and satisfy their basic needs in sickness and health." This help is provided by the action and reaction, interaction and activities between the nurse and the sick or healthy individual.[16,17] King reported that success levels will increase when nurses and patients have good interaction. King also reported that good communication skills are essential in the relationship between the patient and the nurse, and that the lack of communication between them is the biggest obstacle to achieving the targets and goals.[18] King's theory is a useful, testable and practical model for nursing practices. It has been reported that King's theory is used in nursing practices of different fields in many hospitals.[19] Furthermore, many researchers have used the concepts of King's interpersonal system. Kemppainen used this model with a patient who had HIV and psychotic symptoms. This model was used in patients with HIV and psychotic symptoms, women who were about to go through menopause, alcohol addictions, child abuse, and patients with Alzheimer's disease who received home care.[13,20] A study about home care that was conducted using King's model emphasized that examining the caregivers along with the patients during care is important for the interpersonal system. Moreover, this system was reported to be more humane.[20] In Turkey, it was used by Ekizler (1991)[21] for cervical cancer patients. Although King's theory is commonly used nursing practices and studies in the international literature, particularly in care for families, psychiatric care and community health nursing,[22] its use is very limited in Turkey.[23] Examples of studies that use the requirement focused risky dementia behavior model and the suggested interventions for the identification of agitation model, which can be used specifically to plan care for patients with Alzheimer's disease, are also limited.[24] The fact that King's theory can be used for patients who receive home care, is a communication theory and complies with the nursing process provides ease of understanding and use for nurses.[25] Therefore, this study is intended to provide a patient with Alzheimer's disease with nursing care according to King's conceptual system.

Case Report

In this case report, a patient who was registered to the home care unit of a community hospital and diagnosed with Alzheimer's disease was provided with nursing care according to King's conceptual system. The patient in the case report was selected after a discussion with the home care unit of the hospital. This study included a patient who had been diagnosed with Alzheimer's disease and had active disease symptoms. The patient lived in a city, had a communicative caregiver who had difficulty with caregiving and agreed to participate in the research. Before the study began, written permission was obtained from the hospital and written and verbal consent was obtained from the patient's relatives due to the patient's cognitive disability.

The patient lived in her daughter's home, was 86 years old and had suffered from Alzheimer's disease for 10 years. The patient's primary caregiver is her daughter. The patient had completed primary school, had three children and lost her husband 12 years ago. A check of the patient's vital signs during the first visit found that her blood pressure was 130/70 mmHg, and her pulse rate was 66/minute. Her respiratory rate was 18/minute, and her temperature was 36.5°C. The patient was found to be fully dependent using the Katz Index of Activities of Daily Living. Mini-mental test evaluation of the patient concluded that the patient had cognitive dysfunction. Discussions with the patient and her caregiver during the home visits indicated that the patient had sleep problems, audiovisual hallucinations and disorientation with people, space and time. It was also found that the caregiver had difficulty in her caregiving role and, in particular, had inadequate knowledge and skills for managing the patient's medications. To address these problems, the researchers conducted a total of 12 home visits each performed once a week. Upon making NANDA's nursing diagnoses[26] according to Imogene King's conceptual system, a care plan was prepared, and nursing interventions were implemented. The data about the patient and her caregiver were collected during the first home visit using an interview and observation. Afterwards, these data were classified according to Imogene King's conceptual system model, and the problems were diagnosed using NANDA's nursing diagnoses. Interventions were planned and implemented considering the patient as an individual and the caregiver's state using the Nursing Diagnoses Manual[26] as reference. The intervention results were evaluated using the criteria from the same text. Each symptom of the patient was observed, interventions were implemented and the intervention results were evaluated at the end of the current visit and the subsequent home visit.

THE NURSING CARE PLAN ACCORDING TO IMOGENE KING'S CONCEPTUAL SYSTEM MODEL

Perception, Communication and Patient-Nurse Interaction	Setting and Achieving Goals	Purposeful Interaction	Achieving Goals
Self-perception of the patient: When she was asked about the season, she said, "I don't know, my daughter, what season is it now? Winter or summer? It looks like summer." When asked about her date of birth, she said, "I don't have my date of birth in my mind." When asked about her country, she said, "Günören". When asked about her daughter, she said, "She is my mother". **Patient perception of the nurse: DETERIORATING ABILITY TO INTERPRET THE ENVIRONMENT**	To provide the patient with the highest level of independence in a therapeutic and safe environment during the caregiving period	- To identify the basic behavioral characteristics of the patient, home visit times were changed with the best time of the day for the individual. The visits continued during these times. - The environment was made safe to prevent injuries and falls, and a non-complex setting where the patient can move freely was created. Environmental stimuli were minimized. - Practical routines were created to help the patient cope with her recent amnesia, enhance her independence and reduce her anxiety. - The patient's dominant sense in perceiving the world was identified. - Light music that the patient used to listen to when she was younger was turned on during her meals. - Simple language including positive expressions was used while communicating with the patient. - Open-ended questions and questions she could not answer were avoided. - The caregiver was informed about the patient's regular medications.	The patient made eye contact while communicating, and the communication was started by her. The patient was not injured during her movements inside and outside the bed.
Patient perception of the caregiver: The caregiver said, "She sees several things at night. Then she says, "They came, they shot, and the bullet flew past my ear. I was terrified, but fortunately, you are here." **Patient perception of the nurse: IMPAIRMENT OF SENSORY PERCEPTION**	To reduce signs of sensory overload by the end of the observation period	- Environmental stimuli that were considered to trigger impairment of the sensory perception of the patient (noise, light, etc.) were controlled. - An orientation exam was conducted with the patient in three fields (space, time and people) during each home visit. - The causes of the environmental sounds were explained to the patient, and the caregiver was also asked to explain them. - It was recommended that later in the night when hallucinations occurred, the patient should be accompanied her daytime caregiver. - Light music was played for the patient in the evening to help her cope with auditory hallucinations. - The family members were told not to talk loudly and make noise inside the house, particularly out of her sight, and their voices were put under control. - The tools and materials in the room where the patient slept, their intended uses and sounds were explained to the patient using simple language to help reduce her concerns and fears. Each practice that was implemented was explained to the patient. - A protective environment was created to prevent the patient from harming herself and the people around her through precautions, such as the use of fall arrest equipment, taking sharp objects away from the patient and reducing immediate stimuli.	The caregiver reported that the patient's nighttime fears and hallucinations decreased. She did not react with fear as before; however, her meaningless speech continued.
Patient perception of the caregiver: The caregiver said, "She frequently wakes up and cannot sleep well." **Patient perception of the nurse: SLEEP DEPRIVATION**	To cure the patient's sleep disorder by the end of the observation period	- Environmental noises were put under control during the times when the patient slept with the cooperation of the caregiver. - To reduce the patient's fears and concerns, she was not left alone while sleeping and listened to light music to relax her before sleeping. She also listened to this music while sleeping to prevent disruptive auditory hallucinations. - The patient's bath time was rescheduled earlier than her sleeping time. - Daytime sleeping was restricted, and active and passive exercises were done with the patient in the daytime during the home visits. - Activity planning was done with the family members to increase interaction with the patient throughout the day. - Safety precautions were taken to avoid injuries. - The caregiver was informed about the regular use of the medications in the treatment plan.	The caregiver reported that the duration of the nighttime sleeping of the patient increased nearly one hour. She still woke up at night, but less frequently.

THE NURSING CARE PLAN ACCORDING TO IMOGENE KING'S CONCEPTUAL SYSTEM MODEL

Perception, Communication and Patient-Nurse Interaction	Setting and Achieving Goals	Purposeful Interaction	Achieving Goals
Patient perception of the caregiver: "She was normally a talkative person. She does not talk much anymore, probably because she is tired and cannot look into my eyes while talking." **Patient perception of the nurse:** **IMPAIRMENT OF COMMUNICATION SKILLS**	To establish the highest level of communication with the patient during the observation period	- The caregiver and the family members were informed about the points to be considered while communicating with the patient. - Eye contact was made with the patient, and she was spoken to frankly and clearly. - Unnecessary sounds that cause noise and distraction were minimized. - When the patient did not understand something, the sentences were repeated in the same tone of voice and volume with short and appropriate words. - While communicating with the patient, she was given information that describes the environment and facilitates correct perception rather than questioning her perception of the environment. - When the patient could not answer, non-verbal communication techniques, such as blinking and finger gestures were used. - Negative expressions were avoided while communicating. The patient was given time to reply. - The patient was asked questions with one-word responses, such as yes or no. - Communication with the patient was terminated when the patient managed to express herself verbally or non-verbally about an issue.	When the patient wanted to communicate, she made eye contact, and communicated more easily when addressed with yes or no questions.
Self-perception of the caregiver: The caregiver said, "I can no longer take care of my mother alone. I cannot lift her and put her into bed alone. There is no other person to take care of her. I have to take care of her. After all, she is my mother. It is also not obvious what will happen to us." **Caregiver perception of the nurse:** **DIFFICULTY WITH CAREGIVER ROLE**	To ensure that the caregiver fulfills her caregiver role without difficulty and to avoid caregiver burn-out signs by the end of the follow-up process	- The factors that led to difficulties in care roles (perception of care, social isolation, etc.) were identified. - A discussion was held with the caregiver about her physical and emotional difficulties. - The caregiver was told that her efforts to take good care of her mother were appreciated. - The caregiver was informed about and encouraged to obtain support from non-governmental organizations. - The caregiver was informed about skills for coping with stress. - Discussions were made with the other family members about the positive and negative effects of caregiving and the importance of appreciating the caregiver, dealing with her problems, allow her to take periodical rests and giving her opportunity to make time for herself. - The caregiver was encouraged to ask for help from her relatives. - The caregiver was informed about her own health protection and promotion.	The caregiver's feedback about the difficulties caused by caregiving was obtained. Other members of the family took more responsibility for caregiving. A paid caregiver also began to help with the caregiving process. The caregiver reported that she no longer had difficulty with caregiving.
Patient perception of the caregiver: "The doctor told me to give this medication to the patient once a day at night. But when the patient takes it, she sleeps a lot, so I give a quarter of the medication when she feels unwell. This amount relaxes her." **Caregiver perception of the nurse:** **INABILITY TO IMPLEMENT THE TREATMENT PLAN**	To ensure that caregiver administers medications to the patient properly by the end of the follow-up period	- The caregiver was told about the importance of the correct implementation of the treatment plan. - The caregiver was informed about the medications used by the patient and the administration of them. - The caregiver's feedback was obtained, and misunderstanding was avoided. - The caregiver was given a three-division box to help her not to forget the medications. The medications that should be taken in the morning, mid-day and evening were placed in the appropriate division in the box according to the medication time and were recommended to be given at the right time. - Another differently colored box was used for high-risk medications. - Reminders for giving medications, such as schedules, magnets and alarms were proposed. - The home care unit was informed about this issue.	The caregiver gave correct dosages of medications to the patient on time.

Discussion

This study examined nursing care provided for a patient with Alzheimer's disease receiving home care according to King's conceptual system. It concluded that nursing care provided to the patient with Alzheimer's disease according to King's conceptual system supported the interaction between the patient and the caregiver/nurse. Kadıoğlu (2013) reported that King's conceptual system was highly recognized in practice and the subject of many studies.[25] King's theory has been used in family care, psychiatric care and community health nursing. In a previous study, a patient over 65 years of age with dementia was provided with nursing care using King's model. She had been diagnosed with anxiety, aspiration risk, self care deterioration, deterioration in her movements inside the bed, acute confusion (cognitive fluctuations), risk for constipation, impaired deglutition, bowel incontinence, urinary incontinence, risk for imbalanced body temperature and fall risk and received care. That study concluded that King's conceptual system allowed collecting comprehensive data and performing practices to provide the patient and the family with integrated care.[20] Its findings support the results of this study.

This study found that the interaction particularly between the patient and the care provider was improved. Furthermore, since King's conceptual system focused on reaction-interaction and transaction, it brought the individuality of the planned interventions to the fore. In addition, the study allowed for the effective use of the planning and implementation stages of the theory that were appropriate to the nursing process and facilitated setting targets to achieve goals beginning in the data collection stage.[14,25] King's theory will guide nurses' understanding of the interaction between individuals and the environment. Since King's conceptual system includes the planning and implementation stages of the nursing process, it allows nurses to concentrate on interaction-focused interventions with patients. Due to the cognitive losses of patients with Alzheimer's disease, a major part of the interaction generally transpires between the caregiver and the nurse. This study's examination of interventions and evaluations showed that interaction was established. Moreover, similar to regular home visits, the theory's being goal-focused also ensured that the evaluations were specific to the individual and her surroundings. Theory-based studies for this group of patients are rare.[20] This study is expected to make contributions to the literature since it integrated caregiving for patients with Alzheimer's disease, home care and theory-based nursing care. Furthermore, King's theory is included in undergraduate, postgraduate and doctoral curricula in nursing education. Thus, nurses who are university graduates and who receive postgraduate education improve their skills at using the theory in practice. This theory's compliance with the nursing process is important for its practicality and sustainability.[25]

In accord with these results, nursing care provided according to King's conceptual system is supposed to be appropriate for the home care of patients with Alzheimer's disease. However, presenting the results through a single case is the most important limitation of this study. Therefore, the theory should be put into practice with larger samples of Alzheimer's patients , experimental research on this subject should be conducted, and it should also be used in nursing care studies in different fields.

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