

TRANSITION FROM MATERNAL CHRONIC RENAL FAILURE TO PERITONEAL DIALYSIS TREATMENT

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Abstract

Chronic kidney failure (CKF) has become an increasingly important public health issue in our country and worldwide. According to data systems in our country, as of the end of 2022, there were a total of 86,665 patients with chronic kidney failure, and 4.1% of these patients undergo peritoneal dialysis treatment. Peritoneal dialysis requires active participation of the patient in the treatment, and it can lead to negative effects on body image, self-esteem, and sexual relations due to the peritoneal dialysis catheter, causing anxiety and depression in patients and negatively affecting their quality of life. Throughout human life, individuals undergo changes in identity, roles, responsibilities, abilities, and behaviors due to various reasons (illness, pregnancy, death, birth). One of the fundamental duties of nurses is to assist individuals undergoing various transitions in their lives, to support healthy transitions, and to minimize unhealthy transitions. In this study, the process of transition experienced by a healthy woman transitioning to the role of motherhood due to health problems during pregnancy, and transitioning to chronic kidney failure and peritoneal dialysis treatment, is examined based on Meleis' Transition Theory.

Keywords: nurse; peritoneal dialysis; mother; Meleis; transition theory

Introduction

With the advancement of medical technology, life expectancy is increasing, and the prevalence of chronic diseases is also on the rise. Chronic kidney failure (CKF) has become an increasingly important public health issue in our country and worldwide (Tolasa & Akyol, 2017; Taşan E. et al., 2019). CKF is an irreversible and progressive disease that affects all systems and organs due to the loss of nephrons beyond recyclability and the decrease in glomerular filtration rate as a result of various factors (Tolasa & Akyol, 2017; Yıldırım, 2017). The treatment options for CKF are hemodialysis (HD), peritoneal dialysis (PD), and transplantation (TX) (Tüzün Özdemir & Akyol, 2023). According to the Turkish Nephrology Society 2022 Registry data, as of the end of 2022, there were a total of 86,665 CKF patients, of which 69.77% preferred Hemodialysis (HD), 4.1% preferred peritoneal dialysis (PD) treatment, and 24.48% opted for transplantation. PD treatment is the least preferred CKF treatment model in our country (Süleymanlar, et al. 2022). In this treatment model, the patient performs the treatment at home without visiting a different center and actively participates in the treatment. Continuous ambulatory peritoneal dialysis (CAPD) involves delivering dialysis fluid into the patient's abdominal cavity through a permanent silicone catheter, which is then replaced with fresh fluid after a certain period (4-6 hours), and this process is repeated 4/5 times a day. In automated peritoneal dialysis (APD) treatment, the patient is connected to a PD machine while lying down, disconnects from the machine in the morning (after 8-12 hours), and does not undergo dialysis during the day (Gökçe, 2010; Ballı, 2015; Aydın, 2022). Patient involvement in PD treatment, frequent dialysis changes during the day in CAPD, and negative effects on body image, self-esteem, and sexual relations due to the PD catheter can lead to anxiety, depression, and negatively impact the quality of life (Aguiar, et al. 2019). A study found that PD patients expected their active involvement in treatment to have a positive impact on their quality of life, but the results showed that the quality of life of PD patients was worse compared to other treatment modalities (Süleymanlar, et al. 2022). In a study examining the effects of PD on life and psychological symptoms, 32% of patients reported difficulty in going to work, 44.4% reported difficulties in social life, and 46.6% reported that nothing was the same in their personal lives as before, indicating it was more complex and difficult (Karaca, et al. 2012).

The objective of this study is to assess a patient diagnosed with chronic renal failure during pregnancy, who is scheduled to commence peritoneal dialysis treatment, within the framework of the Meleis Transition Theory. The aim is to facilitate her transition process in a manner conducive to optimal health outcomes.

Meleis' Transition Theory

Meleis' Transition Theory was published in 1994 by Afaf Ibrahim Meleis after extensive research. This theory describes the transition from a known situation to an unknown situation (Artan, et al. 2022). Transition encompasses situations that cause changes in various aspects of human life such as identity, roles, responsibilities, abilities, and behaviors; for example, illness, pregnancy, death, birth, migration, etc. (Meleis, et al. 2000).

The main concepts of Meleis' theory are grouped into four key points. Firstly, the nature, types, patterns, and characteristics of transition situations are examined. Secondly, facilitators and barriers encountered during the transition process are identified; these factors may be personal or societal. Thirdly, the individual's responses to the transition process are addressed. Finally, the role of physical, psychological, social, and spiritual nursing care in transition is explained (Konuk & Su, 2020; Meleis, 2010).

Transitions are highly complex and multifaceted. Meleis argues that a successful transition consists of five fundamental characteristics: awareness, taking responsibility, change and diversity, flow of time/transition, significant milestones, and events (Bekmezci, et al. 2016; Chao, et al. 2020). In Meleis' theory, there are three main headings: the nature of transition, transition situations, and response patterns to transition (Artan, et al. 2022).

1. Nature of Transition

The nature of transition encompasses an area where nurses play a significant role in patient care. Nurses working in this field should understand not only an individual's single transition process but also recognize that individuals and their families may experience multiple transition processes simultaneously. Awareness is associated with the perception, understanding, and acknowledgment of transition experiences (Im, 2010; Meleis, 2010). Taking responsibility indicates the extent to which an individual engages in the transition process. In this context, the level of awareness affects the level of engagement, and awareness is not possible without involvement (Meleis, 2010). Change and diversity influence the responsibility assumed during the transition process. All transitions are characterized by the flow and change over time. Understanding a transition situation fully requires identifying and uncovering the meaning and effects of the change it involves (McEwen, 2014).

Transitions can be identified by significant milestones and events such as birth, death, menopause, diagnosis of illness, etc. Multiple transitions involve significant milestones or events. These milestones often facilitate awareness or active participation. Additionally, there are milestones or events characterized by a sense of stability in new habits, skills, lifestyles, and personal care activities. Each milestone requires the nurse's attention, knowledge, and experience in different ways (Bekmezci, et al. 2016; McEwen, 2014).

2. Transition Situations

Individuals' personal, social, or community situations can facilitate or hinder transition processes, and these situations can affect the outcomes of transitions (Meleis, 2010). Individuals' health is influenced by biological, socioeconomic, cultural, and environmental factors. Additionally, the degree of alignment between an individual's roles within society affects whether the transition process is easy or difficult. Role definitions and values can lead to difficulties in role transition when not accepted by the society experienced. Socioeconomic status is also a significant factor influencing transition. Preparations for the future can facilitate the transition process, while being unprepared can make the process more difficult. Social resources can also influence the transition process; societal elements such as reliable information and role models obtained from health professionals, books, educational groups, and written materials provide significant support during the transition process (Artan, et al. 2022).

3. Response Patterns

A healthy transition process is determined by indicators of development and outcomes (Meleis, 2010;22). These indicators are measurable parameters of how the transition process progresses at each stage. Development indicators include a sense of attachment, interaction ability, positioning, self-confidence, and coping skills (Artan, et al. 2022; Meleis, et al. 2000).

Physical, Psychological, and Spiritual Nursing Care

Meleis (2010) emphasizes that the primary duty of nurses is to assist individuals during various transitions in their lives, support healthy transitions, and minimize unhealthy transitions. Since the concept of transition affects an individual's physical and psychological health, it falls directly within the realm of nursing (Körükcü & Kukulcu, 2014). Understanding the transition process, identifying individual needs and potential risks, and planning effective interventions to enhance well-being are crucial tasks for nurses (Meleis, 2010). Perceiving the experienced transition process, identifying the individual's needs and potential problems, and planning effective interventions to enhance well-being are also among the responsibilities of nurses during the transition process (Aguiar, et al. 2019; Karaca, et al. 2012). Understanding the characteristics and conditions inherent in a transition process will contribute to the development of nursing care tailored to the unique experiences of clients and their families and thus provide healthy responses to the transition.

Methodology

The study was conducted at the dialysis unit of a university hospital in Izmir between April 1st and May 30th, 2023. Prior to the commencement of the study, written and verbal consent was obtained from the patient. As part of the research protocol, the researcher devised and executed a nursing care plan tailored to the patient, guided by the Meleis Transition Theory.

CASE

M.A. is a 30-year-old mother of two children. M.A., who is married, is a housewife. She experienced her first pregnancy at the age of 26 and developed preeclampsia during her second pregnancy at the age of 28. She was diagnosed with chronic kidney failure a year ago. While hospitalized during her pregnancy, M.A. gave birth to a healthy baby girl at 34 weeks. Continuing regular nephrology outpatient clinic follow-up after childbirth, M.A. was asked by her nephrologist to decide on one of the end-stage kidney replacement therapy options due to symptoms such as decreased glomerular filtration rate, edema, hypertension, nausea-vomiting, and loss of appetite. Due to her two children being young, M.A. decided that PD treatment would be more suitable for her.

One week ago, a peritoneal dialysis catheter was placed, and patient education has begun. During this process, the patient completed the necessary arrangements for PD treatment at home. Prior to the interview, verbal and written consent was obtained from M.A.

CONCEPTUAL FRAMEWORK OF TRANSITION THEORY AND CASE STUDY

Nature of Transition: Types and Patterns

Transition Theory provides nurses with a roadmap to understanding patients' health-disease, situational, and emotional transitions (Meleis, 2010). Within the conceptual framework of the theory, when evaluating M.A.'s transition process, situations such as becoming a mother for the second time in the last few years, experiencing illness during pregnancy, followed by a diagnosis of CKD, and being separated from her first child due to necessary treatment during pregnancy are observed. These situations indicate that M.A. is undergoing developmental transitions. M.A.'s health-disease transitions and transition to motherhood are still ongoing. According to the nature of transition theory, M.A.'s transitions can be described as sequential, related, and multiple transitions.

Awareness: Meleis emphasizes that awareness, although not mandatory in the transition process, is key to achieving positive outcomes (Meleis, 2010). Ms. M.A. is aware of her transitions and has planned for a smooth transition. However, the experience of illness and treatment during pregnancy, followed by the diagnosis of a chronic illness, has been a challenging experience for the patient. Additionally, due to the difficult process she experienced, she mentioned that not being able to give enough attention to her children, and not being able to fulfill her roles as a mother and wife, were transitions she did not want. It is quite challenging to experience these situations, be unable to change them, and be fully aware of everything.

Taking Responsibility (Participation): The level of responsibility, a feature of transition, reflects the degree of an individual's participation in the transition process (Meleis, 2010). Ms. M.A. is aware of the responsibilities she must carry as a woman, mother, and wife. However, the illness she experienced has prevented her from fulfilling her responsibilities, such as not being able to spend enough time with her children and husband, not being able to breastfeed her second child, and not being able to fully fulfill her roles as a mother and wife. During this transition period, she feels supported by her husband and family but believes that she has not fulfilled her

responsibilities. This situation creates feelings of anger and inadequacy. Ms. M.A. expressed that she felt the joy of becoming a mother for the second time, but she could not show the same attention to her second child as she did to her first, could not breastfeed adequately, and needed her mother-in-law's support in caring for her children due to her illness.

Change and Diversity: Adapting to new roles and situations requires change, and change is inevitable in all transitions (Meleis, 2010). Nurses are responsible for preparing individuals for change and helping them cope with the changes they encounter during the transition process. The transitions experienced by Ms. M.A. are characterized by significant changes and diversities in both her and her family's lives.

Flow of Time: Transitions move chronologically, and each individual's transition experience is personal and unique (Meleis, 2010). Ms. M.A.'s transitions are long-term processes, and it should be noted that the process is ongoing when evaluating them.

Significant Milestones and Events: Identifying critical periods or milestones is necessary for determining appropriate interventions (Meleis, 2010). Ms. M.A. evaluates the significant milestones and events in her life. She says that until the 22nd week of her pregnancy, everything went well, and she was happy, but receiving the diagnosis of preeclampsia, the risk of losing her baby, and subsequently being diagnosed with chronic kidney disease were the most important events in her life. After receiving the diagnosis of preeclampsia, the most important thing for her was the health of her baby and herself, and she was also worried about what would happen to her other child if something happened to her. After giving birth to her baby, she thought she would get rid of all these illness processes, but learning that she now had a chronic illness and needed to undergo dialysis regularly made her very upset. However, she believes that she needs to take care of her health for the sake of her children's health and care and needs to comply with the treatments.

Transition Situations: Facilitating and Hindering Factors

It has been determined that Ms. M.A. experienced many transitions she did not want within a short period of time and attributed negative meanings to the transitions during our initial interviews due to both her and her children's health problems. These factors emerge as factors hindering the transition. Accordingly, Ms. M.A. firstly needs to accept her own health problems and protect her health. It is important for her to adapt to dialysis treatment, learn the correct application steps of peritoneal dialysis treatment, and acquire the necessary knowledge and skills to manage possible complications at home. In addition, she needs to become aware of nutrition and lifestyle changes and learn and implement what is necessary to support her children's healthy development. Thus, a plan is made for her to experience a healthy transition process. Ms. M.A. expressed that she was worried about not being able to provide adequate care for her children and not being able to properly apply the necessary PD treatment for her health, as her children still need her care and she cannot fully trust herself to apply the PD treatment. However, she mentioned that she preferred PD treatment out of necessity because she would have to go to a different center for hemodialysis treatment three days a week, and during this process, she would have to be separated from her children. Nursing care processes related to PD diet compliance, medication use and application steps, PD application steps, cleaning of the home dialysis room and dialysis application, possible complications and solution suggestions, chronic disease treatment and care, care of her children, and education aimed at supporting their healthy development have been planned for Ms. M.A. Additionally, her strengths are supported, and preparations have been made for situations that may lead to weaknesses.

PHYSICAL, PSYCHOLOGICAL, SOCIAL, AND SPIRITUAL NURSING CARE ACCORDING TO THE TRANSITION THEORY

The nurse responsible for MA's care was consulted, and a plan for regular education and nursing care for the patient was established over a 2-week period. During this process, MA was initially provided with information on CKD, PD treatment, and potential complications through a PowerPoint presentation and a demonstration on a model. On the same day, MA was instructed on hand washing procedures, preparation of PD supplies, and the steps involved in dialysis application through a demonstration on the patient. Finally, the PD catheter dressing of the patient was changed, and the patient was discharged home. On the second day, when the patient returned, PD supplies were prepared, surgical hand washing and PD application were performed to complete any missing steps. On the third day, the patient was asked to perform the dialysis process steps themselves, and any remaining steps were explained and completed. Additionally, the patient was observed changing their own catheter dressing. After completing the dialysis

procedure, the patient was educated on dietary management. On the fourth day, MA appeared more confident, successfully completing all PD application steps without any omissions. She expressed feeling better, believing that deciding on dialysis was the right choice for her, allowing her to stay with her children and care for them as desired. On the fifth day, MA was educated on the disposal of medical waste, cleaning of the PD room, and storage of PD solution at home after the PD treatment. One week after starting the education, during the seventh session, the patient was able to complete all PD application steps correctly, answer all questions about potential complications, treatment procedures, and diet. MA's psychology was observed to be better than during the initial encounter, showing increased confidence and a more positive outlook on life. Additionally, MA came to the clinic with her children and husband. Both children were observed to be healthy and happy, and MA's husband expressed, 'When she is happy, we are all happy,' indicating his wife's improved mood.

PROCESS INDICATORS OF A HEALTHY TRANSITION

According to Meleis, process indicators of a healthy transition include interaction, a sense of attachment, positioning, self-confidence, and coping skills development (Meleis, 2010).

Interaction: MA expressed difficulty in communicating with others when she was diagnosed with preeclampsia and subsequently with CKD due to emotional difficulties. However, with the knowledge and support gained during the dialysis education process, she regained confidence and improved her communication with her surroundings. This is an important indicator of interaction in a healthy transition process.

Sense of Attachment: MA emphasized her trust in dialysis nurses and other healthcare staff, stating that positive interaction with the healthcare team supported her. Trust and attachment to healthcare workers are significant indicators of a healthy transition process.

Development of Self-Confidence and Coping: As MA began to implement dialysis treatment and progressed through the education process, she gained increasing confidence in managing the treatment and started to manage this process successfully. This is an important indicator of increased self-confidence and coping skills development in a healthy transition process.

Mastery Indicators: MA mentioned that with the knowledge and skills she gained in applying and managing PD treatment, she began to fulfill her familial roles and responsibilities more effectively. This indicates the acquisition of new skills and the ability to apply them successfully in a healthy transition process.

Development of Flexible Identity: By accepting and being determined to manage dialysis treatment, MA demonstrated flexibility in accepting the status of being a chronic patient and integrating with this new identity. This indicates the ability to integrate with new identities and roles flexibly in a healthy transition process.

Conclusion

In light of Meleis' Transition Theory, the nursing care provided to M.A., a patient undergoing peritoneal dialysis treatment following a diagnosis of chronic kidney failure during pregnancy, offers valuable insights into facilitating healthy transition processes. Through a comprehensive assessment of M.A.'s transition journey, it becomes evident that nurses play a pivotal role in understanding and supporting individuals through complex life transitions.

The conceptual framework of Meleis' Transition Theory provides a structured approach to comprehending patients' health-related transitions, encompassing situational, emotional, and developmental aspects. M.A.'s transition process, marked by significant life events such as pregnancy, illness, and the subsequent diagnosis of chronic kidney disease, underscores the multifaceted nature of transition experiences. Within this framework, M.A.'s journey can be characterized by sequential, related, and multiple transitions, emphasizing the complexity inherent in her situation.

Central to Meleis' theory are the notions of awareness, taking responsibility, change and diversity, the flow of time, and significant milestones and events. These concepts offer a lens through which to evaluate M.A.'s transition process. Despite facing numerous challenges, including the need to balance her health needs with her roles as a mother and wife, M.A. demonstrates resilience and determination in navigating her transition journey. By actively engaging with her healthcare team and acquiring the necessary knowledge and skills for peritoneal dialysis treatment, she exhibits a proactive approach to managing her health.

The nursing care interventions implemented for M.A., guided by Meleis' Transition Theory, focus on facilitating her adaptation to dialysis treatment, supporting her physical and psychological well-being, and enhancing her coping mechanisms. Through structured education sessions, hands-on demonstrations, and ongoing support, M.A. gains confidence in managing her treatment and assumes an active role in her healthcare journey. The observed indicators of a healthy transition, including increased interaction, a sense of attachment, development of self-confidence and coping skills, and mastery of new roles, highlight the effectiveness of the nursing interventions in promoting M.A.'s well-being.

In conclusion, the application of Meleis' Transition Theory provides valuable insights into understanding and supporting individuals undergoing complex health-related transitions. By recognizing the multifaceted nature of transition experiences and tailoring nursing interventions accordingly, healthcare professionals can facilitate healthy transition processes and optimize patient outcomes. Further research in this area is recommended to deepen our understanding of transition experiences and inform evidence-based nursing practices.

References

- Aguiar, R., Pei, M., Qureshi, A. R., & Lindholm, B. (2019). Health-related quality of life in peritoneal dialysis patients: A narrative review. *Seminars in Dialysis*, 32(5), 452-462.
- Artan, Y., Yıldırım, Y., Aykar, F. Ş., & Fadiloğlu, Z. Ç. (2022). Evaluation of an Individual Infected During the Pandemic Based on Meleis's Transition Theory. *Journal of Intensive Care Nursing*, 26(1), 35-41.
- Aydın, Z. (2022). Peritoneal Dialysis Applications. In S. Beyece Incazlı, S. Tüzün Ozdemir, & G. Keskin (Eds.), *Basic Knowledge and Applications in Dialysis Practice* (pp. xx-xx). Akademisyen Yayınevi.
- Ballı, F. (2015). Relationship between arterial stiffness and quality of life, sleep quality, anxiety, and depression in peritoneal dialysis patients. Unpublished master's thesis, Kocaeli University, Kocaeli, Turkey.
- Bekmezci, H., Hamlacı, Y., & Özerdoğan, N. (2016). Care during the postpartum period based on Meleis's transition theory. *Journal of Gulhane Faculty of Nursing*, 5(4), 101-106.
- Chao, Y. H., Wang, S., & Sheu, S. J. (2020). Integrative review of breast cancer survivors' transition experience and transitional care: dialog with transition theory perspectives. *Breast Cancer*, 27, 810-818.
- Gökçe, S. (2010). Quality of life in patients receiving renal replacement therapy. Unpublished master's thesis, Istanbul University, Istanbul, Turkey.
- Im, E. (2010). *Afaf Ibrahim Meleis: Transitions theory* (Vol. 7). Mosby, MO: Elsevier Health Sciences.
- Karaca, S., Cınar, S., & Bahcebasi, Z. B. (2012). From patients' perspectives: the effects of peritoneal dialysis on life and psychological symptoms. *Clinical and Experimental Health Sciences*, 2(4), 169-174.
- Konuk, T., & Su, S. (2020). Understanding Meleis: The transition theory. *Journal of General Health Sciences*, 2(2), 61-76.
- Körükcü, O., & Kukulu, K. (2014). Examination of the transition to motherhood of pregnant women with preterm premature membrane rupture according to Meleis's transition theory. *Anadolu Journal of Nursing and Health Sciences*, 17(4), 253-260.
- McEwen, M. (2014). Overview of Selected Middle Range Nursing Theories. In M. McEwen & E. M. Wills (Eds.), *Theoretical Basis for Nursing* (4th ed., pp. 236-239).
- Meleis, A. (2010). *Transitions theory: Middle range and situation specific theories in nursing research and practices*. New York: Springer Publishing Company.
- Meleis, A. I., Sawyer, L. M., Im, E. O., Messias, D. K. H., & Schumacher, K. (2000). Experiencing transitions: An emerging middle-range theory. *Advances in Nursing Science*, 23(1), 12-28.

- Mu, P. F. (2004). Maternal role transition experiences of women hospitalized with PROM: A phenomenological study. *International Journal of Nursing Studies*, 41(8), 825–832.
- Schumacher, K., & Meleis, A. I. (1994). Transitions: A central concept in nursing. *Journal of Nursing Scholarship*, 26(2), 119–27.
- Süleymanlar, G., Ates, K., & Seyahi, N. (2022). Turkey Nephrology, Dialysis and Transplantation Registry 2022, Republic of Turkey Ministry of Health Joint and Turkish Society of Nephrology Joint Report, 9-177.
- Tasan, E., Ovayolu, O., & Ovayolu, N. (2019). The effect of diluted lavender oil inhalation on pain development during vascular access among patients undergoing haemodialysis. *Complementary Therapies in Clinical Practice*, 35, 177-182.
- Tolasa, A. G., & Akyol, A. (2017). The use of aromatherapy in dialysis patients. *Turkish Nephrology, Dialysis and Transplantation Nurses Association Nephrology Nursing Journal*, 2(12), 1-7.
- Tüzün Ozdemir, S., & Akyol, A. (2023). Effect of inhaler and topical lavender oil on pain management of arteriovenous fistula cannulation. *The Journal of Vascular Access*, 11297298211031086.
- Yıldırım, B. (2017). A Medical Social Service Application: Planning Interaction Group for Hemodialysis Patients 1. *Journal of Social Work*, 1(2), 64-73.

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