


Theory-Based Advanced Nursing Practice: A Practice Update on the Application of Orem's Self-Care Deficit Nursing Theory

SAGE Open Nursing
Volume 7: 1–7
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DOI: 10.1177/23779608211011993
journals.sagepub.com/home/son


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Abstract

Introduction: Many researchers have commended the self-care deficit nursing theory (SCDNT) developed by Orem as a means of improving patients' health outcomes through nurses' contributions. However, experimental research has investigated specific aspects of SCDNT, such as self-care agency and self-care requisites, rather than how the construct is practiced and understood as a whole. The current research presents a case study in which an advanced practice nurse (APN) used SCDNT-led practice within a primary healthcare setting that illustrates how the theory is applied to case management.

Methods: A case study was conducted by observing an APN during her work in the asthma clinic of a public hospital in Hong Kong. A comparison was made between the case management of the APN under observation with the nursing processes stipulated by the SCDNT across four key operations: *diagnostic, prescriptive, treatment or regulatory, and case management*.

Conclusion: During the observed consultation, the APN applied the four key operations. In SCDNT, the role of the APN is to apply practical nursing knowledge by determining how a patient can best undertake self-care within the circumstances of their living arrangements and support facilities. The case study also demonstrated that SCDNT-based nursing practice has strengths and limitations in a primary healthcare setting. The study concluded that Orem's SCDNT serves as an appropriate theoretical framework for nursing practice within primary healthcare settings. One practical consequence of using SCDNT is that it enables APNs to use nurse-sensitive indicators when evaluating their clinical practice. This study offers a practice update to increase the accountability of nursing practice for nurse-led healthcare services.

Keywords

nursing theory, Orem self-care model, primary care nursing, nursing theory-guided practice

Received 26 December 2020; accepted 3 April 2021

Introduction

Advanced nursing practice is based on critical thinking and understanding the required theoretical background (Parker & Hill, 2017). It can be conceptualized as the practice of fostering human health within a social context. Advanced nursing practice is underpinned by discipline-specific theoretical knowledge that draws on philosophical perspectives and ontological, epistemological, and methodological frameworks based on an ethical approach toward humans and the world they inhabit (Parse et al., 2000).

Many researchers have recommended the self-care deficit nursing theory (SCDNT) developed by Orem (1995) to improve patients' health outcomes in terms of the nurses' contributions. Experimental studies on

this theory include assessing the value of SCDNT in reducing fatigue in patients with multiple sclerosis (Afrasiabifar et al., 2016) and an evaluation of SCDNT-based care in improving the quality of life of patients suffering from migraines (Zarandi et al., 2016). Both studies confirmed the valuable role played by SCDNT-led advanced nursing practice in primary

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healthcare settings. However, experimental research investigated specific aspects of SCDNT, such as self-care agency (SCA) and self-care requisites, rather than studying how the construct is practiced and understood (Younas & Quennell, 2019). Consequently, such research has furthered our theoretical understanding rather than offered practical guidelines for clinical application or shed light on how the framework is interpreted in the real world. This emphasis on theory instead of practice has constrained our understanding of SCDNT's application (Bond et al., 2011).

The current research presents a case study in which an advanced practice nurse (APN) used SCDNT-led practice within a primary healthcare setting to illustrate how the theory is applied to case management. The patient described in this case had frequent asthma attacks during the two months before his visit to a nurse-led asthma clinic in a Hong Kong public hospital. The APN who assessed the case had 25 years of experience in respiratory care. This case study offers an opportunity to understand the parameters of the practical application of theory-based advanced nursing practice, specifically that of SCDNT, in primary care settings.

Brief Review

Theory-Based Advanced Nursing Practice With Orem's Self-Care Deficit Nursing Theory: An Overview of Constructs

This section outlines the four key constructs of SCDNT (Fawcett & Desanto-Madeya, 2012). The first construct, *foundational capabilities and dispositions*, consists of personal characteristics, such as the skills and traits that impact a person's capacity for action. This construct may be regarded as an umbrella category encompassing other broad constructs, including the ability to know and do (e.g., literacy or numeracy), dispositions that impact the setting and pursuit of goals (e.g., self-identity), and orienting capabilities and dispositions (e.g., attitudes toward health). The second construct consists of *basic conditioning factors* (BCFs), such as the requirements and ability to undertake self-care regarding patients' characteristics or the environment in which they live. This ability encompasses various factors, such as the patient's state of health, sociocultural setting, gender identity, life habits, and developmental stage. The third construct, *self-care requisites*, includes actions and items required for the patient to achieve holistic self-care, including health, development, and general well-being.

The last construct, *SCA*, is the individual's overall ability to meet their self-care needs. The SCDNT distinguishes between two types of knowledge: *speculatively*

practical knowledge, established from theory, and *practically practical knowledge*, established from real-world practice (George, 2011). The latter is demonstrated, for example, by an APN who has learned to provide primary care to patients who lack social and economic capital. APNs in such cases juggle complex priorities through a system of frequent telephone calls to ensure regular health monitoring. Another example is when a nurse recognizes that a patient is incapable of monitoring their health status properly, and accordingly makes provision to help the patient meet their self-care needs (Mohammadpour et al., 2015); this is crucial as the primary task of an APN is to promote the SCA of each patient.

Furthermore, SCDNT separates four key operations within professional practice—*diagnostic*, *prescriptive*, *treatment or regulatory*, and *case management* (De Chesnay & Anderson, 2019). Within SCDNT, *diagnostic* operations refer to the diagnosis and prediction of self-care requisites, which must consider the effect of foundational capabilities and dispositions and BCFs on the patient's self-care ability. The APN then uses this diagnosis to guide their *prescriptive* operations, determine the practical actions required based on the patient's state of health, manner of daily living, and environmental constraints, and health or other goals. The actions prescribed are realized through *treatment or regulatory* operations. These are not generally performed by the APN directly, although the APN can offer help and advice in matters such as adjusting a patient's home environment and ensuring that they have the necessary knowledge and skills to accomplish the prescribed actions. Finally, under *case management* operations, APNs ensure that all actions performed under the previous three operations are properly evaluated and integrated to ensure smooth practice and communication among all links in the health service chain.

Effective case management by APNs rests on their understanding that diagnosis, prescription, and treatment constitute a dynamic process that functions properly only if adapted to each patient's needs (Doucet, 2013). This process requires integrating a feasible course of action for optimal healing into a patient's daily living patterns within the financial and other healthcare service constraints. Within the SCDNT, the role of the APN is to apply practical nursing knowledge by determining how a patient can best undertake self-care within the boundaries of their living arrangements and support facilities. By elaborating on a specific case study, the following section details how nursing operations can be accomplished according to SCDNT-based practice.

I undertook a descriptive case study because this approach enables an in-depth investigation of a contemporary phenomenon within its real-world setting

(Hackel & Fawcett, 2018; Yin, 2014). I directly observed and recorded how an APN dealt with the physical and other characteristics of a specific real-life situation (Mulhall, 2003). Such systematic observation of individuals performing tasks in a non-laboratory setting can yield richer data than interviewing subjects after the event or asking them to self-report; the latter data collection methods carry the risk of bias and self-selection (Morse, 2003).

The subject of this case study was an APN, observed during her work in the asthma clinic of a public hospital. She has a master's degree in nursing and 25 years of experience in the respiratory nursing specialty (14 years in primary care and 11 in acute care). I observed the APN during a scheduled consultation with a referred patient. This patient visited the emergency room (ER) of a public hospital on multiple occasions over the previous two months due to asthma attacks. The patient gave verbal consent for the observation, and I respected their privacy by taking field notes rather than an audio or video recording of the consultation. After I documented the consultation details, I compared the case management of the APN under observation to the nursing processes stipulated by the SCDNT. Finally, I presented in-depth information on the four operations of the SCDNT within the case study's context in the reflection section of the application.

Discussion

Case Scenario

The patient, "Mr. Z.," was 61 years old and had been a smoker for 21 years. He visited the clinic due to his wife's concerns about his recent coughing episodes and general ill health. Mr. Z., however, considered his health to be generally good. When asked about his health goal, he replied that he wanted to work without coughing as much as he usually did. He also stated that although he was diagnosed with asthma eight years ago, he did not renew his medications because he believed that he did not need them.

The initial nursing assessment clearly revealed that Mr. Z.'s wife was more proactive in managing his care than he was. When asked whether he woke up at night coughing, coughed during his morning walks, or coughed while undertaking strenuous activities, he repeatedly turned to his wife for answers. When asked whether he could think of any triggers for the asthma attacks that eventually compelled him to visit the ER, Mr. Z. responded that he believed his dry cough episodes at night worsened since his pet dogs were allowed into the bedroom and on the bed over the past two months. From this initial interaction, the APN concluded that Mr. Z. had the foundational disposition of paying

attention to his health only when something interfered with his work.

During Mr. Z.'s physical examination, the APN found only slight wheezing in the right middle lobe. An ER physician who attended to Mr. Z., however, diagnosed him with asthma and referred him to the asthma clinic to discuss options for improving the condition's long-term management.

Reflection

The Parameters of Theory-Based Practice Concerning Diagnostic Nursing Operations. During the observed consultation, the APN applied *diagnostic nursing operations* as per the SCDNT—diagnosing how the BCFs may impact the patient's self-care requisites and whether the patient has the necessary SCA to meet the requisites. In this case, the diagnosis of self-care requirements covered Mr. Z.'s ability to identify and avoid situations that he knew could trigger an asthma attack. It also included changing his self-image to acknowledge that he had asthma, recording peak flow measurements to monitor his health status, taking prescribed medications, and being able or willing to monitor the effects of those medications. During the consultation, the APN identified the actions required, ensured Mr. Z. understood them independently and interdependently, and ascertained that he was ready to fulfill the requirements and knew the procedures for fulfilling them.

The APN also evaluated the Mr. Z.'s SCA (an individual's ability to fulfill self-care requirements for a specific condition and in general). Orem (1995) differentiated between the three types of self-care operations that comprise SCA: *investigative-estimative*, *judgment and decision-making*, and *productive*. To perform these operations, the individual must ask and answer questions such as, What do I need to do? What should I not do? Which actions do I choose to perform? Is my self-care practice giving me the desired outcomes? Direct observation of the APN's asthma discussion with Mr. Z. revealed that he had the necessary knowledge to manage his diagnosed condition. However, it was equally clear that Mr. Z.—given his lack of interest in his health and physical well-being—would require assistance to accomplish his self-care requirements and the ability to work without coughing. Consequently, the APN diagnosed the patient as having limited SCA knowledge due to his lack of concern regarding his physical health and asthma concerns.

Regarding Prescriptive Nursing Operations. The first step is to *prescribe* all the actions necessary to ensure total self-care. Hence, in the observed consultation, the APN had to ensure Mr. Z. was fully cognizant of the requirements to control his condition to stay in good health. To

regulate his asthma, Mr. Z. was advised to monitor his cough, use a peak flow meter to monitor and record his respiratory function, use a metered-dose inhaler four times daily for 14 days and monitor any effects, and identify and avoid triggers. Mr. Z. stipulated that his preferred health outcome was reduced cough. Therefore, the discussion focused on how these self-care requirements could be integrated into his everyday life. Ideally, consultation between the APN and patients should result in a partnership and mutual understanding of constraints, desired outcomes, and measures necessary to achieve those outcomes. Mr. Z. demonstrated considerable dependence on his wife when asked questions about his health; therefore, the APN understood that the responsibility for his self-care was shared between the two in their everyday lives. This shared responsibility indicated a *collaborative care system* (Geden & Taylor, 1999), in which two capable adult partners in a long-term relationship adopt a system of SCA in which each assumes some responsibility for the other's care management. Under such a care system, the APN seeks to help the partners incorporate new self-care requirements into the existing system by clarifying and exploring each partner's roles and responsibilities and facilitating an agreement on how best to modify their living arrangements. The observed APN predicted that if Mr. Z.'s wife did not take responsibility for meeting at least some of her husband's care requirements, he would not adequately monitor his health or take the prescribed course of action.

Regarding Treatment or Regulatory Operations. The supportive-educative system developed for long-term implementation by Mr. Z. had four specific goals: 1) to help him acquire the knowledge needed to manage his condition; 2) to help him learn the skills required to understand and accurately describe his symptoms; 3) to help him take the appropriate self-care management decisions and actions; and 4) to complement the existing collaborative care system by ensuring that Mr. Z. and his wife could make the necessary adjustments to their roles and responsibilities to achieve their self-care requirements, both now and in the future.

The supportive-educative system could be complemented by a developmental-supportive system in Mr. Z.'s case to support him in modifying his self-image and integrating the prescribed self-care measures into the couple's daily routine. Specifically, Mr. Z. must develop his self-concept to accept that a chronic health condition requiring constant attention is a part of his identity and that this condition requires him to adhere to his prescribed medications. During the consultation, the APN asked Mr. Z., "How are you managing your asthma?" This question was to determine whether Mr. Z. had taken ownership of the illness and enable the APN

to judge how to help him adjust his self-image. Confirmation of this adjustment will involve Mr. Z. describing himself as being asthmatic or having asthma.

The APN drew on both knowledge and experience to design a nursing system tailored to meet Mr. Z.'s needs, specifically seeking to help him develop the skills needed to understand and accurately describe his symptoms. The APN demonstrated the understanding that symptoms are experienced subjectively and can only be described accurately by the patient. Hence, although Mrs. Z. may offer encouragement and support toward her husband's self-care needs, only Mr. Z. can engage in actions to meet those needs. Particularly, the symptoms that Mr. Z. is likely to experience due to his condition were carefully described to him by the APN in an easily comprehensible language. For example, people with asthma commonly suffer from shortness of breath, which the APN described as having trouble catching one's breath, feeling as if the air is too thin or lacks enough oxygen, or feeling suffocated.

Having realized that Mrs. Z. was an important contributor in Mr. Z.'s self-care, the APN invited her to participate in a discussion of ways to effectively implement the actions prescribed for Mr. Z. One of the prescribed requisites was the need for Mr. Z. to identify and avoid his asthma triggers. Therefore, the APN facilitated a discussion on how dog fur may trigger his cough, with which Mrs. Z. agreed. Solutions for avoiding this trigger included not allowing pets in the bedroom and ensuring that Mr. Z. thoroughly washed his hands after touching the pets, as hands are carriers of dander. Mrs. Z. suggested that Mr. Z. should also wash his hands before going to sleep. This discussion on ways to avoid triggers exemplifies the need for prior negotiation to properly implement an action plan for self-care. The discussion allows the patient and their family members to identify the least disruptive and most efficient way of incorporating the new regime into their everyday life.

Regarding Case Management Operations. Case management operations address how diagnostic, prescriptive, and treatment or regulatory operations can be integrated to ensure the smooth delivery of healthcare services. For patients visiting a primary healthcare setting, this range of operations is best integrated through a long-term communication system between the patients and APNs, who can coordinate the services required from a range of providers where necessary. Under the SCDNT, the observed APN had a choice to either manage Mr. Z.'s case within the asthma clinic or refer him elsewhere. However, if the APN decided to refer Mr. Z., she would have continued to direct the overall coordination and communication with him and his wife. Mr. Z. could, for example, be seen by a respiratory physician in the future, which would be arranged by the APN,

whose responsibility in such a scenario would be to ensure that Mr. and Mrs. Z. understood why this step was being taken and what outcomes they could expect from it.

Services are appropriately coordinated when each stakeholder's voice is heard—in this case, Mr. and Mrs. Z., the APN, and the specialist to whom Mr. Z. may be referred. This specific case management operation also requires the APN to adopt the role of the patient's advocate, representing Mr. Z. to the specialist by conveying essential information such as his preferred outcomes and self-care abilities and strategies. This information gives the specialist the necessary context to communicate effectively with Mr. and Mrs. Z. and suggest and explain any recommended changes in the ongoing treatment. Advocacy may be aptly described as making the path ready. It aims to ensure patients' smooth transition to different care providers and proper coordination of their overall care management.

Applicability of the Self-Care Deficit Nursing Theory to Advanced Nursing Practice in Primary Healthcare Settings

The case study demonstrated that SCDNT-based nursing practice has both strengths and limitations in a primary healthcare setting. According to the Institute of Medicine (IOM) Committee on the Future of Primary Care (1996), primary care is “the provision of integrated, accessible healthcare services by clinicians who are accountable for addressing a large majority of personal healthcare needs, developing a sustained partnership with patients, and practicing in the context of family and community” (p. 31). However, Geden and Taylor (1997) advocated extending this definition to encompass the integration of prescribed self-care measures into patients' daily lives, given their importance in achieving the desired outcomes. Once this extension has been incorporated, the IOM Committee on the Future of Primary Care (1996) definition essentially described the SCDNT. Hence, the SCDNT offers a framework through which APNs can evaluate specific cases and identify a language in which they can communicate their contribution to patients' health and well-being. Advanced nursing practice in a primary healthcare setting is principally aimed at promoting patients' SCA to construct and perform the necessary self-care practices (Bal Özkaptan & Kapucu, 2016; Hemati et al., 2015).

Among the possible challenges to theory-based practice is that the SCDNT addresses specific practical aspects of nursing practice rather than conceptualizing the nature of the nursing activity. Despite this limitation, the SCDNT offers the necessary simplicity, clarity, and logic to serve as the preferred framework for many APNs undertaking chronic disease management in

primary healthcare settings (Afrasiabifar et al., 2020), such as the APN observed in the current case study. Moreover, the model offers a clear roadmap for the coordination of nurse–patient relations and establishes the actions to be undertaken by both partners to ensure the mutually desired outcome of boosting the patient's SCA.

However, it must be acknowledged that the SCDNT is restricted by its failure to address every aspect of primary care and all potential patient requirements. For example, Orem (1995) did not clearly define “family.” Moreover, there were weaknesses in her treatment of public education and the relationship between nurses and the society where they practiced, which are important factors for disease prevention, management, and aftercare (Blok, 2017; Rutledge, 2019).

Chronic disease management is a key element of primary healthcare and involves attending to the patient's emotional needs, which the SCDNT does not do, thereby reducing its applicability. Further, self-care is not the only construct to be considered when dealing with people living with chronic diseases. Theories addressing this limitation include Jean Watson's theory of caring (Neil & Tomey, 2006) and Roy's adaptation model (Roy, 2009), which can complement the SCDNT. This is especially true for Roy's assertion that the family, rather than the individual patient, is the recipient of care, given that family-centered care is at the heart of today's multidisciplinary approach to primary healthcare (Kokorelias et al., 2019).

This Case Study's Contribution to the Knowledge of Advanced Practice

The SCDNT offers a robust discipline-specific model to promote high-quality nursing practice by enhancing the client's SCA concerning their health outcomes within a care management plan (Carroll, 2019). For example, in the case of Mr. Z., this occurred through the APN's nursing process incorporating the four key operations: *diagnostic, prescriptive, treatment or regulatory, and case management*. This case study also demonstrated that SCDNT could be of value within nurse-led primary healthcare services for chronic disease management (Khademian et al., 2020; Pickett et al., 2014), a matter of increasing concern, given the sharp rise in lifestyle diseases. Continuous improvements in nursing practice and clear communication and coordination between APNs and patients are critical for such diseases to be managed appropriately. The current study demonstrated how theory-based practice might increase the accountability of APNs in fostering patients' ability to attain the desired outcomes. This is achieved through a practice based on a professional ethos of high-quality, humanistic, and effective care. More importantly, it contributes

to our broader understanding of how APNs can integrate aspects of SCDNT to update their practice further.

Conclusion

SCDNT serves as an appropriate theoretical framework for nursing practice within primary healthcare settings. Translating the tenets of the SCDNT into practice offers a way for primary care nurses to care for an individual as an embedded component of a wider family and society. The case study considered in this paper demonstrated how the SCDNT could guide an APN to understand their patient as an agent who can develop, grow, and adopt a self-care regimen. One practical consequence of using the SCDNT is that it enables APNs to use nurse-sensitive metrics when evaluating their clinical practice. Thus, Orem's theory offers a valuable framework for reflection on patient care and enhances our understanding of the ongoing fluidity and adaptability of advanced nursing practice and primary healthcare.


Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

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References

- Afrasiabifar, A., Mehri, Z., & Ghaffarian Shirazi, H. R. (2020). Orem's self-care model with multiple sclerosis patients' balance and motor function. *Nursing Science Quarterly*, 33(1), 46–54. <https://doi.org/10.1177/0894318419881792>
- Afrasiabifar, A., Mehri, Z., Javad Sadat, S., & Ghaffarian Shirazi, H. R. (2016). The effect of Orem's self-care model on fatigue in patients with multiple sclerosis: A single blind randomized clinical trial study. *Iranian Red Crescent Medical Journal*, 18(8), e31955. <https://doi.org/10.5812/ircmj.31955>
- Bal Özkaptan, B., & Kapucu, S. (2016). Home nursing care with the self-care model improves self-efficacy of patients with chronic obstructive pulmonary disease. *Japan Journal of Nursing Science*, 13(3), 365–377. <https://doi.org/10.1111/jjns.12118>
- Blok, A. C. (2017). A middle-range explanatory theory of self-management behavior for collaborative research and practice: Self-management behavior. *Nursing Forum*, 52(2), 138–146. <https://doi.org/10.1111/nuf.12169>
- Bond, A. E., Eshah, N. F., Bani-Khaled, M., Hamad, A. O., Habashneh, S., Kataua', H., al-Jarrah, I., Kamal, A. A., Hamdan, F. R., & Maabreh, R. (2011). Who uses nursing theory? A univariate descriptive analysis of five years' research articles. *Scandinavian Journal of Caring Sciences*, 25(2), 404–409. <https://doi.org/10.1111/j.1471-6712.2010.00835.x>
- Carroll, K. (2019). Bringing nursing care to patients living with diabetes mellitus. *Nursing Science Quarterly*, 32(3), 187–188. <https://doi.org/10.1177/0894318419845402>
- De Chesnay, M., & Anderson, B. (2019). *Caring for the vulnerable*. Jones & Bartlett Learning.
- Doucet, T. (2013). Philosophical and theoretical perspectives for advanced nursing practice (5th ed.), by W. K. Cody (Ed.). (Burlington, MA: Jones and Bartlett, 2013). *Nursing Science Quarterly*, 26(2), 193–198. <https://doi.org/10.1177/0894318413477151>
- Fawcett, J., & DeSanto-Madeya, S. (2012). *Contemporary nursing knowledge: Analysis and evaluation of nursing models and theories*. FA Davis.
- Geden, E. A., & Taylor, S. G. (1997). How is nursing expressed by nurse practitioners in the primary health care setting. *International Orem Society Newsletter*, 5(2), 9–11.
- Geden, E. A., & Taylor, S. G. (1999). Theoretical and empirical description of adult couples' collaborative self-care systems. *Nursing Science Quarterly*, 12(4), 329–334. <https://doi.org/10.1177/08943189922107061>
- George, J. B. (2011). *Nursing theories: The base for professional nursing practice* (6th ed.). Pearson Education India.
- Hackel, J., & Fawcett, J. (2018). Teaching and learning from case studies: The added value of using a nursing conceptual model to construct cases. *Nursing Science Quarterly*, 31(3), 263–271. <https://doi.org/10.1177/0894318418774872>
- Hemati, Z., Mosaviasl, F. S., Abasi, S., Ghazavi, Z., & Kiani, D. (2015). Effect of Orem's self-care model on self-esteem of adolescents with asthma referred to an asthma and allergy clinic in Isfahan. *Tanaffos*, 14(4), 232.
- Institute of Medicine Committee on the Future of Primary Care. (1996). Defining primary care. In M. Donaldson, K. Yordy, & N. Vanselow (Eds.), *Primary care: America's health in a new era* (pp. 27–51). National Academy Press.
- Khademian, Z., Kazemi Ara, F., & Gholamzadeh, S. (2020). The effect of self care education based on Orem's nursing theory on quality of life and self-efficacy in patients with hypertension: A quasi-experimental study. *International Journal of Community Based Nursing and Midwifery*, 8(2), 140–149. <https://doi.org/10.30476/IJCBNM.2020.81690.0>
- Kokorelias, K. M., Gignac, M. A. M., Naglie, G., & Cameron, J. I. (2019). Towards a universal model of family centered care: A scoping review. *BMC Health Services Research*, 19(1), 564. <https://doi.org/10.1186/s12913-019-4394-5>
- Mohammadpour, A., Rahmati Sharghi, N., Khosravan, S., Alami, A., & Akhond, M. (2015). The effect of a supportive educational intervention developed based on the Orem's self-care theory on the self-care ability of patients with myocardial infarction: A randomised controlled trial. *Journal of Clinical Nursing*, 24(11–12), 1686–1692. <https://doi.org/10.1111/jocn.12775>

- Morse, J. M. (2003). Perspectives of the observer and the observed. *Qualitative Health Research, 13*(2), 155–157. <https://doi.org/10.1177/1049732302239595>
- Mulhall, A. (2003). In the field: Notes on observation in qualitative research. *Journal of Advanced Nursing, 41*(3), 306–313. <https://doi.org/10.1046/j.1365-2648.2003.02514.x>
- Neil, R. M. & Tomey, A. M. (2006). Jean Watson: Philosophy and science of caring. In A. M. Tomey & M. R. Alligood (Eds.), *Nursing theorists and their work* (6th ed.) (pp. 91–115). Mosby.
- Orem, D. (1995). *Nursing: Concepts of practice* (5th ed.). Mosby.
- Parker, J. M., & Hill, M. N. (2017). A review of advanced practice nursing in the United States, Canada, Australia and Hong Kong Special Administrative Region (SAR), China. *International Journal of Nursing Sciences, 4*(2), 196–204. <https://doi.org/10.1016/j.ijnss.2017.01.002>
- Parse, R. R., Barrett, E., Bourgeois, M., Dee, V., Egan, E., Germain, C., King, I., Koerner, J., Neuman, B., Newman, M., Roy, C., Walker, L., Watson, J., & Wolf, G. (2000). Nursing theory-guided practice: A definition. *Nursing Science Quarterly, 13*(2), 177. <https://doi.org/10.1177/08943180022107474>
- Pickett, S., Peters, R. M., & Jarosz, P. A. (2014). Toward a middle-range theory of weight management. *Nursing Science Quarterly, 27*(3), 242–247. <https://doi.org/10.1177/0894318414534486>
- Roy, C., Sr. (2009). *The Roy adaptation model* (3rd ed.). Pearson.
- Rutledge, P. M., Montgomery, A. J., Lott, S. M., McGee, Z. M., & Burns, D. M. (2019). The relationship between family support, self-care, and health outcomes in selected African-American females with type 2 diabetes. *Journal of National Black Nurses' Association, 30*(2), 1–9.
- Yin, R. K. (2014). *Case study research: Design and methods (applied social research methods)*. Sage Publications.
- Younas, A., & Quennell, S. (2019). Usefulness of nursing theory-guided practice: An integrative review. *Scandinavian Journal of Caring Sciences, 33*(3), 540–555. <https://doi.org/10.1111/scs.12670>
- Zarandi, F. M., Raiesifar, A., & Ebadi, A. (2016). The effect of Orem's self-care model on quality of life in patients with migraine: A randomized clinical trial. *Acta Medica Iranica, 54*(3), 159–164.