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**Research article** 

# Self-care in the older adult population with chronic disease: concept analysis

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## HIGHLIGHTS

• Self-care is supported in the literature as an approach toward the attainment and sustainment of optimal health.

• The common attributes, referents, antecedents, consequences, and related concepts were identified.

• A clearer conceptual understanding was established of how self-care will support nursing research and clinical leadership.

### ARTICLE INFO

Keywords: Self-care Chronic disease Older adult population

## ABSTRACT

Purpose: Chronic disease care is considered a challenging dilemma for health organizations' sustainability and patient health. Self-care is key to chronic disease management and is substantially important in all aspects of health and levels of care. In the past years, research regarding self-care in the context of chronic disease has evolved, yet this complex concept continues to be ambiguous as there are differences in the way self-care is clearly conceptualized in the literature. A discussion of an in-depth concept analysis of self-care in the older adult population with chronic disease and an outline of its defining common attributes, referents, antecedents, consequences, and related concepts.

Design: Qualitative concept analysis concerning the concept of self-care in the older adult population with chronic disease.

Methods: An extensive review of the literature concerning the concept of self-care in the older adult population with chronic disease was conducted using different databases. Literature from nursing and other disciplines was selected to differentiate this concept from other related concepts. Rodgers's evolutionary methodology of concept analysis was used to investigate the concept of self-care in detail to better understand its meanings in the context of chronic disease

Results: Multiple definitions of self-care exist, and a consensus definition was not shown to have been achieved across disciplines. The common attributes, referents, antecedents, consequences, and related concepts were identified, and a model case was constructed by the authors to clarify the concept of self-care in the context of the older adult population living with chronic disease. This concept analysis provides a theoretical definition of selfcare of the older adult population living with chronic disease to offer nurses and others insight into the concept, which will ultimately provide a foundation for further research needed in the areas of clinical practice, policy, and education. Identification of the core of the self-care concept affords professionals and researchers the ability to identify appropriate practice priorities, enhance current practices, and develop theories and guidelines regarding self-care, leading to improvements in patient care and outcomes.

## 1. Introduction

Chronic disease care is a challenging issue for patients' well-being and a burden for global healthcare, as it represents one of the primary expenditures of healthcare systems (Centers for Disease Control and Prevention, 2018; World Health Organization [WHO], 2019). Existing evidence supports the concept of self-care as a component of care for individuals living with chronic conditions and is critical in the prevention, control, and management of chronic disease (Schulman-Green et al., 2012). One response to the high prevalence of chronic disease among the

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older adult population is the promotion of self-care via encouraging greater involvement of chronically ill individuals in their own care to improve quality of life and reduce healthcare costs (WHO, 2019). Active participation, empowerment, and responsibility are considered core principles in chronic disease management (WHO, 2019). All these behaviors require additional knowledge, motivation, and skills, directing to self-care (Riegel et al., 2019; Schulman-Green et al., 2012). Promotion of self-care is therefore essential and requires the patient to assume an active role in their disease management, but there is a lack of consensus on the definition and scope of self-care (Riegel et al., 2019). Thus, clarity on the concept of self-care and a meticulous analysis of its concept is necessary to better understand it, which can inform nursing care and facilitate the implementation of a self-care approach for chronic conditions.

#### 2. Background

Self-care is key to chronic disease management and is substantially important in all aspects of health and levels of care. The concept of selfcare has similarities and differences with other concepts, including selfmanagement, self-regulation, self-efficacy, and self-monitoring (McEwen and Wills, 2014). Historically, self-care has been rooted in the discipline of nursing and was first introduced in the late 1950s, and then officially defined by Dorothea Orem, a nurse theorist, referred to learned, positive, and practical activities performed by individuals within their own time frames to maintain health and well-being while continuing their personal development (Orem, 1959). This concept as a process involves the domains of shifting responsibility back onto the individual, focusing on illness needs, and living with disease (Orem, 1959). By 1971, Orem had built a nursing theory based on the concept of self-care, including the self-care theory (which describes and explains self-care), self-care deficit theory (which explains how nursing can assist individuals when they are unable to achieve self-care independently), and the theory of nursing systems (which describes the relationships required for nursing itself to exist), thereby providing nursing with a framework to direct practice and linking self-care concepts with nursing practice (McEwen and Wills, 2014).

Within sociology, Levin (1979) was one of the first to define the concept of self-care as a process in which people take personal responsibility in the promotion of health, disease prevention, and treatment. In agreement with Levin, Idler in 1983 described self-care as activities that individuals undertake in promoting health, restoring health, preventing disease, and limiting illness (LeBlanc and Jacelon, 2018). In 1984, the WHO issued a first overarching definition of self-care and then developed a number of finer definitions in later years. Self-care was defined as the activities individuals undertake on their own behalf, either separately or in participative collaboration with professionals, intending to establish and maintain health and preventing and dealing with the disease (WHO, 1984). Later, the WHO (2013) expanded the definition of self-care beyond the capacity to act solely by an individual to the ability of individuals, families, and communities to maintain and promote health, prevent disease, and cope with disease and disability, with or without the support of healthcare providers or professional assistance. The primary purpose of this concept analysis is to examine the state of knowledge and to provide a conceptual understanding of self-care while defining self-care's common attributes (characteristics), referents (contextual information), antecedents (events prior to self-care), consequences (what happens after self-care), and related concepts (concepts that have a relationship with chronic disease self-care).

#### 3. Design

Qualitative concept analysis concerning the concept of self-care in the older adult population with chronic disease. An extensive review of the literature was performed using several databases, including CINAHL,

Cochrane Library, PubMed, Ovid, EBSCO, Medline, PsycINFO, EMBASE, and SocINDEX, with no limit set for the date of publication. Databases were searched utilizing the following keywords: "self-care," "chronic disease," and "older adult population". The targeted population consisted of the older adult population, aged 60 years and above, diagnosed with chronic diseases such as heart disease, lung disease, kidney disease, diabetes, cancer, arthritis, or stroke. The sample selection criteria were as follows: articles written in the English language, made available in full text in the selected databases, which showed evidence in the title, abstract, or in its other structures, of aspects relating to the concept of selfcare. Literature searches generated 9,262 scholarly articles to be identified, from 1950 to 2021. Due to the volume of data retrieved, additional limits of years (1980-2021) was placed and with a strong focus on selfcare in the older population who live with chronic disease. This yielded 3312 publications. After reading through the abstracts and skimming the articles, 50 were selected as meeting the inclusion criteria. These 50 articles were read by the two researchers and then discussed in order to evaluate the reliability of individual articles before deciding whether to include or exclude them. Duplicate articles were eliminated, and articles were rejected if the concept was not covered in the article, and if its attributes, antecedents, consequences, and references could not be identified from the article. Of the original 50 articles, 17 were included in the analysis.

#### 4. Methods

In the present concept analysis, Rodgers's evolutionary method was used to investigate a concept (self-care in the older adult population with chronic disease) that is dynamic and still evolving within the practice of nursing. The following activities, as proposed by Rodgers, were used during this concept analysis (1) identify the concept of interest (2) identify and select an appropriate sample from the relevant literature using a systematic approach and broad time frame (3) analyze data to identify characteristics of the concept (4) identify the attributes of the concept (5) identify the antecedents, consequences, and references of the concept where possible (6) identify concepts that are related to the term of interest (7) identify a model, real case of the concept (Rodgers and Knafl, 2000). After the phase of selecting the literature that served as the basis for analysis of the concept, the two authors objectively read all 17 articles selected for inclusion, in their entirety. As each article was read, fragments of text were identified and highlighted which referred to attributes, referents, antecedent, and consequences of the concept of self-care, as well as concepts related to self-care. The information acquired from this analysis also enabled the construction of the relevant model case to outline misinterpretations related to the concept of self-care, along with a clear definition of the concept.

#### 5. Results

The following section focuses on presenting the results from the review of the literature, and in relation to the older adult population with chronic disease on the basis of Rodgers' (1989) method.

#### 5.1. Defining attributes of self-care

Rodgers and Knafl (2000) defined attributes as the key characteristics that appear repeatedly in the literature, as these enable researchers to distinguish the occurrence of a phenomenon from a similar one. The analysis of self-care in the context of the older adult population with chronic disease resulted in the following defining attributes: the process of looking after oneself (resulting in long-lasting individual benefits of self-care and maintaining general well-being), and knowledge and education (health literacy). Self-monitoring or self-control (ability and confidence) to perform certain activities, relationships (collaborative partnerships), action skills (capability) directed toward needs, goals, and health problems are also common attributes of the concept. Self-care activities (involves practicing physical, psychological, social, and spiritual self-care activities), informed decision-making, positive attitudes, active participation in changes, role management, resource utilization, and adherence to a self-care plan are also closely aligned to the self-care concept in relation the older adult population (Anderson, 1990; Blankers et al., 2011; Clark, 2003; Godfrey et al., 2011; Haug et al., 1989; Høy et al., 2007; LeBlanc and Jacelon, 2018; Levin, 1979; Lorig and Holman, 2003; Moore et al., 2015; Peters-Klimm et al., 2013; Richard and Shea, 2011; Riegel et al., 2019; Schulman-Green et al., 2012; Sundsli et al., 2013; Wilkinson and Whitehead, 2009).

#### 5.2. Referents of self-care

Analysis of referents resulted in the identification of the common attributes of self-care, and 17 articles were used to define them. To ensure that the concept is examined in a holistic way and from different perspectives, and eventually, reaches a consensus, these most relevant articles were subdivided into three categories: articles about self-care concepts in general, self-care as specific to diagnosis, and articles about self-care and its link to chronic disease. From this analysis, the involvement of others in chronic disease patients' self-care activities, such as family members, care providers, and therapists, was a common outcome. However, a lack of consistency related to their roles and boundaries in self-care makes it difficult to unravel the actual roles of patients in their own care from others.

## 5.3. Antecedents of self-care

Antecedents are defined as events that take place before the advent of the concept, while consequences have occurred as a result of the concept in question (Rodgers and Knafl, 2000). The three types of antecedents for self-care were found to be client-related (commitment, self-efficacy, self-motivation, self-esteem, availability of time, and mutual investment with chronic disease), healthcare provider-related (active participation, partners' relationship or support of and cooperation with the clients), and system-related (adequate sources; disease knowledge; social networks; and social, spiritual, mental, financial, cultural factors (Anderson, 1990; Blankers et al., 2011; Clark, 2003; Godfrey et al., 2011; Haug et al., 1989; Høy et al., 2007; LeBlanc and Jacelon, 2018; Levin, 1979; Lorig and Holman, 2003; Moore et al., 2015; Peters-Klimm et al., 2013; Richard and Shea, 2011; Riegel et al., 2019; Schulman-Green et al., 2012; Sundsli et al., 2013; Thorne et al., 2002; Wilkinson and Whitehead, 2009).

#### 5.4. Consequences of self-care

In contrast to antecedents, positive and negative consequences are defined as those events or incidents that occur as a result of the concept in question (Rodgers and Knafl, 2000). Maintenance of health and well-being, enhancement of knowledge and awareness, increased adjustment with disease, alleviation of symptoms, increased self-esteem, enhanced active participation, decreased healthcare resource utilization, decreased risk of disease complications, the ability to acquire autonomy, and treatment adherence are the common consequences of improving patients' ability in self-care, thereby developing a higher level of competency in self-care (Blankers et al., 2011; Godfrey et al., 2011; LeBlanc and Jacelon, 2018; Moore et al., 2015; Peters-Klimm et al., 2013; Riegel et al., 2019; Schulman-Green et al., 2012). Having an independent attitude toward one's care process results in various consequences, including improved health status, improved health outcomes, enhanced functional ability, improved self-efficacy, increased patient satisfaction, and improved quality of life through education, social support, action skill development, and lifestyle changes (Clark, 2003; Høy et al., 2007; Lorig and Holman, 2003; Richard and Shea, 2011; Wilkinson and Whitehead, 2009). Without engaging in self-care, negative consequences result, including poor performance capability, loss of power capabilities,

increased dependency, decreased self-esteem and confidence, reduced well-being, decreased health outcomes, increased risk of disease complications, more healthcare visits, and negative physical and psychological states (Godfrey et al., 2011; Haug et al., 1989; LeBlanc and Jacelon, 2018; Thorne et al., 2002).

#### 5.5. Surrogate terms and concepts related to self-care

The following terms are related to self-care and are used interchangeably with the concept of self-care and have all appeared in nursing and non-nursing articles: active participation, coping, self-management, self-monitoring, self-efficacy, adherence, and enabling (LeBlanc and Jacelon, 2018; Moore et al., 2015; Sundsli et al., 2013). Active participation of individuals in their own conditions involves opportunities to engage in and influence decisions regarding care (Clark, 2003; Høy et al., 2007; Lorig and Holman, 2003). Coping exists within the broader concept of self-care as an active component (Godfrey et al., 2011; Richard and Shea, 2011). Self-management, self-monitoring, and self-efficacy are empowering approaches to care and are commonly associated with self-care, which implies their crucial roles in patient care as essential elements of chronic disease management and involve a reaction and action phase (Haug et al., 1989; Moore et al., 2015). Self-management is a subcategory of self-care that empowers individuals to take charge of their own conditions and involves self-regulation skills (Blankers et al., 2011; Sundsli et al., 2013). Self-monitoring is a component of self-care in which an individual undertakes activities such as monitoring their symptoms or self-adjustment of their treatment and lifestyle as a result of self-awareness (Schulman-Green et al., 2012). Self-efficacy is both an antecedent and a consequence of self-care and refers to an individual's degree of confidence in their ability to self-manage and self-monitor while requiring minimal support to reach their goals (Riegel et al., 2019). Adherence and enabling are associated with self-care throughout the literature, as both help give control, develop abilities, and produce an overall new balance in patients' lives (Peters-Klimm et al., 2013; Schulman-Green et al., 2012).

## 5.6. Model case

To illuminate the meaning of the concept of self-care, a model case was developed by the researchers and demonstrated the defining attributes, antecedents, and consequences of the concept. MS. Smith is a 62year-old female diagnosed with type II Diabetes Mellitus (DM) two years ago. Recently she was not taking medication as ordered and as a result she has had three episodes of fainting in the last month. At the moment, she decided to take the prescribed drug in order to avoid any damage due to uncontrolled glucose level and she committed to managing her care and taking responsibility for it herself. She acquired the essential knowledge and skills necessary to succeed in her self-care and maintain good diabetes control via participation in an educational program offered at the community center. In this program, she learned about the disease, its signs and symptoms, its complications, and its treatment options. She also identified ways to manage her own care independently, maintain her general well-being, and prevent disease-related complications. Since then, she has demonstrated an understanding of the relevant information, managed her condition, and followed her regimen, including diet, exercise adherence, foot care, and eye checkups. She has become capable of recognizing her needs, engaging in self-care actions, monitoring her blood glucose levels, recognizing physical symptoms as being hyperglycemic or hypoglycemic, adjusting her insulin intake accordingly, choosing a healthy lifestyle, and avoiding any stressors. She has participated in a group discussion with her family members, friends, healthcare team, and a support group related to living with diabetes mellitus. She has developed an emergency plan for if her self-action does not help in resolving her symptoms, such as reaching out for her provider's help for better disease control and family support. She has communicated regularly with her primary healthcare team when she has a concern or

question about her symptoms. She has discussed and revised the management plan with her providers, and she has regular follow-up appointments to check her diabetes control. Up to this point, Ms. Smith has demonstrated self-care, maintaining of her condition, and diabetes control with no disease-related complications.

#### 5.7. Theoretical definition of the concept of self-care

Based upon the identified attributes, antecedents, and consequences that were found in this analysis, the theoretical definition of self-care of the older adult population living with chronic disease is as follows: a health development process in which individuals with chronic disease make a naturalistic and informed decision to manage their condition independently (self-care management) and function effectively in taking care of their own health with minimal or no support of health-care providers, show ownership of self-care activities via active participation (self-care maintenance) in these activities, comply with necessary changes and long-term therapeutic regimens, enhance their self-efficacy by monitoring symptoms and solving problems caused by their disease, and incorporate effective self-care strategies into daily life to achieve, maintain, or promote maximum health and well-being, through interactions with healthcare providers.

#### 6. Discussion

The term self-care was introduced into nursing literature in the 1950s to refer to the learned, positive, and practical activities performed by individuals within their own time frames to maintain health and wellbeing while continuing their personal development (Orem, 1959). Although much information on self-care is available, there are still differences in the way self-care of the older adult population living with chronic disease is conceptualized across disciplines. The findings of this concept analysis indicated the common attributes of the concept of self-care, namely the process of looking after oneself (resulting in long-lasting individual benefits of self-care and maintaining general well-being); knowledge and education (health literacy); self-monitoring or self-control (ability and confidence) to perform certain activities; relationships (collaborative partnerships); action skills (capability) directed toward needs, goals, and health problems; and self-care activities (involves practicing physical, psychological, social, and spiritual self-care activities); informed decision-making, positive attitudes, active participation in changes, role management, resource utilization, and adherence to a self-care plan. Three types of antecedents for self-care were identified to be client-related; healthcare provider-related; and system-related. The positive consequences mentioned were maintenance of health and well-being; enhancement of knowledge and awareness; increased adjustment with disease; alleviation of symptoms; increased self-esteem; enhanced active participation; decreased healthcare resource utilization; decreased risk of disease complications; improved ability to reach autonomy; improved treatment adherence; improved health status; improved health outcomes; enhanced functional ability; improved self-efficacy; increased patient satisfaction; and improved quality of life through education, social support, action skill development, and lifestyle changes. The described negative consequences include poor performance capability, loss of power capabilities, increased dependency, decreased self-esteem and confidence, reduced well-being, decreased health outcomes, increased risk of disease complications, more healthcare visits, and negative physical and psychological states. Seven concepts were related to self-care: coping, adherence, enabling, active participation, self-management, self-monitoring, and self-efficacy.

## 7. Conclusion

This paper highlighted the definition of the concept of self-care in the older patients in relation to its attributes, references, antecedents,

consequences, and related concepts, which can be used as components of patient care. Supporting and encouraging older patients with chronic disease to self-care is a key role for the healthcare providers and nurses in particular as nurses often communicate and engage more with patients for longer periods of time in multiple settings; enabling them to move forward with their disease. Motivating and helping patients to self-care involves nurses and others actively collaborating with patients and their families to acquire knowledge and skills which will guide them to identify their needs, to manage their own health problems, to do self-care more efficiently, and to make informed decisions regarding their chronic disease. Self-care can help to promote domains of quality of life in patients with chronic diseases and reduce distress or symptom burden among them; therefore, nurses and others should advise patients with chronic disease on self-care activities and should include these patients in self-care education programs whenever possible. Most importantly, nurses and all providers must become more educated about self-care and about the best ways to promote self-care and influence outcomes among these patients.

Once nurses understand the concept of self-care accurately, they can develop effective nursing interventions and guidelines to empower individuals in managing their conditions independently. Further research exploring self-care from the patient's perspective and encompassing all the factors and characteristics of the concept of self-care in this paper is necessary to appropriately evaluate the consequences of improved quality of life and minimize healthcare expenditures. More research examining the relationship between self-care of chronic disease and healthcare organizations' outcomes, is needed. Raising more awareness of this concept among professionals is therefore needed and can serve as a guide in conducting more research and the development of public health policies, self-care disease management programs, education sessions, practical interventions, or evaluation tools for people living with chronic diseases.

#### Declarations

#### Author contribution statement

Jawhrah Alqahtani and Ibtesam Alqahtani: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

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Data included in article/supplementary material/referenced in article.

## Declaration of interests statement

The authors declare no conflict of interest.

#### Additional information

No additional information is available for this paper.

#### References

Anderson, J.M., 1990. Home care management in chronic illness and the self-care movement: an analysis of ideologies and economic processes influencing policy decisions. Adv. Nurs. Sci. 12 (2), 71–83.

Blankers, M., Koeter, M.W.J., Schippers, G.M., 2011. Internet therapy versus internet selfhelp versus no treatment for problematic alcohol use: a randomized controlled trial. J. Consult. Clin. Psychol. 79 (3), 330.

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Centers for Disease Control and Prevention, 2018. Health Systems Approaches to Preventing Chronic Disease: New Partners, New Tools, and New Strategies from. https://www.cdc.gov/pcd/current\_issue.htm. (Accessed 20 August 2021).

Clark, N.M., 2003. Management of chronic disease by patients. Annu. Rev. Publ. Health 24 (1), 289–313.

- Godfrey, C.M., Harrison, M.B., Lysaght, R., Lamb, M., Graham, I.D., Oakley, P., 2011. Care of self-care by other-care of other: the meaning of self-care from research, practice, policy and industry perspectives. Int. J. Evid. Base. Healthc. 9 (1), 3–24.
- Haug, M.R., Wykle, M.L., Namazi, K.H., 1989. Self-care among older adults. Soc. Sci. Med. 29 (1), 171–183.
- Høy, B., Wagner, L., Hall, E.O., 2007. Self-care as a health resource of elders: an integrative review of the concept. Scand. J. Caring Sci. 21 (4), 456–466.
- LeBlanc, R.G., Jacelon, C.S., 2018. Self-care among older people living with chronic conditions. Int. J. Older People Nurs. 13 (3), e12191.
- Levin, L.S., 1979. Self-care: new challenge to individual health. J. Am. Coll. Health Assoc. 28 (2), 117–120.
- Lorig, K.R., Holman, H.R., 2003. Self-management education: history, definition, outcomes, and mechanisms. Ann. Behav. Med. 26 (1), 1–7.
- McEwen, M., Wills, E., 2014. Theoretical Basis for Nursing, fourth ed. Lippincott Williams & Wilkins, Philadelphia.
- Moore, L., Frost, J., Britten, N., 2015. Context and complexity: the meaning of self-management for older adults with heart disease. Sociol. Health Illness 37 (8), 1254–1269.
- Orem, D., 1959. Guides for Developing Curriculum for the Education of Practical Nurses. U.S. Dept. of Health, Education, and Welfare, Office of Education, Washington, DC.
- Peters-Klimm, F., Freund, T., Kunz, C.U., Laux, G., Frankenstein, L., Müller-Tasch, T., Szecsenyi, J., 2013. Determinants of heart failure self-care behaviour in communitybased patients: a cross-sectional study. Eur. J. Cardiovasc. Nurs. 12 (2), 167–176.

- Richard, A.A., Shea, K., 2011. Delineation of self-care and associated concepts. J. Nurs. Scholarsh. 43 (3), 255–264.
- Riegel, B., Dunbar, S.B., Fitzsimons, D., Freedland, K.E., Lee, C.S., Middleton, S., Stromberg, A., Vellone, E., Webber, D.E., Jaarsma, T., 2019. Self-care research: where are we now? Where are we going? Int. J. Nurs. Stud. 103402.
- Rodgers, B.L., Knafl, K.A., 2000. Concept analysis: an evolutionary view. In: Eoyang, T. (Ed.), Concept Development in Nursing: Foundations, Techniques, and Applications. Saunders, Philadelphia.
- Schulman-Green, D., Jaser, S., Martin, F., Alonzo, A., Grey, M., McCorkle, R., Redeker, N.S., Reynolds, N., Whittemore, R., 2012. Processes of self-management in chronic illness. J. Nurs. Scholarsh. 44 (2), 136–144.
- Sundsli, K., Espnes, G.A., Söderhamn, O., 2013. Being old and living alone in urban areas: the meaning of self-care and health on the perception of life situation and identity. Psychol. Res. Behav. Manag. 6, 21.
- Thorne, S., Paterson, B., Russell, C., Schultz, A., 2002. Complementary and alternative medicine in chronic illness as informed self-care decision making. Int. J. Nurs. Stud. 39 (7), 671–683.
- World Health Organization (WHO), 1984. Health Education in Self-Care: Possibilities and Limitations. Report No. HED/84.1). https://apps.who.int/iris/handle/10665/70092.
- World Health Organization (WHO), 2019. Self-care Can Be an Effective Part of National Health Systems from. https://www.who.int/reproductivehealth/self-care-national -health-systems/en/. (Accessed 20 November 2019).
- World Health Organization (WHO), 2013. Q+A about Self-Care from. https://www.who .int/reproductivehealth/self-care-interventions/questions-answers/en/. (Accessed 19 August 2021).
- Wilkinson, A., Whitehead, L., 2009. Evolution of the concept of self-care and implications for nurses: a literature review. Int. J. Nurs. Stud. 46 (8), 1143–1147.