

Conceptual analysis of self-care agency

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ABSTRACT

The concept of self- care agency was developed by Orem (1980) as a component of Self-Care Deficit Nursing Theory (SCD-NT). Since its development, self-care agency concept has been applied widely in the discipline of nursing to determine the relationship between self-care agency and other concepts of the Orem SCD-NT in various populations. In this paper, the author analyzes the concept of self-care agency using Wilson's Conceptual Analysis Method as modified by Walker & Avant (1995). In particular, the use of the self-care agency concept is considered as it relates to conditioning factors, self-care actions, and specific outcomes in nursing research and practice.

Descriptors: Self care.

INTRODUCTION

The concept of self- care agency was developed by Orem (1980) as a component of Self-Care Deficit Nursing Theory (SCD-NT). Since then, this concept has been used widely in the discipline of nursing as it relates to research, education, and practice in the field of health promotion and disease management. According to Orem (1980, 1985, 1991), self-care agency is an important concept for measuring one's capability for self-care practice to achieve a desire goal-oriented outcome.

A conceptual analysis of self-care agency identifies and defines the elements that comprise the concept as well as the meaning, attributes, and use of the composite concept. In addition, illustrative cases such as a model case, a related case, a borderline case, and a contrary case are presented to clarify the use of the concept. Finally, antecedents, consequences, and empirical referents are listed.

PURPOSE OF CONCEPT ANALYSIS

The purpose of this paper is to analyze the concept of self-care agency using Wilson's Conceptual Analysis Method as modified by Walker & Avant (1995). In particular, the use of the self-care agency concept is considered as it relates to conditioning factors, self-care actions, and specific outcomes in nursing research and practice. Through a systematic process of analyzing terms, Wilson's method stresses the development of a theoretical foundation for further refinement and analysis. Thus, the selfcare agency concept was selected, a review and summary of the literature was performed, and the essentials elements and measurements were described.

Defining the concept of self-care agency

self-care agency is a composite concept that is not defined in English language dictionaries. Thus, the definition of each word that comprises the concept is fundamental to understanding the origin of the concept. The definitions collected for each word are applied strictly to human beings, excluding animals or objects.

In the Webster's New Universal Unabridged Dictionary (1996) the word "self" is defined as "person referred to with respect to complete individuality; one's own self. A person's nature, character, etc.: his better self. Personal interest" (p.1735). Other definitions related to specific knowledge areas are also provided. In philosophy, self is "the ego; that which knows, remembers, desires, suffers, etc., as contrasted with that known, remembered, etc. The uniting principle, as a soul, underlying all subjective experience" (p.1735). In immunology, self means "the natural constituents of the body, which are normally not subject to attack by components of the immune system (contrasted with nonself)" (p.1735). In addition, Bandura (1986) defined self as one's own specific experience, which is in continuous development through the entire life; and Orem (1991) defined self as "sense of one's whole being" (p.117).

Care has been defined as "a state of mind in which one is troubled; worry, anxiety, or concern. A cause or object of worry, anxiety, concern, etc. Serious attention; solicitude; heed; caution. Protection; charge. Grief; suffering; sorrow" (Webster's New Universal Unabridged Dictionary, 1996, p.314). For Orem' (1991) care is "take care of, which means to watch over, to be responsible for, to make provision for, to look after some person" (p.14).

Agency is "the duty or function of an agent. The state of being in action or of exercising power; operation" (Webster's New Universal Unabridged Dictionary, 1996, p.37). In Orem's (1971, 1980, 1985, 1991) SCD-NT, agency appears to be an individual's decisions about self-care needs as well as the initiative in performing selfcare actions. Orem (1991) defined agency as "the powers of persons to engage in particular kinds of goal-achieving actions" (p.145).

Self-care is "care of self without medical or other professional consultation" (Webster's New Unabridged Dictionary, 1996, p.1735). Orem (1991) defined self-care as "the practice of activities that individuals initiate and perform on their own behalf in maintaining life, health, and well-being" (p.117).

In the early 1970's, Orem identified the concept of self-care agency as a condition which is characteristic of human beings to initiate and sustain self-care, but it was only defined and conceptualized by Orem in the 1980 and 1990s. According to Orem (1991), self-care agency is defined as "the complex acquired ability to meet one's continuing requirements for care that regulates life processes, maintains and promotes integrity of human structure and functioning and human development, and promotes wellbeing" (p. 145). This concept is used throughout the theory to interpret an individual's capabilities for self-care actions to achieve a goal-oriented outcome. Self-care agency is described by Orem (1980, 1985, 1991) as having three types of personal trait components: foundational, enabling, and operational.

Foundational traits include personal capabilities regarding sensation, perception, memory, and orientation. Any disturbance in one of these capabilities affects one's deliberate actions.

Enabling traits are the self-care agency power components consisting of the specific personal capabilities to engage in self-care such as knowledge, self-care skills, health value, energy, mobility, motivation, decision-making, interpersonal skills, persistence, and purposeful goals.

Operational traits are the personal capabilities for recognition of personal and environmental conditions and factors significant to one's self-care actions (estimative operations); judgement and decision-making about what one can, should, and actually does do (transitional operations); and the actual performance of self-care actions (productive operations).

Self-care agency is one of the key concepts in Orem's SCD-NT and it is acquired throughout the life span. Orem also emphasized that personal and environmental basic conditioning factors influence self-care agency as well as selfcare needs. Orem listed ten basic conditioning factors: age, gender, developmental level, health state, sociocultural orientation, health care system, family system, patterns of living, environmental factors, and the availability and adequacy of resources. The conditioning factors are too broad; any personal, environmental, and health-related factors may influence the development and exercise of self-care agency (e.g. one's knowledge, skills, experience, resources, interest, desire, goals orientation, or disturbance of human integrity functioning such as memory, perception, sensation, orientations, and organic conditions).

Orem's conceptualization of self-care agency suggests that the reason that individuals do not act appropriately may not be because they do not know how to perform self-care actions but, rather, because self-care agency varies with one's physical, cognitive, and psychosocial development.

The use of the self-care agency concept

the self-care agency concept has been applied widely in the discipline of nursing to determine the relationship between self-care agency and other concepts of the Orem SCD-NT in various populations. Many studies have examined which are the strongest predictors of self-care agency, self-care, and goal-oriented outcomes in different populations and different fields (Ailinger & Dear, 1993; Aish & Isenberg, 1996; Baker, 1997; Folden, 1993; Schott-Baer, Fisher, & Gregory, 1995), as well as Orem's theory testing of self-care agency (Aish & Isenberg, 1996; Bliss-Holtz, 1996; Bohny, 1997; Dodd & Dibble, 1993; Felder, 1990; Frey & Denyes, 1989; Gast et al., 1989; Gaut & Kiecklefer, 1988; Monsen, 1992; Hart, 1995; Hart & Foster, 1998; Hartweg, 1990; Laferrieri, 1995; McDermott, 1993; McQuiston & Campbell, 1997; Moore, 1993; Smits & Kee, 1992; Wang & Fenske, 1996) and methodological investigation of the concept of self-care agency (Carter, 1998; Evers, Isenberg, Philipsen, Senten, & Brouns, 1993; Kearney & Fleischer, 1979; Lorensen, Holter, Evers, Isenberg, & Achterberg, 1993; McBride, 1991; Moore, 1995; Riesch & Hauck, 1988; West & Isemberg, 1997).

Numerous studies have been conducted to study the relationship between self-care agency and the other components of Orem's SCD-NT. Studies that support Orem's relational statement between self-care agency and conditioning factors include Lukkarinen & Hentinen (1997), who examined the factors among 250 patients with coronary artery disease. The results showed that some conditioning factors (e.g. age, sex, socioeconomic status, employment status, and health behaviors) were preconditions for the exercise of self-care agency; Hart & Foster (1998), who reported that several conditioning factors influenced self-care agency in two groups of pregnant women; And, Mapanga & Andrews (1995), who found that some conditioning factors (emotional support from family and friends) had a positive effect on the self-care agency of unmarried teenage primiparas' engagement in contraceptive practice.

Among the researchers who have studied the relationship between self-care agency and self-care actions are Moore (1993), who studied 414 health children students. Her findings strongly supported that self-care agency predicts self-care actions; Craddock, Adams, Usui & Mitchell (1999), who found that there were associations between self-care agency and self-care actions in a population of breast cancer chemotherapy adult patients; Hart (1995), who determined that self-care agency had a direct positive effect on the self-care actions of pregnant women; And, McDermott (1993), who studied 309 working adults to test the interaction of learned helplessness and self-care agency. The researcher found that learned helplessness and self-care agency are interacting variables which can affect one's self care actions. The relationship between self-care agency and goal-oriented outcomes has been investigated as well. Behm & Frank (1992) studied 86 nurses in one public health district in a United States Southern State to examine the relationship of self-care agency and the maintenance of personal well-being. The findings supported that the nurses' level of self-care agency predicted their abilities to manage their job situations and stressors, and the nurses were able to maintain their job satisfaction.

These studies have shown varying results from the use of the concept and suggest further research, such as replicating studies, using other strategies and methodologies to measure self-care agency in areas in which the concept was not a predictor of self-care actions or desired outcomes, measurement in different populations, as well as using more than one instrument to increase the possibility of measuring most of the aspects of the concept. Most of these studies attempted to determine the relationship between conditioning factors and self-care agency, or between self-care agency and self-care actions. Few studies have examined the relationship between self-care agency and outcome, which may be explained by the fact that in Orem's theory, self-care actions are mediators between self-care agency and goal-oriented outcomes, which suggests that if someone exercises self-care agency, he or she performs self-care actions, which would lead to the achievement of a desired outcome.

According to Carter (1998), there is no research instrument to measure the foundational traits of self-care agency. The instruments available are used to measure only partially the enabling traits and/or the operational traits. It is necessary to be sure which aspects of selfcare agency one wants to measure to select the appropriate instrument. And it may be necessary to use more than one instrument to obtain a more complete representation of the concept. Carter (1998) goes on to say that current researchers who have based their studies on Orem' SCD-NT almost exclusively define selfcare agency as a "person's ability to engage in self-care actions to meet individual health care needs" (p.198). In addition, the use of self-care agency measurement instruments proposes to evaluate whether individuals possess cognitive, psychomotor, and emotional skills, which are fundamental to a person's capability for assessing themselves, interpreting data, utilizing resources (personal and environmental), and performing actions to promote and maintain health and well-being.

In summary, self-care agency is an individual's capabilities to recognize his or her needs, to evaluate personal and environmental resources, to determine and perform self-care actions to achieve a desired outcome. Self-care agency appears to be affected by personal and environmental factors, which interfere with its development and maintenance. The exercise of self-care agency leads to the achievement of goal-oriented outcomes.

Related, borderline, and contrary concepts of self-care agency

Self-care (Backman & Hentinen, 1999; Lantz, Fullerton & Quayhagen, 1995), power (Lee, 1999), perceived self-care capabilities (Dashiff, 1992; Warren, 1998; Wheststone & Hansson, 1989), and self-care ability (Soderhamn, Ek & Porn, 1996) appear to be the terms most often used in lieu of self-care agency.

Self-efficacy is identified as a borderline concept in relation to self-care agency. According to Bandura (1986), who developed the concept of self-efficacy in his Social Learning Theory, self-efficacy is "people's judgement of their capabilities to organize and execute courses of action required to attain designed types of performances" (p.391). One may understand that the difference between self-efficacy and selfcare agency is that self-efficacy is not of a general nature; it is related to specific behaviors. Selfefficacy places greater emphasis on a person's beliefs (judgement) in his or her capabilities to perform a specific behavior to achieve a desired outcome. On the other hand, self-care agency emphasis a person's power (capabilities) to identify his or her needs, evaluate his or her personal and environmental resources, choose the appropriate actions, and perform behaviors to achieve a specific outcome.

Dependent-care agency (Orem, 1980, 1985, 1991) is identified as a contrary concept of self-care agency. Orem (1991) described dependent-care agency as "the complex developed capability of responsible adults to do the foregoing for dependents" (p.65). Thus, dependent-care agency is the opposite of self-care agency. And other adult assumes the responsibility of caring for someone who is unable to exercise his or her self-care agency.

The attributes of self-care agency

Considering Webster's New Universal Unabridged Dictionary (1996), Bandura (1986) and Orem' (1991) definitions of self, care, selfcare, agency, and self-care agency, and current researchers' acceptance of the concept's meaning (Carter, 1998), human beings who exercise self-care agency have the following characteristics: (1) cognitive capabilities to evaluate, judge, and make decisions about personal and environmental conditions and factors significant to self-care actions; (2) personal interest in performing self-care actions to achieve a desired outcome; (3) physical and psychosocial capabilities to engage in self-care actions; and (4) personal capability to perform self-care actions correctly.

Model Case

Mr. Johnson is a 42-year-old white male who was diagnosed with type I diabetes mellitus 25 years ago. As soon as he became aware of his diagnosis, he made a firm commitment to self-manage his diabetes care. Mr. Johnson participated in a diabetes educational program offered in the community hospital patient education department. Mr. Johnson learned about the disease and its complications, and the ways to manage his own care to maintain good diabetes control. Since then, Mr. Johnson has been monitoring his blood glucose levels to adjust his insulin intake, and when he perceives physical symptoms that he judges as being hypoglycemic or hyperglycemic body responses. He follows a diabetic regimen including diet management, exercise adherence, insulin administration, foot care, and annual eye examinations.

Mr. Johnson also has regular appointments with his health care provider to check his diabetes control. Up to this point, Mr. Johnson has maintained good diabetes control, as evidenced by his glycosylated hemoglobin level of less than 8% and no disease-related complications.

Mr. Johnson demonstrates all the defining characteristics of self-care agency. He acquired the knowledge and skills necessary to manage his self-care. He is capable of recognizing his needs and evaluating his physical, personal and environmental resources to engage in self-care actions. He has also demonstrated an interest in achieving and maintaining good diabetes control to prevent disease-related complications.

Related Case

Mr. Walker is a 35-year-old white male who lives alone. Last winter Mr. Walker fell from the top of his house and had three fractures in his right arm bones, which sent him to the hospital for a surgical procedure. Before being discharged from the hospital, Mr. Walker received educational classes about his condition as well as about self-care. Mr. Walker went home with the conviction the he was able to handle his situation. Although Mr. Walker tried to perform several self-care actions (e.g. take off and put on his shirt, prepare his food, take a shower) he was unable to do so. Mr. Walker had to ask his mother to come and take care of him.

Mr. Walker believed that he was able to perform self-care actions and manage his situation. He failed to evaluate appropriately his physical conditions as well as his lack of abilities to perform actions using only his left arm. Mr. Walker had the belief (self-efficacy) but not the capability (self-care agency).

Borderline Case

Mrs. Brown is a 23-year-old white female who was diagnosed with type I diabetes 4 years ago. Mrs. Brown participated in a diabetes educational program in which she learned about the disease and how to manage selfcare actions to achieve good diabetes control. Although she has diabetes knowledge and self-care skills, she does not adhere to her diet, exercise, and blood glucose monitoring regimes. She gives herself insulin, but she does not adjust its dosage according to her blood glucose monitoring because she does not monitor her blood glucose routinely. Since her diagnosis, Mrs. Brown has been hospitalized several times due to hyperglycemia. Also, her glycosylated hemoglobin level always has been greater than 10%.

Mrs. Brown partially demonstrates the attributes of self-care agency. She has the capability to perform self-care actions but she chooses to perform only some of them. She does not have interest in performing self-care actions to achieve diabetes control as evidenced by her glycosylated hemoglobin level. Mrs. Brown appears to have physical, cognitive, psychosocial, judgement, and decision-making capabilities, but she chooses to perform only some self-care actions.

Contrary Case

Mr. Miller is a 58-year-old black male who was diagnosed with coronary artery disease. At catheterization, the narrowing of his left main coronary artery was greater than 70%, which determined coronary artery bypass graft surgery (CABG). After surgery, Mr. Miller had the opportunity to have nutritional education and discharge classes to learn how to perform dressing changes, administer medication, and monitor signs and symptoms of complications. However, Mr. Miller did not participate in those classes; when approached by the nutritionist, he did not want to learn about his diet, and he told the nutritionist to talk with his wife. He also sent his wife to discharge classes instead going himself. During hospitalization, Mr. Miller did not have the initiative for ambulating, sitting up in a bedside chair, performing respiratory exercises, or even going to the bathroom for voiding. Most of the time he remained in bed watching TV or sleeping. Nurses and family members had to tell him what to do and encourage him as well as assist him when he was doing anything. Because of his attitude, Mr. Miller had to remain in the hospital for 7 days instead 5 days, which is the average hospital stay for patients in the same situation.

Mr. Miller did dot demonstrate the physical, cognitive, and psychosocial capabilities for judgement, decision-making, and behavior performance. Mr. Miller did not demonstrate interest in performing self-care actions to achieve a desired result. Moreover, Mr. Miller did not have capabilities to perform self-care actions correctly as evidenced by his lack of knowledge and skills that were taught in discharge classes and his nutritionist's instructions.

Antecedents

Self-care agency development requires a need or desire to perform self-care actions to achieve a goal-oriented outcome. The exercise of self-care agency involves the individual's capabilities to recognize personal needs, to self-evaluate (personal and environmental resources), and to perform appropriate self-care actions. Therefore, the antecedents of self-care agency derive from an individual's (1) cognitive developmental level, (2) physical developmental level, (3) psychosocial developmental level, (4) need and desire to perform self-care actions, and (5) goal-oriented outcomes.

Consequences

The consequences of self-care agency are the appropriate performance of self-care actions and the achievement of goal-oriented outcomes. Therefore, the consequences of selfcare agency are (1) appropriate performance of self-care actions, and (2) achievement of a desired outcome.

Empirical Referents

Over the last three decades Orem (1971, 1980, 1985, 1991) has attempted to define, clarify, and conceptualize self-care agency in the SCD-NT. In addition, many researchers have made attempts to operationalize and measure self-care agency in various populations (Evers et al., 1993; Kearney & Fleischer, 1979) and in terms of specific health-related problems (Craddock et al., 1999; Felder, 1990; Gaut & Kiesckhefer, 1988; Lukkarinen & Hentinen, 1997; Monsen, 1992; West & Isenberg, 1997).

Attempts have also been made to determine the relationship between conditioning factors and self-care agency (Ailinger & Dear, 1993; Hart & Foster, 1998; Lukkarinen & Hentinen, 1997; Mapanga & Andrews, 1995); self-care agency and self-care actions (Craddock et al., 1999; Hart, 1995; McDermott, 1993; Moore, 1993); and selfcare agency and goal-oriented outcomes (Behm & Frank, 1992).

However, self-care agency is an interrelated complex of capabilities (Orem, 1980, 1985, 1991) and it is not possible to measure all aspects of the concept with the available developed instruments (Carter, 1998). Thus, further research is necessary to develop new instruments, or to adapt the existing ones by using different

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populations with different conditions and in different environments.

CONCLUSION

An analysis of the concept of self-care agency in terms of its defining attributes, antecedents, consequences, and empirical referents provides information related to nursing research and practice. Establishing specific nursing strategies is helpful to assist one's development and maintenance of selfcare agency. In addition, evaluating one's level of self-care agency and to what extent it relates to personal and environmental factors, self-care actions, and goal-oriented outcomes are fundamental for selecting those specific strategies.

REFERENCES

- 1. Ailinger, RL, Dear. MR. Self-care agency in persons with rheumatoid arthritis. Arthritis Care and Research. 1993;6(3):134-40.
- Aish, AE, Isenberg, M. Effects of Orem-based nursing intervention on nutritional self-care of myocardial infarction patients. International Journal of Nursing Studies. 1996;33 (3): 259-70.
- 3. Backman K., Hentinen, M. Model for the self-care of home-dwelling elderly. Journal of Advanced Nursing, 1999; 30(3):564-72.
- Baker S. The relationship of self-care agency and self-care to caregiver strain as perceived by female family caregivers of elderly parents. Journal of the New York State Nurses Association. 1997; 28(1): 7-11.
- 5. Bandura, A.Social foundations of thought and action. Englewood Cliffs, N J: Prentice-Hall.1986
- Behm LK, Frank DI. The relationship between self-care agency and job satisfaction in public health nurses. Applied Nursing Research. 1992; 5(1): 28-9.

- Bliss-Holtz J. Using Orem's theory to generate nursing diagnoses for electronic documentation. Nursing Science Quartely. 1996; 9(3): 121-25.
- Bohny BJ. A time for self-care: role of the home healthcare nurse. Home Healthcare Nurse.1997; 15(4): 281-86.
- Carter PA.Self-care agency: the concept and how it is measured. Journal of Nursing Measurement. 1998;6(2): 195-207.
- Craddock RB, Adams PF, Usui WM, Mitchell L. An intervention to increase use and effectiveness of self-care measures for breast cancer chemotherapy patients. Cancer Nursing. 1999; 22(4):312-19.
- 11. Dashiff CJ. Self-care capabilities in Black girls in anticipation of menarche. Health Care for Women International. 1992; 13(1): 67-76.
- Dodd MJ, Dibble SL. Predictors of self-care: a test of Orem's theory. Oncology Nursing Forum. 1993; 20 (6): 895-901.
- Evers GCM, Isenberg MA, Philipsen H, Senten M, Brouns G. Validity testing of the Dutch translation of the appraisal of self-care agency ASA scale. International Journal of Nursing Studies. 1993; 30(4): 331-42.
- Felder E. Self-care agency and blood pressure control. Journal of Human Hypertension. 1990; 4(2): 124-26.
- Folden, S.. Effects of a supportive-educative nursing intervention on older adults' perceptions of self-care after stroke. Rehabilitation Nursing. 1993; 18(3): 162-7.
- Frey MA, Denyes MJ. Health and illness self-care in adolescents with IDDM: a test of Orem's theory. Advances in Nursing Science. 1989: 12(1): 67-75.
- Gast HL .Denyes, MJ Campbell, JC Hartweg, DL, Schott-Baer D, Isemberg M. Self-care agency: conceptualizations and operationalizations. Advances in Nursing Science. 1989: 12(1): 26-38.
- Gaut DA, Kieckhefer GM.. Assessment of self-care agency in chronically ill adolescents. Journal of Adolescent Health Care. 1988: 9(1): 55-60.
- Hart MA, Foster SN. Self-care agency in two group of pregnant women. Nursing Science Quartely, 11(4), 167-71.
- 20. Hart MA. Orem's self-care deficit theory: research with pregnant women. Nursing Science Quartely. 1995; 8(3): 120-26.

- 21. Hartweg DL. Health promotion self-care within Orem's general theory of nursing.Journal of Advanced Nursing. 1990; 15(1): 35-41.
- 22. Kearney BY, Fleischer BJ. Development of an instrument to measure exercise of self-care agency.Research in Nursing and Health. 1979; 2(1): 25-34.
- 23. Laferrieri RH. Orem's theory in practice: hospice nursing care. Home Healthcare Nurse. 1995; 13(5):50-4.
- Lantz JM, Fullerton J, Quayhagen MP. Perceptual and enactment measurement of self-care. Advanced Practice Nursing Quartely. 1995; 1 (3): 29-33.
- Lee MB. Power, self-care and health in women living in urban squatter settlements in Karachi, Pakistan: a test of Orem's Theory.Journal of Advanced Nursing. 1999; 30(1): 248-59.
- Lorensen M, Holter JM, Evers GCM, Isenberg MA, Achterberg TV. Cross-cultural testing of the appraisal of self-care agency: ASA scale in Norway.International Journal of Nursing Studies. 1993; 30(1): 15-23.
- 27. Lukkarinen H, Hentinen M. Self-care agency and factors related to this agency among patients with coronary heart disease.International Journal of Nursing Studies. 1997; 34(4): 295-304.
- 28. Mapanga KG, Andrews CM.The influence of family and friends' basic conditioning factors and selfcare agency on unmarried teenage primiparas' engagement in contraceptive practice.Journal of Community Health Nursing. 1995; 12(2): 89-100.
- 29. McBride SH. Comparative analysis of Three instruments designed to measure self-care agency.Nursing Research. 1991; 40(1): 12-16.
- McDermott MAN. Learned helplessness as an interacting variable with self-care agency: testing a theoretical model.Nursing Science Quartely. 1993; 6(1): 28-38.
- McQuiston CM, Campbell JC. Theoretical substruction: a guide for theory testing research. Nursing Science Quartely. 1997; 10(3): 117-23.
- 32. Monsen RB. Autonomy, coping, and self-care agency in healthy adolescents and in adolescents with spina bifida. Journal of Pediatric Nursing. 1992; 7(1): 9-13.
- 33. Moore JB. Predictors of children's self-care performance: testing the theory of self-care

deficit. Scholarly Inquiry for Nursing Practice: An International Journal. 1993; 7(3); 199-217.

- Moore JB. Measuring the self-care practice of children and adolescents: instrument development. Maternal-Child Nursing Journal. 1995; 23(3): 101-8.
- 35. Orem DE. Nursing: concepts of practice. New York, NY: McGraw-Hill Book Company;1971
- 36. Orem DE. Nursing: concepts of practice. 2nd ed. New York, NY: McGraw-Hill Book Company; 1980
- 37. Orem DE. Nursing: concepts of practice. 3rd ed. New York, NY: McGraw-Hill Book Company; 1985
- Orem DE.Nursing: concepts of practice.4th ed. Saint Louis, MO: Mosby; 1991
- Riesch SK, Hauck MR. The exercise of self-care agency: an analysis of construct and discriminant validity. Research in Nursing and Health. 1988; 11(4): 245-255.
- 40. Schott-Baer D, Fisher L, Gregory C. Dependent care, caregiver burden, hardiness, and self-care agency of caregivers. Cancer Nursing. 1995; 18(4): 299-305.
- Smits MW, Kee C. Correlates of self-care among the independent elderly: self-concept affects well-being. Journal of Gerontological Nursing. 1992; 18(9);13-18.
- Soderhamn O, Ek A, Porn I. The self-care ability scale for the elderly.Scandinavian Journal of Occupational Therapy. 1996; 3(2); 69-78.

- 43. Walker OW, Avant KC.Strategies for Theory construction in nursing. 3rd ed. Norwalk, CT: Appleton & Lange; 1995
- 44. Wang C, Fenske MM. Self-care of adults with non-insulin-dependent mellitus: influence of family and friends. Diabetes Educator. 1996; 22(5); 465-70.
- 45. Warren JK. Perceived self-care capabilities of abused/neglected and nonabused/ nonneglected pregnant, low-socioeconomic adolescents. Journal of Child and Adolescent Psychiatric Nursing. 1998;11(1); 30–7.
- 46. Webster's new universal unabridged dictionary (based on the 2nd edition of the Random House dictionary of the English language). New York, NY: Barnes and Noble Books; 1996
- West P, Isenberg M. Instrument development: the mental health-related self-care agency scale. Archives of Psychiatric Nursing. 1997; 9(3): 126-32.
- 48. Wheststone WR, Hansson AMO. Perceptions of self-care in Sweden: a cross-cultural replication. Journal of Advanced Nursing. 1989; 14(11): 962-9.

Received: 05/23/2002 **Accepted:** 09/18/2012