

# Nursing models: a requisite for professional accountability

*Kathryn Suggs Chance, RN, DSN  
Assistant Professor  
School of Nursing Georgia State University  
Atlanta, Georgia*

**N**URSING MODELS have received much attention in professional circles, especially in the past decade, as theorists have attempted to describe nursing's unique contribution to health care. Although there are many models *of* or *for* or *about* nursing,<sup>1-8</sup> few theorists have emerged providing a complete well-described focus for nursing. Among the major nursing theorists are Sister Callista Roy, Dorothy Johnson, Imogene King, and Dorothea Orem.

## OVERVIEW OF THE ROY ADAPTATION MODEL

Roy views the human being as a biopsychosocial open system in constant interaction with a changing environment.<sup>8</sup> To cope, the human being uses innate and acquired biological, psychological, and social mechanisms. To respond positively to environmental changes, the human being must adapt.

The individual's adaptation level is

determined by the pooled effect of focal stimuli (stimuli immediately confronting the individual), contextual stimuli (all other stimuli present), and residual stimuli (beliefs, attitudes, experiences, or traits). Each individual's adaptation level comprises a zone that indicates a range of stimulation that will lead to a positive or adaptive response.<sup>8(p13)</sup>

Two major types of adaptive mechanisms are the regulator and the cognator. The regulator mechanism works mainly through the autonomic nervous system to set up a reflex action that readies the individual for coping with the stimulus by approach, attack, or flight. The cognator identifies, stores, and relates stimuli so that symbolic responses can be made.<sup>9(p44)</sup>

The modes of adaptation that the human being uses to respond to a changing environment include physiological needs, self-concept, role function, and interdependence. Self-concept and role function develop a framework for interaction between the client and nurse. The nurse's goal is to promote adaptation in these modes in situations of health and illness. Roy has identified commonly occurring adaptation problems in each of the four modes.<sup>10(pp183,185)</sup>

The nurse assesses client behavior in each adaptive mode, identifies the client's position on the health-illness continuum, and identifies focal, contextual, and residual factors influencing client behaviors. Nursing diagnosis includes problem delineation by describing adaptive or maladaptive behavior and the primary influencing stimuli. Goal setting aims to change maladaptive behavior and to reinforce adaptive behavior.

Intervention consists of manipulating

---

*Nursing diagnosis includes problem delineation by describing adaptive or maladaptive behavior and the primary influencing stimuli. Goal setting aims to change maladaptive behavior.*

---

influencing factors, the focal, contextual, and residual stimuli. This can take place in any setting and at any time, with the individual adapting in relation to health and illness. The final step of the nursing process is evaluation of the effectiveness of nursing intervention.<sup>10(p187)</sup>

The values inherent within the Roy adaptation model are as follows: Nursing's concern with the human being is a socially significant activity. Promoting adaptation is important for patient welfare, since it conserves patient energy. Nursing focuses on the person adapting as a result of his/her position on the health-illness continuum. These values, which are not proven but assumed to be true, need continuing development. The uniqueness of nursing needs further explication.<sup>10(p188)</sup>

## OVERVIEW OF THE JOHNSON BEHAVIORAL SYSTEM MODEL

Johnson sees the human being as a biopsychosocial being situated in a particular cultural setting.<sup>1</sup> Behavior is an integrated response to an external or internal stimulus that is modified by environmental factors. The behavioral system is viewed as those complex, overt responses to a variety of stimuli in the environment that are purposeful and functional to the individual. All human behavior is universal in

nature, although the universality is obscured by cultural, social, biological, and personal factors.<sup>11(p11)</sup>

The seven universal subsystems of the behavioral system are attachment or affiliative, dependency, ingestive, eliminative, sexual, aggressive, and achievement. Each subsystem has structural components: Drive, when stimulated, may reflect the goal sought; set, or predisposition to act in certain ways rather than others; choice, or selecting from available alternatives the action that will best attain the desired outcome; and behavior and its efficiency and effectiveness in goal attainment. These structural components interact with one another to create the overall function of the system.<sup>12(pp210-213)</sup>

The goal of the behavioral system is to produce an integrated response to the environment in a form that has meaning to both the environment and the individual. Behavioral adaptation refers to adjustments to the continually changing demands of the internal and external environment, designed to achieve a relatively stable balance. Biological, psychological, social, and cultural systems represent major regulators of behavioral responses through genetic inheritance, circadian rhythms, age, sex, attitudes, values and beliefs, social class, role expectations, locus of control and alienation, creativity and problem-solving ability, and self-concept.<sup>11(pp121-143)</sup>

Nursing is an external regulator force that acts to preserve the integration of the patient's behavior in illness or the threat of illness. Its primary goal is behavioral system balance and stability.<sup>12(p214)</sup>

The nursing process includes assessment, diagnosis, intervention, and evalua-

tion. In assessment, the nurse must analyze the physiological, social, cultural, psychological, environmental, and general regulatory factors. The next step is analysis of the structure and function of the subsystem. This includes identification of the components of the situation, drive, set, choice, and behavior. Diagnoses may involve situations of insufficiency, discrepancy, incompatibility, or dominance. Intervention includes nursing action, followed by evaluation, which seeks to determine the effectiveness of the nursing action.

The major units of the model are goal of action (behavioral system balance and stability), patency (a behavioral system threatened by the loss of order and predictability through illness), actor's role (regulation and control), source of difficulty (structural or functional stress), intervention foci and mode, and consequences, both intended and unintended.<sup>13</sup>

In summary, Johnson sees the human being as a behavioral system which has a tendency to achieve and maintain stability in patterns of functioning. Each subsystem must receive adequate functional requirements. The human being as a behavioral system becomes a patient when threatened by the loss of order and predictability through illness. The goal of nursing is to effect the patient's behavioral stability.<sup>8(p9)</sup>

## OVERVIEW OF KING'S THEORY OF GOAL ATTAINMENT IN NURSING

King first published the general concepts of human behavior in 1971. After much work on these concepts, King now states that a theory of goal attainment has been derived.<sup>14</sup>

The original framework is summarized as follows: The individual is a personal system whose functional concept is perception. Groups are interpersonal systems whose major concept is interaction. Society is seen as social systems whose basic concept is organization. Subconcepts for each of the major systems have been identified and developed as substantial content in a new publication.<sup>15</sup>

The human being and the personal environment are the focus of King's conceptual framework and theory of goal attainment. The individual is assumed to be a social, time-oriented, reacting, perceiving, purposeful, controlling, and action-oriented being.

The basic concepts of the theory, relating to interacting human beings, have been defined. Perception is each individual's representation or image of reality. Interaction is the interfacing of individuals in existential moments for some purpose or goal. Transactions are an exchange of energy and information within the persons involved and result in goal attainment.<sup>15</sup> Communication, interchange of thoughts and opinions among individuals, is the means whereby social interaction and learning take place.<sup>2(p101)</sup>

The basic abstraction of nursing is the human being and his/her world. The nurse assists individuals and groups to attain,

---

*Nursing is a process whereby nurses assist individuals to meet their basic needs in performing activities of daily living and to cope with health and illness at some particular point in the life cycle.*

---

maintain, and restore health. Health has biologic, psychologic, and social elements. Nursing is a process of action, reaction, interaction, and transaction whereby nurses assist individuals to meet their basic needs in performing activities of daily living and to cope with health and illness at some particular point in the life cycle.<sup>2(p89)</sup> Both nurse and patient are influenced by perceptual determinants that influence judgment and decision making.

King's dynamic nurse-client transactions can be diagrammed as in Fig 1. The goal is the attainment, maintenance, and restoration of health. Health is defined as a state in which individuals can function in their social roles.<sup>15</sup>

## OVERVIEW OF OREM'S THEORY OF SELF-CARE

Orem defines self-care as care that is performed by the individual for the individual after reaching a state of maturity

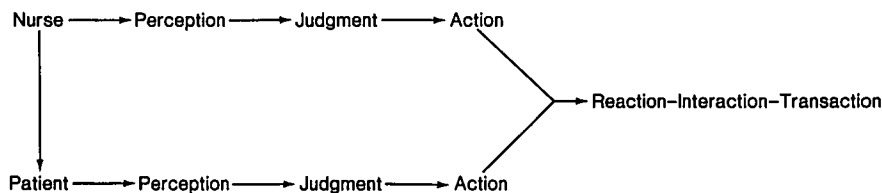


Fig 1. King's dynamic nurse-client transactions.

that allows consistent, controlled, effective, and purposeful action.<sup>16(p32)</sup> Activities of self-care are learned relative to the beliefs, habits, and practices that characterize the cultural way of life of the group to which the individual belongs. Self-care is affected by the individual's family position and roles and by the health state. It is positive, practical action that involves decision making. Self-care is therapeutic in that it contributes to support of life processes and promotion of normal functioning; maintenance of normal growth, development, and maturation; prevention, control, or cure of disease processes and injury; and prevention of or compensation for disability.<sup>4(p20)</sup>

Orem has partitioned self-care into three categories. One category is universal self-care requisites that stem from universal needs such as air, water, and food; excrements; activity and rest; solitude and social interaction; hazards to life and well-being; and normalcy. The second category of self-care stems from developmental requisites and is associated with stages throughout the life cycle. The third category of self-care is health deviation requisites. These exist for persons who are ill, injured, or have defects or disabilities.<sup>16(p41)</sup>

This theory assumes that human beings manage themselves and their environment. Self-care is a form of deliberate action. Awareness of the meaning of factors relevant to self-care is a prerequisite condition for self-care action.<sup>4(p139)</sup>

Orem believes that the individual and environment form an integrated functional whole. Knowledge of the nature of interchanges between the individual and the environment is basic to deliberate efforts to introduce new elements that may bring

about change and affect the balance of the system. The human being is distinguished from other living things by the capacity to reflect on personal experience and environment; to symbolize one's experiences; to use symbolic creations (ideas, works) in thinking, communicating, and guiding personal efforts to do and to make things that are beneficial for oneself and others. Health must include all of these things.

Nursing's special concern is the individual's need for self-care action and the provision and management of it on a continuous basis in order to sustain life and health, recover from disease or injury, and cope with their effects.<sup>16(p6)</sup> Nursing has social, interpersonal, and technological dimensions. Nursing's primary work involves designing, managing, and maintaining systems of therapeutic self-care for individuals unable to manage their own self-care. Nursing systems are formed when nurses prescribe, design, and provide care to regulate therapeutic self-care demand and promote self-care capabilities.<sup>16(p30)</sup>

The nursing process consists of determining why a person needs nursing care or identifying self-care requisites of clients; designing a system of nursing assistance or selecting the general methods whereby each requisite can be met; planning for specified nursing assistance or identifying the actions to be taken in meeting self-care requisites; and providing or directing nursing assistance. The nursing process is based on the theory that deliberate action to accomplish a defined goal must be designed in relation to the goal sought; must consider the environmental, technological, and human factors relevant to the goal; must be performed according to the

plan, making revisions as indicated by changing conditions; and must be controlled by evidence of the status of goal attainment.<sup>16(pp201-202)</sup>

The central concept of Orem's theory of self-care is that persons with limitations who are providing self-care will need help from nurses when self-care is either health derived or health related. Such self-care deficits are predictive of nursing requirements. Nursing's focus is self-care. Self-care actions help to regulate structural integrity, human functioning, and human development.<sup>16(p26)</sup>

## DISCUSSION

The four models for nursing that have been presented all include a philosophical basis of beliefs about the human being, nursing's goal, and the components of the nursing process. All purport to provide a conceptual frame of reference for nursing that has implications for practice, education, and research. Fawcett<sup>17</sup> defines a conceptual model as a highly abstract umbrella of related multidimensional concepts that provide a broad perspective. According to this definition, all four models presented represent conceptual models for nursing.

In their beliefs about the human being, King, Johnson, and Roy see the individual as a personal, behavioral, or open system. Orem tends to deal with human needs or requisites, rather than with the properties of the individual.

King, Orem, and Roy consider the specific focus of nursing. For King, nursing's goal is to attain, maintain, and restore health. For Orem, nursing's goal is to design, manage, and maintain systems of

therapeutic self-care. For Roy, nursing's goal is to promote adaptation in situations of health and illness. Johnson sees nursing's goal as promoting equilibrium and dynamic stability.

In their delineation of the nursing process, there are striking similarities between Johnson and Roy. Johnson sees the nursing process as assessment, analysis, diagnosis, intervention, and evaluation. Roy's components of the nursing process are identical except that instead of Johnson's analysis of the subsystems, Roy includes identification of focal, contextual, and residual influences. King makes a different, more philosophical delineation of the nursing process. The nurse and client are seen in a process of action, reaction, interaction, and transaction to achieve mutual goals. Orem's steps are more similar to Johnson's and Roy's. The nurse's identification of self-care requisites can be likened to assessment. The designing of a system for nursing assistance might be broadly likened to diagnosis. Planning for nursing assistance and provision and control of nursing care are similar to planning, intervention, and evaluation.

The four models appear to be much more alike than different. All provide an approach to nursing practice and a philosophical umbrella that can serve to guide it. With further delineation, hypothesis formation, and empirical testing, each model can be developed into a conceptual system for nursing.

## UTILITY OF NURSING MODELS

Moore<sup>18</sup> states that the usefulness of a model is determined by the extent to which relationships explained by it are well

understood and the degree to which the relationships of the model to the area needing explanation can be demonstrated. All four models deal with a proclaimed uniqueness of nursing that relates to nursing's perspective. The human being and a dynamic interrelationship with the environment are the focus in some form of each model. The extent to which the relationships between the human being and the environment are well understood is undergoing continued development in each of the models.

A different criterion for usefulness could be proposed. Do these nursing models provide a framework that can guide nursing practice, education, and research? All four models propose to serve as such a framework. They provide a way of thinking about the client and the nurse. However, the model must generate tools and hypotheses that can be empirically analyzed through research. The four models in their present stage of development represent an initial attempt to describe and interpret nursing's role in the health care delivery system, but they are classical examples of what Hardy<sup>19</sup> calls a preparadigm stage of scientific development. They are divergent schools of thought that address the same range of phenomena but describe and interpret these phenomena in different ways.

One might ask why a nursing model is needed to guide practice, education, and research. Brower and Baker<sup>20</sup> claim that a nursing model is needed for the practitioner to develop role mastery. Such a model would assist in preparation for and practice in the role to be acquired. McKay<sup>21</sup> calls for a model to delineate the system boundaries for the nurse-scientist.

---

*Nursing models serve as a framework for the development of nursing knowledge and thus underpin accountability of the profession through its practice, education, and research.*

---

McKay's proposed model would possess a high level of abstraction, furnishing a framework and a language for understanding. Jacox<sup>22</sup> thinks that a nursing model could be used to predict the effect of practitioner activities on clients.

Professional accountability or quality of care is directly linked to the use of nursing knowledge. Nursing models serve as a framework for the development of nursing knowledge and thus underpin accountability of the profession through its practice, education, and research.

## **PROPOSAL: A PARADIGM FOR EVOLUTION OF NURSING SCIENCE**

Such a model for nursing is needed to contribute to theory development for the profession. If the purpose of research is theory, and if the purpose of theory is to describe, explain, predict, and control phenomena, then a model is a first step in building nursing theory.

A proposed paradigm for the evolution of nursing science is depicted in Fig 2. Models will provide the focus of the discipline. In the delineation of nursing's focus, concepts will emerge. Careful definition and interweaving of these concepts will provide conceptual frameworks. The design of such conceptual frameworks can

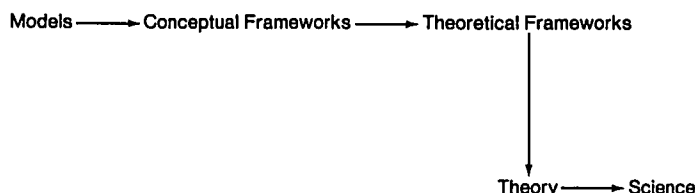


Fig 2. Paradigm for the evolution of nursing science.

be likened to construction of a jigsaw puzzle. Only through trial and error will the concepts begin to fit together to form a logical and consistent framework to explain nursing phenomena. From conceptual frameworks will emerge theoretical frameworks or interrelated constructs that appear again and again as a result of research. From the theoretical frameworks will emerge distinct nursing theories that will be tested and either corroborated or not supported. With the evolution of nursing theories, which will be subject to further research trials, the roots of nursing science will have developed.

Models are needed to provide the focus of the discipline. Through that focus and with further development and refinement, models can eventually lead the profession

to the uncovering and discovery of the scientific base for practice, education, and research. The four models discussed here provide nursing's focus and delineate concepts. As concepts continue to be interrelated, conceptual frameworks will emerge from these models.

There has been much professional discussion about whether the discipline should seek one grand theory on which to base its practice. Until there is at least one fully developed theory that can be researched and tested, the question is a moot one. There is room for many theories, all of which must be contested and corroborated. Before one global theory is chosen, models must be further developed and tested.

## REFERENCES

1. Johnson DE: *One conceptual model of nursing*. Paper presented at Vanderbilt University, Nashville, April 25, 1968.
2. King IM: *Toward a theory for nursing: General concepts of human behavior*. New York, John Wiley & Sons Inc, 1971.
3. Newman B, Young RJ: A model for teaching total person approach to patient problems. *Nursing Res* 21(3):264-269, 1972.
4. Orem DE: *Nursing: Concepts of practice*. New York, McGraw-Hill Book Co, 1971.
5. Orlando JJ: *The dynamic nurse-patient relationship*. New York, GP Putnam's Sons, 1961.
6. Peplau H: *Interpersonal relations in nursing*. New York, GP Putnam's Sons, 1952.
7. Rogers ME: *An introduction to the theoretical basis of nursing*. Philadelphia, FA Davis Co, 1970.
8. Roy C: *Introduction to nursing: An adaptation model*. Englewood Cliffs, NJ, Prentice-Hall, Inc, 1976.
9. Roy C: Adaptation: A conceptual framework for nursing. *Nursing Outlook* 18(3):42-45, 1970.
10. Roy C: The Roy adaptation model, in Riehl JP, Roy C: *Conceptual models for nursing practice*, ed 2. New York, Appleton-Century-Crofts, 1980, pp 179-188.
11. Auger JR: *Behavioral systems and nursing*. Englewood Cliffs, NJ, Prentice-Hall, Inc, 1976.
12. Johnson DE: The behavioral system model for nursing, in Riehl JP, Roy C: *Conceptual models for nursing practice*, ed 2. New York, Appleton-Century-Crofts, 1980, pp 207-216.



13. Johnson DE: *The Johnson behavioral system model for nursing*. Unpublished manuscript, UCLA Center for the Health Sciences, School of Nursing, 1972.
14. King IM: *Theory development in nursing*. Paper presented at Georgia State University, Atlanta, April 21, 1980.
15. King IM: *A theory for nursing: Systems, concepts and process*. New York, John Wiley & Sons Inc, 1981.
16. Orem DE: *Nursing: Concepts of practice*, ed 2. New York, McGraw-Hill Book Co, 1980.
17. Fawcett J: The relationship between theory and research: A double helix. *Adv in Nurs Sci* 1(1):49-62, 1978.
18. Moore MA: Nursing: A scientific discipline? *Nurs Forum* VII(4):340-348, 1968.
19. Hardy ME: Perspective on nursing theory. *Adv in Nurs Sci* 1(1):37-48, 1978.
20. Brower HTF, Baker BJ: Using the adaptation model in a practitioner curriculum. *Nurs Outlook* 24(11):686-689, 1976.
21. McKay R: Theories, models, and systems for nursing. *Nurs Res* 18(5):393-399, 1969.
22. Jacox A: Theory construction in nursing: An overview. *Nurs Res* 23(1):4-12, 1974.