Myra Levine Conservation Model

By:
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ABOUT THE THEORIST

- Theorist - **Myra Estrine Levine**
- Diploma in nursing:-Cook County SON, Chicago, 1944
- BSN:-University of Chicago,1949
- MSN:-Wayne State University, Detroit, 1962
- Publication:- An Introduction to Clinical Nursing, 1969, 1973 & 1989

ABOUT THE THEORIST

- Received honorary doctorate from Loyola University in 1992
- Chairperson of clinical nursing at Cook Country SON
- Visiting professor at Tel Aviv University in Israel
- Died in 1996

HISTORICAL EVOLUTION OF MODEL

"Although she never intended to develop theory, she provided an organizational structure for teaching medical-surgical nursing and a stimulus for theory development (Stafford, 1996)"

Myra Levine has published a number of works including:

- *Introduction to Clinical Nursing* - the first edition in 1969 and the second edition in 1973 (1973 edition written as a text book for beginning nursing students)
- *Holistic Nursing* - addressed the consequences of the four conservation principles
- *The Four Conservation Principles: Twenty Years Later* - included substantial change and clarification about her theory

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Major Concepts of Conservational model

- Goal of the model is to promote adaptation and maintain wholeness using the principles of conservation
- Model guides the nurse to focus on the influences and responses at the organismic level
- Nurse accomplishes the goal of model through the conservation of energy, structure and personal and social integrity

Three Major concepts to Levine's Conservation Model

- Wholeness
- Adaptation
- Conservation

CONSERVATION

- The product of adaptation
- "Keeping together "of the life systems or the wholeness of the individual
- Achieving a balance of energy supply and demand that is with in the unique biological realities of the individual

WHOLENESS

"Wholeness emphasizes a sound, organic, progressive mutuality between diversified functions and parts within and entirety, the boundaries of which are open and fluent"

Wholeness

- Exist when the interaction or constant adaptations to the environment permits the assurance of integrity
- Promoted by use of conservation principle

ADAPTATION

"The process of change where by the individual retains his integrity within the realities of his internal and external environment"

ADAPTATION

- Every individual has a unique range of adaptive responses
- The responses will vary by heredity, age, gender or challenges of illness experiences
- While the responses are same, the timing and manifestation of organismic responses will be unique for each individual pulse rate.

ADAPTATION

- An ongoing process of change in which patient maintains his integrity within the realities of environment
- Achieved through the "frugal, economic, contained and controlled use of environmental resources by individual in his or her best interest"

METAPARADIGMS

PERSON

HEALTH

ENVIRONMENT

NURSING

METAPARADIGMS

PERSON

- View of the patient in a holistic view with integrity meaning freedom if choice and movement
- Includes: Identity and self worth
- Refers to the person as a “system of systems”
- Refers to wholeness as the “expression of all contribution of parts and systems

ENVIRONMENT

"Each person has his own environment which includes internal (physiological and pathophysiological) and external factors

INTERNAL ENVIRONMENT

- **Homeostasis**
  - A state of energy sparing that also provide the necessary baselines for a multitude of synchronized physiological and psychological factors
  - A state of conservation

Internal environment

- **Homeorrhesis**
  - A stabilized flow rather than a static state
  - Emphasis the fluidity of change within a space-time continuum
  - Describe the pattern of adaptation, which permit the individual's body to sustain its well being with the vast changes which encroach upon it from the environment

EXTERNAL ENVIRONMENT

- Perceptual Environment: part of the environment that individuals respond with the sense organs
- Operational Environment: Aspects of the environment that are not directly perceived (cannot see, hear, feel or smell)
- Conceptual Environment: Language, ideas, symbols, concepts and inventions

(Kearney-Nunnery, 2008, p. 57)

Perceptual Environment

Part of the environment that individuals respond to with the sense organs

Operational Environment

Aspects of the environment that are not directly perceived (cannot see, hear, feel or smell)

Conceptual Environment

Language, ideas, symbols, concepts and inventions

HEALTH

- Health is a wholeness and successful adaptation
- It is not merely healing of an afflicted part ,it is return to daily activities, selfhood and the ability of the individual to pursue once more his or her own interest without constraints
- Disease: It is unregulated and undisciplined change and must be stopped or death will ensue

NURSING

- "Nursing is a profession as well as an academic discipline, always practiced and studied in concert with all of the disciplines that together from the health sciences"
- The human interaction relying on communication ,rooted in the organic dependency of the individual human being in his relationships with other human beings
- Nursing involves engaging in "human interactions"

PERSON AND ENVIRONMENT

- Adaptation
- Organismic response
- Conservation

ADAPTATION

- **Historicity:** Adaptations are grounded in history and await the challenges to which they respond
- **Specificity:** Individual responses and their adaptive pattern varies on the base of specific genetic structure
- **Redundancy:** Safe and fail options available to the individual to ensure continued adaptation

ORGANISMIC RESPONSE

- A change in behavior of an individual during an attempt to adapt to the environment
- Help individual to protect and maintain their integrity
- They co-exist

ORGANISMIC RESPONSE

- They are four types:
- **1. <u>Flight or fight</u>:** An instantaneous response to real or imagined threat, most primitive response
- **2. <u>Inflammatory</u>:** response intended to provide for structural integrity and the promotion of healing
- **3. <u>Stress:</u>** Response developed over time and influenced by each stressful experience encountered by person
- **4**. **<u>Perceptual:</u>** Involves gathering information from the environment and converting it in to a meaning experience

Conservation

"The way complex systems are able to function even when severely challenged"

CONSERVATIONAL PRINCIPLES

- Conservation of energy
- Conservation of structural integrity
- Conservation of personal integrity
- Conservation of social integrity

Principle #1
Conservation of Energy

Being able to complete activities without excessive fatigue

May include the assessment of:

- Vitals signs
- Breathing patterns
- Behavior
- Tolerance for required nursing interventions
- Activity tolerance level

(Kearney-Nunnery, 2008, 57)

Conservation of Energy

Provides the framework to assess the patients ability to participate in care; provide individualized interventions to meet the patient's needs and initiate measures to restore independence

Principle #2
Conservation of Personal Integrity

Conservation of personal integrity puts into prospective that a persons personal identity and self worth are noteworthy and need to be addressed to assist a person to the highest degree of adaptation possible.

(Alligood & Tomey, 2010, p. 229)

Conservation of Personal Integrity

- A nurse must assess a persons feeling of self worth and integrity and integrate interventions to assist a person to attaining the highest level of self worth
- Assessments should be designed to detect signs and symptoms of depression, anxiety and feelings of uselessness
- Nursing interventions should be based on assisting the patient to achieve goals that will enhance his / her level of self esteem, self worth and feelings of usefulness; assisting in obtaining optimal psychosocial adaptation

Principle #3
Conservation of Social Integrity

Life gains meaning through social communities and health is socially determined.

(Alligood & Tomey, 2008, p. 229)

Conservation of Social Integrity

- A nurse must assess a patients interactions with family, social community, significant others, work and school
- Once the nurse can identify the patient's need to be socially involved; the nurse can provide interventions to assist the person to maintain or achieve the role in the community that fulfills the patients level of wholeness.
- Interventions will assist the patient to obtain optimal psychosocial adaptation

Principle #4
Conservation of Structural Integrity

Process of restoring physical functioning to regain wholeness

(Alligood & Tomey, 2010, p. 229)

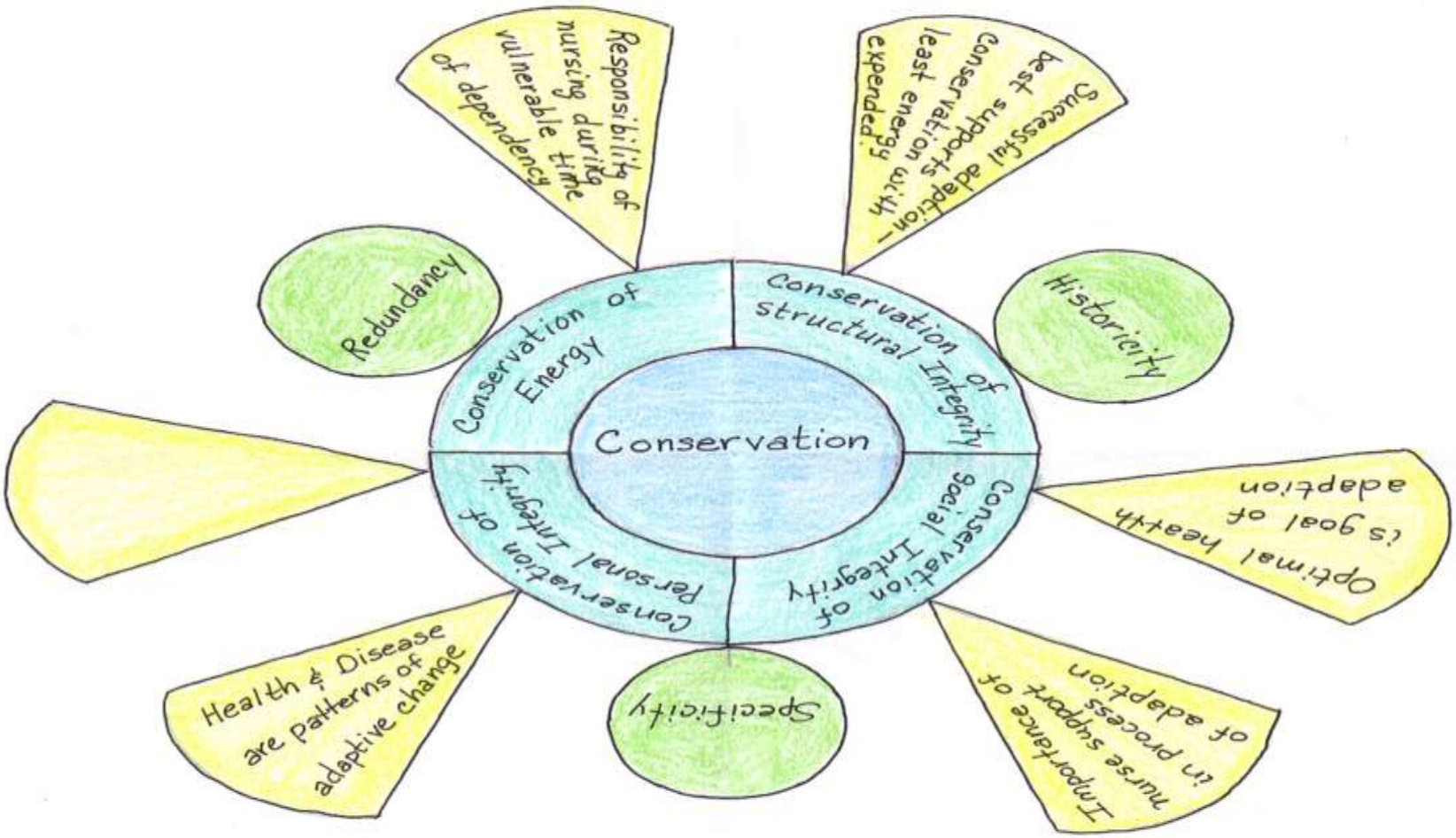
Conservation of Structural Integrity

- This principle encompasses the head to toe physical assessment.
- Early recognition of patient decline or complications can prevent further injury
- This also would incorporate safety assessments and interventions to ensure that patients do not fall or sustain nosocomial infections during their hospital stay
- Interventions will assist the patient to optimal physiological adaptation

Interventions

- Therapeutic: May influence adaptation favorably
- Supportive: Cannot change the course but rather maintain status quo, or prevent a decline in status

Myra Estrin Levine's Conservation Model



ASSUMPTIONS

- the nurse creates an environment in which healing could occur
- A human being is more than the sum of the part
- Human being respond in a predictable way
- Human being are unique in their responses
- Human being know and appraise objects ,condition and situation

ASSUMPTIONS

- Human being action are self determined even when emotional
- Human being are capable of prolonging reflection through such strategists raising questions
- Human being make decision through prioritizing course of action
- Human being must be aware and able to contemplate objects, condition and situation
- Human being are agents who act deliberately to attain goal
- Adaptive changes involve the whole individual

CLINICAL PRACTICE

- Levine's Theory encompasses the person as a whole
- Her assessment strategy takes into consideration the patient as a mind, body and soul, with the philosophy of all systems working together to make a whole
- "Treatment focuses on managing the flight fight response, inflammatory response, response to stress and perceptual awareness"

Use of the Conservation Theory
The conservation theory has been used in many clinical specialties

- Cardiology
- Obstetrics
- Gerontology
- Pediatrics
- Long Term Care
- Emergency Care
- Neonatology
- Critical Care
- Homeless Communities

Nurse's Goal

"End dependence as soon as possible"

Nursing Process

- Assessment
- Trophicognosis
- Hypothesis
- Interventions
- Evaluation

Case Study

Mrs. Jones is a 45 year old women with breast cancer. She has been admitted to the hospital for a bilateral mastectomy. Mrs. Jones is married, but in the process of getting a divorce. She is the mother of 2 children and has not been in the work force out of the home for several years.

Assessment

- Personal Integrity: Body image disturbance; Inability to care for children
- Structural Integrity: Wound healing, weakness
- Social Integrity: Potentially strained relationship with husband

Trophicognosis

- Pain
- Mobility
- Wound management
- Potential low self esteem

Hypothesis

- Teaching: wound care, follow up treatment
- Explore need for assistance with home needs to help with children
- MSW consult for divorce and / cancer support group

Intervention
Energy Conservation

- Pain management
- Allow for frequent rest periods
- Activity as tolerated
- Monitor vital signs

Intervention
Personal Integrity

- Explore body image
- Discuss the need for assistance at home
- Provide privacy dignity and respect

Intervention
Structural Integrity

- Wound care
- Nutritional intake
- Labs
- Concurrent treatments
- Physiological response to concurrent treatments

Intervention
Social Integrity

- Encourage visits from children and friends
- Offer options for divorce support groups and cancer survivor groups
- Encourage interactions with church or other social support groups which the patient is involved

Evaluation

- Fight / Flight: Are vital signs acceptable; Assess for effective coping mechanisms
- Inflammatory response: Is the wound healing; review and assess labs
- Response to stress: assess nutritional intake; review interactions with significant others
- Perceptual awareness: How is the patient adapting to her new body configuration; is she seeking knowledge for follow up care?

Strengths of the Conservation Model

- Clarity – "… Levine's Conservation Model provides nursing with a logically congruent, holistic view of the person (p. 189)" "the theory directs nursing actions that lead to favorable outcomes (p. 237)"
- Simplicity – "…this model is still one of the simpler ones developed"
- Generality – "The four conservation principles can be used in all nursing contexts.'

Educational Benefit

- “Wrote the textbook *Introduction to Clinical Nursing* for beginning nursing students and introduced new material into the curricula for new students”
- “Gives new nursing students the bases for scientific principles behind nursing interventions”
- “Some critics states that this text should be used as a supplement and not the primary text because it requires extensive knowledge of physical and social sciences”

(Alligood & Tomey, 2008, p. 231)

Current Research Status

- No current research on model itself, however "Many nursing researchers and practitioners adopt Levine's model because the conservation principles provide a scientific and research-oriented approach to the majority of nursing interventions. Furthermore, as a theoretical framework, the rules of conservation and integrity are applicable to all aspects of nursing, from clinical practice to administration. As such, the conservation principles help anticipate and predict all fields of nursing practice by placing independent information into an organized framework." (Leach, 2010)
- Areas currently using Levine model in research include: nursing care for preterm infants, cancer patients, CHF, weaning vented patients, post-anesthetic recovery, and pre-op, along with many others.

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- CHF
- weaning vented patients
- post-anesthetic recovery
- pre-op
- along with many others.

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"…everywhere that nursing is essential, the rules of the conservation and the integrity hold (p. 195)"

(Alligood & Tomey, 2010, p.234)

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