



# Research on implementation of nursing/caring theories in different fields of nursing

## *Neuman* health system model

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# Model

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It is a simplified presentation of a theory, a complex of certain events, structures, or systems.

Conceptual models in nursing **bring a common meaning** to the basic concepts of nursing:

*Hall* The three Cs (care, core, and cure) - behavior, reflection, self-awareness

*Peplau* model - psychodynamic nursing and patient-nurse relationship

*Orem* model - self-care, lack of self-care, nursing systems



# Some examples

Lydia Hall Theroy/model	Hildegard Peplau model	Dorothea Orem
<p>In the <b>care phase</b> (nurturing), the nurse gives hands-on bodily care to the patient about daily living activities (toileting and bathing).</p> <p>In the <b>curing phase</b> (interventions), the nurse applies medical knowledge to the treatment of the person.</p> <p>In the <b>core phase</b> (patient), the nurse addresses the patient's social and emotional needs for effective communication and a comfortable environment.</p>	<p>Nurse-patient relationships must pass through three phases in order to be successful:</p> <p><b>Orientation</b> - nurses meet patients and gain essential information about them as people with unique needs and priorities.</p> <p><b>Working</b> - nurses as health educators, resource persons, counselors, and care providers.</p> <p><b>Termination</b> - nurses teach patients about symptom management and recovery at home</p>	<p>Describes how the patient's self-care needs will be met by the nurse, the patient, or by both.</p> <p><b>Self-care</b> is the practice of activities that an individual initiates and performs on his or her own behalf to maintain life, health, and well-being.</p> <p><b>Self-care deficit</b> specifies when nursing is needed (i.e. when an adult is incapable or limited in the provision of continuous, effective self-care).</p> <p><b>Nursing systems</b> : wholly compensatory system, partly compensatory system, and supportive-educative system.</p>

# The relationship of theory and model

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- Theories are models because they reflect aspects of reality
- Models are not a theory (they do not have all the components of a theory), they are ways of explaining certain things.
- However, models can encourage the emergence of new theories

Empirical and theoretical models are distinguished:

- Empirical - physical reproduction of real objects (anatomical model)
- Theoretical - presenting the real world in words and symbols



# Nursing models

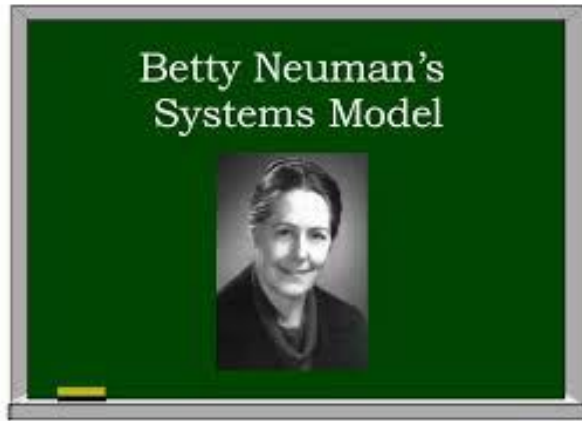
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- Nursing models are theoretical models
- It is a way to **symbolically and conceptually** present on paper the concepts and hypotheses that make up nursing, which explain certain things, help to analyze them, articulate interrelationships, and symbolically reflect the real situation.
- Models, like theories, provide insights into nursing and the most important concepts of nursing before they are tested and tested in the real world.



# *Neuman Systems Model*

# Neuman Systems Model



- ▶ The author of the model, the theorist *Betty Neuman*, deviated from the traditional model of "disease": prevention and health protection are preferred to treatment.
- ▶ The model was first “designed” in the early 1970s and has become a training tool for training mental health nurses in community centers.
- ▶ The author developed the concept of the “client system”: individual, couple, family, group, population, community and society.
- ▶ The model has been applied in practice, nursing management, teaching and research.

# Neuman Systems Model

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While developing the systems model, Neuman used Gestalt, systems and stress adaptation theories.

The Neuman Systems Model shows a comprehensive conceptual structure related to **stressors, reactions** given against stressors and **protective interventions**.

In the model, the system approach is taken as basis and it is explained how the system remains in balance against the stressors.

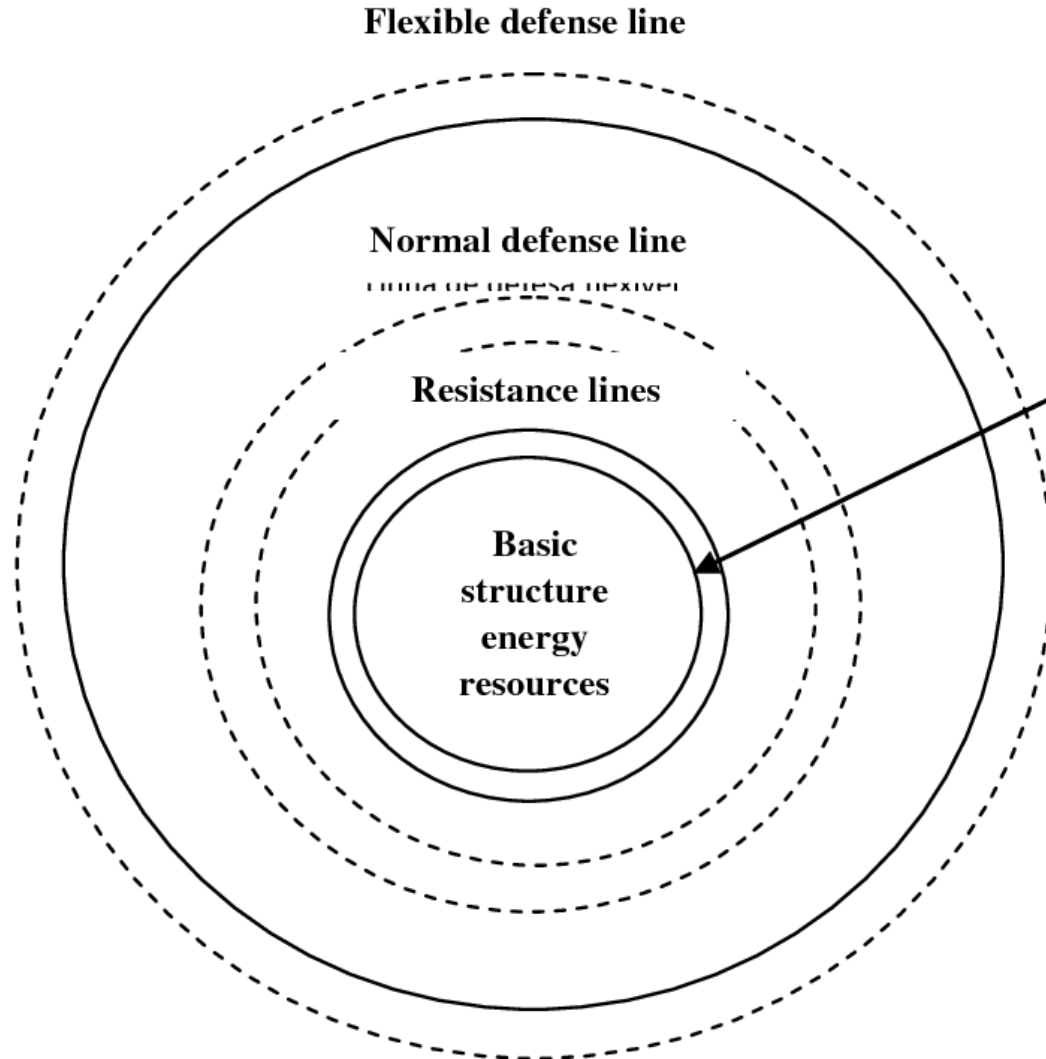
In the Neuman systems model, **the patient is considered a system** and it is clarified that the system has its lower segments and these segments are interrelated.

A human being is an ever-changing open system that is in mutual **interaction** with the environment.

In the Neuman systems model **a three-dimensional framework** of interpersonal, intrapersonal, and extrapersonal stressors is used to analyze the client's stress.



## Graphical representation of the Systems Model of Betty Neuman



### Basic Structure:

- Basic factors common to all organisms, for example:

- Normal temperature parameter;
- Genetic structure;
- Response pattern;
- Organ strength and weakness;
- Ego structure;
- Known common points.

### NOTE:

The physiological, psychological, sociocultural, developmental and spiritual variables occur and are considered, simultaneously, in each concentric circle of the patient.



# *Neuman Systems Model*

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Health oriented. Health is a continuum from well-being to illness.

Optimal well-being is the best possible state of health for a client's system at a given point in time.

Equilibrium or stability is a healthy system (customer), a broken equilibrium is a sick system.

Essential Theorem: The healthier the system, the weaker the response to stressors, the greater the equilibrium control, and the faster the return to a state of stability.


Preventing imbalances is the most important goal.

# The story of one woman...

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- ▶ Female 28 m. age, with two young children and with a not very reliable man. She was diagnosed with stage five cervical cancer. Intended for radical removal of the uterus. The patient lost weight, retained urine, required catheterization, and received radiotherapy. A woman is very worried about her future, worries because of children and does not receive support from her husband. The woman is poorly educated and became pregnant at the age of 16. She lives with her mother. The man is very distant and often drunk. The patient smokes from the age of 13 and smoking is quite intense. The house is not in ideal sanitary condition. The woman is convinced that her illness is a punishment for her previous lifestyle.

# Stressors

Stressors 	Intrapersonal	Interpersonal	Extrapersonal
<i>physiological</i>	Cancer: radiation therapy Nausea Pain Catheter maintenance Weight loss Smoking	Catheter maintenance	
<i>psychological</i>	Fears for the future	Fear for the future of children Lack of male support No data on the mother	
<i>socio-cultural</i>	Primary Education Fear of the consequences of smoking	There is no support from a man The man is abusing alcohol Responsible for two children	Lack of income The man fails to keep the job
<i>developmental</i>	Two children First pregnancy at 16 y.o	Adolescent children: 13 and 11 years.	
<i>spiritual</i>	Spiritual stress due to past life and current situation		Concern for past actions that go beyond social norms

## List of the problems

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### **Nurse perspective:**

- Pain, nausea, weight loss; catheter care perception; unsanitary conditions
- Fear - lack of family support, concern for children
- Spiritual stress is a possible fear of a greater punishment for destiny

### **Patient perspective:**

- "Life is one big problem"
- Fatigue and nausea
- Lack of support from mother and husband, separation of husband from illness
- Fear of children (science, habits)
- Aiming for a better place to live, a cleaner environment (home for children), communication with children

## Support and care

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- **Primary intervention** - to teach self-catheterization, to teach a husband about his wife's illness and needs
- **Secondary and tertiary intervention** - restoration of optimal well-being
- **Tertiary intervention** - restoration of family unity, elimination of possible male depression



# Neuman System Model (NSM) for nursing research

## Using Conceptual Models of Nursing to Guide Nursing Research: The Case of the Neuman Systems Model

Jacqueline Fawcett, RN; PhD; FAAN

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*Conceptual models of nursing inform thinking and give meaning and direction to nursing research. The Neuman systems model is used to exemplify the following five steps, which provide specific direction for conceptual model-based research: (a) Develop a comprehensive understanding of the substantive content and research rules of the conceptual model, (b) review existing research guided by the conceptual model, (c) construct a conceptual-theoretical-empirical structure, (d) clearly communicate the conceptual-theoretical-empirical structure, and (e) conclude the report with an evaluation of the empirical adequacy of the middle-range theory and the credibility of the conceptual model.*

Nursing Science Quarterly, Vol. 14 No. 4, October 2001, 339-345

It is important to explicitly identify the conceptual context for every study

## The purpose

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- ▶ to explain how a conceptual model can be used to guide nursing research, using the Neuman systems model (NSM) as the example

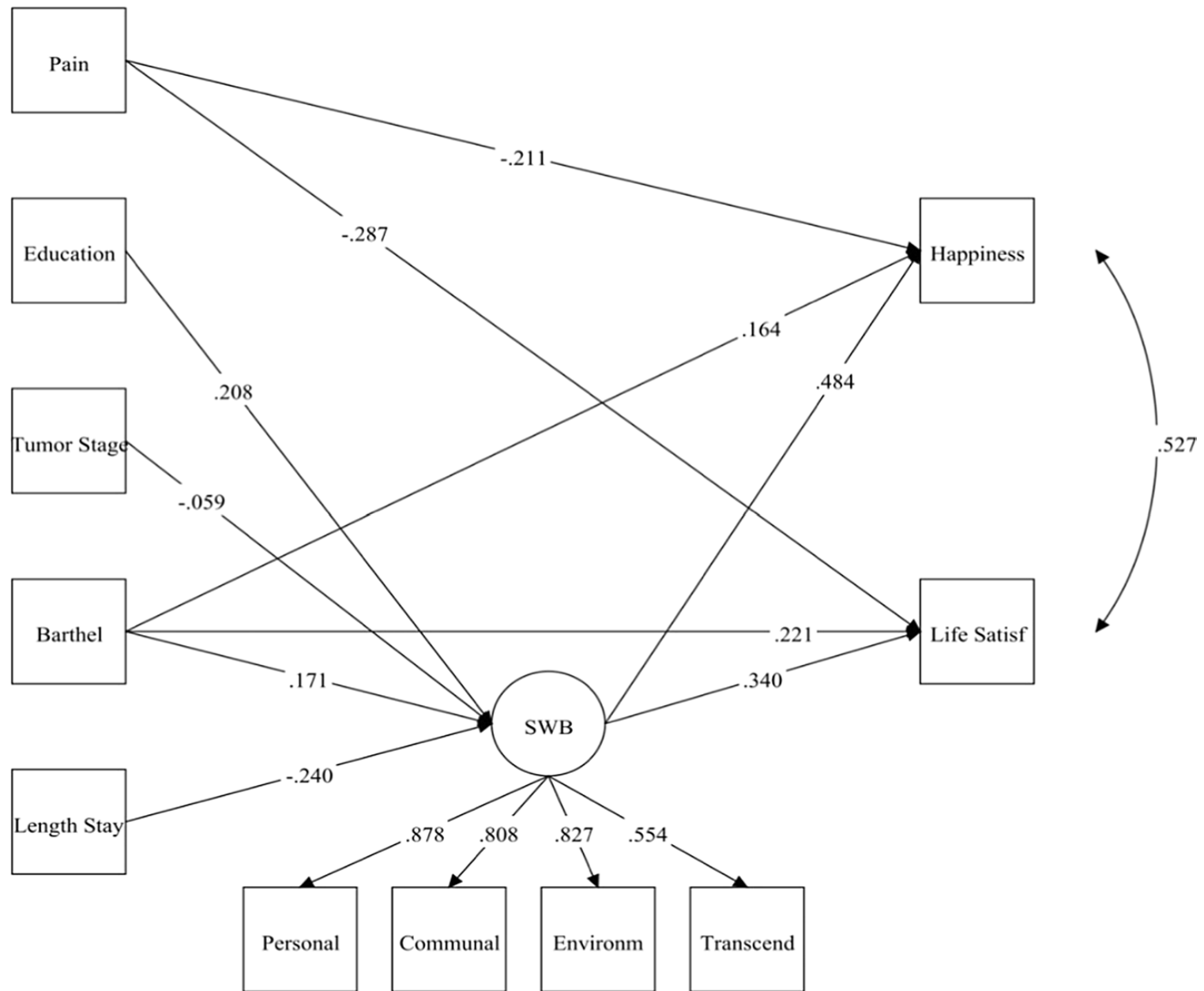
The content of the article reflects the belief that it is impossible to conduct research in a conceptual vacuum

### Critical thinking question:

Why we are looking for the relationship of different variables, e.g. nurses work satisfaction and work related stress; patient's experienced pain and spiritual wellbeing?

Do they have be related? What theory says?





Standardized structural equation model of spiritual wellbeing (SWB) and health-related factors  
 Riklikiene et al., Journal of Religion and Health (2020) 59:2882–2898



# Rational of using theories/models for nursing research

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- Conceptual models of nursing inform thinking and give meaning and direction to nursing research
- ...“the specification of the model determines in part what consequences may be derived from the theory and, hence, what the theory can [describe,] explain or predict”.

Each conceptual model provides a different cognitive orientation or lens for viewing the phenomena that are within the domain of inquiry of a particular discipline.



# Rational of using theories/models for nursing research

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Each conceptual model also provides different epistemic and methodological rules about how the model can be used in the real world of research, including the following:

- the purposes to be fulfilled by the research;
- the phenomena to be studied;
- the nature of the problems to be studied;
- the source of the data (individuals, groups, ect);
- the research designs, instruments, and procedures to be employed, as well as the settings in which data are to be gathered;
- the methods to be employed in reducing and analyzing the data;
- and the nature of contributions that the research will make to the advancement of knowledge



## Selection of the model/theory

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- ▶ The researcher must select the one conceptual model that provides the desired context for the research

The NSM provides clear direction for the researcher who is interested in describing **stressors**; explaining the **factors** that influence reactions to those stressors; and testing the **effects** of primary, secondary, and tertiary prevention on stressor reactions within the context of a **holistic, open systems perspective**



## Neuman Systems Model as a Conceptual Framework for Nurse Resilience

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### Abstract

Due to the stressors involved in the field of nursing, resilience has been identified as an essential trait for those working in the profession. Nurses must deal with many issues that can lead to exhaustion and burnout. The Neuman Systems Model focuses on types of stressors that may cause harm to a person's health and well-being. The purposes of this article are to offer the Neuman Systems Model as a conceptual framework for exploring nurse resilience, and to describe strategies that promote resilience-building in nurses.

- Nurses must deal with many issues that can lead to exhaustion and burnout.
- The Neuman Systems Model focuses on types of stressors that may cause harm to a person's health and well-being.
- The purposes of this research was to offer the Neuman Systems Model as a conceptual framework for exploring nurse resilience, and to describe strategies that promote resilience-building in nurses.



## Resilience and the Neuman Systems Model

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- ▶ Resilience has been associated with traits such as hardiness, mental toughness, and emotional stability, but because it is a behavior that can be nurtured and improved, resilience is a much more complex factor in human **adaptation**.
- ▶ It includes positive **coping** mechanisms and the ability to utilize individual strengths in order to overcome **trauma** and **stress**
- ▶ Neuman's model is a holistic systems perspective that focuses on the types of stressors that may cause harm to a person's health or well-being as well as mechanisms that may reduce the impact of **stress** altogether.
- ▶ To interact with the environment, the client develops a set of defenses that provide **protection** against a variety of **stressors** that have potential to result in either a positive or negative outcome for the client



# Resilience and the Neuman Systems Model

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1. Consideration of the individual nurse as the client system
2. Exploration the interacting physiological, psychological, sociocultural, developmental, and spiritual variables that contribute to system wellness (resilience-building characteristics) or system distress (resilience-lacking characteristics).



# 1. The nurse as a client system

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- ▶ The central core of the nurse is **protected from stressors** by the concentric lines of resistance, as well as the normal and flexible lines of defense
- ▶ As an adaptive response to stress, resilience can be viewed as a portion of the **lines of defense**, and can either strengthen them altogether or serve as an additional buffer once a stressor has penetrated through them
- ▶ Resilience can be conceptualized as a **protective factor** within the Neuman Systems Model to manage, reduce, and prevent stress reactions
- ▶ The amount of resistance the stressor triggers is determined by how the nurse's **five interacting variables interrelate** (a state of optimal wellness occurs when all interacting variables are balanced and in harmony).
- ▶ Resilience is a human attribute that strengthens the capacity of an individual **to respond to stressors** in a way to maintain such **balance and harmony** and as such, can have direct influence on each of the five variables in order to achieve a state of wellness and stability.



# 1. The nurse as a client system

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- ▶ The flexible line of defense is immediately called into action when the nurse encounters a stressor and attempts to maintain stability.
- ▶ **Stressors may be:**
  - ▶ intrapersonal (feelings of weariness after working a long shift),
  - ▶ interpersonal (communications and interactions with patients, family members, coworkers, or members of the healthcare team)
  - ▶ extrapersonal (responding to a medical emergency or time constraints related to patient care), and the nurse's reaction to the stressor may be either positive or negative.
- ▶ If the nurse's flexible line of defense cannot withstand the impact of one or more stressors, the normal line of defense becomes **penetrated**, causing the manifestation of stress and illness symptoms such as work fatigue, emotional exhaustion, and burnout.
- ▶ Resilient people may have adapted or nurtured stronger flexible lines of defense.



## 2. Interacting variables: four patterns of resilience

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- The dispositional pattern of resilience encompasses an individual's psychosocial attributes, and corresponds with the **sociocultural variables** seen within the Neuman systems model.
- Relational pattern refers to an individual's intrinsic and extrinsic roles and relationships influencing resilience, which aligns with the **psychological variables** seen within Neuman's model.
- The situational pattern describes an individual's ability to assess and react to stressors or situations of adversity, and parallels with the **developmental variables** seen within the model.
- The philosophical pattern, which includes an individual's personal beliefs and principles, aligns with Neuman's **spiritual variables** as identified within the model.



## Strategies for Building Resilience in Nurses: **primary** intervention/prevention

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### Primary Intervention - to identify risk factors and prevent stressors from occurring

Nurses must strive to be open and cognizant of any concerns that may be found in the workplace environment

Ensuring open lines of communication among colleagues, finding points of commonality among healthcare professionals, and mentoring new nurses to build positive relationships

Resilience training for nurses and interdisciplinary professionals may serve to strengthen employees' flexible lines of defense.



## Strategies for Building Resilience in Nurses: **secondary** intervention/prevention

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Secondary intervention involves the recognition of problems and interventions that address issues before the nurse's lines of resistance become targeted by stressors

It may be necessary for a nurse to seek guidance from a friend or manager in the workplace.

The nurse must try to view the stressor as a temporary problem realizing that change will be necessary to successfully overcome the problem.

The use of reflective journaling following particularly stressful events may also assist the nurse in evaluating resilience-building techniques.

A strong support system, such as family, friends and clergy can help assist the nurse, and can enhance coping mechanisms that help diminish emotional exhaustion and burn out.

When illness becomes present or mental health declines, the nurse should be referred to a professional person for guidance.

Peer or administrative acknowledgment and praise for how a stressful situation was handled by the nurse may promote feelings of pride in that nurse, which can lead to resilience-building



## Strategies for Building Resilience in Nurses: **tertiary** intervention/prevention

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Tertiary interventions aimed at resilience-building involve decreasing or eliminating the stress response and promoting maintenance of stability, which restructures the nurse's lines of defense

Re-adaptation occurs during these interventions, and nurses may need to reflect upon and examine which mechanisms worked best and which ones did not help.

Resilience-building involves having a flexible mindset that allows a balance between head-on approaches to stressful circumstances and stepping away from the problem.

Re-education regarding the specific nature of the stressor may be necessary.

Self-help and support groups, books, and online resources may also help rebuild the lines of defense and strengthen resilience.



## The authors conclude that:

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- ▶ The Neuman systems model serves as a feasible conceptual framework in the analysis of resilience in nursing.
- ▶ Resilient nurses must be able to stand strong in the face of crisis, overcome adversity, and embrace change.
- ▶ There are many known stressors involved in the nursing that have the potential to disrupt a nurse's lines of defense.
- ▶ The relationship among **physiological, psychological, sociocultural, developmental, and spiritual variables** can affect how well the nurse adapts to a situation.
- ▶ Resilience can be learned and strengthened through **primary, secondary, and tertiary interventions**.
- ▶ It is important that nurse professionals build and maintain positive professional relationships, strive for a **balanced** life between work and play, actively reflect on positive and negative experiences, and develop a sense of control over emotional situations.
- ▶ The Neuman systems model offers a framework that may help to provide evidenced-based approaches to strengthening and building resilience in nurses.



# Self-reflection and individual learning

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- A. To present alternative possibilities of applying the Neuman model of care in research?
- B. How the ranking of Neuman evaluation (5 types of stressors) may be helpful in the research process to identify the stressors threatening the older patients at nursing homes?
- C. Remember when you were last ill. Evaluate yourself according to 5 stressors. Divide stressors into personal, interpersonal, and extrapersonal. How have these stressors reduced your resilience?

## Answer the self-reflection questions:

- What is the importance of the theories and models for nursing research?
- What determines the successful application of the nursing model/theory in nursing research?



# Literature

- Fawcett, J., & Giangrande, S. K. (2001). Neuman systems model-based research: an integrative review project. *Nursing science quarterly*, 14(3), 231–238.
- Neuman, B., & Reed, K. S. (2007). A Neuman systems model perspective on nursing in 2050. *Nursing science quarterly*, 20(2), 111–113.
- **Turner, S. B., & Kaylor, S. D. (2015). Neuman Systems Model as a Conceptual Framework for Nurse Resilience. *Nursing science quarterly*, 28(3), 213–217.**
- Gehrling, K. R., & Memmott, R. J. (2008). Adversity in the context of the Neuman systems model. *Nursing science quarterly*, 21(2), 135–137.
- **Fawcett, J., & Gigliotti, E. (2001). Using conceptual models of nursing to guide nursing research: the case of the Neuman systems model. *Nursing science quarterly*, 14(4), 339–345.**
- Oliveira, D., Peres, P., Giménez, J., Bezerra, A., Silva, D., Ribeiro, M., De, P.S., Carvalho, Silveira, D., & Araújo, E.A. (2016). Nursing process to men with laryngeal cancer based on Neuman model.
- Bademli, K., & Duman, Z. Ç. (2017). Conceptual Framework for Nurses in the Use of the Neuman Systems Model on Caregivers of People Suffering by Schizophrenia. *International Archives of Nursing and Health Care*, 3(3). <https://doi.org/10.23937/2469-5823/1510079>