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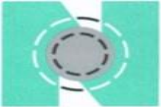


Vancouver, British Columbia

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***The Neuman Systems Model: A Force for Energizing
Nursing Practice, Research, Teaching and Administration***

Sponsored by:

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	Douglas College, Faculty of Health Sciences, Department of Psychiatric Nursing
	Justice Institute of British Columbia

Keynote Presentations

Abstracts

Vision, Values and Verities: A View of the Neuman Systems Model

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The purpose of this presentation is to gain a global view of the Neuman systems model from its inception, through the present, and into the future. Betty Neuman is and has been a visionary all of her life. The creation of the NSM when a faculty at UCLA was a vision based upon her lifelong values that she put into practice to aid the learning of a class of graduate students. This event occurred concurrently at a time when nursing leaders were challenging the profession to develop theories to guide the discipline. As the years unfolded the model was accepted by peers as more than a teaching tool. The breadth of the model gave it usefulness and credibility beyond the mental health field. As the years unfolded, practitioners found it useful as a guide for practice in all areas of nursing. Educators consulted with Dr. Neuman about using the model as a basis for curriculum organization. Researchers began to test the meaning of concepts and propositions from the model to demonstrate credibility. Countries around the world found the model compatible with the values of their health care systems; thus, the use of the model internationally has continued to grow into the present. By 2012 more than 350 practice and education settings were using the model. Finally, as we contemplate the future, and the contemporary issues, needs and challenges in the healthcare system, we ask the question, “How can the NSM provide insights into these concerns?” Our conclusion will acknowledge that theory development is critical to the evolution of the discipline, and demonstrate how the Neuman systems model is meeting this criterion.

Participant Outcomes:

1. Explain the historical development of the Neuman Systems Model
2. Demonstrate how the NSM continues to be viable in the world of the future.

Paper Presentations

Abstracts

Theory-driven Faculty/Student Engagement, Cultural Competence, Quality/Safety Goals

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Challenges and complexities of engaging students on real world culturally sensitive topics in a general education transcultural healthcare course are the essence of this presentation. Believing that theory-based is evidence-based, several theories are operationalized and provide the foundation of this course. The instructional design is informed by professional and teaching/learning theories including Neuman Systems Model (NSM), Purnell Model for Cultural Competence, and Keller's ARCS Model. As the overarching wholistic model, the NSM provides the professional nursing and interdisciplinary healthcare team framework while Purnell provides specificity within cultural domains. Keller's ARCS Model (Attention, Relevance, Confidence, and Satisfaction) is utilized to assure intentional selection of teaching/ learning strategies which promote student engagement and learning outcomes.

When considering teaching/learning strategies for a course in which culturally sensitive topics are at the forefront, it is imperative to select strategies for creating a safe environment. Such an environment provides a climate in which students are free to state beliefs and opinions. Carefully selected strategies also hold students accountable to listen and respect diverse viewpoints. To this end, utilization of ground rules on civility, evidence-based principles, and classroom assessment findings will be explored in relation to the instructional design.

In summary, the authors will reflect upon how this course contributes to the Institute of Medicine (IOM) recommendations along with Quality and Safety Education for Nurses (QSEN) including the knowledge, skills, and attitude as relevant to 21st century practice in acute, chronic, community, and education settings. Opportunity for participant feedback and discussion will be included.

Participant outcomes:

1. Discuss challenges of student engagement on multicultural and diversity topics.
2. Identify the force of utilizing nursing and education theories to drive instructional design of a transcultural healthcare course.
3. Examine the components of this course that specifically contribute to IOM recommendations and QSEN knowledge, skills, and attitude goals in healthcare delivery to peoples from diverse backgrounds.

Hispanic Nurses' Perception of Pain Assessment and Management

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The purpose of this study is to identify cultural beliefs of Hispanic nurses and how they approach pain management in the clinical setting. The conceptual model for this paper is the Neuman Systems Model. The sociocultural variable was isolated as the focus of this research study to identify if culture impacts the nurse's assessment and management of pain. This study was a descriptive, cross-sectional correlation design using 3 survey instruments. Using selected tools to assess the Hispanic nurses' perception of pain assessment and management, the results showed the average nurse had inadequate knowledge levels in these areas in general. However, a specific strength in this sample of Hispanic nurses was accurate pain assessment. Regardless of acculturation, Hispanic nurses demonstrated a high degree of accuracy in pain assessment for both non-Hispanic and Hispanic patients; however, they had higher pain management decision-making scores for Hispanic patients. Wong-Baker's pain assessment tool predicted correct assessment and management of pain. Nevertheless, neither acculturation nor years of experience were significant predictors. Because the sample included only Hispanic nurses, these results cannot be generalized to the general population of nurses. Results of this study were inconsistent with literature asserting a relationship between healthcare decisions and acculturation. It is possible that this lack of relationship may be due to the generally high level of acculturation of this sample. This study is consistent with other empirical findings that nurses in general have inadequate knowledge of pain management, with important implications regarding the need for further research and training in this area.

Participant Outcome:

1. Discuss the impact of isolating the sociocultural variable of the Neuman Systems Model and its implication to nursing practice.

Cultural Competency Intervention Program for Healthcare Workers

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The purpose of this study was to develop a cultural competence program and measure its effectiveness for a diverse group of healthcare workers. A secondary aim was to extend the use of the Transcultural Self-Efficacy Tool (TSET) to a broader range of workers. The sociocultural variable of the Neuman Systems Model was used as the trajectory for the implementation of the Cultural Competence Program. This study also identified which segment of the cultural competence program participants considered most effective. A multi-method approach was used, combining a quasi-experimental design with pre-test, immediate post-test, and a 1-month follow-up post-test along with qualitative data collection via an open-ended interview. A significant mean increase from pre-test to post-test was found on the TSET. Follow-up scores obtained a month later also showed a significant increase difference from the pre-test. The decline from post-test to 1-month follow-up was not significant. The cultural competence program used 5 different teaching methods. Most participants preferred a combination of methods. The most common unique preference was storytelling, followed by video. Qualitative analysis revealed 4 themes, with Knowledge Acquisition and Application to Work Setting predominant. More longitudinal studies need to be conducted to verify retention of cultural competence among healthcare employees. Due to the small sample size ($N = 21$), replication of this research in the testing of the Transcultural Self-Efficacy (TSET) among a larger sample of healthcare workers is needed. While the results support the effectiveness of a one-time program, it is plausible that an even greater impact would be found from on-going training in healthcare settings.

Participant Outcome:

1. Discuss the utilization of the sociocultural variable of the Neuman Systems Model in a Cultural Competency Program.

Identifying Nursing Student Stressors and Interventions Using the Neuman Systems Model

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Jolene Nash, BS, RN, Graduate Student

Sarah Beckman, MSN, BS, RN, Treasurer, NSM Trustees

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The learning environment of undergraduate nursing students can be particularly stressful and anxiety ridden. Clinical experience and NCLEX preparation create stress unique to nursing (Goff, 2011). This paper will detail how the Neuman Systems Model (NSM) can easily be applied to the nursing student community to prevent common stressors from penetrating to the normal lines of defense. A class of 43 junior level undergraduate nursing students was surveyed to determine stressors based on the NSM concept of intrapersonal, interpersonal, and extrapersonal stressors; 32 responses were completed. This article lists those findings as well as interventions suggested by the students and found in the literature. Instructors can implement these interventions following the NSM example of preventions as interventions. The goal is to prevent the stressors from passing the flexible lines of defense. According to the NSM, once stress affects a system deeper than the flexible lines of defense the system becomes unstable. This paper will also share a creative, student-developed 12 steps to promote individuals to consider and accept responsibility for their own sense of coherence (Okumura, Suzuki, Bai, & Mukawa, 2012). Opportunity for participant feedback on NSM application will be included.

Participant outcomes:

1. Identify preventions as interventions used by instructors to prevent system instability in the nursing student community.
2. Identify preventions as interventions used by nursing students to prevent system instability within the individual.

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Hole in a Holistic Assessment: Environmental Health in Nursing

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The synergy amongst health, illness and environmental health determinants has been identified since Florence Nightingale in the mid- nineteenth century. By the mid- twentieth century the assessment of these environmental influences, both positive and negative determinants of health, was largely segregated into two specialty areas of nursing: public and occupational health nursing. This isolation of environmental health into a specialized focus resulted in a decreased capacity of most nurses to perform an environmental health assessment of their patients. In recent times, evidence linking the many influences of the environment to a person's health is indisputable. Therefore, as nursing research emphasizes, the scope of nursing practice must evolve to include environmental influences into all holistic health assessments. Nurses should question how a force in the person's outside environment influence a person's internal health. Nursing educators have an ethical responsibility to begin the process of incorporating environmental pedagogy into nursing education. As a result, nursing students will have a better capacity to identify environmental factors that may be contributing to health (good and bad health), understand the role of individuals and communities in providing good stewardship of the environment, and make recommendations on ways to reduce or prevent exposures to environmental hazard. Each student nurse will develop a broader depth and breadth in their understanding of environmental health issues as they relate to themselves and their patient population. In the end, all nurses, including the psychiatric nursing students at Douglas College, will incorporate an environmental health assessment into their nursing practice, using the Douglas College Conceptual Framework (adapted from the Neuman's Systems model) and identify strategies to improve individual, community and global health. Nursing education must parallel the impact of the environmental on our health. Our patient's health, in the twenty first century, depends on it.

Participant Outcomes:

1. Participants will explore their understanding of environmental health within their community and patient population.
2. Participants will recognize the importance of integrating environmental pedagogy into nursing curriculum.

A Beginner's Guide to Writing the Theoretical Rationale

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&
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Writing the theoretical rationale for one's study can be a daunting prospect for the novice researcher. Nursing's conceptual models provide excellent frameworks for placement of study variables but moving from the very abstract concepts of the nursing model to the less abstract concepts of the study variables is difficult. Similar to the five paragraph essay used by writing teachers to assist beginning writer's to construct a logical thesis, this paper presents guidelines which beginner's can follow to construct their theoretical rationale. This guide can be used with any nursing conceptual model. The example used in this paper is Dr. Nancy Manister's research on Role Stress, Eating Behaviors and Obesity in a sample of Lutheran Ministers. We guide the novice through constructing the Conceptual-Theoretical-Empirical (C-T-E) structure and then writing the five main sections of a theoretical rationale along with examples for each. The main sections are: (a) an introduction, (b) a succinct overview of the nursing conceptual model, (c) a succinct overview of the literature from which each study variable was derived, (d) the middle range theory propositions and, (e) the basis for the research questions/hypotheses.

Participant Outcomes:

1. Explain the components of the nursing conceptual model-based theoretical rationale
2. Construct a Conceptual-Theoretical-Empirical Structure

Neuman Systems Model as the Basis for Education in Changes and Innovations in the Dutch Health Care System

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& Senior Lecturer, University of Applied Sciences**

Roland van Linge, MSc, PhD.

**Senior Lecturer, University of Applied Sciences
University of Utrecht, Department of Nursing Science**

Marlou de Kuiper, MScN, NSM Trustee

**Course Manager & Senior Lecturer, Master Care Trajectory Design
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Abstract for a joint presentation. This joint presentation covers:

- The theoretical basis for innovations in health care: “Where have all the theories gone”?
- followed by an overview of the current changes in the Dutch Health Care System with an emphasis on self-management and shared decision-making and
- structured and systematic elements of the curriculum of the Master Care Trajectory Design to help the students in diagnosing patient problems, and designing interventions using the NSM. A short introduction of didactic frameworks for the program is followed by 3 student presentations of their findings.

Participant Outcomes:

1. Contribute to understanding the theoretical basis of integrated care
2. Contribute to the design of educational programs based on the Neuman Systems Model
3. Contribute to increased understanding of clinical decision making based on the Neuman Systems Model

International Service-Learning in Nursing Education

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Ashley H. Lee, MSN, RN, Lecturer of Nursing

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Purpose

An international service-learning (ISL) in nursing course was developed to utilize nursing theory and practice based on the Neuman Systems Model (NSM) in the context of an intensive, directed service-learning opportunity in a medical mission setting in Honduras.

Conceptual Framework

The NSM was used to develop course objectives as well as course assignments.

Methodology

The School of Nursing (SON) formed a partnership with Volunteers in Medical Missions (VIMM) for an established number of spaces on the mission team and a streamlined process for planning experiences in country. Students are selected by application and prepared for: financial needs, communication barriers, medical mission roles, team relationships, and travel in a developing country. In Honduras, students participate in five days of medical clinics set-up in various villages. They provide support in: pharmacy, dentistry, and medical care.

Results

Students achieved stated course objectives: 1) Utilize the nursing process to assist individuals, families, and communities whose lines of resistance have been penetrated by selected stressors in attaining and maintaining health. 2) Assess biological, psychological, sociocultural, spiritual, and developmental factors which influence health attainment and maintenance for individuals, families, and communities. 3) Incorporate the nursing process and other problem-solving approaches to promote wellness for clients in selected community settings in developing country. 4) Collaborate with other mission health care team members as a provider and coordinator of nursing care for individuals, families, and communities.

Discussion

ISL opportunities provide active learning that enhances participant skills in teamwork, communication, critical thinking, interpersonal understanding, and intrapersonal reflection in a lived experience that cannot be recreated in the local environment. Implications Interest exists in future trips to incorporate multiple disciplines in the University. Faculty will co-lead future VIMM trips to provide an enhanced level of control to allow more student-focused experiences and will include quantitative assessments of student achievement.

Participant Outcomes:

1. Learners will be able to describe the application of the Neuman Systems Model to develop an international service-learning immersion course.
2. Learners will be able to describe the utilization of the Neuman Systems Model to evaluate student critical thinking in the context of nursing care in a developing country.

The Effects of Electronic Medical Record Use in the Clinical Laboratory Setting on Perceived Self-Efficacy in Electronic Nursing Documentation by Baccalaureate Nursing Students

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Study Purpose: The purpose of this study was to determine whether the use of a generic EMR in the clinical learning laboratory in early nursing courses improves perceived self-efficacy in use of EMR while engaged in acute care clinical rotations during subsequent nursing courses.

Conceptual Framework: The Neuman Systems Model serves as the conceptual framework of this study. Adequate training on the use of the EMR has the potential to strengthen the clinical student's flexible line of defense, mitigating the effects of the stressors of the new experiences in clinical such as the use of an EMR for nursing documentation.

Methodology: A non-probability sample was drawn from the students in the Department of Nursing, with students enrolled in sophomore courses serving as the experimental group, and students enrolled in junior courses serving as the control group. The control group had no exposure to EMR during prior clinical learning laboratories, and completed a nine item self-efficacy questionnaire prior to their first clinical day in the September 2012. During the Fall 2012 semester, an EMR was used during course and clinical learning laboratories for two different sophomore-level nursing courses. Prior to the experimental group's first clinical day in January 2013, each student completed the self-efficacy questionnaire. Chi-square test was used to determine differences in the perceived self-efficacy between the experimental and control groups.

Results: Twenty nine students comprising the control group were surveyed in September 2012 and 22 students comprising the experimental group were surveyed in January 2013. Students in both the experimental and control groups indicated a moderate to low perceived self-efficacy for the utilization of the EMR in the clinical setting. There was no statistically significant difference in perceived self-efficacy between the two groups.

Implications: It is suspected that early exposure to the EMR would serve to strengthen the flexible line of defense with regard to the psychological variable, as anxiety may be reduced as perceived self-efficacy improves. Reduced anxiety may, in turn, have a positive impact on clinical performance, knowledge recall, and learning. This study's limitations included a small sample size and poor functionality of the EMR. As this study failed to support the aforementioned hypothesis, there are plans to repeat the study with a larger sample size over a longer period of time with a difference EMR and introduction of the EMR earlier in the nursing curriculum.

Participant Outcomes:

1. The participant will be able to discuss the use of EMRs by nursing students within the context of the Neuman Systems Model.
2. The participant will be able to identify methods by which to improve student access to EMRs prior to clinical experiences.

The Spiritual Variable in a NSM Based Curriculum

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The bachelor nursing curriculum of the Faculty of Health Care of the Reformed University for Applied Sciences in Zwolle in the Netherlands is based on the NSM. Students are educated in total client-centered care by application of the model within different client groups cases. In the educational process special attention is given to the education of spirituality and spiritual care (spiritual variable).

Content of this paper:

- A model of nursing competencies for spiritual care which is the foundation for the education regarding the spiritual variable and spiritual care. The model consists of competencies regarding:
 - o use of self (focusing on self-awareness regarding spirituality and spiritual care)
 - o spiritual care and the nursing process
 - o quality assurance and health policy regarding spiritual care
- The educational process regarding spirituality and spiritual care within the nursing faculty. This process consists of:
 - o The way the NSM including the spiritual variable is threaded throughout the curriculum
 - o A module about human caring and spiritual care
 - o Competence development in nursing practice during internships
- The results of a research study regarding the development of nursing competencies for spiritual care among nursing students. These results are based upon the outcomes of a quantitative and qualitative study by using the SCCS-assessment tool (Spiritual Care Competency Scale)¹ and analysis of vignettes.

Participant Outcomes:

1. To present the competencies for spiritual care the nursing students are working on to enable them to deliver holistic care based on an integral approach of nursing care based on the NSM
2. To give insight in the educational process that is contributing to the development of these competencies and the effects of that education
3. To discuss these outcomes with participants of this within the context of the NSM

¹ R van Leeuwen, LJ Tiesinga, B. Middel, D. Post, H. Jochemsen (2009). The Validity and reliability of an instrument to assess nursing competencies in spiritual care. *Journal of Clinical Nursing*, 18 (20), 2857-69.

Role Stress, Eating Behavior, and Obesity in Clergy

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Purpose:

This study examined the relations between role stress, eating behaviors, and obesity in Lutheran Church Missouri Synod clergy, and was based on The Neuman Systems Model (Neuman, 2011) and Kahn and colleagues (1964) Organizational Role Theory.

Method:

This was a cross sectional, randomized, web based study (N = 430), response rate 38%. Study variables were measured with the Role Conflict and Ambiguity Scales (Rizzo, House, & Lirtzman, 1970); Emotional and Restrained Eating Behavior Scales of the Dutch Eating Behavior Questionnaire (Van Strien, Frijters, Bergers, & DeFares, 1986), and self-report of height and weight for BMI calculation.

Findings:

Obesity was high among clergy (overweight/obese 81.4%, obese 36.7%). Emotional eating was found to partially mediate the relation between role stress and obesity (~ 77 – 78%), but not restrained eating behavior. In ancillary analysis, restrained eating was found to be a moderator of the relation between emotional eating and obesity. Additionally, low social support was the most significant contributor to role stress ($r = -.41$, $p < .0001$), which was moderate.

Conclusions:

Conceptual and theoretical linkages between the Neuman's System Model (Neuman, 2011) and Kahn's role stress theory (Kahn et al., 1964) were supported. Coping through emotional eating (activation of the lines of resistance) partially mediates the relation between role stress (invasion of the normal line of defense) and obesity (a core response). Restrained eating appears to moderate the relation between emotional eating and obesity. Revisions to tests of relations between the normal line of defense and core response were proposed.

Participant outcomes:

1. Describe the relations between role stress, emotional eating behavior, and obesity.
2. Identify obesity as a core response in the Neuman Systems Model.

The Neuman Systems Model Applied to the Social Issue of Domestic Violence

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The Neuman Systems Model has been used extensively as the basis for care of individuals, families, groups, and/or communities as client systems for many years. However, in the most recent issue of her textbook, Neuman (Neuman & Fawcett, 2011, p. 15) adds that a social issue can be a client system. Once the client system is delineated, it is assessed holistically including all five variables, goals set, and subsequently preventions as interventions are planned. This presentation examines the social issue of domestic violence from a Neuman perspective. Domestic violence is an overarching concern in families, in cities and in rural areas, in the workplace, in everyone it touches. Almost everyone from victims, to perpetrators, to children/witnesses, to nurses, to teachers and employers, to shelter workers, to friends, and to strangers has been or will be affected by domestic violence in some way. Domestic violence is no longer something that remains behind closed doors, something hidden within a family or relationship. The four metaparadigm concepts as they apply to this social issue will be identified from a Neuman Systems Model point of view. Neuman's three levels of nursing preventions as interventions will be emphasized. This presentation will be of interest to any professional or student touched by the social issue of domestic violence.

Participant outcomes:

1. Examine the social issue of domestic violence from a Neuman perspective
2. Identify at least 5 possible nursing preventions as interventions that could be used when addressing domestic violence for each of Neuman's three levels

Nursing Students and Spiritual Care in the Netherlands: Baseline Measurement

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Study purpose

To identify student nurse' perception of spirituality and spiritual care and their competency in delivering such care at the start of their study. This study is the Dutch baseline measurement of a longitudinal international study.

Conceptual framework

According to nursing theory (e.g. Neuman Systems Model) nurses have to think about a patient in an integral way (that is the developmental, sociocultural, physiological, psychological and spiritual variable). During their years of study nurses have to learn and to practice this. The expectation is that nurses will be competent in delivering such care, also spiritual care, by finishing their study.

Methodology

Nursing students will be asked to complete a questionnaire at the beginning of each year of their study. The answers on the questionnaire and summary scores will be compared between schools and demographic characteristics.

Results

546 nursing students from five different schools, have finished the questionnaire in the first month of their study. These just started students have high scores on of the questionnaire, which means that they have a wide view of spirituality, they say they are competent in delivering spiritual care, spirituality plays an important role in their lives and these students feel spiritually well.

Discussion

These new students show involvement and love for patients; an important base for caring and the right attitude to deliver spiritual care. However, literature shows that nurses, while working in practice, apparently have 'lost' this attitude; they feel barriers to deliver spiritual care. The question arises: does the curriculum of nursing studies fit the spiritual drive of students?

Implications for nursing education Discussion about the gap between the spiritual caring drive of students at the start of their study and their incompetence at the end is necessary, next to discussion about the fit of curricula and the caring base of students.

Participant outcome:

1. How can we apply NSM in curricula to keep in touch with the (spiritual) caring drive of just started nursing students?

Doctoral Graduate Study as a Created Environment

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Teaching graduate students in nursing and other disciplines requires attention to the multidimensions of the individuals, their environments, and the constant change occurring during the dynamic interactions of their lives in academic environments. The five person variables of the Neuman systems model (Neuman, 1989) are valuable as instructional referents for identifying and evaluating the progress and resistance of students.

Neuman's *created environment* and the *wellness-illness continuum* are valuable extensions of our conceptualization of the academic environment. Graduate students unconsciously create and develop a personal conceptualization of internal and external environmental factors. A student in a state of *wellness* has established a dynamic equilibrium among the external environmental factors (work, family, school, life, etc.) and the internal environmental factors (self-confidence, courage, stress, stability, perceptions, etc.). A student in a state of *illness* has not developed a stable and healthful equilibrium.

A graduate course instructor benefits by adopting Neuman's 3-stage nursing process analysis (Neuman & Young, 1972) in interactions with students. Begin with a *Learning Diagnosis* by assessing the physical/physiological, psychological, socio-cultural, developmental, and spiritual status of each student (Gigliotti, 1999). Next, negotiate *Learning Goals* recognizing and developing the current wellness of the student by achieving equilibrium among the internal and external factors in their lives and addressing stressors. Finally, *Define Outcomes* through systematic and creative personal and academic interventions addressing the five dimensions of individuals. This approach helps students restore the balance needed for learning and prevents future problems by teaching students how to address the factors influencing their academic and personal lives. Using this created environment approach in doctoral level residencies has proven highly successful. Several examples from recent classes will illustrate how strategy has been used to successfully reframe entire classes stuck in patterned, non-productive responses reflecting their illness as learners.

References

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Participant Outcomes:

1. Develop an appreciation for the value of the Neuman Model applied beyond nursing.
2. Learn several practical ways to use the Neuman Model to reframe learning environments.
3. Hear how the Neuman Model energized and engaged several different groups of graduate students from diverse fields.
4. Enjoy the opportunity to share creative applications of the Neuman Model to energize and engage graduate students in academic classes and residencies.

Calcium Channel Blockers as Initial Therapeutic Agents in Hypertension: Relationship to Incident Heart Failure

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Study Purpose: To perform a review of the literature to determine the scope of heart failure (HF) incidence with calcium channel blocker (CCB) use for the management of hypertension, to determine whether this incidence is limited to or independent of the effect of nondihydropyridine CCBs, to discuss alternative CCB physiologic mechanisms that may be responsible for HF outcomes, and to discuss the role of the APN in prevention and management of CCB-induced HF.

Conceptual Framework: Neuman Systems Model was used to demonstrate how specific CCB-induced physiologic changes affect the human system and the role of the APN on primary, secondary, and tertiary prevention of CCB-induced HF outcomes.

Methodology: RCTs and meta-analyses written in English and dated from 2000 AD and forward were included. The year 2000 was chosen due to the shift in evidence based practice away from short acting CCB agents due to their implication in mortality and cardiovascular events. Study inclusion required the identification of HF as a designated endpoint.

Results: The literature demonstrates a strong association between *all* types of CCBs and incident HF, that this association is found in persons with and without pre-existing myocardial dysfunction, that BP measurement alone is an insufficient measure of end organ preservation with CCBs use, and that CCB-induced HF is more problematic with comorbid coronary disease, renal disease, and diabetes mellitus. Furthermore, current research suggests that these outcomes are a result of CCB-induced neurohormonal sympathetic activation, sustained CCB-generated nitric oxide production leading to inflammation and tissue destruction, and/or increased systemic calcification secondary to concurrent calcium supplementation.

Discussion /Implications: These findings suggest the pressing need for re-evaluation of CCBs as first line agents in treating hypertension and for possible revision of JNC VII hypertension guidelines. APNs are in a strategic position to affect HF outcomes through the implementation of conservative prescriptive practice of CCBs for hypertension management.

Participant Outcomes:

1. Understanding the APN's pivotal role in the prevention and management of heart failure outcomes when using CCBs as antihypertensive agents (particularly with comorbid heart disease, renal disease, and / or diabetes mellitus) despite JNC-VII guideline recommendations.
2. Recognize that BP measures are an ineffective means for monitoring end organ damage (i.e. HF outcomes) when CCBs are used and that the literature demonstrates a strong association between CCB use and incident HF despite the ability of CCBs to achieve optimal BP goals.

The Orthopedic Nurse Residency Program: A Qualitative Study

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Purpose:

To report the experiences and perceptions of new nurses involved in a nurse residency program as they transition from a novice nurse to a professional nurse.

Method:

A qualitative descriptive methodology was used. Twenty four subjects were divided into two focus groups: 4 male nurses and 20 female nurses. Data obtained from the audio-taped responses to the interview schedule were analyzed for content using thematic analysis. Themes extracted from the data were interpreted using the holistic approach of the open systems framework of Betty Neuman (NSM). The NSM provided a creative way to view environmental factors that can positively or negatively affect a new nurse's perception of the entire program.

Results: Ten main themes were identified:

Discussion and Conclusions:

Thematic analysis from this qualitative study highlighted the experiences of twenty four new nurses during transition from novice nurse to professional nurse in an orthopedic specialty hospital. There were many challenges inherent in transitioning to the new environment. It identified sources of environmental stressors according to the concepts of the NSM. The Nurse Residency Program (NRP) provided a unique educational opportunity for professional growth for new nurses accepted in the program. The presence of a resource person enhanced the coping that led to improved clinical competency and decision-making; acquisition of new skills leading to autonomy with nursing practice. The variety of teaching and learning strategies was necessary for the successful transition. Participants expressed the potential to lead. It was viewed as a retention strategy and a personal enrichment experience. Participants were empowered to offer suggestions and recommendations to improve the organizational and work environment which could serve as significant feedback to educators and administrators to some aspects of future nurse residency programs.

Sailing the High Seas – Integrating the NSM into Psychiatric Nursing

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&

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“If it isn’t broke don’t fix it”. “Don’t reinvent the wheel”. Heard these quotes before? Sure you have! So why is it that no-one wants to change? When you have a group of diverse strong people, can everyone agree? Well that’s where we started, different ideas and different thoughts, why change a model of care that has been working for years and has a strong foundation in our nursing program? Where do we start? Well firstly who is going to be the one to bring up “let’s change our nursing model”? This is where the journey began. Let’s bring in the experts to give us some open and expert opinions. This we did, many strong professionals, nursing schools from near and far and the best of the best, Dr. Betty Neuman herself.

We are sold, and forward we go! The team implements the Neuman Systems Model into the first year of the Psychiatric Nursing Program. It’s creative, exciting and what better way to achieve success than to involve the nursing students in this transition. “Sailing the high seas” became the new title to incorporate the model into year one of the program. As we sailed across the white board, we sailed the high seas, hit all of the variables, lines of defenses, lines of resistance, and stressors. Our environment affected our central core but all in all there is optimal system stability, reconstitution and best of all our nursing care plans are outstanding and all it took was sailing some rough seas whilst fighting off sharks, pirates, and illness!!

Our journey has been incredible over the last couple of years, we have had some bumps along the way, but now we have incorporated the Neuman model throughout our program and accompanying program courses. We have all been Neumanized!

Participant Outcomes:

1. Describe how faculty and students have embraced the Neuman Systems Model.
2. Appreciate the challenges and benefits of integrating the Neuman Systems Model with in an established curriculum.

NSM in Education: Energizing Teacher and Student Learning Outcomes

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In order to address the stressors affecting a variety of students, the Neuman Systems Model, informatics, and evidence-based teaching was applied in the education process by a senior leadership nursing student in collaboration with faculty and university resources. Three teaching tools were developed in response to intra-, inter-, and extra-personal stressors. Information technology in the form of a health education video, a website, and a Prezi energized the teaching/learning process resulting in significant engagement of the diverse groups of students in each project. Two primary preventions as interventions addressed health-related knowledge deficits in elementary and middle-school students which resulted in a student-produced video on menses and a Prezi on synthetic drugs. Both will be featured. The third teaching tool served as a secondary prevention as intervention targeting undergraduate students enrolled in their first year in a generic nursing program. This program requires a perfect score on a medication dosage calculation exam each semester in which the students are enrolled in a clinical course. Responding to self-reported stressors, including math anxiety, a medication math web site was developed. Opportunity for discussion about math anxiety in nursing students in relation to the long-term goal of safe medication administration will be included.

Participant outcomes:

1. Identify how the NSM is applied to meet diverse learning needs.
2. Identify how technology can be used to engage both teacher and learner.
3. Discuss successful strategies in dealing with math anxiety.

Poster Presentations

Abstracts

Application of the Neuman Systems Model in Caring for Filipino Americans with Metabolic Syndrome

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Introduction:

Metabolic syndrome is a clustering of factors that greatly increase the risk for cardiovascular disease. Metabolic syndrome is prevalent among Asian Americans, but little is known about this syndrome in Filipino population.

Purpose:

The aim of this study was to investigate the prevalence of metabolic syndrome and its associated risk factors among Filipino Americans.

Conceptual Framework:

The Neuman Systems Model was utilized as a framework to guide the study.

Methodology:

Descriptive, cross-sectional research design was used. A convenience sample of 300 Filipino Americans residing in southern Nevada were recruited to participate in the study. Participants were between the ages of 35-75 years, they were screened for the presence of metabolic syndrome and other cardiovascular risk factors through self-reported survey. Screening for central adiposity was completed through actual waist circumference measurement.

Results:

Eighteen percent of the sample met the threshold for metabolic syndrome. When men and women were compared, 21% of men and 15% of women had the syndrome. Regarding risk factors, almost half of the sample had HTN, 12% had diabetes, 28% had dyslipidemia, 37% were overweight, 80% had central adiposity, 12% reported smoking, and 37% did not exercise.

Discussions:

Metabolic syndrome is prevalent among Filipino Americans living in southern Nevada. Many have cardiovascular risk factors — criteria for a clinical diagnosis of metabolic syndrome.

Implications:

Using the Neuman Systems Model as a guide for practice, nurses and nurse clinicians should screen their Filipino American clients for metabolic syndrome and its associated risk factors. They should also educate their clients and families regarding strategies to prevent the syndrome.

Participant Outcomes:

1. Discuss the prevalence of metabolic syndrome among Filipino Americans.
2. Explore primary and secondary prevention strategies to decrease the risk of metabolic syndrome using the Neuman Systems Model.

**Creating a Reflection Room and Strengthening the Spirituality Variable on an
Inpatient Adult Psychiatric Unit:
A Multi-Phase Quality Improvement
and Research Project by an Interdisciplinary Team**

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Kathy Fisher, MHSC, LPN, LCADC, Addictions Counselor
Christine Hopkins, MA, BC-DMT, NCC, LCAT, Creative Arts Therapist;
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In early 2012 a nurse-leader using the holistic perspective of the Neuman Systems Model identified lack of support for the spirituality variable on the unit and recruited an interdisciplinary quality improvement (QI) team to address this. The team includes three nurses, a licensed addictions counselor and a licensed creative arts therapist.

The team's mission is to strengthen spirituality as a secondary level of prevention to help restore patients' equilibrium after the crisis of inpatient hospitalization, and, at the tertiary level, to mitigate against further symptomatic deterioration while maintaining existing stability on the unit. Actions completed to date include: multidisciplinary literature reviews of research, gaining administrative approval and budget, spirituality discussion groups to gather patients' input, a staff orientation booklet on religion-spirituality (R-S) in recovery and physical transformation of a lounge into a Reflection Room. It is carpeted, has dark teal walls and windows covered with frosted mosaic film. Sofas, armchairs, pillows, plants and stereo speakers in the ceiling contribute to the healing environment. It serves as a "comfort room" where patients practice self-calming and optionally, self-initiated R-S practices, such as prayer, meditation and meeting with clergy. Outreach by the QI team to the new chaplain led to multidenominational volunteers organizing for weekly pastoral visits. Phase Two now in development is a research project to discover whether use of the Reflection Room correlates with reduced use of PRN medications for anxiety or agitation.

Working closely with the Research Council of our Magnet hospital system, the QI team is developing a mixed-method design, which will include retrospective chart reviews, staff observations and patients' self-reports. It will be submitted to the Institutional Review Board in early 2013. Initial tracking data shows use of the Reflection Room overall is increasing, which confirms the need for supporting the spirituality variable on the unit.

(cont. next page)

Outcomes Summary submitted for the 2013 Neuman Systems Symposium

Patients' use of the Reflection Room is logged on a Communication Sheet every shift. During daily community meetings, information on the uses, location and how to access the Reflection Room is announced to patients. The spiritual atmosphere of the room and the daily announcement communicate to patients that Religion-Spirituality (R-S) topics, concerns, activities and support are welcomed on the unit. From the daily announcement:

"The Reflection Room is a peaceful environment for quiet time, alone time, meditation or prayer. It's available on request for individual or group use."

The data below show that the Reflection Room is becoming integrated as part of milieu culture on the unit as evidenced by increasing use by patients, from a retrospective review of unit administrative records (communication sheets). A mixed-method research project now in development will reveal whether use of the Reflection Room correlates with reduced use of PRN medications. IRB approval/exemption and completion of the research is expected in 2013.

Week Dates (M-Su))	DAY SHIFT	EVENING	NIGHT	TOTALS
1. 7/2-8	1	1	0	2
2. 7/9-15	1	2	0	3
3. 7/16-22	2	0	0	2
4. 7/23-29	1	5	0	6
5. 7/30-8/5	4	0	1	5
6. 8/6-12	2	1	0	3
7. 8/13-19	1	0	1	2
8. 8/20-26	0	1	0	1
9. 8/27-9/2	2	2	4	8
10. 9/3-9	2	3	4	9
11. 9/10-16	0	1	0	1
12. 9/17-23	0	3	0	3
13. 9/24-30	0	1	2	3
14. 10/1-7	2	1	0	3
15. 10/8-14	0	0	3	3
16. 10/15-21	1	7	0	8
17. 10/22-28	0	0	0	0
18. 10/29-11/4	4	1	0	5
19. 11/5-11	6	1	0	7
20. 11/12-18	3	9	0	12
21. 11/19-25	6	3	0	9
22. 11/26-12/2	4	3	4	11
TOTALS	42	45	19	106

The Reconstitution Process of Divorced Women: Getting to a New Normal

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&

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The concept of reconstitution has been part of the NSM since the beginning. Reconstitution describes how a person reacts to a stressor in their lives and returns to stability and wellness. Neuman and Young first introduced the term reconstitution in 1972 to describe the events that occur “following the person’s reaction to stressors” (Fawcett et al, 1982, p. 37). Fawcett makes the point that this infers that the process of reconstitution is the person’s progress, once a stressor has created a variance from wellness, to a return to stability and wellness. Reconstitution factors are intrapersonal, interpersonal, and extrapersonal in nature and include physiological, psychological, development, spiritual and sociocultural aspects. Reconstitution takes place any time a stressor impacts a client system. It is a regenerative or reconstructive process whereby a client system undergoes a rearrangement of existing variables at the site of stressor impact. It occurs after the client system has experienced a negative reaction to a stressor, which required the client system to alter itself to preserve the system and protect the basic structure. Reconstitution occurs whether or not there is intervention, but a more favorable outcome (that is a higher level of return to wellness) may be realized should intervention by health care professionals occur.

Divorce is a stressor that impacts the lives of those who experience it. While most often thought of as impacting the psychosocial domain, there is some evidence that it has further reaching effects on all aspects of life. The purpose of this qualitative study is to have women who have experienced divorce describe the aftermath. Using a grounded theory approach, data gathered will be analyzed within the framework of the reconstitution process. This research focuses on all 5 Neuman variables, thus providing an integrated picture of what the process is to move from dealing with the stress of divorce and move towards a new stability and state of wellness.

Participant Outcomes:

1. To discuss the process of reconstitution after a stressful event.
2. To understand the qualitative research method in theory testing.

Caregivers and Nurses' Support of Family Members in Transition from Hospital to Nursing Home

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The primary aim of this descriptive qualitative study was to describe caregivers' perceptions of intra-, inter-, and extrapersonal stressors related to their family member transitioning from hospital to nursing home. Another aim was to provide a description of the perceptions of the nurses who work with caregivers during the transition. Neuman's Systems Model was used to guide this study; relevant concepts for this study included the client system and intra-, inter-, and extrapersonal stressors of the created environment.

Acute care nurses who worked with caregivers during the family members' transition from hospital to nursing home were recruited with the assistance of a case manager and two social workers at a major medical center in a southern state. In addition, announcements were inserted in bulletins at local churches, and flyers were posted at other organizations to recruit participants. Institutional Review Board (IRB) approval was granted by Hampton University and the medical center. Written informed consent was obtained for each participant. The researcher conducted semi-structured interviews face-to-face and by telephone with caregivers and nurses, and the interviews were tape recorded and transcribed. Data saturation was achieved with the emergence of several themes after 36 interviews of 21 caregivers and 15 nurses.

Data were categorized into themes using Qualitative Solutions for Research (QSR) NVivo 9 content analysis. Eleven caregiver themes and nine nurse themes were integrated to form a middle-range theory of shared perceptions of stressors between caregivers and nurses. The main shared stressors identified in the analysis were decreased level of care, location and convenience of the nursing home, and communication between staff and family members. Findings from this study indicate organizational support is required to assist with perceived nursing home stressors, and caregivers prefer the nursing home to be located near their homes.

Participant outcomes:

1. The participant will be able to articulate the statement of the problem as it relates to nursing
2. The participant will understand why qualitative research was the method employed in this study.

Neuman Systems Model and Assessment of Prevalence and Risk Factors for Pre-Hypertension among Adults in Burkina Faso

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Background:

Pre-hypertension is a new risk of the disease category for cardiovascular diseases and is clinically stratified into low level with a blood pressure (BP) 120-129/80-84 mmHg and high level with a BP of 130-139/85-89 mmHg. Adults with pre-hypertension have a greater risk for stroke, heart failure, and coronary heart diseases as compared to normotensive adults. Pre-hypertension increases risk for stroke by 25%, in adults; and those with a high level of BP \geq 130-139/85-89 mmHg have significantly increased the risk for stroke by 79%, $p < 0.001$. Neuman Systems Model's (NSM) knowledge of intrapersonal and extrapersonal risk factors for pre-hypertension can be applied to positively shift the effects of foremost risks associated with pre-hypertension. However, there is a limitation of population-based data on prevalence and risk factors for pre-hypertension in Burkina Faso.

Purpose:

The purpose of this study, guided by the NSM, is to assess the prevalence of each category of pre-hypertension, identify the intrapersonal and extra-personal risk factors, and to ascertain the predictive risk factors for pre-hypertension among adults.

Theoretical Framework:

Based on the NSM, in the adult system, stressors continuously interact with the lines of defenses and resistances. If the normal line of defense is disrupted because of the risk stressors, BP in the physiological variable can slightly elevate to 120-139/ 80-89 mmHg. Stressors are assessed in this study through the NSM's sociocultural, developmental, psychological, and spiritual variables. The NSM depicts the adult system with the five interacting variables and provides the conceptual framework for assessment of intrapersonal and extrapersonal risk stressors.

Research Methodology: A cross-sectional design and a convenience sampling will be used with adults. Cochran's sample size formula will be used to estimate the sample. The physiological, developmental, sociocultural, psychological, and spiritual variables will be analyzed using t-test, chi-square test, while their relationships will be determined through binary multivariate correlations. Multivariate analysis will be also used in binary logistic regression to determine potential risk predictors for pre-hypertension among the adults in Burkina Faso.

Implications for Nursing: An assessment of the prevalence and risk factors for pre-hypertension using the NSM in Burkina Faso is a sound proactive approach to primary prevention of major risk factors associated with pre-hypertension in the adults. The findings would constitute basis for interventions targeting prevention and/or reduction of pre-hypertension among adults in Burkina Faso.

What is the Spiritual Well-being of Adults who had Experienced Childhood Sexual Abuse by the Clergy?

**Charlene Niemi, RN, MSN,
PhD. student**

Background:

The long term effects of childhood sexual abuse are well documented, however little is known about the correlation between sexual abuse perpetrated by a clergy and the spiritual well-being of the adult.

Objectives:

This research will examine the effects childhood sexual abuse perpetrated by a priest has on the adult's spirituality as viewed through the Neuman Systems Model. Spirituality, one of the five variables making up the client core, can also be viewed as a resource for the flexible line of defense. The question to be answered is how is the spirituality of the person affected when the stressors of sexual abuse by a clergy, that which should be a protective factor, is the cause of stress on the client system.

Method: This study will utilize a mixed method approach. Selection of subjects will be adults that were sexual abused by Catholic priests in the United States. A spiritual assessment tool will be given to each participant. Interviews will be conducted to expand on the lived experiences of victims' spiritual journey.

Results: The hypothesis is that victim of childhood sexual abuse by clergy is associated with long term spiritual distress.

Contributions/Implications: To understand the negative impact on spirituality on the victims of childhood clergy abuse it is imperative health care providers understand the worldview of the affect of abuse by a authority figure, especially a trusted leader of their religion. The Neuman Systems Model maintains that spiritual development brings the client to a greater place of well-being. If the spiritual variable is harmed then the mental and physical variables are in danger.

Application of Neuman Systems Model to Chronic Obstructive Pulmonary Disease Exacerbation

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Chronic Obstructive Pulmonary Disease (COPD) exacerbation is the third most common cause of hospitalization, emergency room visits, and outpatient visits in the United States. Uncontrolled COPD exacerbation results in economic and social burdens due to the cost of healthcare resources and the costs of disability missed work, premature mortality, and the need for caregivers. In addition to costs, COPD exacerbations negatively affect patients socially and emotionally. Currently, there is limited understanding between psychosocial components of health and COPD exacerbation. This presentation highlights the relationship that COPD exacerbation has with anxiety, depression, and loneliness using the Neuman Systems Model as a framework.

As depicted in the NSM, COPD patients have limited functional health due to impaired lung function. The degree of airway obstruction is represented by the ratio of Forced Expiratory Volume in one second (FEV1) to Forced Vital Capacity (FEV1/FVC). This study proposes that anticipatory fear (intra-personal stressor) of breathing attacks may trigger anxiety and depression (disturbed the internal environment). The external environment can affect the client with COPD when its interpersonal stressors become impacted by social withdrawal. A created environment is an interaction between the internal (anxiety and depression) and the external environments (loneliness). The major contribution of the created environment is to help a client maintain system integrity by modifying the reaction between internal and external environments with social support that can help to change the response to the stressors.

Currently, the understanding of the relationships among internal environment (anxiety and depression), external environment (loneliness) and created environment (influence COPD exacerbation) is still quite limited. It is anticipated that findings from this study will give healthcare providers a better understanding of these relationships.

Perceived Stress of African-American Family Caregivers of Stroke Survivors

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Stroke survivor caregivers often interact with loved ones who have severe physical and emotional deficits. According to Pierce, Finn, and Steiner (2004), increasing numbers of stroke survivors, the largest patient population living with long-term disabilities in the United States, are living at home. In this study, more than 50% of stroke survivors who were new stroke victims received care by family members in the home setting between the years 2006 and 2012. Stroke continues to be more common in the African American ethnic group than in any other ethnic or racial group in the United States (National Institute of Neurological Disorders and Stroke [NINDS], 2012). To understand the needs of this population, a quantitative study was conducted to examine African American family caregivers of stroke survivors and their caregiving experiences.

A sample of 38 African American participants ($N = 38$) from rural communities in the southeastern region of North Carolina participated in the study. The Neuman Systems Model (Neuman & Fawcett, 2002) was used to guide the study and an adapted version of Pearlin's Caregiving and Stress Process Tool was used to identify and measure stressful situations occurring in the family system. Data were analyzed using SPSS. The study (Smith-Johnson, 2012) revealed that there continues to be a lack of adequate assistance and support for African American family caregivers and overall families. Participants in the study responded that there was little to no assistance and support from professionals or family members and the "weight of caregiving fell on their shoulders". An implication and suggestion for nursing is to develop intervention family care plans to assist the African American family caregivers of stroke survivor with managing stressors that have the potential to create family instability.

Participant Outcomes:

- 1) Neuman Systems Model can be used as a valid and appropriate model to assess the African American caregiver's interacting variables-socio-cultural, physiological, psychological, development, and spiritual, to determine their responses to stressful situations when providing caregiving for relatives who have experienced a stroke.
- 2) There is a link between the family caregivers' characteristics and their role and experiences as family caregivers.