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ROY ADAPTATION MODEL

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Introduction

Theory-based nursing practice is dependent on the concept that the work of any discipline is directed by its knowledge base. The practice then is guided by the distinctive theories of that particular discipline. A nurse practitioner using process of theory-based nursing practice develops a practice proposition and a plan for schematic application of this nursing process in the relevant area of nursing. Now nursing research and practice are based on nursing theories and models such as Roy Adaptation Model (RAM) Roy & Andrews (1991) in the relevant area of nursing. RAM is a highly developed and widely used conceptual description of nursing. It is accepted by the nursing community, in nursing practice, education, and research. It is commonly used in different countries to guide studies that address adaptation.

Understanding Roy's theory is extremely significant for nurses because it helps them to promote a client's adjustment to challenges related to health and illness and enhances adaptation for individuals and groups in the four adaptive modes, thus contributing to health, quality of life, and dying with dignity. This paper intends to highlight the Roy Adaptation Model regarding major concepts, and application through analyzing a research article utilizing the concepts of RAM as a framework; A study done by [Ramini, Brown, & Buckner \(2008\)](#) entitled "Embracing Changes: Adaptation by Adolescents with

Cancer", that aimed to examine adaptive strategies of adolescents with cancer; through analyzing the adolescents' reported experiences of their adaptation to cancer. The researchers used the concepts of adaptation described in the Roy Adaptation Model as a framework for their study.

Adolescents with cancer are associated with high level of stress affecting their developmental growth ([Ramini, Brown, & Buckner, 2008](#)). Therefore, studying the physical and psychological adaptation of adolescent patients with cancer is significant for nurses; understanding the adaptive strategies used by adolescents with cancer may help nurses to design effective intervention to promote effective coping and improve the patient's quality of life.

Overview of the theory

Roy viewed a person as an open system .The system responds to environmental stimuli through the cognater and regulator coping mechanisms. The responses occur through one or more of four adaptive modes which are: (a) physiological mode, (b) self-concept mode, (c) role function mode, and (d) interdependence mode.

These responses can be identified as adaptive or maladaptive. Adaptive behaviors that need support and infective behaviors need to be analyzed to identify the associated stimuli. Those stimuli are: (1) Focal stimuli which is the major one, most

immediately confronting the person and needs direct attention, (2) Contextual stimuli includes all other stimuli present that are affecting the situation, (3) residual stimuli , those whose effect on the situation are unclear. The goal of nursing is to promote adaptation by managing the environmental stimuli.

Nursing management while caring for the patient will include: increasing, decreasing, maintaining, removing, or otherwise altering or changing relevant focal and/ or contextual stimuli to result in adaptive behaviors ([Tomy&Alligood, 2006](#)).

Literature review

[Henderson et al. \(2003\)](#) used the three environmental stimuli defined by RAM to guide their study. The focal stimulus in this study was the diagnosis of breast cancer; the contextual stimuli were demographic data such as age, marital status, educational level, income and length of time since diagnosis; the residual stimuli were unknown factors that may affect the coping strategies of the patients.

[Waweru, et al. \(2008\)](#) conceptualized the adaptation of children living with AIDS in the self-concept mode. They considered coping with AIDS as focal stimuli, the environment of care as the contextual stimulus, while the developmental level of the school aged children was the residual stimulus. [Waweru, et al. \(2008\)](#) has completely supported the RAM in which various stimuli are affecting the self-concept mode; this study indicated that RAM could be used cross culturally. Contrary to that, other researchers created questions based on the four adaptive modes of RAM to guide their interviews.

[Zeigler, et al. \(2004\)](#) reported the findings of a program evaluation project mentioned previously. This project was designed to identify the experience of both participants

in and facilitators of a community breast cancer support group. Similarly, a study by Ramini, et al. (2008) aimed to identify the experiences of adaptive strategies used by adolescents with cancer. The questions have been used to reflect the physiological mode in the study of Zeigler et al. was related to the most distressing physical problems. The self-concept mode includes questions associated with feelings about body and self. The role function mode includes questions about the activities done by the breast cancer support group and the satisfaction level indicated these activities. The questions reflected the interdependence mode was related to the quality and quantity of support received from the support group.

Roy adaptation Model in Ramini, Brown, & Buckner (2008) study

RAM was used in the study "Embracing Changes: Adaptation by Adolescents with Cancer" for its ability to describe a model of the adaptation process that integrates multiple adaptive modes of the individual. Accordingly, the following questions were asked to guide the study, (a) what experiences do adolescents with cancer report that reflect the four adaptive modes of the RAM?, (b) do reported experiences during adolescence provide evidence of positive adaptive responses?.

Adolescents with cancer face many challenges that may impact negatively on their psychological well-being; the adolescent children with cancer are confronted with their own unique challenges. They must deal with not only events specific to the diagnosis and adverse treatment effects of a life-threatening illness but also complex developmental changes and demands (Woodgate & Degner, 2003).

Researchers used a theory-based descriptive method conducted in a children's hematology/oncology clinic and the participants included adolescents and young adults who had experienced cancer as

adolescents. They designed open-ended interview questions which were based on the four adaptive models of the RAM: physiological, self-concept, role function, and interdependence. Questions were intended to be administered in 30 45 minute audio-taped interviews.

The sample used for this study was a convenience sample which met all criteria. Participants were female and male; English-speaking; adolescents and young adults who had cancer as adolescents had attended a specialty camp for children and adolescents with cancer; had not been hospitalized during the 6 months prior to the study, and were willing to be contacted by the student-investigator. Only four adolescents and young adults, 3 female and one male (ranging from 16 to 25 years old) completed the study, and gave written informed consent during the allotted time, which spanned a 6-month period.

Adolescents and young adults reported evidence of positive adaptation. Recognition of physiological effects and the inability of health care personnel to adequately intervene made adolescents and young adults more confident in their own experiences and interpretations of those experiences, affecting self-concept and role function modes. Adolescents and young adults reported creatively managing bodily changes and keeping positive attitudes of "embracing changes" rather than being stifled or intimidated by them. They were able to develop personal networks and draw needed support from the networks. Participants reported many opportunities to feel normal and to develop friendships with others who were adapting to cancer.

Theory usage

Roy's Adaptation Model was used as a theoretical framework, to examine the various modes of adaptation as perceived by adolescents with cancer. This direct application of Roy's model was successful and

appropriate for the research topic. Experiences were categorized for the four adaptive modes that are related to Roy's model: physiological, self-concept, role function, and interdependence. By using this concept researchers aim to describe a model of the adaptation process that integrates multiple adaptive modes of the individual. Furthermore, the authors used RAM to identify adaptive strategies of adolescents with cancer.

The RAM served as a template for the interview and therefore provided the structure for analysis of the qualitative responses of the adolescents. Each concept was used for a special purpose in this article; they used questions that measure the basics needs of adolescence such as what was a normal day like for you?, and how cancer affects their physical wellbeing?, the answers to these questions reflect the RAM as it is consistent with Roy's description for the physiological mode (behavior, physical process).

The researchers used questions that measure self-esteem such as, how cancer changed the way you feel about yourself; and, what had made you feel better about yourself during cancer treatment. The answers to these questions are an exact reflection of RAM, as it is consistent with Roy's definition for self-concept mode.

The researchers used questions to measure social integrity; they asked many questions such as (1) do you think people treat you differently because they knew you had cancer? If so, in what way?; (2)do you feel as though the cancer camp helped you in any way during your experience with cancer and its treatment, if yes, how?. The answers to these questions are an exact reflection of Roy's theory of the role function mode.

Finally they used questions about relationships and communication with others, interdependence mode, such as how has cancer affected the

relationships with people with whom you interact often (parents, siblings, grandparents healthcare workers, teachers) and what have you done to maintain a close relationship with your family. The answers to these questions are an exact reflection of Roy's theory of the interdependence mode which is all consistent with Roy's description.

In general, Ramini, Brown, & Buckner (2008) used a one level assessment approach in applying Roy's model. Adaptive responses in all four modes were examined. In the physiological mode the patient's ineffective adaptation i.e., uncontrolled nausea and vomiting, uncontrolled pain, and weaknesses and fatigue, were the first priority for nursing care to assess the adolescent's descriptions of physiological effects of cancer and its treatment and to listen to their patients in the evaluation of care. Also, they stressed on continuous assessment of cancer treatment effectiveness to alleviate the physiological changes and they should listen to the patient's perception. These physiological changes were congruent with the findings of Hicks and colleagues (2003) who studied the quality of life during childhood cancer treatment from the patient's perspective. Assessment of the self-concept mode revealed adaptation was increased confidence and maturation, appreciation of life. These finding also were congruent with the study findings by Hedstorm and colleagues (2003). The participants reported adaptive behaviors such as using camps reinforced their adaptation and promoted confidence, maturation, and strengthening of integrity and spirit. This is very important to nurses to take into consideration to involve adolescents in special programs and activities. Furthermore, there were ways to promote adaptation in the interdependence mode, including nurses should encourage families to be involved in patient's activities. Thus, all reported responses and the positive adaptation are evidence

of congruency with the adaptive modes.

Reflection

The authors used the conceptual model in a simple clear way, which reflected on their ability to conduct the research questions correctly. I see that RAM was the most appropriate adaptation model to be applied for "Embracing Changes: Adaptation by Adolescents with Cancer" because most aspects of the Roy model were implemented well in this research. Thus, I think that the researchers have used the Roy adaptation model in an appropriate and successful way.

On the other hand, researchers missed some concepts such as stimuli and its type (Focal Stimulus, Contextual stimuli, Residual stimuli); they didn't identify them in each mode; Adaptive problem, adaptation level; and system, regulator and cognator subsystem, innate & acquired coping mechanism. Despite, the usage of the theory not being comprehensive; it did not affect the research ability to test the needed aspects and well answered the research questions proposed in the study.

Opinion

It is a good experience for me to review and assess the Application of RAM. I Think, the researchers applied the four modes in a clear, simple, and appropriate way, and thus, Roy's model is an effective guide to examine adaptive strategies of adolescents with cancer.

Strength

Many strong points have been shown in this research article regarding the application of the RAM such as: The researchers used all concepts of the RAM in a clear, organized way that focused on the purpose of the study which was well stated "to use the RAM to examine adaptive strategies of adolescents with cancer". The researchers used open-ended interview questions, which were generated based on the four adaptive modes of RAM; the study

used concepts of RAM (adaptation, physiologic mode, self-concepts, role function and interdependence); these concepts were defined conceptually and operationally. The researchers clearly developed themes depending on the participant's answers which are shown clearly in Table 3 page 76 and organized according to RAM. Interpretation of findings is logical and consistent with the theoretical framework.

Weaknesses

There were some weaknesses in this study such as: small sample size (only 4 patients) and all from the Caucasian population. This will limit the generalizability of the findings and increase the risks of controlling threats to internal and external validity. Also, the researchers did not use some concepts of the Roy' Adaptation theory such as stimuli (focal, contextual, and residual stimuli); system, adaptation level; innate & acquired coping mechanism. In addition, other tenets of the RAM, such as cognator and regulator mechanisms and the effects of the nurse's role in facilitating adaptation were not highlighted. The characteristics of adolescents were not mentioned clearly in this study (One participant interviewed described illegal behaviors of underage driving and marijuana use during cancer treatment); some participants had the cancer when they were children, and the purpose of the study to identify the adolescents' adaptive coping mechanisms to consequences of cancer and its management.

Conclusion

This paper addressed and reviewed the application of the ROY adaptation theory. The RAM conceptual framework was used to guide and direct nurses in the oncology setting and it appears that concepts of RAM can be easily implemented to identify the adaptive strategies of cancer patients. This qualitative descriptive study aimed to examine adaptive strategies of adolescents with cancer through analyzing experiences reported

during their adaptation. After reading and in depth analyzing the process of this research it was concluded that the RAM might be used in adaptation programs to guide cancer patients. The RAM is an effective guide for nursing practice when caring for adolescents with cancer. This was a good application of Roy's conceptual framework to enhance wellbeing. It was really interesting to learn how to apply nursing theory in nursing practice.

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