

Roy Adaptation Model: Application of Theoretical Framework

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Abstract

Roy Adaptation Model has the five main concepts of nursing theory: the health, the person, the nurse, the adaptation and the environment. Roy views the person in a holistic way. The core concept in her model is adaptation. The concept of adaptation assumes that a person is an open system who responds to stimuli from both internal and external aspects of the person. This study will be guided by Roy Adaptation Model as a conceptual framework in order to (1) to investigate the relationship between environmental stimuli (focal, contextual, and Residual stimuli) and four adaptive modes of RAM which causes cancer related pain (2) and to note the effect of environmental stimuli on coping mechanism (3) to correlate research variable with theory concept, and to assist the researcher to predict the results and recommendations by answering the research question.

Key words: cancer pain, Roy Adaptation Model, barriers, barriers to cancer pain management, pain management, attitude, and beliefs.

Background

Breast Cancer is the most common malignancy in women and accounts for 22.9% of all female cancers worldwide (Ferlay, Shin, Bray, Forman, Mathers, Parkin, 2010). One in 8 women will be diagnosed with breast cancer in their lifetime (National Cancer Institute, 2010). In Jordan, breast cancer accounts for 18.8% of the total new cancer cases and is ranked first among cancer in females, accounting for 36.7% of all female cancers, and is the leading cause of cancer deaths among Jordanian women (Jordan National Cancer Registry, 2008). Approximately 925 breast cancer cases were registered among Jordanian women in 2011, according to official figures.

Recently, oncology researchers indicated that 44% of breast cancer patients experience pain (National Institutes of Health, 2002; Al Qadire, 2012; Potter, Wiseman, Dunn, et al. 2003). However, cancer pain is still inadequately treated among patients who are suffering from cancer disease (Ward, Donovan, Owen, et al. 2000). Generally, cancer pain may occur at any stage of the disease, and depends on the type of tumor, and location of metastases (Greenwald, Bonica, & Bergner, 1987). However, in breast cancer, pain is almost iatrogenic, due to many factors such as chemotherapy treatment, radiotherapy and postoperative complications (Marchettini, 2008). This specificity could be of some importance regarding barriers of breast cancer pain management.

Introduction

Uncontrolled cancer related pain is still a permanent, feared, and prevalent problem throughout the world (Bagciva, Tosun, Komurcu, Akbayrak, & Ozet, 2009). One in 8 women will be diagnosed with breast cancer in their lifetime (National Cancer Institute, 2010).

There are many factors contributing to ineffective pain management of cancer patients, including barriers within systems of care, health care professionals, and among patients and their family (Finley, Forgeron, & Arnaout, 2008).

The American Pain Society recommended patient involvement as a primary focus for improving the quality of cancer pain management (Gordon et al., 2005). Patients' beliefs about reporting pain and using analgesics have an important function in their pain levels (Vallerand, Templin, Hasenau, & Doucet, 2007) and the effectiveness of their pain

management (Bagciva, Tosun, Komurcu, Akbayrak, & Ozet, 2009; Gunnarsdottir, Donovan, Serlin, Voge, & Ward, 2002).

Many researchers reported that patients are reluctant to report their pain for reasons including fear of side effects, fatalism about the possibility of achieving pain control, fear of distracting physicians from treating cancer, tolerance, addiction and belief that pain is indicative of progressive disease (Potter, et al. 2003; Miaskowski & Dibble, 1995; Finley, Forgeron, & Arnaout, 2008). All of the factors mentioned previously represent worse factors affecting all dimensions of quality of life for patients and their families. (National Institutes of Health, 2002)

Many researchers have studied the barriers of pain management among cancer patients generally, but there has been little investigation of the barriers of pain management in breast cancer patients. In Jordan, breast cancer is the most common cancer afflicting women. According to statistics from Jordan, major obstacles to patients reporting pain and using available analgesics include misconceptions regarding beliefs about disease and pain, and pain medication (Dawson et al., 2002; Gunnarsdottir, Donovan, Serlin, Voge, & Ward, 2002; Jacobsen et al., 2012). However, little published research was found that discussed the pain barriers of Jordanian patients with breast cancer.

To enhance the quality of breast cancer pain management, it is very important to better understand the phenomenon of patient-related barriers to breast cancer pain management. For this reason, it is essential to explore the barriers from the patient's point of view. However, there have been knowledge gaps in the literature to date regarding barriers of breast cancer pain management. Thus, investigating the patient-related barriers to breast cancer pain management, will help to fill the gaps in knowledge related to patients' barriers and consequently will enhance the quality of breast cancer pain management. Thus, the aim of this study is to investigate the barriers that have impacted pain management of Jordanian breast cancer patients. The purpose of this study is to correlate barriers to effective pain management among breast cancer patients and RAM.

Conceptual Framework

The study will be guided by Roy Adaptation Model, 1991 (RAM). (RAM) is one of the most frequently used conceptual frameworks to guide nursing research, education and practice.

The contributions of this theoretical framework are that it will lead to a more systematic guide for researchers and an increased quality of nursing practice, as well as organized nursing knowledge through research and provides a more organized curriculum. The model provides a way of thinking about people and their environment that is useful in any setting. (Roy & Andrews, 1999)

Overview of RAM

Roy Adaptation Model has the five main concepts of nursing theory: the health, the person, the nurse, the adaptation and the environment. Roy views the person in a holistic way. The core concept in her model is adaptation. The concept of adaptation assumes that a person is an open system who responds to stimuli from both internal and external aspects of the person (Roy & Andrews, 1999). Environmental stimuli are categorized as focal, contextual, and residual stimuli. Focal stimuli represents an immediate and apparent cause of the problem (Roy & Andrews, 1999, p. 31); contextual stimuli are other causative factors whilst residual stimuli relate to the patient's past experiences with the illness and how these experiences may impact upon the patient's current condition. Regulator and cognator activities as a coping mechanism are manifested through a patient's illness. Regulator activities are physiological in nature whilst cognator activities may range from a physical attribute to a psychological or social attribute (Roy & Andrews, 1999, p. 32). The nurse's role while caring for a patient involves manipulating the stimuli that comes from the environment so that they fall within the client's field of positive coping resulting in adaptation. The adaptation is considered as the effective response to a stimulus, whereas a negative response is described as ineffective. Adaptation takes place in one physiological mode and three psychosocial modes. The psychosocial mode of adaptation includes self-concept; role function, and interdependence mode, four modes of adaptation are an interrelated relationship.

This study will be guided by Roy Adaptation Model as a conceptual framework in order to (1) to investigate the relationship between environmental stimuli (focal, contextual, and Residual stimuli) and four adaptive modes of RAM which causes cancer related pain (2) and to note the effect of environmental stimuli on coping mechanism (3) to correlate research variable with theory concept, and to assist the researcher to predict the results and recommendations by answering the research question.

Relationship between Research Variables and RAM Concepts

Three type of stimuli that affect the four adaptive modes by making barriers to effective pain management in breast cancer patients are as follows: suffering of patient from pain causes physiological effect such as absence of activity, decreased rest, and poor nutrition (physiological mode); mastectomy affects sensation of body image among women, and could cause social isolation (self concept-group identity mode); the cancer disease itself and when adding cancer pain, affects the role of patients in family, with friends, and society and causes poor communication with others (role function mode); and it affects the ability of patients to love, respect, value, and make close relationships with others (interdependence mode).

Focal (breast cancer); contextual (cancer pain); and Residual stimuli (fear of addiction and side effect,

fatalism, and belief) are considered factors that affect coping mechanism (regulator and cognator). According to RAM, the coping mechanism in this study will be the regulator subsystem that helps patients to overcome cancer pain in response to neural, chemical, and endocrine systems (Roy and Andrews, 1999), while cognator subsystem helps patients to overcome cancer pain through the four types of systems involved (cognitive emotion channels, perceptual and information processing, learning, judgment, and emotion (Roy & Andrews, 1999). For example, uncontrolled pain and poor management over some side effects of pain medication such as opioids could be the causes of constipation and the beliefs regarding that pain medication is harmful for the human body creates a wrong belief among patients and causes a negative impact on this mechanism in order to cause the patients to refuse treatment. This is considered a barrier to pain management (relationship between regulator mechanism and residual stimuli).

Learning, perceptual, informational process, and judgmental activity have a strong relationship between belief and judgment of patients and their family over cancer and cancer related pain (Relationship between cognator mechanism and residual focal stimuli).

At the empirical level, the relationship between demographic data sheet (DDS) and BQ have a significant relationship between the pain level in stage I and stage II of cancer disease; also the mentality of patients regarding cancer and cancer pain differ according to age, educational level, and treatment method between patients etc.. In this study, the final result (output) will be assessed according to the following: if the BQ score is more than 2.5 and associated with DDS variable this patient is considered to have a positive relationship and have barriers to effective pain management and needs a feedback process immediately to overcome this barrier to alleviate suffering by changing the perception of patients toward pain treatment or a need to change or modify the treatment plan. On the contrary, if the patients have BQ score less than 2.5 this tends to have a negative relationship between DDS and BQ, thus there are no barriers to effective pain management among patients.

Summary and Conclusions

Research studies in the oncology field of western countries revealed several barriers to effective pain management such as fear of addiction, fear of developing tolerance, fear of side effects, and fatalistic beliefs. Identifying barriers to effective pain management from the patient's perspective in breast cancer patients in Arab and Islamic culture is the focus of this study.

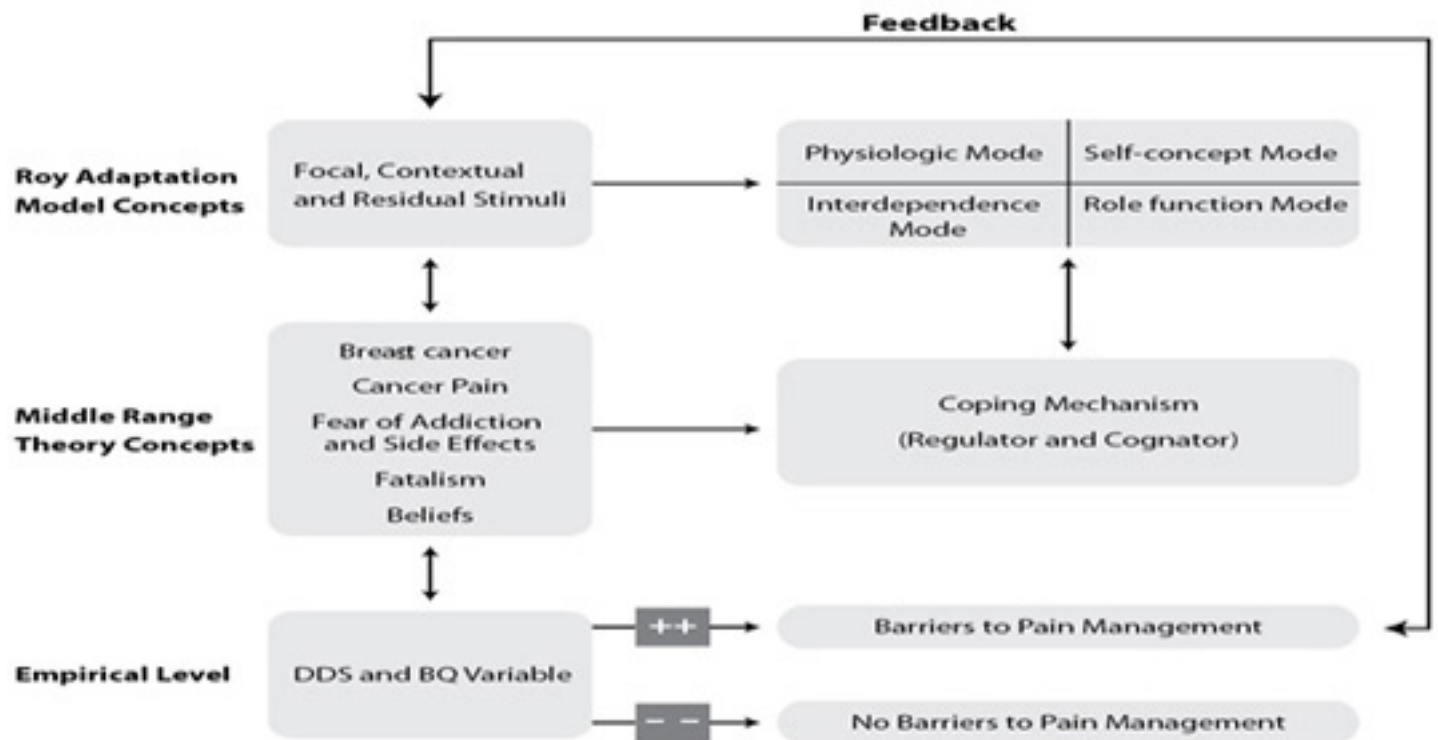
Cancer pain and its under-treatment is a major health issue. Multiple factors are associated with ineffective cancer pain management such as cultural factors, misperception about pain medication (fear of side effects, fear of addiction, and tolerance), patient's demographic characteristics and patient's beliefs such as fatalism, which increases the suffering and reduces quality of life for patient and their families.

Many barriers to effective cancer pain management have been reported in order to establish clear guidelines and an educational program to overcome these barriers, to relieve pain and suffering among cancer patients.

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Figure 1: The Conceptual Framework



<http://www.cancer.gov/cancertopics/factsheet/detection/probability-breast-cancer>

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