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Review Article

Disability Intervention Model for Older Adults with Arthritis: An Integration of Theory of Symptom Management and Disablement Process Model

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SUMMARY

To evolve a management plan for rheumatoid arthritis, it is necessary to understand the patient's symptom experience and disablement process. This paper aims to introduce and critique two models as a conceptual foundation from which to construct a new model for arthritis care. A Disability Intervention Model for Older Adults with Arthritis includes three interrelated concepts of symptom experience, symptom management strategies, and symptom outcomes that correspond to the Theory of Symptom Management. These main concepts influence or are influenced by contextual factors that are situated within the domains of person, environment, and health/illness. It accepts the bidirectional, complex, dynamic interactions among all components within the model representing the comprehensive aspects of the disablement process and its interventions in older adults with rheumatoid arthritis. In spite of some limitations such as confusion or complexity within the model, the Disability Intervention Model for Older Adults with Arthritis has strengths in that it encompasses the majority of the concepts of the two models, attempts to compensate for the limitations of the two models, and aims to understand the impact of rheumatoid arthritis on a patient's physical, cognitive, and emotional health status, socio-economic status, and well-being. Therefore, it can be utilized as a guiding theoretical framework for arthritis care and research to improve the functional status of older adults with rheumatoid arthritis.

Introduction

Rheumatoid arthritis (RA) is a systemic inflammatory autoimmune disease that is characterized by pain, joint stiffness/swelling, fatigue, and subsequent functional limitations and disability (Taibi & Bourguignon, 2003). The average age of persons with RA and the proportion of older adults with RA have increased over time due to longevity and disease chronicity (Helmick et al., 2008). This suggests that RA-related adverse effects on functional status, health care costs, morbidity/mortality, and psychological well-being may increase as well.

Because RA is a chronic, incurable disease, the ultimate goals for its management are to control pain, minimize joint damage, maintain function, and improve quality of life (Hootman & Helmick, 2006). The American College of Rheumatology guidelines (American College of Rheumatology Subcommittee on Rheumatoid Arthritis Guidelines, 2002) emphasize patient education (e.g., self-care, exercise, and lifestyle changes) with supportive care as one of the most important interventions for optimal management of RA in addition to conventional pharmacological therapies. To achieve these goals, a comprehensive understanding of a patient's symptom experience from his/her perspective, development of effective management strategies, and proper evaluation of subsequent outcomes is essential. In addition, identifying potential interactions among these factors and assessing contextual variables that may affect the symptom experience, interventions, and outcomes are indispensable.

The Theory of Symptom Management (TSM; Humphreys et al., 2008) has been utilized in many studies to understand a patient's symptom experience, management, and outcomes. It is a comprehensive model which includes a wide range of concepts and other contextual variables within three key dimensions of nursing science, person, environment, and health/illness. However, to our knowledge, no study has applied or tested the TSM with arthritis patients. The Disablement Process Model (DPM; Verbrugge & Jette,

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1994) addresses the influence of a disease, other contextual variables, and the relationships among them on functioning. The simplicity and practicality of the DPM make it easy to apply as a conceptual framework for many research studies in persons with various health conditions including arthritis, but also may limit its ability to fully capture a patient's disabling symptom experience and management.

A Disability Intervention Model for Older Adults with Arthritis (DIMOA) is essentially based on the three main concepts of the TSM, with an effort to incorporate key components of the DPM into the TSM. Because the TSM encompasses the key concepts of the DPM, the incorporation of constructs from the DPM into the TSM may provide a more comprehensive framework that can facilitate an understanding of the disablement process and symptom management, as well as guide arthritis care and research. Therefore, the purpose of this paper is to introduce and critique the two models as a conceptual foundation from which to construct the DIMOA.

Theory of symptom management

The TSM was first introduced by the symptom management faculty group at the University of California, San Francisco School of Nursing in 1994 (Larson et al., 1994). The concept labels and their interrelationships in the symptom management model were revised in 2001 (Dodd et al., 2001). The TSM was proposed in 2008 as a middle range theory for nursing (Humphreys et al., 2008). It comprises three essential components, namely symptom experience, symptom management strategies, and symptom outcomes. Dynamic relationships among these concepts are placed within a three-dimensional sphere of person, environment, and health/illness which are the main domains of nursing science.

Main concepts

Symptom experience is a dynamic interaction comprising an individual's perception, evaluation, and response to a symptom (Humphreys et al., 2008). When people notice unusual sensations (perception), they assess the characteristics of their symptom, including severity, location, duration, frequency, cause, curability, and its disabling effect (evaluation). People, then, try to relieve their symptoms by developing their own self-care strategies or seeking health care for more effective interventions (response).

Symptom management strategies aim to avert, delay, or minimize the symptom experience, and its negative outcomes (Humphreys et al., 2008). In order to achieve the goal of symptom management, the specifications of who, where, how much, when, as well as what the intervention strategy involves should be considered (Humphreys et al.).

Symptom outcomes following the implementation of symptom management strategies are measurable. If the strategies are effective, patients may have positive outcomes, including improvement in functional status, emotional status, self-care ability, costs, quality of life, morbidity, and mortality (Humphreys et al., 2008).

The three core concepts of the TSM are continuously interacting with each other, and the bidirectional arrows in the model show this dynamic relationship (Humphreys et al., 2008). The symptom experience may affect or be affected by management strategies and outcomes. As people recognize symptoms, they may implement several management strategies, and assess outcomes. According to the outcomes, their symptom perceptions will be affected, and their management strategies may change. As symptom experience and management strategies are adjusted or changed, their outcomes will be affected. This process may continue repeatedly until symptoms subside or are resolved.

The symptom management process may be interrupted, however, if there is a problem with adherence (Humphreys et al., 2008). If the prescribed strategy is not accepted or utilized at all, or is applied inconsistently, nonadherence may also become a challenging issue. A broken arrow is placed in the model between the management strategies and outcomes to acknowledge this concern.

Domains of person, environment, and health/illness

The three main concepts of the TSM are influenced by the surrounding domains of person, environment, and health/illness. Person variables include demographic, physiological, psychological, sociological, and developmental factors which are intrinsic to an individual (Dodd et al., 2001). The domain of environment is the collective milieu where a symptom occurs, including physical (e.g., home, work, or hospital), social (e.g., social network or interpersonal relationships), and cultural (e.g., beliefs, values, attitudes, or behaviors) aspects (Dodd et al.). The health/illness domain consists of health or illness status, risk factors, diseases or injuries, and disabilities that directly or indirectly affect an individual's symptom experience, management strategies, and outcomes (Dodd et al.). In summary, the contextual factors situated in the three domains of person, environment, and health/illness influence or are influenced by the three major components of the TSM by multidirectional interactions.

Applications of TSM in arthritis research

The TSM has been utilized in many symptom research studies with diverse populations, including people with asthma (Hardie, Janson, Gold, Carrieri-Kohlman, & Boushey, 2000) or HIV (Tsai, Hsiung, & Holzemer, 2002). To date, however, no study has applied or tested the TSM with arthritis patients. A few studies have explored the symptom experience of persons with arthritis, how they self-manage their symptoms, and the relationship between self-management and functional outcomes. Although the use of the TSM was not explicitly addressed, most of these studies indeed had ideas analogous with those of the TSM.

Radford et al. (2008) for example, interviewed patients with recently diagnosed RA (5–8 months) and patients with more than 5 years of disease duration about the medical care they received and the most helpful support they expected to receive. Four themes emerged, (a) information (symptoms, management strategies, and outcomes), (b) support (emotions, safe environment, and family), (c) choice (talking to other patients or health care providers), and (d) involvement (holistic care, partnership, and joint decisions). Information and support overlapped indicating patients' needs for talking and being listened to. Choice and involvement also overlapped implying proper timing and options for interventions (Radford et al.). The findings of this study suggest potential interventions (e.g., providing educational sessions regarding optimal RA management and helpful resources) that could benefit newly diagnosed RA patients. The issue of when and how to provide them should also be considered to enhance their efficacy.

Musil, Morris, Haug, Warner, and Whelan (2001) investigated the symptom experience of community-dwelling older adults with chronic health problems and whether different symptom patterns influenced management strategies and outcomes over time. The authors examined whether older adults with consistent arthritis or cardiopulmonary symptoms (occurring at all 4 time points in 27 months) reported more symptom management (physician contact, self-care, and use of illness labels) and worse well-being (depression and self-assessed health) than those with intermittent or