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Practice Guidelines for Self-Management of Osteoarthritis Pain in the Home-Based Settings

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Abstract

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MSN, Howard University, 2009

BSN, Bowie University, 2006

Project Proposal Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctorate of Nursing Practice

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Abstract

Osteoarthritis (OA) is a debilitating chronic illness that can prevent older adults from accomplishing their activities of daily living or ambulate without pain. The project's purpose was to develop and disseminate multidisciplinary educational practice guidelines to nurses for use in older homebound male Veteran's Administration OA patients to improve home-based pain management and self-care preventative strategies. Orem's theory of self-care management constituted the theoretical framework. The design was a quality improvement project and involved formation of 6 panels of interdisciplinary teams who reviewed the American Society of Anesthesiologist (ASA) and Osteoarthritis Research Society International (OARSI) guidelines. The ASA and OARSI guideline components were evaluated via a scoring sheet for pain control and self-management effectiveness for the OA patient. The panels assessed these treatment plans in terms of suitability, tolerance, and patient adherence for inclusion into the educational program. The panel members independently reviewed both sets of guidelines and then convened as a group to share their scores and reach a consensus on these guidelines, in the patient population served. Agreement of 85% among the panel members was needed for inclusion into the practice guideline. Based on the scoring results the panel concluded that the ASA and OARSI guidelines would likely improve pain control, functional ability, and psychological well-being essential to lifestyle modifications and OA symptoms management education program. The social impact of developing nursing practice guidelines for the self-management of OA pain in home-based settings will be manifested in better patient lifestyle and behavior modification leading to better symptom management.

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Dedication

This project is dedicated to my mother (Omolara M. Eniola), my husband (Charles Akintan), and my three loving children (Joyce, Jumoke, and Joshua Akintan). I value my family's unconditional love and perseverance during my course of studies. My family's encouragement and support have improved my ability to complete my doctorate. My mother's consistency and belief in quality education since youth has always reminded me of the worth of continuing my education. This doctorate project is also dedicated to my grandmother (Alhaja Falilat Abdul Azeez) for how well she raised me and believed in my success. The hard work and motivation inculcated to me have assisted me go a long way in life. Further, I believe that without the favor of Almighty God, I will not be where I am today.

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Section 1: Overview of the Evidence-Based Project

Practice Guidelines for Self-Management of Osteoarthritis Pain in Home-Based Settings

Osteoarthritis (OA) is reported as the most common form of musculoskeletal disorder and cause of pain and disability in the majority of Western developed countries (Ng, Heesch, & Brown, 2012). A degenerative musculoskeletal condition, OA can cause stiffness, pain, disability, and deformity. OA patients typically experiences pain that is exacerbated by weight-bearing activities. Therefore, effective management of OA focuses on alleviating joint pain and stiffness, promoting joint mobility, increasing muscle strength, reducing consequential damage to joints, and improving the health-related quality of life (Ng, Heesch, & Brown, 2012).

According to Reinhold, Witt, Jena, Brinhaus, and Willich (2008), OA is a common disease that ranks among the top five causes of disability. It is associated with exorbitant economic burden to the society. The number of OA cases is expected to double in the next 15 years, which in the absence of adequate treatment strategies will indirectly double the overall burden to the community. Substantial planning is needed to cope with the increasing rate of OA and its influence on the healthcare system (Ng, Heesch, & Brown, 2012).

Background

Arthritis has contributed to older adults' inability to accomplish their activities of daily living (ADLs) or to ambulate shorter distances. The failure of older adults to accomplish ADLs leads to a loss of independence and to increased dependence on others for care. Since arthritis is an insidious disease, it correlates strongly with developing of a

late-life disability out of mid-life arthritis. Osteoarthritis in the elderly contributes to disability and the progressive debilitation; therefore, its prevalence may have an effect if appropriate interventions are not made (Covinsky, Lindquist, Dunlop, Gill, & Yellin, 2008).

According to Hootman, Bolen, Helmick, and Laugmaid (2006), an estimated 67 million adults in the U.S. population are expected to be affected by it. However, its impact varies. Illiteracy, overweight and obesity, sedentary lifestyles and being a woman all contribute to the development of arthritis. Arthritis is the leading cause of debility among older adults in the United States. Despite the personal strain and threat to the quality of life from chronic pain, older adults fail to report their pain to healthcare providers for fear of hospitalization, invasive tests, loss of autonomy, and poly-pharmacy (Peterson, 2010).

Problem Statement

Boutaugh (2003) stated that, arthritis is a significant public health concern for older adults. In the United States, musculoskeletal conditions and arthritis are the leading causes of debility among this group, leading to more than 7 million seniors to report having their activities restricted. Limited physical activity is significantly higher among people with arthritis, compared to other groups. Moreover, persistent inactivity among arthritis patients has led to increased debility in older adults. Roberto and Reynolds (2002) reported that chronic diseases significantly lower older adults' quality of life. Older adults have also frequently reported hesitating to discuss pain, primarily because their generation is accustomed to accepting unpleasant situations. Moreover, older adults

who report pain tend to minimize its intensity to please their physicians or to distract them from receiving appropriate treatment. The experience of pain, however, is subjective in nature because individuals perceive pain differently. While treatment for arthritis can vary, modalities can be inaccessible even when individuals undergo similar objective measures of health. Self-care is one of the most common strategies used to treat chronic OA pain. Older adults habitually use their personal regimen to self-manage the physical aspect of pain is to accommodate daily living activities. Therefore, older adults use self-care to increase their autonomy and self-reliance (Roberto & Reynolds, 2002).

According to Dunn and Horgas (2004), older adults who experience chronic pain use coping strategies such as hoping and praying, relaxation, ignoring, exercise, diversion, and avoiding causing pain. Poor psychological, physical, social, emotional, and spiritual well-being can result when older adults manage their pain badly or fail to treat it. Moreover, older adults who suffer from pain have a lesser chance of participating in social activities and lack self-care ability. As a result, higher level of negative affect occurred such as depression compared to older adults without pain (Dunn & Horgan, 2004).

Effective management of OA requires the use of self-management, including an educational program that conveys knowledge and skills to better manage the disorder. The well-known Arthritis Self-Management program (ASMP) focuses on pain management, communication with the provider about disease information, and healthy behavioral practice. A significant feature of ASMP is that it can be used to bring together

different people with a similar condition to promote a sense of self-efficacy (Osborne, Buchbinder, & Ackerm, 2006).

Purpose of the Project

The project's purpose was to develop, and disseminate multidisciplinary educational practice guidelines to nurses for use in older homebound male Veteran's Administration OA patients to improve home-based pain management and self-care preventative strategies.

Goals

This project goals were to (a) assemble an interdisciplinary healthcare team to review the literature with an emphasis on encouraging older adults in home-based settings to self-manage their pain; and to (b) develop self-care management educational practice guidelines for nurses who cared for OA patient, guidelines that the patient could be use in home-based settings.

Objectives

This proposed project will evaluate treatment-related changes and document pain systematically and consistently. This project aimed to guide nurses to (a) increase their understanding of osteoarthritis pain as a chronic disease, and (b) increase the involvement of patient and family/caregivers during the educational process by giving them written material about self-managing OA pain.

Conceptual Model

The conceptual model that was used to address this project's problem was Orem's self-care deficit theory. Orem proposed that individuals learn and practice ongoing self-

care to protect their physical, mental, developmental functioning, and human integrity to preserve their health and well-being. *Self-care* means that individuals do things that are common in conventional healthcare to reinforce good health. The underlying concepts behind Orem's theory of self-care are classified into two major concepts; self-care and their actions systems. Action systems constitute the therapeutic self-care demand (TSCD), which is needed to meet TSCD. The maintenance of homeostasis between rest and activity is hindered by actions and condition related to meeting other self-care obligations that may affect healthcare conditions. Moreover, self-care is the principle of balance between exercise and rest sufficient to restore and sustain activity necessary to living life (Allison, 2007).

Orem defines *self-care* as behavior acquired by learning confidence early in life. Individuals are thought to acquire self-care behavior during childhood when social norms and values are learned and transferred from one generation to another. Orem suggested that self-care is established while living life, and the type of behavior exhibited varied based on the group affiliation and social practice (Becker, Gates, & Newsom, 2004). Orem's theory of self-care management serves as a medium where body functioning is regulated, which in turn leads to confidence to manage one's own health. For example, learning to relax as one-self-care strategy can be used to relieve pain-related stress, which emphasizes Orem's SC fundamentals. Among these fundamentals are encouraging regular comfort, prevention of vulnerabilities that lead to incessant pain, and returning to a feeling of normalcy after possible-negative side-effects of medical care measures (Roykulcharoen, 2004).

Orem's model proposed that improving a patient's functional abilities result in successful healthcare outcomes. *Self-care* is a set of practices individuals engaged in to maximize well-being and health in their lives (Dodd & Miaskowski, 2000). SC involves engaging in strategies regularly in both illness and good health such as daily tooth-brushing and, selecting nutritious food. Patient's actively managing disease-are also doing self-care. Therefore, Orem assumes everyone is willing to care of him or herself. However, when there are more self-care needs than abilities, a nursing intervention is desirable (Jaarsma, Riegel, & Stromberg, 2012).

The concept behind Orem's self-care deficit theory has three major concepts: (1) self-care agency (SCA); (2) basic conditioning factors (BCF); and (3) the therapeutic self-care demand (TSCD). *SCA* is an individual capacity to care of him or herself. *BCF* is the contextual evidence of health status. *TSCD* is the cumulative of all actions they need care for themselves. For example, an individual who performs self-care can take care of selves. SCA is based on learned information needed to write, read, perform verbal skills, count, reason, and continuous skills. Nevertheless, Orem's theory suggested a limitation in one's ability to read and understand educational materials interferes with one's judgment or decision making about self-care measures. Therefore, a deficient in one's ability to perform a task necessary for daily living and functioning results in a self-care deficit (Wilson, Mood, Risk, & Kershaw, 2003).

SCA consists of three conceptual abilities: (a) power components; (b) self-care operations; and (c) foundational capabilities. The power components or the self-care efficacy entails one's judgment of ability to perform self-care behaviors. The self-care

capacity to be productive enables concrete ability to perform self-care. Foundational abilities or the transitional experience of self-care is the judgment of one's information that is dependable on the conceptual framework of self-care behaviors. These self-care behaviors are learned and can also be utilized during the performance of particular behaviors that will result in health promotion (Callaghan, 2005).

Wilson et al. (2003) stated that Orem uses the term BCF to imply different characteristics of individuals and their environment. BCF addressed the internal and external factors that affect individual ability to care for self. For example, age, sociocultural orientation, gender, communication modalities family systems, health situation, and socioeconomic status are all elements of BCF. Besides, one's age will affect the information needed for self-care (Wilson et al., 2003).

The summation of all activities expected to be performed to meet the self-care requirement is known as TSCD. TSCD can be achieved by integrating patient educational material. To formulate TSCD, analysis of self-care elements is needed to meet those needs. A comprehensive patient assessment is also required to judge a patients' self-care ability to read, write, reason, and his verbal skills including the BCF component (age, gender, income, socioeconomic status, and health situation). Therefore, BCF influence both SCA and TSCD self-care concepts (Wilson et al., 2003).

Moreover, Orem's model emphasizes the domain of nursing practice. Orem suggested that individuals have knowledge of what to do to take care of themselves. Thus, a self-care deficit occurs when self-care demand surpasses self-care agency. Therefore, whenever there is a deficit in a person's self-care ability, nursing care is

available (Burns & Grove, 2009). In order to achieve the goal of this project, assisting a patient to meet the activity and rest is essential. Nurse's knowledge of the attributes related to balance and deviation from health is required. Moreover, nurse's identification of health condition that can affect the ADLs and rest pattern, and what activity and rest mean to each patient was addressed in the development of this practice guideline.

Nature of the Project: Educational Guidelines

Following these six steps, the purpose of the project was to develop and disseminate multidisciplinary practice guidelines to improve home-base pain management and self-care preventative strategies for OA patients.

1. Assemble an interdisciplinary project team.
2. Review the national guidelines including treatment plans.
3. Develop an educational program.
4. Validate the program with external expert.
5. Develop an evaluation plan in collaboration with the interdisciplinary team.
6. Determine the outcomes measures for the pain management monitoring process.

Assemble an Interdisciplinary Project Team

American Society of Anesthesiologists (2010) stated that, an interdisciplinary team approach to pain management is an effective way to alleviate the intensity of pain. Since the patient's health status and degree of pain changes over time, it is necessary to re-evaluate and alter treatment plans. Initiation of a long-term approach, including periodic follow-up with the interdisciplinary team, should be included in the treatment plans. The interdisciplinary nature of the team will improves the patient's ability to

function by reducing physical pain and alleviating psychological suffering since team members have the ability to consult one another (ASA, 2010). An approach that focuses on different levels of the problem such as social, political, and economic involves the patient in the change process. Using multiply translations will enable understanding by different groups. Planning health promotion activities around the time of events, such as community gatherings, recreational activities, family-centered events, and community celebrations will reach many patients. Identification of positive role models in each target group will assist in the delivery of information, which will reflect on behavior. Finally, the program will be a success if the information is clear and concise (Hodges & Videto, 2011, p.181).

Review of the National Guidelines, including Treatment Plans

Two national guidelines of two organizations, including treatment plans were reviewed from (OARSI) and (ASA). The OARSI guidelines recommend that access to information and education should be given to patients with hip and knee OA. OARSI also emphasizes lifestyle modifications, pacing of activities, exercise, weight control, and other measures that would relieve damaged joints. Those guidelines recognized the effect of self-care and patient-focused modalities compared to over treatment provided by healthcare professionals. Adherence to non-pharmacological therapy should be taught to patients with OA because self-management strategies of knee and hip OA provide patients with the opportunity to effectively manage pain and decrease disability (Hawkeswood & Reebye, 2010).

The ASA guidelines focused on educating OA patients on skills development and different treatment modalities needed to manage chronic pain. Healthcare systems acknowledged the significant of the ASA guidelines because it is known to improve the psychological and quality of life. ASA guidelines were created as a pain management guide for anesthesiologists and other pain specialists (ASA, 2010).

Develop an Educational Program

In Brady (2012) study, population-based approaches recommended by the guidelines of the Centers for Disease Control and Prevention (CDC) support self-management by OA patients. The guidelines will encourage increased physical activity and creating urban planning and design that accessible to people with OA, such as placing signs at the bottoms of escalators to encourage people to opt for stairs. The CDC guidelines also encourage dietary changes to promote access to healthy foods in schools and workplaces (Brady, 2012). Development of an educational program will guide nurses who care for home-based patients to use fewer of nonsteroidal anti-inflammatory drugs (NSAIDs), recognize the presence of pain in patients, and to use various self-care methods to manage pain. The use of fewer drugs in older adults is to prevent the risk of gastrointestinal problems related to the long-term use of NSAIDS. The practice guidelines will also change a patient's health behaviors and perception of osteoarthritis-related symptoms. For example, regular exercise helps patients maintain muscle strength and mobility. Patients can also be referred to community social activities, self-help programs, support groups, and mobile services for meals and transportation (AHRQ, 2002). During the development of the practice guidelines for the program, the six

healthcare providers reviewed the current guidelines for OA pain in the knees and hips from the American Society of Anesthesiologists, which focused on educating OA patients on skill development and different treatments needed to manage chronic pain, and the Osteoarthritis Research Society International, which recommended that patients with hip and knee OA should be given access to information and education. These two guidelines was used a model to develop practice guideline for the home-based primary care program.

Validate of the Program with External Experts

The practice guidelines will be validated by consulting the Arthritis Foundation, and will be based on medical practice protocol. The Arthritis Foundation experts will review the draft educational practice guidelines, which will include feedback on the usefulness of the program, its validity and impact on pain management. Further, the external expert will be asked to provide feedback on the practice guideline regarding: (a) whether the guidelines reflect an accurate representation of the peer-reviewed literature; and (b) usefulness of the proposed practice guidelines (Cibulka et al., 2009).

Develop an Evaluation Plan in Collaboration with the Interdisciplinary Team

Helping older adults to effectively manage pain should include a comprehensive pain assessment in order to successfully address pain. This should focus on the pain's causes, characteristics, the latest available modalities for treating it, and its impact on patient's mood, his or her performance of ADLs, and quality of life (Miaskowski, 2010).

Ensuring the effectiveness of strategies must include goals of reaching each audience and full knowledge of the planning process. Awareness among consumers must

include severity and accessible strategies through advertisement and partner outreach efforts. In order to facilitate providers in strategic plans, ongoing education on the efficiency of evidence-based interventions will enable a clinician in the healthcare system to refer and support the planning process. Further, showing interest in system change and community-level policy efforts that promote physical activity, nutrition, and injury prevention can facilitate involvement in the planning process (Giles & Klippel, 2010). Determine the outcomes measures for the pain management monitoring process

Implementation of ongoing pain management quality improvement will be done to ensure home care nurses and OA patients have adequate knowledge of the self-management program, to help home care nurses motivate change, and to compare interventions before and after the development process. Automated telephone triage systems will be used to enable patients to call in for help when dealing with unrelieved pain or adverse effects from medication or self-management programs (Gordon et al., 2005).

Definition of Terms

The following terms were used throughout the project and thus need to be defined.

Older adults are defined as those of a chronological age of 65 years or older. Based on United States standards, older adults are eligible for programs, and this is the age that marks retirement (Hurria & Kris, 2009).

Osteoarthritis is a degenerative musculoskeletal condition that can result in pain, debility, stiffness, and deformity (Ng, Heesch, & Brown, 2012). According to the ASA

(2010), chronic pain is defined as pain not directly related or associated with neoplastic involvement.

Multidisciplinary team is a representation of a multimodal approach that includes more than one discipline (ASA, 2010).

Chronic pain is mostly related to medical conditions that extend beyond the expected temporal boundary of tissue healing, and that impacts normal functioning or well-being of an individual (Warsi et al., 2004). In the 20th century, the experience of pain is widely believed to be a sign of tissue damage that has to be addressed in order to adequately deal with the pain. Moreover, scientific believed of pain was framed around the "Descartes specificity theory." Descartes specificity theory suggested that pain occur as a result of nerve impulses that produced an injury that is sent to the pain center in the brain. The amount of pain experienced was directly related to the magnitude of the bodily injury. In the second-half of the 20th century, Melzack and Wall formulated the new model of pain currently known as the gate control theory. The Gate Control theory accentuated that the predominant neuroplasticity is the modulation of nociceptive inputs at the spinal dorsal horn. The neurophysiological state is now known as a major contributor to the medical mysterious chronic pain phenomenon (Wales, Matthews, & Donelly, 2010).

Self-management enables patients to educate themselves in preventatives and therapeutic health care projects, and thereby take care of themselves to improve health-behavior (Warsi et al., 2004).

The Osteoarthritis Research International (OARSI) is an appointment of international experts of the multidisciplinary committee to create current evidence-based and applicable recommendations in the form of guidelines for managing OA of the knee and hip including the systematic review of research evidence. The committee was first appointed in 2005. OARSI guidelines are to provide specific, patient-focused, current evidence-based expert unanimity recommendations for managing OA of the knee and hip that is internationally significant (Zhang et al., 2008).

The American Society of Anesthesiologists (ASA) guideline is a knowledge base range of interventions that are significant to effective management of chronic pain and pain-related problems. The purpose of ASA guidelines is to enhance pain management by recognizing that a pain-free state may not be attainable. ASA also focuses on promotion of functional, psychological and physical well-being of patients by enhancing the quality of life and minimizing adverse outcomes of untreated OA pain (ASA, 2010).

Assumptions

As stated by May (2010), majority of patients might have a positive attitude towards self-management strategies, but many have identified an issue with its application. For example, many patients did not adhere with the self-management philosophy and have misunderstanding about the proper management of OA pain. In addition, clinicians might not always provide and facilitate pertinent information that can promote self-management activity. Therefore, lack of correspondence in perception of self-management activity between clinicians and patients will result in underestimating patients' willingness for advice (May, 2010). Assumptions identified were those related

to the older adults with cognitive impairment who also suffer from pain even though they were unable to express themselves. In addition, both healthcare providers and patients have personal beliefs about pain management that needs to be addressed before achieving pain relief goals. Therefore, self-report is the gold standard for evaluating OA pain (Horgas, Yoon, & Grall, 2012).

Scope and Delimitations

A significant aspect OA pain should be redesign to include the quality of care that is safe and patient-centered. The historical approach to OA pain management through passive dissemination of information to patients by social networking require an immediately consideration. Thus, the need of OA patients were not met due to the amount of information disseminated through social networking (Hunter, Neogi, & Hochberg, 2011). Implementation of health behaviors is essential to reducing OA symptoms and can also promote self-management interventions. Also, using coping strategies such as leisure activities to conserve energy can also help reduce fatigue and pain associated with OA (Nour, Laforest, Gauvin, & Gignac, 2006).

Limitations

Lack of awareness on pain management and treatment among clinicians remains a significant barrier to effective pain management. For example, clinicians are often unsure of the characteristics of chronic pain. Moreover, appropriate use of pain medications in older adults is another barrier to effective management of chronic pain (Jones et al., 2004). Insufficient interdisciplinary team time, inability to meet the needs of patients, poor adherence to lifestyle modification, and low- comfort level with nutritional and

exercise program also present barriers to using of self-management strategies for OA pain (Litman, 2008). Further, misuse of techniques due to inadequate monitoring and accountability can negatively affect the outcomes of self-management programs (Hadjistavropoulos, 2012).

Significance of OA Management to Practice

A self-management educational program has been shown to improve patient disease control. In the area of self-efficacy, this has been perceived to be higher in patients due to increasing in their functional ability and activity. It has also shown that, self-management programs organized by clinicians tend to impact health behavior and improve health status. Thereby, teaching patients to problem solve, set goal, and identify a plan of actions for themselves (May, 2010). As stated by Brand and Cox (2006), coordinating both pharmacological and non-pharmacological treatment plans implemented by the multidisciplinary team within diverse healthcare settings is an effective guideline in OA pain management. Nevertheless, a gap in OA management knowledge has been reported. Clinical practice guidelines (CPS) have been performed to guide translating of evidence into practice.

Evidence-based Significance of Self-Management of OA Pain

According to Hawkeswood and Reebye (2010), educating OA patients in disease manifestation and treatment modalities is essential to manage their symptoms and modifying their lifestyles. OA patient with low-energy diets that is intended to boost their energy level report relief in joint pain, stiffness, and functional ability after 8 weeks of treatment. Furthermore, comprehensive assessment of OA patients with medical and

functional issues is required when choosing therapy. Physiotherapists are often needed to help manage hip and knee OA because patient get more active after completing treatment. Manek and Lane (2000) reported that, self-help arthritis treatment courses conducted by healthcare professionals that show patients how to manage their OA pain have been shown to improve the quality of life. Moreover, ongoing patient contact is important in managing OA because of cost-effectiveness and clinical success.

Summary

The current healthcare initiatives acknowledge the significances of self-management strategies, which support the goal of this project. The development of practice guidelines of self-management of OA pain will improve nursing practice. In addition, this practice guideline development will promote patient and financial outcomes of the organization. The impact of this project on patients, providers, and society will prevent a relapses of disease, which is one of the current deliveries of care model.

The assumptions and limitations of this project have been carefully considered during development process to ensure have a successful implementation in the practice setting. The following section will provide discussion on the review of scholarly literature that was conducted to support the development of this practice guideline.

Section 2: Review of Scholarly Evidence

Introduction

The project's purpose was to develop, and disseminate multidisciplinary educational practice guidelines to nurses for use in older homebound male Veteran's Administration OA patients to improve home-based pain management and self-care preventative strategies. Older adults who suffer from OA experience a cycle of inactivity, depression, pain, and social separation (Boutaugh, 2003). Arthur et al.'s (2009) study used the Readiness to Manage Arthritis Questionnaire (RMAQ) to measure the current level of arthritis management. Patients are allowed to choose their level of readiness before implementing new behavior to manage their arthritis. The study's findings support the clinical observation of varying readiness levels among individuals with arthritis in adopting self-management behavior (Arthur et al., 2009).

Literature Search Strategy

The literature review used the following databases: CINAHL, MEDLINE, and the Cochrane Library. The search terms included *older adult, arthritis, osteoarthritis, quality of life, disease management, self-care, self-management, self-efficacy, and functional disability*. The results, which were limited to full-text and the period 2000-2012, yielded 76 articles. Inclusion criteria of older adults as a target population with self-care management of arthritis pain resulted in high yield, but 8 articles were relevant and selected for this review.

Framework/Evidence-Based Practice Approach

The Plan, Do, Study, Act (PDSA) method are a practical approach to pain management. It entails an assessment of goals and educational needs. Using a small-scale pilot test will test the program before introducing it on a larger scale in an organization. Such an interdisciplinary educational approach to pain management will also improve policy development. Education is required to efficient evaluate and manage of gaps in knowledge. Timely and continuous feedback and audit will also help in the development of policy for chronic pain management. Frequent assessment of providers' documentation of pain management and comparing it with organization benchmarks will help in the establishment of improved awareness and accountability of chronic pain in older adults. Further, establishment of such a champion to reduce or eliminate pain self-sufficiently will improve policy development. Having a committed and knowledgeable staff to lead quality improvement strategies will promote pain management (VNSNY Center for Home Care Policy & Research, 2009).

Background and Context

Self-management of OA pain has received significant attention in the health-care reform arena. Self-management is one of the elements of Wagner's chronic care and patient-centered medical home model. One of the four goals of the United State Department of Health and Human Services' framework for addressing multiple chronic illnesses is self-care management. Implementation of self-management strategy is essential in OA management (Brady, 2012). The American College of Rheumatology (ACR) identified strategies such as physical activity, weight management, and self-

management education (SME) as significant to OA pain management. Furthermore, the National Public Health Agenda for Osteoarthritis also known as the OA agenda has declared public health readiness for this illness (Brady, 2012).

Personal interest in home-based patients is interested in self-management of OA pain because it is an interactive educational program that can be used to build goals, decision making, self-monitoring, and problem solving. For instance, self-management programs can be provided by trained caregivers and health-care professionals. The interactive nature of self-management education (SME) can be used to assists clinician development of new competencies (Brady, 2012). Assuming the role of an educator of self-management of OA pain has greatly impacted both the healthcare professionals and caregivers of home-bound patients. Conducting and education session on the importance of self-management strategies for managing OA pain has been a rewarding role. Teaching caregivers of home-bound patients the subjective nature of pain, and patient functional level in regard to OA pain was remarkable. Further, the initial driving force behind self-management of OA was the opportunity given by the practicum setting to interact with both the caregivers and healthcare professionals of home-bound patient experiencing OA pain.

Specific Literature

In order to review the literatures on self-management of OA pain, the specific literature will help to look at the theme or to narrow the literature. According to the literature, there are noticeable discrepancies in the prevalence of chronic pain all over the world. In Hardt, Jacobsen, Goldberg, Nickel, & Buchwald (2008) study, the World

Health Organization (WHO) reported an estimated 5% - 41% ranges of chronic pain among women and 4% - 29% for men. Different methods of assessing pain and mode of data collection also impacted the outcomes of pain management in different countries. For instance, compared to telephone surveys, the results from mailed questionnaires showed a higher response. In the United States, the rate of self-reported pain varies by ethnicity and race; different studies have reported a higher rate of pain among African Americans compared to non-Hispanic Whites (Hardt et al., 2008).

A descriptive population-based review of an epidemiology study was conducted by Helmick and Murphy (2012) to ascertain the rate of OA in adults. The study identified that the symptoms of OA can result in debility. An estimated 921,000 hospitalizations resulted from OA. Osteoarthritis is the fourth highest primary diagnosis related to hospital discharge, though most OA hospitalizations are related to knee and hip replacement procedures. It is predictable that the number of hospital visits stemming from OA will grow as the rates of hip and knee replacement among U.S. adults rises. The study also reported that patients with OA incurred medical costs as a result of joint replacements and co-morbidities. The ability to work with OA was limited among one in three adults, aged 18-64 years, who suffered from OA. Moreover, higher mortality rates were also observed among U.S adults with knee OA, and indicated that women with knee OA were 50% more likely to die when compared to women of the same age without OA. The incidence of premature death from gastrointestinal and cardiovascular diseases can be attributed to arthritis-related medications. Regardless of OA's effect on the U.S

population, health care providers and patients continue to under-recognize the illness (Helmick & Murphy, 2012).

Evidence of positive results related to self-care management of pain in older adults was indicated in Reid et al. (2008) study. This positive result was evidenced by a 23% reduction in the median pain intensity scores across the studies. In addition, the median decrease in disability score among the participants was also 19%. The study results show self-care works because interventions are more efficient among older adults living with chronic pain. It also proved to be ideal for alleviating pain among older adults living in an inbound community. The study also proved that the cost of administering self-care can be low. The frequent use of self-care techniques is not related to adverse side effects. Therefore, routine use by older adults of self-care strategies to manage pain will prompt them to use self-management to cope with other chronic illnesses associated with aging (Reid et al., 2008).

General Literature

The general literature review will assist in transitioning from a specific view of self-management of OA pain to a broader review. Studies have found that older adults' decreased ability to carry out ADLs will lead to an inability to live independently. Moreover, middle-aged adults who suffer from arthritis will likely have difficulty in performing ADLS over 10 years of follow-up. The study concluded that middle-aged adults with arthritis symptoms are at higher risk of developing disabilities common in later life at an earlier age, including loss of independence. Geriatric syndromes, a treacherous debility that occurs as a result of various impairments from arthritis weakens

an elderly person's response to the stressor. Since arthritis is frequent among elderly people, a minor showing of disability progression may greatly impact public health (Covinsky et al., 2008).

In a Vivienne, Kao, Wu, Tsai, and Chang (2011) study, several beliefs are related to increased debility such as that one can control the effect of pain, that pain is damaging and permanent, belief that one can control pain and that pain can reduce impact involvement in daily activities. However, pain does induce people to avoid activity for fear of increasing it (Vivienne et al., 2011). According to Bitton (2009), data collected from managed care organizations for over a year estimated the direct costs of OA as a combination of ambulatory care, hospital care, and medication use. The majority of hospitalization costs were related to knee and hip replacements in OA patients. Although the cost of treating rheumatoid arthritis is five times greater than OA, the higher prevalence of OA made its cost seven times higher than the cost of treating rheumatoid arthritis.

Ginckel and Witvrouw (2013) conducted a case-control study of 18 participants that include (12 men and 6 women) recruited from the Department of Physical Medicine and Orthopedic Surgery at Ghent University Hospital. The study examined tibiofemoral cartilage deformation and recovery after a 30-repetition squatting exercise in OA members. There was no significant difference observed in both groups immediately after exercise program despite propensity toward more deformity in participants with OA. Moreover, result from the study also revealed that a slower recovery tends to occur in

members with OA due to 15 minutes recovery of cartilage plates to baselines volumes (Ginckel & Witvrouw, 2013).

Literature Review of the Method

Ross, Caswell, Hing, Hollington, and Dalziel (2001) reported that seniors were creative regarding their decision-making about pain, using different methods alone or in combination to self-manage pain. Participants reported that disregarding pain symptoms pain is part of their decision making. Intervention that included exercise and the application of heat and cold is the self-care practices used most widely by older adults at home. Nevertheless, it is important to use medication for managing pain, which is recognized but not perceived as the last resort by managing pain by the participants. Although seniors account for 28-40% of all prescription drug users, they are hesitant to medication. Older adults' perceived activities like involvement with others, expressing their common illness and sharing their pain experience with others are common of coping strategies to manage pain (Ross et al., 2001).

According to Kemp, Ersek, and Turner (2005), the most common self-care strategies used by the participants are prayer, nonsteroidal anti-inflammatory drugs, heat and cold applications, and physical exercise. Moreover, older adults relied mostly on medications to manage their chronic pain. For example, 80% of the participants reported use of at least one analgesic or adjuvant medication; whereby 36% reported using two or more strategies in the past. The study indicated that the use of analgesic therapy can be a useful strategy among older adults. Fewer differences in coping strategies were found between men and women with osteoarthritis pain, even though women relied on more

problem-focused strategies than men. More women reported using hot and cold applications than men. Regarding the use of prayer, there was no significant difference found between men and women (Kemp et al., 2005).

Summary and Conclusions

Developing practice guidelines served as a way of assisting practitioners and patients in making health care decisions that are supported by current technology, medical knowledge and best practices. In order word, development of practice guidelines helped to create and examine current practice by showing clinical feasibility of data (ASA, 2010). In order to reach the goal of OA management, it is essential to improve understanding by changing the behavior and attitudes of consumers, policy makers, community organizations, healthcare providers, and business community. Ensuring the effectiveness of strategies must include goals of reaching each audience and full knowledge of the planning and implementation processes (Giles & Klippel, 2010).

As stated by McKenzie and Torkington (2010), OA management plan should be individualized based on patient's preferences and circumstances. For example, development of multidisciplinary collaboration enables patient's to access available OA treatments provided by healthcare providers. Further, nurses and allied health professionals can be of assistance in developing a care plan. Patient assessment, documentation, patient education, and facilitation of communication between health care providers can also be done by the nurses (McKenzie & Torkington, 2010). In Dewar (2006) study, patient marital status has been shown to influence pain assessment. Nurses tend to underestimate a pain in single patients and to overestimated pain in married

patients. In other words, patients spouse tends to call the attention of nurses to patient pain which can increase the nurses rating of patient's pain (Dewar, 2006). The literature review provides evidence that this project will fill a practice gap in the area of patient assessment by nurses that work in the community.

In section 3, the approach that was implemented to accomplish the design and methodology of the practice guidelines development was a review of the ASA and OARSI guidelines.

Section 3: Approach

Methodology and Design

The project's purpose was to develop, and disseminate multidisciplinary educational practice guidelines to nurses for use in older homebound male Veteran's Administration OA patients to improve home-based pain management and self-care preventative strategies. Reviewing of both the ASA and the OARSI guidelines was carried out in this section. The ASA guidelines addressed patient education and skill development, which are needed for patients to manage pain. The OARSI guidelines emphasized patient access to information and education about managing hip and knee OA.

Project Design and Methods

The approach that was used to design this project was the review of ASA and OARSI guidelines (see Appendix C and D). To review the existing guidelines and selected treatment plans for the management of OA of hips and knees in home-bound patients, six panels of interdisciplinary team (IDT) members were selected. Each panel consisted of a primary care provider, clinical pharmacist, social worker, clinical psychologist, and two-nurse case managers from home-based primary care programs (HBPC). The selection of six panels' members served to represent the HBPC programs. The reason for the debility among home-bound patients was reviewed by the panel members. The ASA and OARSI guidelines were reviewed and evaluated for safety, cost-effectiveness, and efficiency for the OA patient served by a HBPC program. The panels also assessed their treatment plans in terms of suitability, tolerance, and adherence. The

team consistently agreed on individualized care for treating patients with knee and hip OA. This was in line with the ASA and OARSI guidelines. Fernandes et al. (2013) stated that, individualization of treatment does not indicate that everyone should receive the same treatment; it rather needs to be personalized depending on patient's needs (Fernandes et al., 2013). After the panels had been selected, a scoring sheet was developed to objectively determined guidelines used in our male home-based patients that are largely served by the organization. Members reviewed both sets of guidelines on their own and then convened as a group to share their scores and reach a consensus on these guidelines, or parts of them in the patient population served - A 85% agreement among the panel members was needed. See attached idea for a scoring sheet (Appendix B). The IRB record number for this project is (05-09-14-0324220).

Population

The HBPC program has a mean age of 76.5 years among the veteran's populations served by the Department of Veterans Affair medical center. The majority of the older veterans are 95% men; the newer generation of veterans has more women (Beales & Edes, 2009). Thus, this study included only home-bound male who were older than 60 year with OA of the hips and knees. The focus of the evaluation plan will be based on the patient that meets the inclusion criteria.

Ethical Considerations

The procedure that was used to ensure ethical protection of the panel members that participated in the literature review was to keep their identity anonymous. Walden University IRB department waived this project from participant consent because it does

not require human subject use. The main goal of this project goals were to (a) assemble an interdisciplinary healthcare team to review the literature with an emphasis on encouraging older adults in home-based settings to self-manage their pain; and to (b) develop self-care management educational practice guidelines for nurses who cared for OA patient, guidelines that the patient could be use in home-based settings.

Data Collection

While there was no substantial data collected for this guideline development, a tool (see Appendix D and E) was used as a guide and approved by the panel during the review of the OARSI and ASA guidelines. The OARSI guidelines recommended that access to information and education should be given to patients with hip and knee OA. OARSI also emphasized the significance of lifestyle modifications, pacing of activities, exercise, weight control, and other measures that would relieve damaged joints. OARSI guidelines recognized the effect of self-care and patient-focused modalities compared to treatment provided by healthcare professionals. Adherence to non-pharmacological therapy should be taught to patients with OA as recommended by the OARSI. Moreover, OARSI guidelines focused on early intervention for the patient with OA. Prompt referral and the importance of weight loss and exercise should be emphasized. The use of a comprehensive approach of care to alleviate the need for medication and surgery is encouraged by the OARSI guideline. OARSI guidelines endorsed that the quality of patient education on the pathogenesis of OA, clinical course, and treatment will promote behavioral changes and improve signs and symptoms (Hawkeswood & Reebye, 2010).

ASA guidelines focused on educating OA patients about skill development and different treatment modalities that are needed to manage chronic pain effectively. ASA guidelines recognize the broader perspective of healthcare including the psychological and quality of life. Nevertheless, ASA guidelines focused on the chronic aspect of pain and cannot be applied to patients with acute pain. In addition, ASA guidelines do not apply to pediatric patients, surgical intervention, or the administration of intravenous drugs besides implanted intrathecal drug delivery systems. ASA guidelines were created as a pain management guide for anesthesiologists and other pain specialist. ASA guidelines focus on education and skill development for managing chronic pain. The ASA guidelines recognize the broader context of health care such as quality of life and psychosocial functioning. Conduction of history and physical examination and reviewing of diagnostic studies by a physician should be essential components of patient evaluation as recommended by the ASA guidelines. The ASA guidelines also suggest the use of multidisciplinary interventions in the management of patients with chronic pain. Multidisciplinary approaches to chronic pain management are effective in alleviating the intensity of pain for an extended time (ASA, 2010).

Data Analysis

No formal data were analyzed for this project, but the effectiveness of the intervention was evaluated.

Project Evaluation Plan

The evaluation plan was carried out with a review of benefit of the self-management program, willingness of nurses using the guideline, and parts of the self-

management program most helpful to home-bound patients. The quality metric that was implemented to evaluate the effectiveness of the project was the Arthritic Foundation (AF) quality indicator project (see Appendix C), which was established to assess OA patients' quality of care. The AF quality indicator consists of 14 indicators that include the physical examination, assessment of pain and function, non-pharmacological, and pharmacological strategies (Hunter, Neogi, & Hochberg, 2011). As stated by Maclean et al. (2004), the quality of care can be measured by evaluating the results of care rendered to patients or by assessing the process in which care is provided to patients. Measuring relevant health outcomes for chronic illness such as arthritis and diabetes can take many years to develop. Moreover, waiting to measure the results can prevent timely interventions to promote health care quality. Therefore, the use of quality indicators can represent an acceptable standard of care for improving health outcomes (Maclean et al., 2004).

In the Coleman et al. (2012) study, health care professionals were used as the key component of OA evaluation plan. The program integrated information about OA and the significance of exercise to encourage self-efficacy and behavior changes in the participant. Implementation of the modeling approach also has a tendency to convey knowledge and skills that people may adhere to over a longer time. Telephone and written notification are examples of the evaluation plans used in the study as a follow-up assessment (Coleman et al., 2012).

Significance of Evaluation Plan on Program Development for Self-Management of OA Pain Management

This self-management intervention helps individuals with OA work towards targeted goals in dealing with the emotional, behavioral, and medical aspect of the illness. Relevance of an evaluation plan in the self-management approach to OA pain can help in determining outcome measures that are personally and clinically essential to the well-being of patients. Moreover, evaluation plan can promote evidence-based interventions to suit patients' needs (Sperber et al., 2012). According to the Sperber et al. (2012) study, participants found that telephone calls from the health educators are most helpful in adhering to the self-management program. The use of education materials was rated next. Learning about exercise and lifestyles modifications were reported by the participants as beneficial to OA symptoms management (Sperber et al., 2012).

In a Coleman et al. (2012) study, health care professionals were used as the key component of the self-management program of an OA evaluation plan. The program integrates information about OA and the significance of exercise to encourage self-efficacy and behavior changes in the participant. Implementation of the modeling approach also has a tendency to convey knowledge and skills that people may adhere to over a longer period. Telephone and written notification are examples of the evaluation plans used in the study for follow-up assessment (Coleman et al., 2012). Implementation of self-management strategies for pain has a tendency to develop partnerships among providers, patients, and families. In addition, self-management strategies are an example of patient-centered care that can promote patients' decision-making and autonomy.

Familiarizing providers with patient needs have been shown to increase patient satisfaction and clinical outcomes by preventing overusing and underusing medical services (Shaller, 2007).

In order to facilitate providers in strategic plans, ongoing education on the efficiency of evidence-based interventions will enable a clinician in the healthcare system to refer and support the planning process. In addition, public health agencies can work closely with providers to secure funding for them. Strategies to reach the policy makers will focus on targeting advertisement, media messages, partnership integration, and congressional educational visits. Employers and business community facilitation can be achieved by developing strategies that will attract insurers and employers implementation of policies that increase referrals and communication that address OA management. Further, showing interest in system's change and community-level policy efforts that promote physical activity, nutrition, and injury prevention can facilitate involvement in the planning process (Giles & Klippel, 2010).

Summary

The current innovations and advances in healthcare systems support self-management of OA pain. Development and implementation of practice guidelines that assist patients to self-manage OA pain will change the healthcare environment. Self-management strategies support individualized care because patients were given the opportunity to receive teaching based on their debility. Therefore, it is essential to continue to assess and evaluate the implementation of the practice guidelines to promote

continuity of care. Further, the use of Orem's theory builds a connection with the OA patient to self-manage pain.

According to Gordon et al. (2005), effort to promote pain management should go beyond the pain assessment and documentation. Evidence-based treatment regimen should be part of treatment strategies in order to encourage patient participation. Pain management standard should be established in each patient setting to ensure proper documentation and effectiveness in treatment plans. Pain assessment should include location, quality, alleviating and aggravating factors, and previous treatments and effectiveness. Moreover, collaborative care of patient involvement in shared decision with providers and self-management strategies have been shown to improved health outcomes. Pain management goals should also be individualized to each patient based on needs, circumstances, and desires (Gordon et al., 2005).

Section 4: Findings, Discussion, and Implications

Summary and Evaluation of Findings

The aim of this project' was to develop, and disseminate multidisciplinary educational practice guidelines to nurses for use in older homebound male Veteran's Administration OA patients to improve home-based pain management and self-care preventative strategies. Therefore, this project supported the Washington, DC Veterans' Affair medical center current evidence-based practice guidelines implemented such as falls prevention, coordination of care, and pain management. The self-management educational program enhances patient safety and the coordination of care as evidenced by the organizations improvement in patient satisfaction. The findings also revealed that giving clinicians options with the practice guidelines helps in managing patients with OA. According to Hawkeswood and Reebye (2010), the self-management practices guidelines for managing OA of the knee and hip will continue to give patients the opportunity for education and interventions that are needed to control pain and decrease debility.

The conclusion from the panel review of the two selected guidelines on the effect of self-management education programs on patients with OA suggested improvement in pain, functional ability, and psychological well-being. When looking at the HBPC patients' adherence to the self-management program (see Appendix B), one of the committee members suggested that optimal exercise program might not be clear to the members due to their age and cognition. Therefore, adherence to the program will be a key predictor to the long-term outcomes of the guideline.

The project was introduced to the program director for initial review. The program and the medical director later extended the project to the interdisciplinary team of nurses, social workers, psychologist, physical therapist and pharmacist. The two selected practice guidelines were reviewed by home-based primary care staffs with the use of a scoring sheet (see Appendix B). After collaboration with the program and medical director, modifications were made to the previous template to reflect patients' adherence to the self-management program. The program adopted the two guidelines for use. The outcomes of the resulting practice guideline will be re-evaluated on a regular basis using in-service and training of staff to improve adherence. With each home visit, the interdisciplinary team members were required to initiate discussion and teaching about the self-management of OA pain. Review of the self-management guideline is required during initial and subsequent home-visit. The project leader will continue to ask for feedback from the program leaders to promote effectiveness of the self-management of OA pain. The ongoing feedback from nurses will be evaluated for continuous performance improvement.

Discussion

An effective way to help patients develop skills and techniques to manage chronic illness is to implement self-management education programs. Stakeholder endorsement was crucial to self-management education programs. For example, implementation of self-management educational program at the local level will promote awareness among health care professionals by increasing confidence in the quality of the programs (Jordan & Osborne, 2007). The OARSI guidelines provide various strategies for managing OA of the hip and knee. The recommended strategies will continue to be used by a healthcare professional to individualize osteoarthritis care. Further, comprehensive assessment of patients will assist in multidisciplinary care by reducing the need for surgery and medications (Hawkeswood & Reebye, 2010).

In order to achieve effective treatment of OA pain, implement of nonpharmacological treatment can alleviate loss of function related to OA. Initial patient evaluation should entails consideration of how to achieve realistic goals with lifestyle modifications such as exercise, weight loss, and acupuncture. It is also essential to know that patient education is the key success to nonpharmacological interventions. Multidisciplinary team support and follow-up with rheumatologist and nutritionist to provide individualized care and ongoing assessment of current physical function should be part of the treatment plans to ensure patients are adhering to instructions (Askari & Eisenberg, 2005).

Application of a holistic approach to each person is needed when deciding the appropriate treatment plans for OA pain management. Although education is significant

to OA treatment, nurses play a key part in assisting the patient to manage better their illness. Therefore, OA patient need to have knowledge and treatments available so that they can participate in disease management. Nevertheless, there is little evidence that providing written instruction alone can change patient behavior. Teaching about self-management has been shown to improve individuals living with OA the ability to manage symptoms and change lifestyles (Lucas, 2009).

According to Parissopouloos & Kotzabassaki (2004), patient involvement in decision making is crucial. For example, Orem's idea of self-care is associated with allowing people to take charge of their health when it is possible. Self-care behavior is an ongoing part of adult life that can be initiated and performed to maintain stable health and well-being. Effectiveness in self-care management can result in the development of structural integrity and functioning which is important to human development. Moreover, deliberate action is performing to achieve the therapeutic self-care demand of care. The idea of health according to Orem's theory is holistic because it focuses on ways to influence someone health and well-being. In order for someone to meet the universal development and health needs, healthy state is required (Parissopouloos & Kotzabassaki, 2004). Self-care represents any self-directed action of activity of daily living engagement to preserve emotional, social and physical well-being. Patient adherence to acquired and learned behavior increases the quality of life. Therefore, nurse's role is essential in assisting a patient that cannot carry-out the self-care activities in order to achieve a maximum level of life satisfaction (Ovayolu, Ovayolu & Karadag, 2011).

Implications

Brady (2012) reported of how OA self-management education (SME) interventions were addressed in the National Public Health Agenda in 2010 as a plan to alleviate the burden of OA. The OA 2010 Agenda defined SME as an educational guideline that engaged and enhanced patients' self-management of OA. The OA 2010 Agenda also focused on building a set of goals and problem-solving skills that would enable the patient to self-monitor their pain. Moreover, self-management support (SMS) is fundamental to patient-centered medical home or home-based primary care, which is a key aspect of the U.S. Department of Health and Human Services strategic framework for addressing chronic diseases.

Self-management approach will address OA pain management because these programs are often offered in community settings. Programs that are offered in places that are closer to an elderly resident have been shown to address the transportation barriers common among this population (Reid et al., 2008). An effective form of self-management (SM) of disease can facilitate treatment of many patients that live in rural areas due to scarcity and distance to healthcare systems. SM program can assist individual and society to regulate an illness through the use of SM technologies in the home environment. Moreover, SM allows individual to achieve better health outcomes. SM can also improve the society to manage better large and growing number of chronic disease, which will alleviate dependence on health care professionals and organizations (Redman, 2007).

Strengths and Limitations

Strengths

As stated by Conaghan, Dickson, and Grant (2008), a self-management educational program among people with osteoarthritis and health-care professionals would alleviate misunderstanding and misconceptions concerning osteoarthritis treatment and disease management (Congahan, Dickson, & Grant, 2008). Moreover, the strength of self-management educational program by clinicians is to attempt to change health behavior and status among patients. Patients can also be taught to set goals and know how to problem solve by having a planned action for managing their disease. Development of self-efficacy is the main strength of the self-management educational program. In addition, self-management educational program promote collaboration between clinicians and patients to ensure skills and confidence needed to manage illness and to seek for support when needed (May, 2010).

Additional strength to the project is its alignment to the current changes in healthcare delivery system. The worldwide interest in the development and implementation of patient-centered model of care support incorporation of evidence into practice to improve patient care outcomes in OA pain management (Hunter, Neogi, & Hochberg, 2011). Therefore, developing practice guideline to manage OA pain will enhance patient satisfaction and quality of life, which will promote the Washington, DC Veterans Affair Medical Center growth.

Limitations

One draw-back of the self-management approach is that more studies are needed for differentiating between the kind of strategies and modes of delivery that will be efficient for elderly patients based on functional ability (Reid et al., 2008). Insufficient interdisciplinary team time, inability to meet the needs of patients, poor adherence to lifestyle modification, and low- comfort level with nutritional and exercise program also present barriers to using of self-management strategies for OA pain (Litman, 2008). Further, misuse of techniques due to inadequate monitoring and accountability can negatively affect the outcomes of self-management programs (Hadjistavropoulos, 2012). This project cannot be generalized to female home-bound patients because the majority of the patients served are male. Moreover, the generalizability of the project is limited to home-base setting and not acute care or hospital-based setting.

Recommendation for Future Practice

Efforts to promote pain management should go beyond pain assessment and documentation. An evidence-based treatment regimen should be part of the treatment strategies provided to encourage patient participation. A pain management standard should be established in each patient setting to ensure proper documentation, recognition, and prompt treatment. Pain assessment should include location, quality, alleviating and aggravating factors, and previous treatments and effectiveness. Pain management goals should also be individualized to each patient based on needs, circumstances, and desires (Gordon et al., 2005). Furthermore, a collaborative method is needed when conducting health promotion research. Nursing researchers have advocated and encouraged action

research. Action research is applicable to nursing research because it involves both researchers and participants creating shared empowerment to achieve common goals. Therefore, an essential evidence-based implementation can be evaluated with the use of health promotion research (Whitehead, 2006).

Analysis of Self

Personally, I think of myself to be functioning in the role of scholar and project manager. Developing and implementing self-management guideline for osteoarthritis management among home-bound veterans has enhanced my knowledge on the quality of chronic disease educational program. As stated by Chism (2009), DNP graduates can directly influence patient care through skills developed during the course of studies. Further, the value of using evidence-based practice is to improve optimal healthcare outcomes through reviewed of clinical evidence that will benefit home-bound patients.

As a DNP prepared graduate, there were significant areas in which the author of this presentation has grown, gained insight, or had sought an inquiry that had been achieved during the DNP program. In the area of proficiency, DNP program has helped in developing skills to work within the organization and in patient care. In the policy arena, the DNP program had assisted in the evaluation and implementation of policies and procedures regarding patient needs. In the arena of professional development, it has given me the confidence to achieve the goal of drafting and reviewing policy (American Association of Colleges of Nursing, 2006).

Summary and Conclusions

Implementation of self-management strategies to manage pain in illness is becoming relevant in the health-care system. Besides a reduction in the health care costs, self-management programs assist with decreasing demand in healthcare services. Effectiveness in self-management use can promote self-efficacy, improved understanding of pain, and exposure to different treatment options available for managing chronic pain (Hadjistavropoulos, 2012). The chronic nature of OA and inadequate resources to manage the disease indicated that effective educational program and continuous self-management are needed. Since the uptake of arthritis educational programmes are low, it important to develop self-management program that will be easily accessible to clinicians and patients (Ackerman, Page, & Schoch, 2013).

Further, self-management educational programmes for managing OA are driven to motivate behavioral changes and improve lives of people. Active participation in educational programmes is in accordance with the multidisciplinary self-management program because it empowers people to control their disease. Therefore, the use of skills and expertise of health care professionals to provide individualized educational program and self-management will modify behavior in people with OA that might not be achievable with the limited knowledge of a layman (Coleman, Briffa, Carroll, Inderjeeth, Cook, & McQuade, 2008).

Section Five: Scholarly Product

Executive Summary

Implementation and evaluation of practice guideline for self-management of OA pain in Home-based primary care (HBPC) setting at the Washington, DC Veterans Affair Medical Center (VAMC) is paramount to patient safety and satisfaction. The project will change the current structure and outcomes of the HBPC program. HBPC program mission is to provide a detail interdisciplinary primary care in the comfort of veterans home. Therefore, developing a practice guideline for the interdisciplinary team member that promotes self-management of OA pain will further promote the program quality.

Background of the Organization (Washington, DC VAMC HBPC program)

Washington DC VAMC HBPC program offers an interdisciplinary team (IDT) of providers to provide chronic longitudinal care to veterans with complex medical problem at home. Veterans that are enrolled in the program are those that are having difficulty in coming to the medical center for appointments due to the complex condition. The role of the IDT members is to meet with the veterans and their caregivers at home to arrange for services that will sustain their health as long as possible(Washington, DC Veterans Affair Medical Center, 2013). The VA established six sites for HBPC program in 1972. The program begins to expand in sites, and practice variations were developed that include an increase in physician involvement and plan of care. In 1985, VA changed the name of the program from Hospital Based Home Care (HBHC) to Home Based Primary Care (HBPC) to elucidate intention to provide a comprehensive primary care in the home of the veterans. HBPC program is different from home care services because of the target

population, outcomes, and process of care. HBPC program has a mean age of 76.5 years. Majority of the older veteran's population are 95% men compare to the newer generations of veterans that have more women (Beales & Edes, 2009).

Current VAMC Initiatives

The change in demographic of American population has been a public health issue to the healthcare economist and the policymakers. The population of American older than 85 years is projected to increase by 44% between the years 2000 to 2010. This increase in 10 years resulted in doubling of the number of veterans older than 85 years within the first 5 years. In order word, VA is facing challenges of increase in the older population across the nation. Nevertheless, an increase in the aging population among the veterans comes with an increase in the prevalence of diseases and debility. Almost half of the American veterans older than 85 years of age are dependent in at least one activity of daily living. These demographic changes result in VA creation of a spectrum of programs to provide services to the older population. The focus of these programs is to meet the needs of veterans that are having complexity in their health care and impairment in functioning. In the year 2007, 72% of the veterans had heart disease, 35% had heart failure, 48% had diabetes, 29% had cancer, nearly one in five had chronic lung disease, and at least a third of the veterans had dementia. Therefore, HBPC program goals focus on monitoring of veterans in their home with the use of tele-health, caregiver support, palliative care, and provision of therapeutic, safe home environment (Beales & Edes, 2009).

Project Poster

Poster Presentation(shola).pdf

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Appendix A: Visual Representation of Program Design

Mission Statement	To improve the quality of life of home-bound veteran's by reducing debility from osteoarthritis pain.
Goals	(a) assemble an interdisciplinary healthcare team to review literature with emphasis on encouraging older adults in home-based setting to self-manage their pain; b) develop a practice guideline of self-care management of osteoarthritis pain for nurses who care for patient in home-based setting by ensuring that pain is control and; c) Improve ability of HBPC patients ability to function in daily activities
Objectives	This project aimed to guide nurses to: (1) understand osteoarthritis pain as a chronic disease; and (2) involve patient and family/caregivers in the educational process by providing written material about self-managing of chronic pain in osteoarthritis.
Activities to meet Objectives	1)Assemble interdisciplinary project team 2) Review of national guidelines including treatment plans 3) Develop educational program 4) Validate program with external experts 5) Develop evaluation plan in collaboration with interdisciplinary team 6) Pain management monitoring process outcomes measures
Data needed	Review of ASA and OARSI guidelines
Evaluation survey	• Benefit of self-management program, • Willingness to participate in the program, • Part of self-management program most helpful.

Appendix B: Scoring Sheet for the Panel's Review of Guidelines

Table 1

Categories	ASA Guideline (A)	OARSI Guideline (B)	All recommendations or specify which ones
1.Safe for our home-based patients	Y	Y	(x) A
	N	N	(x) B
2.Cost effective for implementation in our setting	Y	Y	(x) A
	N	N	(x) B
3.Efficient for care in our setting	Y	Y	(x) A
	N	N	(x) B
4.Suitable for our home-bound patients and home care agency	Y	Y	(x) A
	N	N	(x) B
5.Can our home based patients tolerate these interventions?	Y	Y	(x) A
	N	N	(x) B
6.Can our home base patients adhere to these guidelines?	Y	Y	(x) A
	N	N	(x) B

Note. Under Number 5, 90% agreement was reached by the panel members. One of the committee members suggested that home-bound patients may not be achieved on a long-term basis due to patient's age and cognition.

Appendix C: Evaluation plans/Sample Practice Guidelines for Management of Chronic Pain

Table 2

Quality measures for OA rated as valid

Topic area	Quality indicators
Physical examination	1) IF a patient is begun on a drug treatment for joint pain, arthritis, or arthralgia, THEN evidence that the affected joint was examined should be documented.
Pain and Functional assessment	2) IF a patient is diagnosed with symptomatic OS of the knee or hip, THEN his or her pain should be assessed annually and when new to a practice. 3) If a patient is diagnosed with symptomatic OA of the knee and hip, THEN his or her functional status should be assessed annually and when new to a practice.
Education	4) IF a patient has had a diagnosis of symptomatic OA of the knee and hip for > 3months, THEN education about the natural history, treatment, and self-management of OA should have been given or recommended at least once.
Exercise	5) IF an ambulatory patient has had a diagnosis or symptomatic OA of the knee or hip for >3months AND has no contraindication to exercise and is physically and mentally able to exercise, THEN a directed or supervised muscle strengthening or aerobic exercise program should have been prescribed at least once and reviewed at least once per year.
Weight loss	6) IF an individual is overweight (as defined by body mass index of ≥27 kg/m2), THEN the individual should be advised to lose weight annually. 7) IF a patient has symptomatic osteoarthritis of the knee or hip and is overweight (as defined by body mass index of _27 kg/m2), THEN the patient should be advised to lose weight at least annually AND the benefit of weight loss on the symptoms of osteoarthritis should be explained to the patient. 8) IF a patient has symptomatic osteoarthritis of the knee or hip and has been overweight (as defined by body mass index of ≥27 kg/m2) for >3 years, THEN the patient should receive referral to a weight loss program.
Assistive devices	9) IF a patient has had symptomatic osteoarthritis of the

	hip or knee and reports difficulty walking to accomplish activities of daily living for _3 months, THEN the patient's walking ability should be assessed for need of ambulatory assistive devices. 10) IF a patient has a diagnosis of osteoarthritis and reports difficulties with non-ambulatory activities of daily living, THEN the patient's functional ability with problem tasks should be assessed for need of non-ambulatory assistive devices to aid with problem tasks.
Pharmacologic therapy	11) IF a nonnarcotic pharmacologic therapy is initiated to treat osteoarthritis pain of mild or moderate severity, THEN acetaminophen should be the first drug used, unless there is a documented contraindication to use. 12) IF oral pharmacologic therapy for osteoarthritis is changed from acetaminophen to a different oral agent, THEN there should be evidence that the patient has had a trial of maximum-dose acetaminophen (suitable for age/comorbidities).
Surgery	13) IF a patient with severe symptomatic osteoarthritis of the knee or hip has failed to respond to nonpharmacologic and pharmacologic therapy, THEN the patient should be offered referral to an orthopedic surgeon
Radiograph	14) IF a patient has hip or knee osteoarthritis AND has worsening complaints accompanied by a progressive decrease in activities AND no previous radiograph during the preceding 3 months, THEN a knee or hip radiograph should be performed within 3 months.

Note. From "Measuring quality in arthritis care: Methods for developing the arthritis foundation's quality indicator set," by C.H. Maclean, K.G. Saag, D.H. Solomon,S.C.Morton, S.Sampsel, & J.H. Klippel, 2004. *Journal of Arthritis & Rheumatism,51*(2), p.193-202. Adapted with permission of the author. (Both the name of the journal and the word "Note" are set in italics.)

Appendix D: Evidence-based guidelines for the nonpharmacological treatment of osteoarthritis of the hip and knee

Issue: BCMJ, Vol. 52, No. 8, October 2010, page(s) 399-403 Articles J. Hawkeswood, MD [1], R. Reebye, MD, FRCPC [2]

22 October 2014

Ms Oyesola Akintan
Walden University
Minneapolis, MN
USA
E-mail: oyesola.akintan@waldenu.edu

Dear Ms Akintan:

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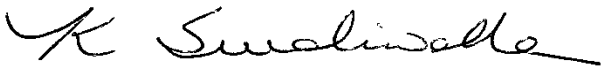

Kashmira Suraliwalla
Production Coordinator

Appendix E: Practice Guidelines for Chronic Pain Management

An Updated Report by the American Society of Anesthesiologists Task Force on Chronic Pain Management and the American Society of Regional Anesthesia and Pain Medicine

Subject

Permission to reuse journal for dissertation

Discussion Thread

Response Via Email (Delayna S.) 10/22/2014 07:34 AM

Dear Oyesola,

Thank you for the reference number. I have now approved your request free of charge in RL so you'll be able to use the texts.

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Delayna

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EDUCATION

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Walden University, School of Nursing
Doctorate of Nursing Practice- To graduate in November, 2014

August, 2007 to May, 2009
Howard University Washington, DC School of Nursing
Master of Science in Nursing (Family Practice) – May 2009

September 2003-May, 2006
Bowie State University, Bowie Maryland
Bachelor of Science in Nursing - May 2006

September, 1996-1997
Federal Polythenic Ilaro, Ogun State Nigeria
Associate Degree in Biological Science-September, 1999

CERTIFICATION/LICENSURES

State Board of Maryland Registered Nurse Licensure (2006 to present)
District of Columbia Registered Nurse Licensure (2006 to present)
American Nurse Credentialing Center Family Nurse Practitioner Certification (2009 to present)
American Nurse Credentialing Center Advanced Medical-surgical certification (2008 to present)
American Heart Association BLS and ACLS Instructor (2003 to present)

PROFESSIONAL EXPERIENCE:

September, 2006 -Present
Washington DC VA Medical Center

- Family Nurse Practitioner-Home based primary care (2012 to present)
- Registered Nurse-Medical /surgical telemetry unit (2006 to 2012)

April 2011-May, 2012
Inspiris Care Inc.

- House call nurse practitioner

January, 2003-August, 2004
Prince Georges Community College Largo, MD. Academic Tutor (College Mathematics)

- Assisting student with Mathematics and provide support for educational achievement.

RESEARCH EXPERIENCE

January, 2008-May, 2008
Research assistance to Dr. Alan Johnson (Co-Chair of School of Pharmacy and Allied Health, Howard University Washington, DC)

- Topic: Overweight and Obesity in Adolescent Population.

August 2008-April 2009
Dr. Covington (Associate Professor of School of Nursing,
Howard University Washington, DC).

- Develop a research practicum in Stroke prevention in African American Population with

DNP PRACTICUM EXPERIENCE

January, 2013 –February. 2014
Terry Mikovich (Director of Home-based Primary Care. Washington, DC VAMC).

- Developed a falls template that is accessible to HBPC providers with the mentor. Educate the caregiver support program providers on self-management of pain in Home-based veterans. Completed a total of 504 clinical hours

May, 2012-September, 2012
Carolyn Rainey (Nurse Practitioner of home tele-health program of Washington, DC VAMC).

- Studied the impact of nocturnal medication on blood pressure control in home tele-health veterans. Completed a total of 72 clinical hours

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Psi Beta Kappa Honor Society in Psychology.

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Dean List Howard University School of Nursing (2007-2009)
Trustee Award of Howard University School of Nursing (2009)
Recipient of Washington, DC 100 extra-ordinary nurse award at Howard University Sigma Theta Tau Chapter (2012)