Osteoarthritis and Physical Activity Participation: A Complex Issue Requiring Multiple Inputs

Ray Marks*

Department of Health, Physical Education, Gerontological Studies and Services, School of Health Sciences & Professional Programs, City University of New York, York College, and Department of Health & Behavior Studies, Columbia University, Teachers College, New York, USA

*Corresponding Author: Ray Marks, Department of Health, Physical Education, Gerontological Studies and Services, School of Health Sciences & Professional Programs, City University of New York, York College, and Department of Health & Behavior Studies, Columbia University, Teachers College, New York, USA.

Received: November 30, 2016; Published: December 07, 2016

Introduction

Physical activity participation, a universally acknowledged approach for controlling weight, preventing or alleviating depression, and for improving or maintaining health status is commonly advocated as a key self-management approach for reducing osteoarthritis disability. But in our view, simply hoping the patient diagnosed as having osteoarthritis, who is frequently an older rather than a younger adult, will be inclined to follow recommendations to participate in a regular physical activity program, given the presence of oftentimes unrelenting pain and joint dysfunction that accompanies the disease seems highly presumptive and problematic. In addition, simply recommending this form of self-management without careful assessment and progressive planning is potentially doomed to failure.

In particular, carrying out physical activity that exacerbates the magnitude or severity of the osteoarthritis condition because of poor preparation, instructions or lack of forethought, along with the failure to enlighten patients about the importance of pursuing a physically active rather than a sedentary life, may undoubtedly contribute to abysmal adherence rates in general for physical activity participation among adults with osteoarthritis.

As well, mythological views about exercise, as well as about osteoarthritis itself, along with a unique set of intrinsic disease associated challenges to participating in regular physical activity, are some of the additional challenges that may preclude ready adoption of general physical activity recommendations even if these are clearly conceived by clients to be helpful.

As outlined in the related literature [1-10], these potential problems include, but are not limited to disease associated factors such as-

- Depression and/or pain anxiety
- Embarrassment as regards being seen to be exercising if obese
- Fear of further joint destruction and/or pain increases
- Joint instability, muscle weakness, poor exercise endurance
- Joint inflammation and joint swelling
- Pain and stiffness in one or more joints
- Poor health status
- Poor body and self-perception of exercise participation if obese
- Poor balance control, leg fatigue and/or shortness of breath when walking
- Poor knowledge of recommended interventions
- Poor self-efficacy perceptions

Other factors that may preclude or hamper attempts to maintain a regular physical activity program may include uncertainty about the type or activity that is safe, as well as its dosage, intensity, and frequency. Health providers who have not provided careful recommendations tailored to the health status of the individual patient, patients as well as providers who lack of confidence in the outcomes of participation in regular physical activity, vague and/or complex time consuming activity recommendations, and lack of social support or provider support for continuous physical activity participation (Figure 1).
Osteoarthritis and Physical Activity Participation: A Complex Issue Requiring Multiple Inputs

prove of considerable value in efforts to promote adherence of the patient with osteoarthritis to physical activity recommendations [16]. Concerted efforts to answer or address any questions or concerns patients may have, along with concerted efforts to monitor the patient’s progress in light of the extent and progression of their biomechanical problems, their level of pain, inflammation status, muscle strength and endurance capacity, body mass indices, psychological and general health status is also strongly advocated [8]. Moreover, conveying an empathetic demeanor that acknowledges the patient’s daily mobility challenges, as well as any negative past experiences with exercise, is predicted to advance the osteoarthritis patient’s willingness to consider, prepare for, and to actively pursue a recommended physical activity program in the long-term, regardless of any unrelenting health issue.

Research also reveals that education concerning the specific benefits of physical activity participation, which include, but are not limited to a reduced risk of excess disability, as well a reduced risk of acquiring chronic illnesses that arise from sedentary behaviors, as well as obesity and cognitive problems such as depression, along with pain is beneficial in efforts to help the osteoarthritis patient carry out a physical activity program on a long-term basis [17]. Providers too that take note of predicted reductions in medication intake, often injurious to the patient, a reduced need for surgery, and better outcomes following surgery along with life quality [15] can help to emphasize the importance of adherence to physical activity guidelines. They may also want to refer to the science base showing the importance of exercise for reducing disability among the older adult with osteoarthritis, as well as the importance of social support [12].

As well, based on the successes of motivational interviewing, offering patients a menu of activity options, rather than any prescriptive recommendation, plus the knowledge and resources the client needs to carry out the desired tasks may further help to foster physical activity adherence in the face of pain and dysfunction. Ascertaining the patient’s stage of change for physical activity adoption, as well as the extent to which the patient is aware of the multiple benefits of regular physical activity participation, and tailoring the recommendations accordingly are also advocated as key components of such an approach [19-21], as are adequate supervision, support of family/friends, and interventions that can diminish any excess emotional overlay [14]. Stressing the fact that regular physical activity participation can reduce, rather than increase the risk of functional dependence, and that it can foster a substantive reduction in pain, improve sleep patterns, and life quality [15-16] is potentially of considerable added value in any effort to effectively attenuate the disease and its attendant disability.

In addition, mutually agreed upon realistic and achievable goals, an appropriate manageable activity routine, perhaps one that aligns with daily activities and abilities, the availability of appropriate ongoing professional and social support, and actively intervening to removing barriers to activity participation including excess unrelenting pain, joint instability, joint swelling, and fear are highly warranted [10]. Where appropriate, efforts to maximize a patient’s self-efficacy for physical activity participation as well as providing directives for overcoming barriers to exercise, such as scheduling and time related issues may be especially helpful [26], as may clear instructions, formally educating patients/clients about the benefits of exercise, and how to enhance their well-being though physical activity participation. Ensuring the patient has the skill and ability to carry out an appropriate activity plan, and is aware of the risk factors for non-adherence is of similar import. Rewarding small steps towards achieving adherence, expressing a sincere belief in the client, using positive supportive statements, and providing them with successful role models is likely to be advantageous as well. Assuming a non-judgmental, respectful, and empathetic demeanor, and tailoring the recommendations to the patient’s stage of readiness will predictably foster greater adherence to recommended exercise participation.

Implications

Osteoarthritis, a debilitating disease affecting a high percentage of older adults is not curable, and patients thus depend on exercise and other self-management programs to ameliorate pain and disability, often unresponsive to drug intervention and/or surgery. Yet, attempts to encourage adults with osteoarthritis to participate in regular physical activity have been shown at best to be suboptimal [18]. Hence, assisting and encouraging adults with osteoarthritis to carry out recommended bouts of physical activity participation on a consistent basis has become an important treatment goal in efforts to minimize the immense personal, social and economic costs of this widespread disabling health condition.

Osteoarthritis and Physical Activity Participation: A Complex Issue Requiring Multiple Inputs

To this end, and in light of the many intrinsic and extrinsic factors that prevail to counter long term physical activity participation [Figure 1], including the patient’s health status, beliefs and attitudes, and mental health status, thoughtful comprehensive efforts on the part of the provider are clearly necessary to harness a patient’s motivation. Research also reveals that, along with effective trustworthy empathetic communications, an encouraging demeanor, and one that conveys a deep understanding of the patient’s diagnosis and its implications, while imparting the belief that the recommendations for physical activity participation will prove helpful, is also likely to be extremely valuable. Other attributes that can facilitate activity adherence are shown in Box 1 below.

Box 1: Recommended attributes of programs designed to promote physical activity.

- Acknowledges individual’s prior exercise experience
- Corrects patient’s misperceptions about exercise or their physiological status
- Comports with the individual’s disability status, beliefs, resources, lifestyle, personal goals and interests, perceived disability, and stage of readiness for physical activity
- Involves individual in goal setting, setting of realistic goals, while providing goal-oriented physical activity advice
- Includes feedback and scheduled follow-ups
- Utilizes clear written instructions
- Harnesses social support
- Considers optimal efforts to reduce pain before and after undertaking physical activity
- Minimizes anxiety, fear, reactive depression, and distress

In sum, although osteoarthritis is widespread, this incurable health condition may be improved as a result of regular physical activity participation, as outlined above and verified by Spitaels., et al. [25], who observed complex adherence barriers among cases with osteoarthritis including: the domains of patient as well as the health care professional, the extent of any disagreement with guideline recommendations, the role of any negative experiences with drugs, the patients’ comprehension of the disease process, and the presence of poor communication by the health care provider. As well, of considerable import is “genuine interest and collaboration” by the provider as discussed by Hinman., et al. p. 479 [16]. Other factors of import are the interaction of pain, and associated health problems [1].

To this end, research that can help practitioners to guide patients optimally over the course of their disease, and that draws on theories that explain or predict health behaviors such as the Health Belief Model, the Transtheoretical Model, the Theory of Planned Behavior, Social Support, Mindfulness and Acceptance and Commitment Therapy, Social Cognitive, Self-regulation, and Self-efficacy theory may be of special significance in our view as indicated in the related literature [13,27-32]. Additional research that employs well-designed prospective studies, a variety of well-defined samples, and that employs disease specific outcome measures will also enable a more profound set of understandings and efficacious strategies in this realm to emerge. In the interim, it is believed the recommendations cited in this work may be deemed more helpful than not. Moreover, based on the available evidence, those with erroneous or incorrect exercise perceptions, those with no pain, or symptoms of worsening pain, those presenting with signs of depression, those who are overweight or obese, as well as those with limited socioeconomic resources should be selectively targeted [15,26-34].

Bibliography


Citation: Ray Marks."Osteoarthritis and Physical Activity Participation: A Complex Issue Requiring Multiple Inputs". EC Orthopaedics 4.6 (2016): 681-687.
Osteoarthritis and Physical Activity Participation: A Complex Issue Requiring Multiple Inputs


Osteoarthritis and Physical Activity Participation: A Complex Issue Requiring Multiple Inputs


29. Won MH and Son YJ. "Perceived social support and physical activity among patients with coronary artery disease". Western Journal of Nursing Research (2016).


31. Stonerock GL and Blumenthal JA. "Role of counseling to promote adherence in healthy lifestyle medicine: strategies to improve exercise adherence and enhance physical activity". Progress in Cardiovascular Disease (2016).


