Management of a Case with OA of Hip Joint throughout the Rehabilitation Problem Solving Form (RPS) along with Narrative Reasoning

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Abstract

The aim of the study was to explore the management strategies of an OA patient with Narrative reasoning process and Rehabilitation Problem Solving Form (RPS). The objectives included, finding out the factors that may affect the rehabilitation program of a patient with Osteoarthritis of hip joint, to develop effective, evidence based exercise program for a patient with OA of hip joint considering the type, frequency and intensity, to find out the ways of motivating individual to participate in the therapeutic intervention program. A single case based study conducted throughout the Narrative reasoning process and RPS method. This case selected conveniently from the musculoskeletal unit of CRP, Savar. The findings of the study indicate that considering the physiological effects, clinical reasoning, psychosocial aspects, risk factors, patient's values, expectations, and social context throughout the exercise guideline ensured the successful rehabilitation for this patient. Rehabilitation Problem Solving (RPS) form helped to engage the patient with the exercises and to observe the outcome and impact of it. Narrative reasoning process helped to find out her family role, job satisfaction and relationship with the family members, environmental factors and to make her motivated as well. Furthermore, provided information about her condition, made her confident.

Keywords: *Narrative Reasoning, Osteoarthritis, Rehabilitation Problem Solving Form.*

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Introduction

Osteoarthritis (OA) is one of the most common causes of chronic musculoskeletal pain. It has estimated that the overall prevalence of hip OA in the general adult population is about 11%. Osteoarthritis is (OA) related with age with manifestations. It usually not occurs until middle age (Fernandes, et al., 2013). The OA disease process involves the entire joint including cartilage, bone, ligament and muscle. It causes several changes such as joint space narrowing, bony osteophytes and sclerosis seen on X-ray. Risk factors are multi factorial. Those include older age, female sex, obesity, previous joint injury, genetics and muscle weakness. Pain is the dominant symptom although the severity of pain and the extent of changes on X-ray are not well correlated.

It is a common joint disorder of joint stiffness, swelling, muscle weakness, and joint instability. Those symptoms lead to physical and psychological disability and impaired quality of life (Veenhof, et al., 2006). Individuals with hip or knee OA have difficulty with activities of daily living, such as walking, stair climbing and housekeeping. Furthermore, people with OA commonly have a number of co-existing obesity-related disorders. Those included heart disease, hypertension and diabetes. Hereby the majority of people are with less physical activity (Bennell and Hinman, 2011).

Hip osteoarthritis (OA) has considered one of the most serious musculoskeletal disorders from a public health viewpoint. It contributors to the significant poor health of many older people worldwide (Pinto, et al., 2012). It is the large burden of disease and associated costs of treatment. The effective management of hip and knee OA is a priority of the World Health Organization (WHO) and national rheumatology associations (Pinto, et al., 2012). In 2007, 7.8% of Australians had OA and it has projected to increase to 11% by 2050, due to population ageing and rising obesity rates (Bennell and Hinman, 2011).

In nineteen's research, Mattingly (1991), suggested that Narrative reasoning makes a relationship for motives, actions and the consequence of the activities. Here, the therapist can play a role in specific situation. It is the organized time gap. It is experienced by the therapist from the beginning up to ending about the experience with a single patient (Fleming & Mattingly, 2000). This reasoning process shows about how the people or client changed over time (Hamilton, 2008). Rehabilitation problem solving form acts as a tool. It has known as "Rehabilitation Problem-Solving Form" (RPS-Form). It is based on *International Classification of Functioning, Disability, and Health* (ICF) Model. It helps the health care professionals to analyze the patient problems and to specify the aims to solve the problem. Throughout the RPS-Form, different professionals can encounter the patient's perception. As a result, professionals have the opportunity to provide the treatment throughout the multidisciplinary team. This form also ensures the patients participation in the decision making process (Steiner, et al., 2002). The different clinical reasoning process were applied for proper rehabilitation of OA patients, so the researcher wish to explore the Rehabilitation management strategies of an Osteoarthritis (OA) patient through the Narrative reasoning process.

Methodology

Study design

A single case based study conducted through the clinical reasoning process. Sample was selected conveniently from the musculoskeletal unit at CRP Savar. It has tried

to show how the basic idea behind the reasoning process helped to solve a clinical case.

Data Collection

The data was collected through theory, observation; intervention and using RPS form in narrative reasoning process.

Intervention

Rehabilitation professional assisted to develop an exercise rehabilitation program considering the physiological effects, clinical reasoning and the psychosocial aspects of the patient. The rehabilitation process involved the prescription of mobilization, muscle strengthening, flexibility exercise, low impact exercise, spinal stabilization as therapeutic intervention for reducing the sign and symptoms and also improve the function.

Rehabilitation practitioner considered the risk factors, patient's values, expectations, and social context. Exercises prescribed by an effective exercise guideline. Follow up of the intervention ensured to observe the outcome and impact of it. Rehabilitation Problem Solving Form (RPS) used to specify the aims to solve.

Materials of data collection

In process of the data collection, the researcher was used consent form, RPS form, pen and paper. Researcher took signature from the participant and ensured the confidentiality.

Results

The purpose of the study was to explore the rehabilitation management strategies throughout the Narrative reasoning process. Therefore, to engage the patient with the rehabilitation program, narrative reasoning process used that helped to find out her family role, job satisfaction, relationship with the family members and environmental factors as well. This reasoning process motivated her to maintain the therapeutic exercise as well. Furthermore, information about her condition had provided to make her confident to achieve the goal.

For considering this case, throughout the RPS form the overall physical, psychological, personal and environmental difference measured before and after the treatment. Throughout the RPS form, it was identified that the interventions were effective and outcome can measured easily.

Apply of RPS based on ICF Model (WHO): Disease: OA of left hip joint

	Body structure and function	Activities	Participants
Patients perspective	1.Pain on left hip joint. 2.Low back pain. 3.Difficult to weight bear.	1.Difficulty in walking. 2.Difficulty in stair climbing.	1.Difficult to go to outside. 2.Reduced work tolerance. 3.Sleep interruption.
Physical therapist perspective	1.Pain 2.Reduced muscle power 3.Reduced mobility of joint	1.Decreased flexibility of movement. 2.Decreasd Pelvic tilting. 3.Decreasd balance and coordination	1.Reduced social participation. 2.Recreation and leisure activities hampered.
Contextual factors			
Personal factors	1. Fear or worried about the condition. 2. Demonization about the exercises. 3. Anxiety about the improvement. 4.Cannot participate in family function 5.Cannot participate in 6.Hampered Social function 7.Unable to go to college		
Environmental factors	1. Depression among family members. 2. Misconception about the disease. 3. Home environment is not accessible to do the activities in proper position. 4. Working environment is not supportive. 5. Worried about expense of treatment.		

Discussion: Osteoarthritis (OA) is a progressive disease. Therefore, it is necessary to motivate the patient to cope with their disease. The exercise rehabilitation program should develop for long time effects. There is strong evidence that exercise therapy has a short-term benefit for OA. Some study also shows the long-term effect of exercise rehabilitation for the patient with Osteoarthritis (OA) of hip joint. Exercise rehabilitation involves the prescription of muscular contraction and bodily movement to improve the individual's overall function. It also helps to meet the demands of daily living. Beneficial effects of exercise therapy on pain, physical function have demonstrated. Therefore, exercise rehabilitation is recommended as an intervention to decrease the problems associated with OA of hip joint and to stimulate the patient's function and activities.

To have effective clinical practice rehabilitative health care professions must be aware of all these aspects and how they affect the patient. During the prescription of exercise rehabilitation, it is also necessary to consider the risk factors regarding age, general health and overall physical conditions. Rehabilitation practitioners need to consider the patients values, expectations, and social context of their life. Proper exercise rehabilitation services should maintain by prescribing an effective exercise guideline.

It should suitable for the patient at home and surrounding environment. For successful rehabilitation, follow up of the intervention should ensure to observe the actual outcome and impact of intervention to maintain a good quality of life.

Conclusion: It is necessary to motivate the patient to cope with Osteoarthritis (OA) as it is a progressive disease. Patient's participation in the decision making process should ensure to maintain the exercise program properly and regularly. More research-based evidence is required and the health professionals need to know the application of RPS form and different reasoning process.

Appendix: Case report:

49 years, an old woman who was a college teacher presented complaining of left hip pain. She noticed it from one year ago. She had no history of trauma or blunt force impact that could link with the onset of symptoms. Initially she thought that, it will subside spontaneously, which had not happened. There was no previous history of such symptoms, nor any other muscular or skeletal conditions. She reported that this symptom had gradually worsened during the course of the previous three months. The patient then consulted her family physician in order to rule out possible pathological or systemic causes. A series of blood and urine tests were performed which were within normal limit. An X-ray performed of the left hip joint three months ago. There was no evidence of avascular necrosis. X-ray findings suggested mild degenerative irregularity of the acetabulum with mild thinning of articular cartilage in the left hip. The physician diagnosed the problem as Osteoarthritis of left hip joint and then referred the patient to the CRP for Physiotherapy intervention. The patient also noted that she had right hip pain in the groin area. Occasionally she felt pain to the right hip due to compensations for the left hip. She reported that the left hip pain started deep in the groin region and referred laterally into the gluteal-region. She stated that her pain was worse at night with some short-term stiffness in the morning. She rated the pain as a 4–7/10 (10 being the worst pain she had ever experienced) according to the Visual Analogue Scale (VAS). However, the severity of pain depending on the activities that she was performing. Aggravating factors included getting out of a car, sitting with her knees up, stepping, stair climbing and after long walks. She reported that rest and ibuprofen relieved the hip pain. She explained that the pain came and went depending on her activities. She documented that she took calcium and vitamin D, prescribed by the previous physician.

She stated that she had to take an average three classes at each day at her college. The duration of each classes included about 45 minutes. In this time, she has to stand most of the time. However, , she was living in an urban environment and was living at 3rd floor. Therefore, she had to do stair-climbing every day, which makes her pain aggravated. She reported that her diet was an average. She stated she slept well with 6 to 8 hours per night, but it interrupted because of her left hip pain. She had relevant family history included diabetes mellitus and hypertension. The review of her psychosocial history revealed that she was married and had one child who was living at abroad. Other complaints included occasional low back pain and she was attempting to lose weight.

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