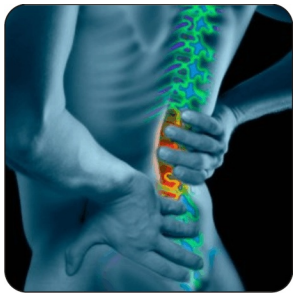
REVIEW PROF-1067

CHRONIC LOW BACK PAIN;

HOW COPING STRATEGIES AFFECTS THE REHABILITATION OUTCOMES



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Low back pain is one of the most important burdens for the patient, health-care, provider and society. Treatment selection should target the appropriate use of available health-care resources with highest probability of success[1]. Back pain is one of the most common medical conditions in world, with almost all adults experiencing low back pain at some level during their lifetime[2]. Most patients who have an episode of acute low back pain will have recovered within a few weeks. However, approximately 10% to 15% of patients have chronic pain and develop disability[3,4]. Chronic back pain affects a person's work, home environment, social and personal life. Moreover it has strong impact on future hopes and dreams of that person as well. Chronic pain is a disability and an experience with which a person lives[5].

The rehabilitation process in chronic low back pain can be influenced by coping strategies of the patient[3] and can be linked to the rehabilitation outcomes[6]. So it is very important area to explore and we should consider biomedical approaches in conjunction with psychosocial aspects.

This review will explore the concept of rehabilitation and coping, the type of coping strategies used, factors influencing the adoption of these strategies, and impact of these strategies on rehabilitation outcomes, and finally how physiotherapist can influence these outcomes in a positive and effective way to get maximum results in relation to chronic low back pain.

Rehabilitation is a complex process and can be defined as " rehabilitation is about people's lives—and often, the reconstruction of those lives in the wake of injury, illness, or surgery. Rehabilitation is about lives that are lived in the broken or damaged bodies"[7].

"Rehabilitation is about the maintenance of existing abilities and roles, promotion of health, the prevention of further impairment, the prevention and reduction of disability, the restoration of function and roles and minimization of handicap"[8]

There are many factors, which affect rehabilitation outcomes both in positive and negative ways. Three main factors are to be highlighted in relation to rehabilitation outcomes; (1) Participants (2) Setting (3) Activities. Setting includes physical and social environment in which rehabilitation process takes place. It involves in-patient, outpatient, ward versus home and most importantly interprofessional and social climate[7]. Some people feel comfortable in their homes or in privacy and some are hesitant in front of

others and cannot focus.

Treatment activities are important component of rehabilitation process. Activities should be purposeful and culturally meaningful reflecting the values and needs of the person's environment[9]. These activities will involve patients and have positive effect on rehabilitation outcomes. Most important aspect of the rehabilitation, the "Participants". are the clients (patient), their family and the staff. Individual client contributes particular characteristics to the rehabilitation process and outcomes including their level of health and functioning both before and after illness. The type and severity of their impairments, the stage of recovery, temporal aspects and behavioural factors are key influential factors in rehabilitation process and outcomes[7].

The behavioural factors include the way client responds and copes with injury whatever it is, acute or chronic. So coping is very important aspect, which cannot be ignored in rehabilitation process and can be directly linked to outcomes.

Coping is a complex phenomenon[6]. And the concept of coping has its roots in the studies of stress that describes ways of coming to term with stressor, could in this context be seen at different levels: a physiological sensory level, a perceptual /affective level and a behavioural level which are assumed to be interwined[10]. The term coping can be defined as[11];

"Coping is the process of managing demands (external and internal) that are appraised as taxing or exceeding the resources of person".

"Coping consists of efforts, both action-oriented and intrapsychic, to manage (i.e. master tolerate, reduce minimize) environmental and internal demands and conflicts among them"[12].

Defined coping is situationally determined state, process, or strategy used to alleviate the impact of stress[13].

Thus these definitions emphasize the importance of emotional context, allows inclusion of both negative/stress side as well as positive /gratification or potential fulfilment side, recognizes overlap between problem solving and coping, and emphasizes adaptive tasks that are not routine or automatized[14].

Inability to work, restriction of social activities, demands on personal relationships, or feeling of disability and feeling of unattainable future goals are the examples of stress.

Back pain involves sensory, emotional, and subjective experience[15], and it follows that way in which a person copes with stress of back pain is dependant on many social, biological, and environment factors[16].

The coping strategies used in back pain can be divided in two categories:

1 Cognitive coping – refers to the way individuals feels about their pain.

2 Behavioural coping – refers to how individuals respond and function against that pain[10].

It has also been suggested that these two copings can be described active coping (non-avoidance) and passive coping (avoidance)[17]. Active coping involves problem solving and assimilative approach while passive coping involves avoidant and accommodating approach to the problem[2,10,18]. Where problem solving efforts are attempts to do something constructive about the stressful conditions that are harming, threatening, or challenging an individual on one hand and emotion focussed coping involves efforts to regulate emotions experienced because of the stress on the other hand[17,19].

Active coping that refers to instrumental action such as engaging in activities, monitoring, attentive, vigilant or confrontative and using one's body actively in management of pain. And patient takes active steps to minimize the disability due to pain and to increase the function[17]. Examples of these steps are, coping self-

statements, staying busy or active, information seeking, distraction techniques from pain, reinterpretation of pain, coming out of worries and negative thoughts and seeking social support[13,17,20].

Confrontation is an active way of coping with pain[10]. Confrontative coping is characterizes by aggressive efforts to change the situation[19]. Seeking social support characterizes efforts to obtain emotional comfort and information from others. Distraction refers to focus attention on some irrelevant and attention getting stimulus or distracting oneself to high level of activity, one can turn attention away from pain. All these strategies have strong impact on the rehabilitation outcomes[19].

Passive coping refers to activities such as withdrawal, resting, avoidance and thinking of pain control. Examples are focussing on the pain and its intensity, misinterpreting pain sensation, avoiding and restricting activities, self blaming, catastrophizing, feeling of helplessness, praying and hoping[18,20]. The concept of avoidance and catastrophizing are destructive in nature and adversely affect the rehabilitation process and health related quality of life.
The avoidance is counter-productive of successful coping with pain and closely related to the development of pain specific behaviour patterns[21]. Catastrophizing is an exaggerated negative orientation toward pain stimuli and pain experience[22]. It is threatening emotions resulting in a feeling of helplessness in managing pain[23]. A relation between catastrophizing and pain, as well as activity related disability, has been observed in patients with chronic pain[24].

But another aspect of coping as a process is its dynamic nature. So that patients adopt both active and passive coping styles to alleviate or to get rid of their problems[15,18]. For example, a patient with back pain can limit his social activities but at the same time can engage in hobbies at home to distract him from pain, imitation of social activities comes under passive coping technique on one hand and to engage in indoor activities comes under active coping technique on the other hand.

This can be well explained in the transactional model of coping which encompass three main terms related to transition with chronic illness (pain in this essay); (1) adaptation (2) adjustments (3) mastery. These terms or skill are important for individual to move on with transition process of illness[25]. As adaptation is a dynamic and ongoing process between the individual and environment[26].

Adjustment is the way individual adjusts his/her means, to arrange, to put in order and to regulate his/her life events in successful way by looking back over his/her previous effective coping skills and life activities according to the current situation[27]. Patient with chronic back pain may use adaptive and adjustment strategies that had previously found effective such as refreshing their knowledge about the condition treatments and equipment available for their condition like walking aids, back support belts and instruction of the things to do or not to do.

The third term or skill is mastery that pertains to being in control and having skills[28]. The effective uses of walking aids, altered way of lifting the things and successful incorporation of these altered patterns in the every day life are the examples of mastery.

There are many diverse factors that lead the patients towards the selection of coping strategies. Age, gender culture, general health, depression, social support, pain beliefs, locus of control, situation, appraisal of situation, personality level of pain, treatment options, previous experiences, are the examples of these factors[3,10,17,18]. All main and important factors like pain relief, social support, situation and appraisal, treatment expectation and locus of control will be explored in relation to select the coping strategies and rehabilitation outcomes.

The interpretations of pain strongly influence the way pain is perceived and experienced by individual. Myths about LBP based on old tradition that are abandoned by the health professionals are still alive in the public e.g. previous spontaneous recovery and bed rest etc[29]. Moreover pain beliefs and cultures among

patients and related health professionals influence as well in selecting the coping techniques and have strong impact on the recovery outcome. For example, Aboriginal people don't visit healthcare professional for their back pain, as it is known that LBP is prevalent in the Aboriginal society. Because in this society there is more pressure on them to tolerate the pain rather to display it[3]. But in western society pain is considered as an unacceptable evil and believed that it is increasingly abnormal experience in the life[5]. According to my experience some people in my country (Pakistan) are reluctant to go to health care professional due to the fear might they have some kind of sever pathology as spine is considered an important part of the mobility and functional ability (that lead them towards passive coping style). In fact they don't want to know what is happening with them before they are severely injured. On the other hand there are some people who consider LBP as a minor problem and try to treat it with self-medication and back supports to save time and money (that leads them toward active coping style without professional advice). So cultures and patient's belief play an important role and may lead them to either confrontation or avoidance, or a mixture of these two[3].

Second important aspect is, the beliefs of healthcare providers about LBP or pain itself. The gap between the beliefs held by the general public and those held by healthcare provider indicate that knowledge of professionals is poorly communicated to their patients[29]. Generally information given by physician or other health care professional to patients in one to one sitting has strong impact on patient's perception of his/her complaint[30]. Patients with low back pain are different from other patient groups as they often seek care from variety of health care professionals[31]. Inconsistent and conflicting advice may contribute to the chronification of problem[3] So there is less literature on the beliefs of healthcare professional regarding low back pain. But in one study in Norwegian general population indicated that 66.3% of chiropractors, 59.3% of physiotherapist and 41% of physicians disagreed with the statement that low back pain recovers it self[29]. These beliefs affect the patients coping style and rehabilitation outcomes due to contrary statements because these views are of prognostic value and might reveal obstacle in new guide lines for treatment[32]. Taking into account both patient's and healthcare professional's belief, people with a history of LBP have more faith in spontaneous recovery than those who are in current situation. So current experience of LBP is fear provoking and in turn induces negative coping style and poor rehabilitation outcomes. The recovery from previous experience is fear reducing and have positive effect on rehabilitation outcomes[29]. But the limitation of study is its conduction in only Norwegian society.

Gender doesn't affect coping and rehabilitation outcomes strongly at psychosocial level. Few differences are found with respect to symptoms, coping and aspects of health-related quality of life. Thus when considering the levels of depression and other psychological items of well being measured in different questionnaires, there is no statistically significant gender specific indications. Moreover, there is no gender difference in disability, depression/anxiety, pain intensity or use of coping strategies[10]. However, investigating coping in musculoskeletal pain gender significant difference was found with respect to CSQ (Coping Strategies Questionnaire) item "catastrophizing", women tended to use this strategy more often than men[24].

Selection of coping strategies and outcomes of rehabilitation depend upon the person's ability to appraise current situation or disease. Appraisal is judgment about the meaning or significance of a situation[33]. It is the process whereby the potential outcomes of situation and coping efforts adopted to deal with the event are evaluated. There are two types of appraisal, primary and secondary[34]. Primary appraisal refers to judgments concerning the events in term of well being of the person 'how much I'm in danger from this situation?' this includes patient's belief, and previous experiences about particular problem. Secondary appraisal is an assessment of what might /can be done .It is related to the coping resources available and its applicability[14].

The way individual appraises the situation is related to the selection of coping style and rehabilitation outcomes in turn. Another variable, which has strong impact on the appraisal of coping re-courses and rehabilitation outcomes, is "locus of control"[17]. This concept has two most important dimension.

i. Internal -the extent which individual believes his health is the result of their own action.
ii External- the extent to which individual believes his health is the result of others.

The main prediction from the health locus of control (HLOC) theory is that internal are more likely to engage themselves in health promoting activities as in low back pain they are more chances to adopt positive (active) coping style to overcome the situation. But sometimes external beliefs are advantageous e.g. during hospitalisation in for acute illness where there is little that one can do to change health status[17].

It has been emphasized by several authors that coping strategies both positive and negative effect on disability, pain and depression and in turn on Rehabilitation outcomes. Active coping have positive impact on minimizing disability from low back pain, whilst some passive strategies have negative effects and increases the pain experience, reduce function and thus increase disability[3,35,36]. In rehabilitation of patients with chronic pain, improved health related quality of life is often considered an ultimate goal[10]. Passive coping could trigger depressive symptoms in the context of high pain intensity. Passive coping over time may intensify the relationship between pain and depressive symptoms and lead these patients to use passive strategies like avoidance than non –depressive. Passive coping can be correlated with psychological distress in contrast to person who face pain more actively[33].

The above discussion reveals that coping strategies used by the patients are important aspect of rehabilitation process and has its strong impact on the outcomes in chronic low back patients. So biomedical model of back pain used in the rehabilitation process is inadequate and doesn't address the complex relationship between cause and effects of back pain both physical and psychosocial[5]. So these inadequacies welcome the broad bio-psychosocial model of back pain[3] that came in recent years and is according to the European guidelines on back pain management.

According to the biomedical approach has contributed to increase the disability from back pain with it focus on impairment, passive techniques, advice on restriction of activities/bed rest etc. all of which have fostered maladaptive coping and passive role for patients. So taking in account all these factors, the thought that comes out is effective rehabilitation. That effective rehabilitation of low back pain refers to the holistic approach that considers not just physical aspect of the condition, but also social, personal, environment and psychological aspects.

But how physiotherapist can be influential in this effective rehabilitation? According to the study on coping, physiotherapist has good relationship with his patients and patients consider him as a person who understand their pain best and disclose their experiences to him[5]. So in this position physiotherapist is best man to incorporate positive coping as a part of wider rehabilitation.

Physiotherapist play is an important and integral part of primary care setting and has active role in rehabilitation process of low back pain. Almost 85% of patients, who visit their GP for their pain, also visit physiotherapist[3]. there are several means by which physiotherapist influence the coping in positive way. Physiotherapist can provide therapeutic interventions, exercise therapy, postural rehabilitation, relaxing techniques and pain control[16]. Alongside this, physiotherapist can educate patients about pain mechanism that can reduce catastrophizing and fear-avoidance strategies[3]. Physiotherapist can involve patients in their diagnosis and goal planning which in turn induce active participation and lead the patent towards active role in rehabilitation process.

In conclusion, chronic back pain and its rehabilitation is a complex process and it is derived by numerous factors, which have been explained above. Rehabilitation of chronic low back pain, emphasis should be on both biomedical and psychosocial outcomes. Evidences suggest that passive coping strategies such as catastrophizing and fear avoidance do have negative effect on rehabilitation of chronic low back pain, whilst positive coping style such as confrontation and distraction techniques have positive effect on rehabilitation outcomes. Bio-psychosocial approach to chronic back pain should be incorporated which covers both medical and psychosocial aspects, which is effective in reducing disability than former biomedical model[3]. And physiotherapist is key person in promoting positive coping style in order to improve both health and psychosocial related quality of life.

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