

Discussion a results of previous studies under the variable of pain management among patients with Chronic Lower Back Pain.

مناقشة نتائج دراسات سابقة في ظل متغير إدارة الألم لدى مرضى آلام أسفل الظهر المزمنة.

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Abstract:

Chronic low back pain (CLBP) is a common musculoskeletal problem in individuals worldwide. It leads to stopping workstopping work, regression in movement and a feeling of depression or anxiety, and because of its wide spread and unknown causes, it places a great burden on specialists and health policy holders in determining its exact causes and effective methods to control it in the future. In this paper, we present a study on "Discussion a results of previous studies under the variable of Chronic Lower Back Pain." The study aims to: address some of the points that take into account the concept of pain in a broad way and the difference between chronic and acute pain, based on: a number of previous studies and different measures that have assessed pain, which enabled to identify how to control and manage chronic pain, specifically Chronic low backpain. The importance of this study lies in the need to reduce the burden of this growing pain on the individual and health care systems.

Keywords: *chronic pain; chronic lower back pain; assessment; management.*

ملخص:

تعتبر آلام أسفل الظهر المزمنة (CLBP) مشكلة عضلية هيكلية شائعة لدى الافراد في جميع انحاء العالم تفضي الى توقف في العمل و تراجع بالحركة و إحساس بالاكنتاب و أو القلق ، و بسبب انتشارها الواسع و أسبابها المجهولة فإنها تضع عبئا كبيرا على عاتق المختصين وأصحاب السياسة الصحية في تحديد أسبابها الدقيقة و الأساليب الفعالة للسيطرة عليها مستقبلا . في هذه الورقة نعرض دراسة حول " مناقشة نتائج دراسات سابقة في ظل متغير إدارة الألم لدى مرضى آلام أسفل الظهر المزمنة." تهدفالدراسة الى : التطرق الى بعض النقاط التي تأخذ بعين الاعتبار مفهوم الألم بشكل واسع و الفرق بين الألم المزمن و الحاد، بالاعتماد على : عدد من الدراسات السابقة و المقاييس المختلفة التي قيمت الألم ، و التي مكنتنا من التعرف على كيفية السيطرة و إدارة الآلام المزمنة تحديدا الام أسفل الظهر المزمنة . و تكمن أهمية هذه الدراسة : في الحاجة الماسة التي تدعو الى تخفيف عبء هذه الآلام المتزايد على الفرد و أنظمة الرعاية الصحية.

الكلمات المفتاحية:الألم المزمن؛آلام اسفل الظهر المزمنة؛تقييم؛إدارة.

Introduction:

Some people suffer from lower back pain at some phase in their lives as due to performing a group of heavy activities for long periods, and then suddenly doing a simple movement such as bending, which generates a varying sense of pain. This pain often ,pass away without need of medical intervention and if it continues for a long period more than 3 months, it becomes chronic pain. Chronic lower back pain occurs at the back area that begins below the rib cage and accompanied by stiffness and regression in movement, in addition to difficulty standing straight, which may lead to disability and absenteeism at work. Although the exact cause of chronic lower back pain remains undetermined. There are groups of risk factors that may play a role in its appearance, such as injuries or surgery, fractures, excessive work and exercise, the presence of a disc may affect the spine, so that it presses on the nearby nerves instead of providing enough space between the spinal discs. These factors, with pain, may cause other joint problems including degenerative diseases. This imposes on individual the possibility to live with a disability that may last for a long time depending on the nature of his injury, according to what most studies of the global burden of disease and years of living with disability (YLDs) of (CLBP) have directed. In order to reduce the negative impact of (CLBP) on patients and health system workers. It is necessary to discover more about the nature of pain as a whole and the effective ways to manage it, specifically chronic low back pain. So that it is possible to separate effective, pain management methods and activate them in the future . Depending on a

different set of pain measures, that many studies have indicated their effectiveness in clarifying the severity and level of pain and disability. Such as a study of (ATAR et al, 2020) on the measures assessment of neuropathic pain and disability among patients with chronic low back pain syndrome. A study of (AO, EO , 2011) on a comparison of subjective and objective bodily functions among patients with lower pain Chronic back, based on the following tools: Numerical Square Scale, Roland-Morris Questionnaire (RMQ-24) and Posterior Performance Scale (BPS) to assess current pain severity, subjective and objective functional status of the participants, respectively. Also (upadhyay, lamba , 2018) compared the modified Oswestry questionnaire for low back pain (LBP) with the Aberdeen LBP Scale (ABPS) to discover the best measure of functional assessment among patients with (LBP). Moreover, based on the results analysis and discussion of these studies, we try to evaluate the various tools for measuring pain and the most effective ones.

1. what is pain ?

In general, pain is a psychological experience, and the most prevalent and comprehensive form of human distress, which often contributes to a significant decrease in quality of life, and as evidenced in the literature that has dealt with pain, so it is an almost inevitable and relatively frequent source of psychological and physical distress from birth to aging. The pain attacks size may vary in terms of the events nature that individuals go through, such as common normal events, or painful and intractable crises that sometimes occur and are not necessarily common.

Pain that causes human suffering may incur high costs and affect economic resources, and is the most common reason for seeking medical care, as an estimated 80% of doctor's office visits involve one or more pain case (Hagjstavropoulos & Craing, 2004, p 1). So that it is necessary to give a precise definition of pain as the sensory and emotional experience of distress, which is usually associated with actual tissue damage or irritation (AMA, 2003). Almost people experience pain during different life stages, from the childbirth pain in mother and child, to the colic and teething pain in childhood, to the injury and disease pain in childhood and adulthood. However, some pain can become chronic, such as arthritis, lower back problems, migraines, or cancer.

(Sarafino & Smith, 2011, p 282). Our pain sensations can also be so diverse that we describe them in different ways, we may describe some pain as “piercing” and others “dull”, such as sharp pains, for example, which can resemble the feeling of tingling or stabbing. Some pains include a burning sensation. Some individuals may express their feeling of pain by describing it as cramping, itching or pain, and others may feel a pulse-like sensation or a continuous fiery sensation, or a feeling of spreading in certain parts of the body or localization of pain in a specific place. The feelings we experience often depend on the types of irritation or damage that occurred and the location. For example, when damage occurs deep in the body, people usually report feeling “dull” or “aching” pain or a more “palpitating” sensation; but damage from an adverse event to the skin described as “piercing.” (Schiffman, 1996; Tortora & Derrickson, 2009), while the painful conditions that people experience also vary according to how the pain arises and persists.

2.-Acute pain vs chronic pain

The feeling of pain, whether continuous or recurring over a period of several months or years, is different from experiencing occasional, short-term episodes attacks of pain, and the length of experience that an individual may live with a painful condition is an important dimension in describing the pain he suffers. Most of the painful cases that people go through are temporary, so that the pain reaches high levels and then subsides in minutes, days, or even weeks, because of the use of painkillers or other treatments prescribed by the treating doctor. In addition, if a similar painful situation occurs in the future, it is not directly related to the previous experience, which is the case with most daily headaches, for example, and the pain that usually results from it, such as toothache. The concept of acute pain refers to the discomfort that people experience in temporary states lasting less than a few months (Mann & Carr, 2006; Turk, Meichenbaum, & Genest, 1983). Patients with acute pain often have high levels of anxiety in the pain presence, but their suffering subsides and their condition improves once their pain subsides (Fordyce & Steger, 1979), and if the painful situation lasts longer than its expected course for more than months, here it calls a chronic condition. Meanwhile, people experiencing pain continue to experience high levels of anxiety and tend to develop feelings of despair and helplessness as various medical treatments become powerless and useless to stop the pain. However, this pain interferes with their daily activities, goals and

affects the quality of their sleep (Afleck & all, 1998), and may even control their lives, and these effects appear clearly in the following: patients with pain , often say that they can tolerate their pain better just if they can get a good night's sleep because they feel tired, exhausted, and drained. And They find themselves less excited with their families; have fewer friends and interests. Gradually and over time, their world is shrinking, and they become more preoccupied with their pain, and less interested aboutanto the world around them, and their world begins to center around the home, doctor's office, and pharmacy, meaning that everything in their lives becomes related to the pain they suffer .(Sarafino & Smith, 2011, p284).

3.-Chronic pain among patients with chronic low back pain

Specialists do not differ in that (LBP) is a major musculoskeletal problem that causes functional limitations and suboptimal quality of life, especially in the elderly, in addition to its severe disability, and economic and social costs exorbitant. This is what a systematic review included 28 studies where concluded that the prevalence of chronic low back pain (lasting more than 3 months) gradually increased from the third decade of life to 60 years. Furthermore, a recent review of 35 studies resulted that 21% to 68% of individuals aged 60 years or older had (CLBP) in the past 12 months, clearly demonstrating the higher prevalence of (CLBP) among the elderly. This number will double among adult population aged 60 years and over during 2015, and by 2050 the number of people suffering from chronic lower back pain may reach (2.1 billion). Which calls for comprehensive awareness of this disease starting from the risk factors how to manage it depending on the appropriate treatment strategies that are developed and implemented to suit the cases that suffer from (CLBP) according to their needs and specificities (Wong et al, 2021, p2).

In general, (LBP) and (CLBP) were seen as one of the common problems among the working population, which prompted the most previous studies focus on identifying risk factors for (LBP) or (CLBP) among adults in several settings. Especially work, to reach a number of psychological variables (such as depression, psychological distress, negative coping strategies, and fear-avoidance beliefs), and the criteria demographics (elderly and women) associated with having (LBP) and/or (CLBP) at work. However, these risk factors cannot generalize to older adults with (CLBP) because they are often retired and have comorbidities, which may modify the effects of these risk

factors. Given the aging population, there is an increasing number of studies investigating factors associated with the increased prevalence/incidence of (CLBP) in the elderly. Older adults with (CLBP) often characterized by degenerative radiological changes (such as disc space narrowing), multiple joint pain involving the neck, hip, and/or knee, and psychological problems (depression and anxiety). Although the most previous literature on factors associated with an increased prevalence of (LBP) in the elderly (such as degeneration of the spine, or lack of physical activity). It did not focus specifically on factors related to the prevalence and widespread development of (CLBP) in the elderly, although it is the main disability cause and high medical expenses. (Wong et al, 2021, p2).

4.Pain management

Just as pain is a negative experience in individuals, it also causes complex management problems. Treatment of acute pain is usually straightforward because the source of the pain is obvious. While helping people with chronic pain is somewhat challenge because this type of pain is present without obvious tissue damage, which calls for the use of different methods in dealing with this pain, which differ according to the way individuals perceive pain and the nature of their pain in the head or lower back. For example, some people may feel relief through medical treatments, while others feel better through behavioral management of their pain. This is what makes specialists turn to treating pain based on different methods.

4.1. - Behavioral approaches to manage pain

Psychologists have excelled in devising treatments that teach people how to manage pain. Several behavioral techniques have actually proven to be effective with a variety of pain syndromes. These techniques include relaxation training, behavioral therapy, cognitive therapy, and (CBT). Some authorities consider these techniques to be a part of mind-body medicine, and therefore they are a part of alternative medicine, while psychologists see them as a part of psychology. Relaxation training, for example, is one of the methods of pain management and may be the main component in pain management with different types of pain, and gradual muscle relaxation consists of sitting on a comfortable chair with complete absence of distracting factors, followed by

regular tension and gradually relaxing muscle groups in all parts of the body (Jacobson, 1938). As this procedure is learned, it becomes possible for individuals to practice the relaxation technique independently. Relaxation techniques have been used successfully to treat pain problems such as tension headaches, migraines (Fumal & Schoenen, 2008; Penzien, Rains, & Andrasik, 2002); rheumatoid arthritis (McCallie et al, 2006) and low back pain (Henschke et al, 2010). The National Institutes of Health Technology (NIHT) panel has evaluated the evidence for progressive muscle relaxation and given this technique the highest rating in pain control (Lebovits, 2007). However, relaxation training typically works as a part of an interdisciplinary program (Astin, 2004). The table below summarizes the effectiveness of the relaxation technique, based on the results of a number of studies. (Brannon et al, 2014, p 166)

Table (1) shows the effectiveness of relaxation techniques

Problem	Results	Studies
1- Tension and migraine headaches.	Relaxation helps in managing headache.	Fumal&Schoenen, 2008; Penzien et al., 2002
2- Rheumatoid arthritis.	Progressive muscle relaxation is an effective component.	Mc Callie et al., 2006
3- Low back pain.	Relaxation is effective in programs to treat low backpain.	Henschke et al., 2010
4- Variety of chronic pain conditions.	Progressive muscle relaxation is effective according to an NIHT review.	Lebovits, 2007

Source: Brannon et al., (2014, 167).

4.2. - Behavioral therapy

The most prominent behavioral procedure in behavioral therapies is behavior modification, which arose from laboratory research on operant conditioning. Behavior modification is a process of forming behavior through the application of the principles of effective conditioning, and its goal is to form behavior, not

to decrease pain emotions. They grumble, moaning, sigh, indignant, grin, and lose their jobs. Wilbert E. Fordyce (1974) was the first who emphasize the role of operant conditioning in the process of pain behaviours, who recognized the rewarding value of increased attention, empathy, financial compensation, and other positive reinforcers that frequently follow pain behaviors. He considered that these conditions create what pain expert Frank Andrasek (2003) called pain traps, attitudes that push people in pain to develop and maintain control of chronic pain. Situations that cause chronic pain include greater attention from family members, diminish normal responsibilities, compensation from employers and medications people receive from clinicians. All these reinforcers make improvement difficult, and behavior modification works against these pain traps, starting with identifying the reinforcers and training people in the patient's environment to use praise and attention to reinforce the desired behaviors and withhold the reinforcement when the patient presents less desire for pain behaviors. In other words, groans and complaints ignored at once, while efforts to increase physical activity and other positive behaviors enhance. Objective results indicate progress in such as the amount of medication taken, absence from work, time spent in bed, number of pain complaints, physical activity, range of motion, and duration of sitting. The strength of the active conditioning technique lies in its ability to increase levels of physical activity and reduce drug use—two important goals of any pain management (Roelofs, Boissevain, Peters, de Jong, & Vlaeyen, 2002). Pain reduces disability, and improves quality of life (Sanders, 2006; Smeets, Severens, Beelen, Vlaeyen,). The behavior modification approach does not address the cognition that underlies the behaviors but cognitive therapy focuses on these cognitions (Knottnerus, 2009). Cognitive therapy is based on the principle that people's beliefs, personal standards, and feelings of self-efficacy strongly influence their behavior (Bandura, 1986, 2001; Beck, 1976; Ellis, 1962) and the difference is that cognitive therapies focus on techniques designed to change cognition. Assuming that behavior will change when a person changes his or her thoughts. Albert Ellis (1962) discussed logical and irrational ideas that he saw as the root of behavioral problems and focused on the tendency to "dramatize", which leads to the escalation of an unpleasant situation to the worse. Examples of catastrophic pain may include "This pain will not get better." "Never," or "I can't go on any longer," or "There is nothing I can do to stop this pain." And the experience of pain can easily turn into a disaster, and any exaggeration of feelings of pain may lead to maladaptive behaviors and an increase in the exacerbation of irrational beliefs, and the

tendency to disaster is associated with an amplification of both acute (Pavlin, Sullivan, Freund, & Roesen , 2005) and chronic pain (Karoly & Ruehlman , 2007). Once the irrational thought identify, the therapist actively attacks these beliefs, with the aim of eliminating them or changing them to ones that are more rational. For example, cognitive pain therapy treats the tendency to exaggeration, which leads people to abandon the belief that their pain is unbearable and will never stop (Thorn & Kuhajda, 2006). Most cognitive therapists who work with pain patients treat changes in both cognition and behavior. In other words, they use cognitive-behavioral therapy. (Brannon et al, 2014, p 167).

4.3. - Cognitive-behavioral therapy (CBT)

is a type of therapy that aims to develop beliefs, attitudes, thoughts, and skills to make positive behavior changes. On modifying environmental emergencies and building skills to change observable behaviour. One CBT approach to pain management is the pain inoculation program devised by Dennis Turk and Donald Meichenbaum (Meichenbaum & Turk, 1976; Turk, 1978, 2001), which is similar to stress inoculation. Pain inoculation includes a cognitive phase: a recognition phase, during which patients learn to accept the importance of psychological factors related to their pain, and often receive an explanation of the theory of pain management. The second stage includes skill acquisition and rehearsals, and includes learning relaxation and controlled breathing skills. The final or subsequent phase of treatment involves instructing spouses and other family members to ignore patients' pain behaviors and promote healthy behaviors such as increasing levels of physical activity, decreasing medication use, fewer visits to the pain clinic, or increasing the number of workdays. This is done by having patients, with the help of therapists, develop a post-treatment plan for dealing with future pain, and finally, they apply their coping skills to everyday situations outside of pain clinics. In this regard, a laboratory study of pain (Milling, Levine, & Meunier, 2003) indicated that inoculation training was as effective as hypnosis in helping participants control pain. A study of athletes recovering from a knee injury (Ross & Berger, 1996) found that pain grafting was effective. Other CBT programs have also proven effective on a variety of pain syndromes. CBT includes strategies to address adverse thoughts common among patients with chronic pain, such as fear and intimidation (Liu & all, 2007; Thorne et al, 2007) and is a behavioral component to help pain patients

behave in healthy, compatible ways rather than pathological ones. And evaluations of CBT for lower back pain (Hoffman, Papas, Chatkoff , & Kerns, 2007) indicate its effectiveness in treating pain syndrome, and CBT studies have shown its benefits with headache patients (Martin, Forsyth, & Reece, 2007; Nash , Park, Walker, Gordon, & Nicholson, 2004; Thorn &, 2007). Patients with fibromyalgia also benefited from CBT more than drug therapy (García, Simón, Duran, Cancellor, & Aneiros, 2006), and CBT has been shown to be beneficial for people with rheumatoid arthritis (Astin , 2004; Sharpe et al , 2001) as well as cancer pain, AIDS (Breibart & Payne, 2001) and lower back pain. Recently, a number of researchers have evaluated some form of treatment Cognitive-behavioral pain management is called acceptance and commitment therapy (ACT). ACT encourages pain patients to become more accepting of their pain, while focusing their attention on the goals and other activities they are coping with, as attempting to direct control pain can lead to distress and disability (McCracken, Eccleston,& Bell, 2005). In addition, a recent meta-analysis of 10 studies of chronic pain patients have shown that ACT resulted in a significant reduction in pain intensity compared to no specific treatment (Veehof et al, 2010). Thus, ACT may be another good alternative to conventional CBT for chronic pain management. In summary, previous studies show that behavior modification and CBT can be an effective pain management intervention for people with a variety of pain syndromes. These techniques are among the most effective pain management strategies. Table 2 shows the effectiveness of these treatments and the problems that can be treated. Finally, it can say that there are varieties of medical treatments for pain that are very effective in dealing with it, even though they have certain limitations. For example, analgesics work to relieve pain and may be useful in the case of acute pain compared to chronic pain. These medicines include opiates and non-narcotic medicines. Opioids consider an effective method for managing severe pain, but their tolerability and dependence properties cause problems with their use by chronic pain patients, making healthcare professionals and patients reluctant to use effective doses. As for non-narcotic drugs such as aspirin, non-steroidal anti-inflammatory drugs and acetaminophen, they are also effective in managing mild to moderate acute pain and have some uses in managing chronic pain. The surgery can alter the peripheral nerves or affect the central nervous system. Surgical procedures are often the last resort to control chronic pain, although procedures that involve destroying nerve pathways are often unsuccessful. Without forgetting the role of health psychologists in helping people to overcome stress and chronic pain by

using relaxation, and by relying on behavioral therapy, cognitive therapy, and cognitive-behavioral therapy. Especially with the category of patients in our study "with chronic lower back pain" who inevitably need a learn how to manage their pain to achieve good quality of life and well-being.(Brannon et al, 2014, p 169).

Table (2) Shows the effectiveness of CBT therapy, cognitive therapy and CBT.

Problem	results	Studies
1- Increase in pain behaviors.	Verbal reinforcement increases pain behaviors.	Jolliffe&Nicholas,2004
2. Chronic low back pain.	Operant conditioning increases physical activity and lowers medication usage; CBT can also be effective.	Roelofs et al., 2002
3. Pain intensity.	Behavior modification decreases pain intensity.	Sanders, 2006
4. Chronic low back pain	Behavior modification is a cost-effective therapy for reducing disability	Smeets et al., 2009
5. Catastrophizing the experience of pain	Catastrophizing intensifies acute and chronic pain.	Karoly&Ruehlman, 2007;Pavlin et al., 2005;Thorn &Kuhajda, 2006
6. Laboratory-induced pain.	inoculation training was as effective as hypnosis for pain.	Milling et al., 2003
7. Athletes with knee pain	Pain inoculation reduces pain.	Ross & Berger, 1996
8. Low back pain.	CBT was evaluated as effective in a meta-analysis and in a systematic review	Hoffman et al, 2007
9. Headache pain and prevention.	CBT is effective in both management and prevention.	Martin et al, 2007; Nash et al., 2004; Thorn et al., 2007
.10. Fibromyalgia	CBT is more effective than drug treatment.	García et al., 2006
11 Rheumatoid arthritis.	CBT can relieve some pain.	Astin, 2004; Sharpe et al., 2001
12. Cancer and AIDS pain.	CBT helps people cope.	Breibart & Payne, 2000

13.Chronic pain.	ACT effective in reducing pain intensity in a metaanalysis.	Veehof et al., 2010
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Source: Brannon et al(2014, 169).

In this regard, relaxation techniques such as progressive muscle relaxation have shown relative success in helping patients manage headache pain, postoperative pain and low back pain. Therefore, behavior modification can be effective in helping pain patients become more active and reduce their dependence on medications, but this approach does not address the negative feelings and suffering that accompany pain, while cognitive therapy treats them and thus helps reduce the catastrophic trait that exacerbates the pain. Besides the behavioral components of operant conditioning, CBT has also shown to be more effective than other therapies. CBT includes pain inoculation therapy, as other combinations of changes in perceptions of pain and behavioral strategies for changing pain-related behavior fit this category. These methods have been successful in treating low back pain, headache pain, rheumatoid arthritis pain, fibromyalgia, pain associated with cancer and AIDS, improving the quality of life of these patients.(Brannon et al, 2014, p. 170).

5. A number of pain scales among patients with chronic lower backpain

Recent studies have tended to assess a number of tools that provide a clear pain assessment, particularly lower back pain, which is a special multidimensional experiment, requiring a precise scale to assess it. The scales that are designed to measure different aspects of health are called health measurement scales, health status scales or health outcomes, functional status, functional outcome scales, disability scales or health-related quality of life scales, also referred to as clinical indicators. One of the most common used scales with LBP or CLBP patients: Oswestry LBP disability scale and Aberdeen LBP (ABPS) (lamba&upadhyay, 2018, p2), Low back-specific version of the SF-36 physical functioning scale, (LB-SF 36), P4 and numerical pain classification scale. The results demonstrate in most of the following studies: that it possible to illustrate the effectiveness and reliability of these scales in assessing pain and disability among patients with low back pain. Like a comparative cross-sectional study (lamba&upadhyay, 2018) in Gemma Ethiopia, aimed to compare the modified Oswestry scale with the Aberdeen LBP scale (ABPS) and to identify the best scale in terms of functional evaluation among a random sample consisted of 100 LBP patients met the criteria for

inclusion. The study tools were: Oswestry LBP disability scale (Modified OSW) and ABPS and a low-back pain version of the SF-36 Physical functioning Scale (LB-S36). One-way ANOVA was used, the results of the two scales (the Oswestry Modified Disability scale and the ABPS) have very important values indicating that both are reliable as an effective tool that can be used to assess pain among LBP patients (**lamba&upadhyay, 2018, p2**).

In fact, these results confirm that the Oswestry Disability Scale also known as the Oswestry Disability Questionnaire. It is a very important that researchers have already used to measure a patient's permanent functional disability. This tool has adopted since 1980 and it is "gold standard" among tools for determining a functional decline in back pain. As for the Aberdeen LBP (ABPS) scale, and Aberdeen's self-used is intended to measure outcomes among patients with lower back pain at Aberdeen University and Aberdeen Royal hospital in Scotland. It includes 19 item on how pain affects different activities such as self-care, walking, sitting, standing, sports, housework, and rest, bowing and sleeping. It also contains questions about sedation, aggravating factors, the symptoms distribution and the effect of pain on function. In addition to the previous two scales, another study of (Stuti & all, 2018) showed a comparison of pain measured by P4, a numerical pain classification scale and a pressure pain threshold among LBP patients. It was based on observation at SBB College of Physiotherapy and VS Hospital in Ahmedabad. The study sample consisted of 50 patients, P4 has been applied to them four times over the past two days and NPRS to self-classify pain intensity over the past 24 hours, as measured by PPT (**Stutiet al, 2018, p 285**). The study finds that P4 and the numerical pain classification scale have a mild inverse relationship to the pressure pain threshold, and the study concluded that P4 is the best self-measuring tool for pain that allows measuring individual change against the numerical pain classification scale and pressuring pain threshold. Although this tool is expensive, it is important and clinically applicable with countless cases. (Stutiet al, 2018, p 288).

There are a number of successful scales in assessing lower back pain according to many results from various empirical studies. Such as (Ataretal,2020 , p 62) in Istanbul, Turkey, which sought to assess neurological pain and disability scales among patients with chronic lower back syndrome: by identifying the neuropathy component and assessing its relationship with physical disability among 102 patients. The study relied on assessing the

neurological pain component and the severity of back pain among patients using different scales Leeds' assessment of neuropathy signs and symptoms (LANSS), PAIN/DETECT and DN4 and a 10 cm optical analog scale (VAS). In addition, to assessing the physical disabilities of patients based on the Lower Back Pain Disability Index in Istanbul (ILBPDI). To reach a set of results, including the presence of neuropathic pain in 24 patients (23.5%) according to LANSS, and in 19 patients (18.6%) according to Pain DETECT, and in 36 patients (35.3%) according to DN4. Therefore, the study concludes that the neuropathy component is more prominent in chronic cases. It is important to identify the mechanisms underlying chronic LBP. The study also considered that chronic pain and disease development in LBP patients could only prevented through appropriate and early treatment methods aimed at mechanism. (Ataret al ,2020 , p 62). The Nigerian study also aimed to compare between subjective and objective bodily functions among patients with chronic lower back pain (CLBP) prepared by (Agwubike EO & Nigeria, Ezeukwu AO,). Based on the CT scan and the sample consisted of 51 patients with mechanical CLBP are in outpatient physiotherapy clinics at the University of Nigeria Teaching Hospital and the National Orthopedic Hospital in Enogo, Nigeria. The study used the Back Performance Scale (BPS) (BPS) to assess the current severity of pain and the subjective and objective functional status of participants, respectively. Using the Pearson correlation to determine multiple relationships and regressions to determine objective function predictions and alpha level at 0.5. The study found that intermediate pain intensity, autoimmune impairment (RMQ) and objective disability are present. The study found an average pain severity (RMQ) and objective disability (BPS) of $6.33 \pm 2.099.76$, ± 5.14 , ± 6.43 and 2.9 respectively, and no significant correlation between subjective and objective functions in patients with CLBP .(EO & AO, 2011, p1).

6. The previous studies results evaluation according to the approved scales

Through looking in the results of the previous studies that presented a set of criteria for assessing pain among different samples of chronic lower back pain patients, which demonstrated the extent to which these scales could be clinically adopted, these tools have reached important results. We can adopt them in our study, and we can use one of these scales, taking into account some of our environmental characteristics. Since the study sample is the same, we will have

to adapt certain aspects only to correspond to the Arab environment, for example, it is not possible to address the sexual aspect with certain individuals. If possible, it will be with some discreetly among specific categories whose answers may not be accurate, and if we use the Oswestry scale, we might face this particular issue in the eighth dimension "Sexual life", which includes phrases relating to this dimension while the rest of the dimensions are good. Other scales allow the pain severity measured because they do not deal with specialized pain and prefer to be adopted as a secondary scale that helps to determine the pain severity among patients. The Oswestry and Aberdeen LBP scales demonstrate a more accurate functional assessment of lower back pain patients based on incoming dimensions.

Conclusion:

Now, many health centers pay wide attention to pain management. As they were not interested in searching for the pain nature or its source (disease or injury as a result of an accident such as lower back pain). They just was focus only on providing a number of painkillers, which did not allow them to control and effective pain management. With the widespread prevalence of this type of pain in several settings, such as work, and its persistence for a long period (more than months), 60% of the people across the world suffer from back pain at some point in their lives the pain can becomes chronic. This pain needs strategies to deal with it. Depending on the target group and its specificities that may need to focus more on the different elements of the chronic pain experience. As emotional and cognitive experiences, sensitivity to pain, behaviors and actions affected by pain, and the social effects of pain. Whether in the short or long term, by designing a set of special programs that aim primarily to provide a complete skills training to distract and divert attention from pain and increase daily physical activity. Such as the Tailored Physical Activity program (TPA) and Chronic Pain Self-management Program (CPSMP) find that 50% of participants with back pain was back to the work after 3 month WITH increasing functional. Also after 150 days approximately 48% of participants in TPA and 40% in CPSMP they was back to the work (Andersen etal, 2016). These programs provide more effective ways to deal with pain and reduce the need for medications as much as possible, that is, work on pain management according to multiple and specialized methods that prevent access to surgical

intervention in some cases of critical lower back pain so that it does not cause its appearance of new pain.

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Appendix : OSWESTRY LOW BACK PAIN DISABILITY QUESTIONNAIRE

Instructions :

This questionnaire has been designed to give us information as to how your back or leg pain is affecting your ability to manage in everyday life. Please answer by checking ONE box in each section for the statement which best applies to you. We realize you may consider that two or more statements in any one section apply but please just shade out the spot that indicates the statement which most clearly describes your problem.

Section 1 – Pain intensity.	Section 2 – Personal care (washing, dressing etc)
<input type="checkbox"/> I have no pain at the moment . <input type="checkbox"/> The pain is very mild at the moment <input type="checkbox"/> The pain is moderate at the moment <input type="checkbox"/> The pain is fairly severe at the moment <input type="checkbox"/> The pain is very severe at the moment <input type="checkbox"/> The pain is the worst imaginable at the Moment.	<input type="checkbox"/> I can look after myself normally without causing extra pain <input type="checkbox"/> I can look after myself normally but it causes extra pain <input type="checkbox"/> It is painful to look after myself and I am slow and careful <input type="checkbox"/> I need some help but manage most of my personal care <input type="checkbox"/> I need help every day in most aspects of self care. <input type="checkbox"/> I do not get dressed, I wash with difficulty and stay in bed.

Section 3 – Lifting	Section 4 – Walking
<input type="checkbox"/> I can lift heavy weights without extra pain <input type="checkbox"/> I can lift heavy weights but it gives extra pain . <input type="checkbox"/> Pain prevents me from lifting heavy weights off the floor, but I can manage if they are conveniently placed eg. on a table . <input type="checkbox"/> Pain prevents me from lifting heavy weights, but I can manage light to medium weights if they are conveniently positioned <input type="checkbox"/> I can lift very light weights. <input type="checkbox"/> I cannot lift or carry anything at all .	<input type="checkbox"/> Pain does not prevent me walking any distance. <input type="checkbox"/> Pain prevents me from walking more than 1 mile. <input type="checkbox"/> Pain prevents me from walking more than 1/2 mile. <input type="checkbox"/> Pain prevents me from walking more than 100 yard. <input type="checkbox"/> I can only walk using a stick or crutches. <input type="checkbox"/> I am in bed most of the time
Section 5 – Sitting	Section 6 – Standing

<input type="checkbox"/> can sit in any chair as long as I like <input type="checkbox"/> can only sit in my favourite chair as long as I like. <input type="checkbox"/> in prevents me sitting more than one hour <input type="checkbox"/> in prevents me from sitting more than 30 minutes <input type="checkbox"/> in prevents me from sitting more than 10 minutes <input type="checkbox"/> ain prevents me from sitting at all	<input type="checkbox"/> can stand as long as I want without extra pain . <input type="checkbox"/> can stand as long as I want but it gives me extra pain . <input type="checkbox"/> in prevents me from standing for more than 1 hour . <input type="checkbox"/> in prevents me from standing for more than 30 minutes . <input type="checkbox"/> in prevents me from standing for more than 10 minutes. <input type="checkbox"/> in prevents me from standing at all.
Section 7 – Sleeping .	Section 8 – Sex life (if applicable) .
<input type="checkbox"/> y sleep is never disturbed by pain . <input type="checkbox"/> y sleep is occasionally disturbed by pain. Because of pain I have less than 6 hours sleep . <input type="checkbox"/> cause of pain I have less than 4 hours sleep. <input type="checkbox"/> ecause of pain I have less than 2 hours sleep. <input type="checkbox"/> in prevents me from sleeping at all .	<input type="checkbox"/> y sex life is normal and causes no extra pain . <input type="checkbox"/> y sex life is normal but causes some extra pain . <input type="checkbox"/> y sex life is nearly normal but is very painful . <input type="checkbox"/> y sex life is severely restricted by pain . <input type="checkbox"/> y sex life is nearly absent because of pain Pain prevents any sex life at all .
Section 9 – Social life	Section 10 – Travelling
<input type="checkbox"/> My social life is normal and gives me no extra pain . <input type="checkbox"/> My social life is normal but increases the degree of pain . <input type="checkbox"/> Pain has no significant effect on my social life apart from limiting my mor <input type="checkbox"/> nergetic interests eg, sport . <input type="checkbox"/> in has restricted my social life and I do not go out as often . <input type="checkbox"/> in has restricted my social life to my home. <input type="checkbox"/> I have no social life because of pain.	<input type="checkbox"/> I can travel anywhere without pain . <input type="checkbox"/> I can travel anywhere but it gives me extra pain . <input type="checkbox"/> Pain is bad but I manage journeys over two hours . <input type="checkbox"/> Pain restricts me to journeys of less than one hour . <input type="checkbox"/> Pain restricts me to short necessary journeys under 30 minutes . <input type="checkbox"/> Pain prevents me from travelling except to receive treatment .

Appendix :Measuring Pain Intensity

The 0-to-10 Numerical Rating Scale (NRS) : Instructions: Please [‘interactive PDF: select the number’, interview: tell me the number] that best represents [your current pain intensity, the least intensity of your pain in the past (24 hours, seven days), the worst pain intensity in the past (24 hours, seven days), the average intensity of your pain in the past (24 hours, past seven days)] on a 0-to-10 scale, where 0 = No pain and 10 = Pain as intense as you can imagine.

Please select **the number that best represents your current pain intensity** on a 0-to-10 scale where 0 = No pain and 10 = Pain as intense as you can imagine.

01 2 3 4 5 6 7 8 9 10

No pain Pain as intense as you can imagine .

Please select **the number that best represents the least intensity of your pain** in the past (24 hours, 7 days) on a 0-to-10 scale where 0 = No pain and 10 = Pain as intense as you can imagine.

0 1 2 3 4 5 6 7 8 9 10

No pain Pain as intense as you can imagine

Please select **the number that best represents the worst intensity of your pain** in the past (24 hours, 7 days) on a 0-to-10 scale where 0 = No pain and 10 = Pain as intense as you can imagine.

0 1 2 3 4 5 6 7 8 9 10

No pain Pain as intense as you can imagine

Please select **the number that best represents the average intensity of your pain** in the past (24 hours, 7 days) on a 0-to-10 scale where 0 = No pain and 10 = Pain as intense as you can imagine.

0 1 2 3 4 5 6 7 8 9 10

No pain
Pain as intense
as you
can imagine

Appendix: The P4 Questionnaire

Name:

Date (yyyy/mm/dd)::

When answering these questions, think only of the pain you are experiencing in relation to the problem for which you are having an assessment.

Circle one number for each of the four questions.

On average, how bad has your pain been:

**No Pain
Pain as bad
as it can be**

In the morning over the past 2 days?

0	1	2	3	4	5	6	7	8	9	10
0	1	2	3	4	5	6	7	8	9	10

In the afternoon over the past 2 days?

0	1	2	3	4	5	6	7	8	9	10
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In the evening over the past 2 days?

0	1	2	3	4	5	6	7	8	9	10
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With activity over the past 2 days?