Combatting Back Pain and Anxiety: The Power of Physical Therapy

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Abstract

Anxiety contributes significantly to musculoskeletal and neurological problems. Patients with chronic pain conditions often experience anxiety symptoms such headaches, mood swings, fatigue, and sleep disturbances. After seeing a pain physiotherapist and receiving frequent counseling, patients reported less lower back pain and anxiety. Pain recovers quicker than anxiety, which requires longer rehabilitation time. This case report shows that back discomfort increases anxiety and may be addressed with psychological treatment. A team-based strategy may treat chronic pain and anxiety issues as an alternative therapy.
Key Words: Chronic pain, Anxiety, Fatigue, Physical therapy

Introduction

A mental illness that influences behavior, anxiety affects all ages. About 20% of Indians have it, which may cause restless leg syndrome, anxiety, mood swings, palpitations, chronic muscular soreness, melancholy, exhaustion, and sleep difficulties. Anxiety increases the risk of myalgia, headache, low back pain, buttock pain, neck pain, dizziness, numbness, paraesthesia, and fibromyalgia. Physical therapy may improve motor and neurological issues and reduce anxiety. In this case study, anxiety treatment for low back pain sufferers is explained.
According to Anxiety and Depression Association of America- Chronic low back pain (CLBP) and anxiety have a complicated connection. Back discomfort is more common with anxiety and mood problems, research shows. Common back pain symptoms include persistent pains or stiffness, intense pain after physical exercise, and chronic discomfort from extended sitting or standing.

Chronic pain therapy might be complicated by anxiety disorders. Chronic pain patients with anxiety may have a reduced pain threshold and be more sensitive to drug side effects.Several anxiety therapies may help reduce chronic pain. Certain drugs, CBT, and relaxation methods like breathing retraining and progressive muscle relaxation may help both disorders.

The relationship between anxiety and chronic low back pain is a nuanced and critical topic in psychosomatic medicine, and the efficacy of alternative therapies like physical therapy and cognitive behavioral therapy (CBT)

in this context has been widely studied. Chronic low back pain is a condition that encompasses both physical and psychological elements. Anxiety, a prevalent mental health issue, can worsen the perception of pain, creating a detrimental cycle where pain heightens anxiety, and increased anxiety further aggravates pain (Linton, 2000). This dynamic can severely impact the quality of life and hinder the recovery process.

Alternative therapies, particularly physical therapy, and CBT, have been effective in addressing these interconnected issues. Physical therapy aims to relieve pain through methods such as exercise, manual therapy, and pain management education, which can indirectly reduce anxiety by empowering patients and enhancing their physical condition (Van Tulder et al., 2000). Conversely, CBT directly tackles the psychological aspects by assisting patients in developing coping strategies to manage their anxiety and modify their perceptions and responses to pain (Hoffman et al., 2007). This integrated approach of combining physical and psychological therapies targets both the underlying cause and the symptoms, offering a more comprehensive and effective treatment paradigm for individuals suffering from chronic low back pain and associated anxiety.

In the study by Oliveira et al. (2019), there was significant impact of low back pain (LBP) on public health, affecting a large proportion of the population in developed countries. It emphasizes that about 20% of LBP cases progress to chronic low back pain (CLBP) with persistent symptoms after one year. The study also notes that despite various treatments available for CLBP, including physical and cognitive therapies, many patients do not respond satisfactorily. This is partly attributed to psychological factors, such as anxiety and depression, which can influence treatment outcomes negatively.

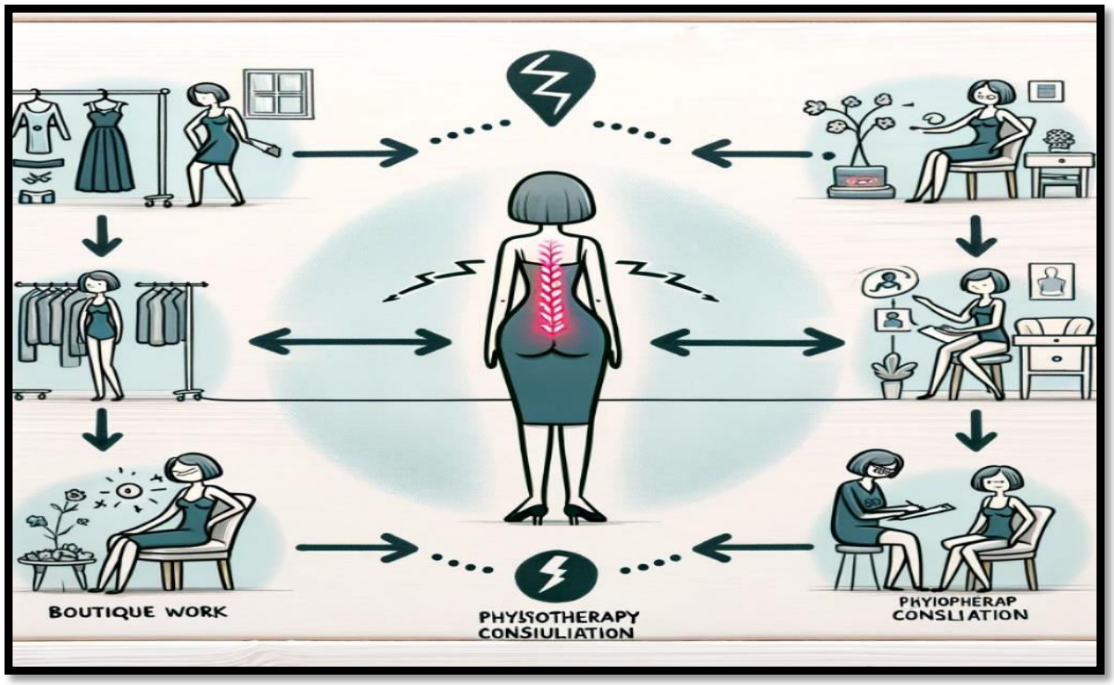

Figure.1 The stick figure diagrams that represent Neelam's journey with lower back pain. Each image portrays different aspects of her experience, including her work at the boutique, her discomfort from the pain, and her consultation with a physiotherapist.

Examination findings: Table-1 below shows the available range of motion (ROM) during Pretreatment and post treatment for Neelam.

Spinal AROM	**Pre-Treatment**	**Post Treatment**
Lumbar Flexion	40º	45º
Lumbar Extension	10º with pain	15º
Lumbar Side Flexion	10º with pain on Right, 15 º on Left	20º on Right, 20 º on Left
Lumbar Rotation	15 º on Right, 10 º with pain on Left	17 º on Right, 15deg with minimal pain on Left
Thoracic Flexion	28 º	30 º
Thoracic Extension	15 º	18 º
Thoracic Side Flexion	20 º with pain on Right, 25 º on Left	27 º
Cervical Flexion	40 º	45 º
Cervical Extension	40 º with pain	43 º
Cervical side Flexion	45 º on R, 42 º on L	53 º on R, 47º on L
Cervical Rotation	55 º on R, 55 º on L	50 º on R, 55 º on L
Hip AROM		
Flexion	115º	125º
Extension	15º	15º
Abduction	40º	45º
Adduction	40º	45º
Internal Rotation	20º	30º
External Rotation	25º	35º

Table-2 Below shows the pre-post difference between the several components of assessment done to assess patient's recovery.

Tools/Scale used	**Pre-Treatment**	**Post Treatment**
FABQw	48	37
FABQpa	25	16
PSEQ	7	20
PHQ-9	16	13
MYOTOMES	3/5	5/5
SUPERFICIAL SENSATIONS	Impaired to light touch	Intact
Deep Tendon Reflexes	1+	2+(Normal)
SLR	Positive (45º)	Negative
Step Test	Negative	Negative
Barber Chair Phenomenon	Negative	Negative
Femoral nerve stretch test	Negative	Negative

Intervention Strategies: Table-3 provides the list of exercises given to the patient during 4 week complete course.

1. Abdominal muscle strengthening: Perform isometric exercises, 3 sets of 10 reps, holding each for 10 seconds.	2. Back mobility enhancement: Execute quadruped lumbar movements, 4 sets of 8-10 reps.
3. Spinal flexibility: Do lumbar rotations, 3 sets of 10 reps.	4. Core stabilization: Conduct planks, 3 sets of 8 reps, each held for 30 seconds.
5. Leg strengthening: Engage in bilateral hamstring exercises, 4 sets of 8-10 reps.	6. Aerobic exercise: Include 30 minutes of moderate-intensity walking on a recumbent treadmill.
7. Mental health support: Utilize cognitive behavioral therapy for addressing anxiety and depression.	8. Relaxation technique: Practice deep breathing exercises in interval sessions.

Discussion

The case of Neelam, a 42-year-old boutique owner suffering from lower back pain (LBP) and associated anxiety, illuminates the complex interplay between physical and psychological factors in chronic pain management. Her journey through physical therapy, coupled with cognitive behavior therapy (CBT), underscores the efficacy of a multidisciplinary approach in treating such conditions.

The improvement in Neelam's range of motion and pain levels post-treatment aligns with the findings of Lewis et al. (2012), highlighting the role of physical therapy in managing chronic low back pain. This is further supported by Bener et al. (2013), who emphasize the significance of addressing psychological factors, including anxiety and depression, in patients with low back pain. The use of CBT in Neelam's treatment resonates with this perspective, addressing the psychological dimensions of her pain.

Kandola et al. (2018) suggest the therapeutic benefits of physical activity for anxiety. Neelam's regimen, including moderate-intensity recumbent treadmill walking, not only aided her physical recovery but also potentially contributed to alleviating her anxiety symptoms. This is indicative of the broader benefits of incorporating exercise into treatment plans for patients with co-occurring chronic pain and anxiety.

The case also highlights the challenges posed by fear-avoidance, as discussed by Menke et al. (2015). Neelam's initial reluctance to engage in physical therapy due to fear of exacerbating her pain is a common obstacle in such cases. Overcoming this barrier was crucial in her path to recovery.

Marshall, Schabrun, & Knox (2017) emphasizes the importance of psychological counseling for chronic low back pain patients, especially in managing fear and depression. It also suggests that regular physical activity alone may not be sufficient to address fear-avoidance beliefs, highlighting the need for a combined approach of physical and psychosocial interventions.

Summary

Neelam's case underscores the importance of a team-oriented approach in the management of chronic pain and associated psychological symptoms such as anxiety. The integration of physical therapy and cognitive behavioral therapy provided a comprehensive treatment, addressing both the musculoskeletal and psychological aspects of her condition.

Physical therapy played a critical role in improving Neelam's physical functionality and reducing pain levels. The specific exercises and activities were tailored to her condition, demonstrating the necessity of personalized treatment protocols in managing chronic pain disorders. Concurrently, cognitive behavioral therapy effectively addressed her anxiety, highlighting the interdependence of physical and mental health in chronic pain management.

This case study reinforces the notion that managing chronic pain extends beyond mere symptom relief. It involves addressing the psychosocial factors that accompany physical ailments. By adopting a holistic approach, healthcare providers can effectively manage pain and improve the overall quality of life for patients like Neelam, without significantly increasing healthcare costs.

In conclusion, the treatment of chronic pain disorders, particularly when accompanied by anxiety, requires a multidisciplinary approach. Physical therapy, combined with psychological interventions like cognitive behavioral therapy, offers a comprehensive strategy that addresses the complex and intertwined nature of these conditions.

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