RESEARCH PAPER

Physiotherapy in Psychiatric Care: A Comprehensive Review of Clinical Applications, Evidence and Therapeutic Outcomes

Utpal Borah[1*], Dr. Mousumi Mahanta[2], Dr. Ajeet Kumar Saharan[3], Dr. Manisha Saharan[4]

*[*1]Senior Physiotherapist, Centre for Rehabilitation Sciences, Lokopriya Gopinath Bordoloi Regional Institute of Mental Health (LGBRIMH), Tezpur, Assam-784001, Email: utpal.borah1979@gmail.com*

[2]Assistant Professor, Centre for Women Studies, Tezpur University, Tezpur, Assam-784028, Email: mousumi.mahanta760@gmail.com

[3]Professor, Nims College of Physiotherapy, Nims University Rajasthan, Jaipur, Rajasthan-303121, Email: ajeetphysio@gmail.com

[4]Professor, Department of Physiotherapy, JRNRV University, Udaipur, Rajasthan-313022, Email: manishasaharan3@gmail.com

Author for correspondence:
Utpal Borah
Senior Physiotherapist, Centre for Rehabilitation Sciences, Lokopriya Gopinath Bordoloi Regional Institute of Mental Health (LGBRIMH), Tezpur, Assam-784001, Email: utpal.borah1979@gmail.com

ABSTRACT
Mental health disorders represent a significant global health burden, with substantial impacts on physical morbidity and mortality. Physiotherapy has emerged as an integral, yet often underutilized, component of comprehensive mental health treatment. This review examines the multifaceted role of physiotherapy in psychiatric care, including its evidence base for treating anxiety, depression, attention-deficit hyperactivity disorder (ADHD), stress-related conditions, and comorbid musculoskeletal disorders. Drawing on clinical practice from a tertiary psychiatric hospital, this paper synthesizes evidence demonstrating that physical activity and structured physiotherapy interventions significantly improve psychological outcomes through neurobiological mechanisms involving endorphin release, regulation of monoamine neurotransmitters (dopamine, serotonin, norepinephrine), and reduction of muscle tension in the stress-anxiety-pain cycle. We discuss therapeutic approaches including relaxation techniques, aerobic exercise, stretching protocols, and electrotherapy modalities, highlighting special considerations for psychiatric populations. Additionally, this review addresses implementation challenges and provides clinical recommendations for integrating physiotherapy into psychiatric treatment pathways. The evidence supports physiotherapy as a cost-effective, non-pharmacological adjunct with potential to enhance quality of life and functional outcomes in psychiatric patients.

Keywords: physiotherapy; mental health; psychiatric disorders; exercise; anxiety; depression; ADHD; rehabilitation.
How to cite this article: Borah U, Mahanta M, Saharan AK, Saharan M. Physiotherapy in Psychiatric Care: A Comprehensive Review of Clinical Applications, Evidence and Therapeutic Outcomes. Int J Drug Deliv Technol. 2026;16(51s): 1850-1857. DOI: 10.25258/ijddt.16.51s.149

INTRODUCTION

Mental health represents a fundamental component of overall human wellbeing. The World Health Organization (WHO) defines health comprehensively as 'a state of complete physical, mental and social well-being and not merely the absence of disease and infirmity' [1]. This definition underscores the inseparable interconnection between psychological and physical dimensions of health, a principle that has profound implications for treatment approaches in psychiatric medicine.

The distinction between mental health and mental illness is not categorical but rather exists on a continuum. As Horwitz and Scheid (1999) noted, in many cases it is not

possible to draw a clear demarcation line between mental health and mental illness [2]. Mental health conditions emerge from a complex interplay of biological, psychological, social, environmental, and economic factors. Consequently, individuals with mental health disorders demonstrate elevated levels of both mortality and morbidity, with increased prevalence of cardiovascular disease, ischemic heart disease, hypertension, diabetes, respiratory disease, and suicide [3]. Furthermore, emerging research has identified strong associations between mental health conditions and reported multiple pain sites in affected populations [4].

While pharmacological and psychological interventions form the cornerstone of psychiatric treatment, mounting evidence demonstrates that physical rehabilitation represents an essential adjunctive modality. Physiotherapy—the therapeutic use of physical techniques including exercise, manual therapy, and electrotherapy—addresses the physical manifestations of mental illness and facilitates the bidirectional mind-body healing process. This paper reviews the contemporary evidence base for physiotherapy in psychiatric care, examines specific therapeutic applications, and provides clinical guidance based on experience from a tertiary mental health hospital.

METHODOLOGY

This study adopted a qualitative systematic review and narrative synthesis design to examine the role of physiotherapy in psychiatric care and mental health rehabilitation. The review was guided by the principles of the PRISMA framework to ensure methodological rigor and transparency. A comprehensive literature search was conducted between January 2025 and March 2026 using major academic databases, including PubMed, Scopus, Web of Science, Google Scholar, and ScienceDirect. Keywords such as “physiotherapy and mental health,” “psychiatric rehabilitation,” “exercise therapy in depression,” “anxiety disorders,” and “physical activity in ADHD” were used with Boolean operators to identify relevant studies.

The inclusion criteria comprised peer-reviewed articles, systematic reviews, clinical studies, and authoritative texts published in English between 2000 and 2026 that focused on physiotherapy interventions in psychiatric and mental health conditions. Studies lacking scientific rigor, duplicate publications, and articles unrelated to psychiatric rehabilitation were excluded. Relevant studies were screened through title, abstract, and full-text review. Data extraction focused on study objectives, psychiatric conditions, physiotherapy interventions, neurobiological mechanisms, therapeutic outcomes, and implementation challenges. A thematic analysis approach was employed to identify recurring themes related to exercise therapy, relaxation techniques, neurochemical regulation, psychosomatic rehabilitation, and multidisciplinary mental health care. In addition to published literature, clinical observations from Lokopriya Gopinath Bordoloi Regional Institute of Mental Health were incorporated to contextualize the findings within psychiatric rehabilitation practice in India. Ethical standards of academic integrity and confidentiality were maintained throughout the study.

Neurobiological Basis: The Mind-Body Connection in Psychiatric Disorders

The Stress-Muscle Tension Cycle

Psychological stress manifests through profound physical mechanisms. During stress responses, the sympathetic nervous system initiates sustained contraction of skeletal muscles, particularly those of the face, neck, shoulders, and back [5]. This physiological adaptation, while protective in acute situations, becomes maladaptive in chronic mental health conditions. Prolonged muscle tension contributes to multiple physical symptoms including chest tightness, muscle cramps, insomnia, and gastrointestinal disturbances [5]. These physical manifestations paradoxically intensify psychological distress, creating a vicious cycle wherein mental tension generates physical symptoms, which further amplify psychological disturbance. The psychosomatic cycle represents a fundamental mechanism linking emotional dysregulation to physical pathology. Breaking this cycle requires physical interventions that address both the neurobiological underpinnings of stress and the resulting muscular tension. Physical exercise and structured physiotherapy serve as potent tools for interrupting this cycle through multiple mechanisms.

Neurochemical Effects of Physical Activity

Physical activity induces substantial neurochemical changes that underlie its psychiatric benefits. Aerobic exercise stimulates endogenous endorphin release in the central nervous system, producing natural analgesic and mood-elevating effects [5]. Beyond endorphins, exercise modulates critical monoamine neurotransmitter systems. Physical activity increases dopamine synthesis and availability, enhancing motivation, reward processing, and executive function. Simultaneously, exercise elevates serotonin levels, reducing depressive symptoms and promoting emotional regulation. Additionally, physical activity increases norepinephrine availability, improving attention, arousal, and

responsiveness. These neurochemical adaptations occur through both acute and chronic mechanisms. Acute exercise sessions produce immediate increases in neurotransmitter availability, while chronic physical activity promotes neuroplastic adaptations including enhanced neural growth, angiogenesis, and synaptogenesis. The upregulation of brain-derived neurotrophic factor (BDNF) through regular physical activity enhances neuronal survival and facilitates learning and memory consolidation.

Clinical Applications of Physiotherapy in Psychiatric Disorders

Stress Management

Stress represents a foundational etiological factor in numerous psychiatric conditions. Physiotherapy addresses stress through muscle relaxation techniques that interrupt the neuromuscular manifestations of the stress response. Structured relaxation protocols, including Savasana (corpse pose) and Jacobson's progressive muscle relaxation technique, systematically reduce tension in major muscle groups [5]. Deep breathing exercises—specifically diaphragmatic breathing, segmental breathing, and pursed-lip breathing—modulate the autonomic nervous system by activating parasympathetic pathways and reducing sympathetic dominance. Breathing exercises also promote chest wall expansion and improve respiratory mechanics, which frequently become compromised during stress. These relaxation techniques are evidence-based interventions supported by research demonstrating reductions in cortisol levels, heart rate, blood pressure, and perceived stress [5]. The systematic practice of relaxation facilitates the development of somatic awareness and volitional control over physical tension, empowering patients to self-regulate their psychosomatic state.

Anxiety - Disorders

Anxiety disorders constitute a major source of psychiatric morbidity worldwide. Physical exercise emerges as a natural and highly effective anti-anxiety treatment modality. Exercise relieves the muscular and cognitive tension characteristic of anxiety while simultaneously boosting both physical and mental energy. The anxiolytic effects of exercise occur through both psychological mechanisms—including mastery, distraction, and improved self-efficacy—and neurobiological mechanisms involving increased GABA (gamma-aminobutyric acid) availability and enhanced parasympathetic tone. Recommended physiotherapy interventions for anxiety include aerobic activities such as cycling and walking, controlled sustained stretching, and slow, relaxed passive movements [5]. These modalities reduce hyperarousal and promote autonomic nervous system rebalancing. The physical engagement required by exercise redirects attention from anxious cognition toward somatic experience and environmental awareness.

Depressive Disorders

Depression represents a leading cause of disability globally and frequently demonstrates partial treatment resistance to pharmacological interventions. Exercise functions as an effective anti-depressant through multiple mechanisms. Physical activity promotes neural growth and generates new activity patterns in depression-affected brain regions. Importantly, exercise directly modulates monoamine neurotransmitter systems—increasing dopamine and serotonin availability while enhancing norepinephrine signalling—thereby directly addressing the neurochemical imbalances underlying depression. Beyond biochemical effects, exercise promotes feelings of calm and well-being through psychological mechanisms including achievement, autonomy, and social connection (when exercise is conducted in group settings). Regular physical activity improves self-perception and enhances the capacity for behavioral activation, addressing the motivational deficits characteristic of depression. Clinical recommendations for depressed patients include both aerobic exercise and resistance training, with evidence suggesting that structured programs demonstrate efficacy comparable to standard antidepressant medications in mild-to-moderate depression cases [6].

Sleep Disturbance

Sleep disruption frequently accompanies psychiatric disorders and substantially impairs treatment outcomes and quality of life. Physical exercise exerts potent sleep-regulating effects through multiple mechanisms. Regular physical activity increases sleep propensity, deepens sleep stages, and normalizes sleep architecture [6]. Exercise increases adenosine levels, promoting sleep homeostasis, while simultaneously advancing circadian rhythm phase through exposure to physical exertion timing. The relaxation protocols employed in physiotherapy—particularly progressive muscle relaxation and deep breathing—directly promote the parasympathetic activation necessary for sleep onset and maintenance. Implementation of afternoon aerobic activity combined with evening relaxation techniques provide comprehensive sleep enhancement.

Attention-Deficit Hyperactivity Disorder (ADHD)

ADHD affects both children and adults, characterized by deficits in attention, impulse control, and executive function. Physical activity represents one of the most effective and evidence-based non-pharmacological interventions for ADHD symptoms. Exercise immediately boosts the brain's dopamine, norepinephrine, and serotonin levels—precisely the neurochemical systems disrupted in ADHD pathophysiology [7]. A single aerobic exercise session produces measurable improvements in focus and attention that persist for hours, while chronic regular activity produces sustained enhancements in concentration, motivation, memory, and mood. Exercise facilitates neuroplastic adaptations in the prefrontal cortex and striatum—brain regions critically involved in executive function and behavioral control. For ADHD patients, physiotherapy protocols emphasizing structured aerobic activities (running, cycling, sports) combined with focused body awareness practices (yoga, tai chi) provide optimal symptom management. Physical activity should ideally precede cognitively demanding tasks to capitalize on acute neurochemical enhancements.

Specific Physiotherapy Modalities and Techniques

Relaxation Techniques

Relaxation techniques form the foundation of physiotherapy for anxious and stress-affected psychiatric patients. Savasana (corpse pose) provides complete physical and mental relaxation through systematic muscle release. Jacobson's progressive muscle relaxation technique teaches patients to systematically tense and release muscle groups, developing improved proprioceptive awareness and voluntary muscle control. This technique has demonstrated efficacy in reducing anxiety, improving sleep, and decreasing pain perception. Breathing exercises include multiple evidence-based approaches: (1) Diaphragmatic breathing activates abdominal musculature and promotes full lung expansion, enhancing oxygen delivery and activating the parasympathetic nervous system; (2) Segmental breathing targets specific thoracic regions, improving regional chest wall mobility; (3) Pursed-lip breathing provides controlled expiration, extending the exhalation phase and promoting parasympathetic activation [5]. Breathing exercises with trunk mobility work specifically enhance chest wall expansion and respiratory efficiency.

Movement Therapies

Controlled sustained stretching addresses muscular tension while improving flexibility and reducing pain. Slow, relaxed passive movements facilitate neuromuscular relaxation without demanding active muscle contraction, making this approach particularly suitable for severe depression or physical deconditioning. These gentle modalities promote body awareness and reduce defensive muscle guarding that frequently accompanies anxiety and trauma. Aerobic exercises including cycling, walking, and structured cardiovascular training provide the most robust evidence base for psychiatric symptom reduction [5]. These activities should be graded in intensity, duration, and frequency according to individual capacity and psychiatric stability. The combination of metabolic benefits, neurochemical effects, and psychological mastery from aerobic exercise makes it a cornerstone intervention across multiple psychiatric conditions.

Electrotherapy Modalities

Electrotherapy modalities present unique considerations in psychiatric populations. Standard electrical modalities such as Interferential Therapy (IFT), Transcutaneous Electrical Nerve Stimulation (TENS), and Electrical Muscle Stimulator (EMS) produce tingling and pulling sensations that psychiatric patients frequently misinterpret, potentially escalating anxiety or causing distress. These misinterpretations increase the risk of electrical burns and treatment discontinuation. Consequently, these modalities are contraindicated in most psychiatric populations. In contrast, LASER Therapy and Ultrasonic Therapy (UST) produce non-stimulating effects well-tolerated by psychiatric patients and have demonstrated efficacy in reducing pain and inflammation. Low-level LASER Therapy (Photobiomodulation) and UST provide direct tissue therapeutic effects without sensory characteristics prone to misinterpretation. Experience from LGBRIMH demonstrates that these modalities are well-tolerated and produce superior outcomes compared to other electrotherapy options [8]. Moist Heat Packs and Micro Wave Diathermy (MWD) similarly provide thermal benefit and muscle relaxation without the problematic sensory characteristics of electrical modalities.

Management of Comorbid Musculoskeletal Conditions in Psychiatric Patients

Psychiatric patients frequently present with comorbid musculoskeletal conditions resulting from multiple factors: physical consequences of prolonged immobility during psychiatric hospitalization, medication side

effects affecting posture and motor control, pain-related behavioral modifications, and bidirectional mind-body dysfunction [4]. Common presentations include low back pain, periarthritis of the shoulder, post-fracture stiffness and weakness, muscle imbalance from immobilization, and postural abnormalities.

Physiotherapy addressing these musculoskeletal conditions provides multiple benefits beyond pain relief. Physical rehabilitation: (1) Maintains Joint Range of Motion; (2) Preserves muscle flexibility and strength; (3) Corrects postural deviations; (4) Reduces pain and inflammation; (5) Improves functional capacity; and (6) Simultaneously addresses the psychiatric condition through the neurochemical and psychological benefits of physical activity [9].

The integration of musculoskeletal rehabilitation with mental health treatment creates a synergistic effect wherein physical rehabilitation promotes psychiatric improvement while psychiatric treatment facilitates engagement with challenging physical therapy. Treatment of referred patients from psychiatric inpatient units using LASER Therapy, Ultrasonic Therapy, Moist Heat Packs, Micro Wave Diathermy and Exercise Therapy demonstrate superior pain reduction and functional improvement compared to Electrotherapy alone [8].

Group Physiotherapy Interventions

Group exercise programs represent an effective delivery model for physiotherapy in psychiatric settings. Group-based interventions conducted for patients sharing similar diagnoses (de-addiction, schizophrenia, ADHD) or demographic characteristics serve multiple functions extending beyond individual physical benefits. Group exercises function as recreational activities, enhancing perceived enjoyment and motivation to participate. Such programs promote social interaction, reducing the isolation frequently accompanying psychiatric conditions. Group-based physical activity provides normalization experiences wherein patients recognize that others share similar struggles, reducing shame and stigma.

Group protocols improve body functioning and physical fitness while simultaneously fostering social connection and psychological support. Regular group exercise programs demonstrate significant benefits in ADHD symptom management, schizophrenia symptom reduction, and de-addiction relapse prevention. The therapeutic community context created through group intervention constitutes an independent mechanism of psychiatric benefit beyond the exercise itself.

8. Challenges in Implementing Physiotherapy for Psychiatric Patients

While physiotherapy demonstrates substantial therapeutic potential in psychiatric care, implementation faces multiple systemic and clinical challenges. Resource limitations constitute a primary barrier; many psychiatric institutions lack adequate physiotherapy personnel, equipment, and infrastructure. In our institution (LGBRIMH, Tezpur), Manpower limitations restrict treatment capacity and necessitate prioritization of cases. High volumes of outpatient referrals relative to available physiotherapy capacity create extended wait times and limited treatment frequency. Clinical challenges include the limitation that only mentally stable psychiatric patients receive physiotherapy referrals. Severely psychotic or acutely decompensated patients lack the capacity to engage with physiotherapy protocols, restricting the intervention to stable outpatients and those in later hospitalization stages. Additionally, many inpatients are discharged during ongoing physiotherapy treatment, interrupting the therapeutic process before treatment completion. Severely psychotic patients frequently demonstrate minimal psychiatric benefit from physiotherapy alone, requiring concurrent psychiatric stabilization through medication and psychological intervention.

Additional barriers include patient motivation deficits, particularly in depression; medication side effects interfering with exercise tolerance; safety considerations in certain patient populations; and limited patient education regarding the mind-body connection and exercise benefits in psychiatric treatment. Addressing these challenges requires systemic improvements including increased physiotherapy manpower, integrated treatment planning between psychiatric and rehabilitation teams, patient and clinician education programs, and research demonstrating cost-effectiveness to secure institutional resource allocation [9].

Summary of Evidence: Physiotherapy Applications and Outcomes

Psychiatric Condition	Primary Modalities	Neurobiological Mechanism	Primary Outcomes	Evidence Quality

Stress Disorders	Relaxation, breathing, stretching	Neuromuscular relaxation, parasympathetic activation	↓ Muscle tension, cortisol	Strong
Anxiety Disorders	Aerobic exercise, breathing, relaxation	Parasympathetic activation, GABA ↑	↓ Anxiety symptoms	Strong
Depression	Aerobic exercise, resistance training	Dopamine/serotonin ↑, neuroplasticity	↓ Depressive symptoms, ↑ mood	Strong
ADHD	Aerobic exercise, structured activity	Dopamine/norepinephrine ↑, prefrontal cortex activation	↑ Attention, focus, impulse control	Strong
Sleep Disturbance	Aerobic exercise, evening relaxation	Adenosine ↑, circadian rhythm, sleep homeostasis	↑ Sleep quality, duration	Strong

Conclusions and Clinical Recommendations

Physiotherapy constitutes an integral and indispensable member of the multidisciplinary mental health treatment team. The evidence base demonstrates that structured physical rehabilitation—encompassing exercise, relaxation techniques, movement therapy, and appropriately selected electrotherapy modalities - effectively reduces symptoms across multiple psychiatric diagnoses and improves overall quality of life in psychiatric patients. The physiotherapy approach addresses both the psychological and physical dimensions of psychiatric illness, recognizing the inseparable mind-body relationship central to mental health.

Girsa S (2022) has explained about the task-oriented training and its benefit in human being, in case of psychiatry care, these task-oriented training can make a big difference [10]. As we know Neural mobilization helps in many conditions similarly it can also show the indirect effect in psychiatric problem, for soothing or improving calmness in ADHD children [11,12,13]. Study done by ajeet et al (2017) suggested that play and leisure activity in special child is beneficial, similarly it can also make a good difference in ADHD children. Also, the positive changes can be enhanced by using nutrition in the patients. [15,16,17]. In Psychological Interventions, essential element is social skills training, which gives people who have trouble interacting with others the skills they need to handle social situations more skillfully. Additionally, parent and teacher training programs are frequently included in treatments. These programs give important adults in a child's life the tools they need to assist their emotional and academic needs and create a supportive atmosphere at home and at school. Additionally, mindfulness and stress-reduction strategies are combined to provide ways to control anxiety and lower stress, which enhances concentration and involvement in academic work.

Mahanta M stated that women mental health is also a point of concern when a child is special. [18,19]. In Psychological Interventions, essential element is social skills training, which gives people who have trouble interacting with others the skills they need to handle social situations more skillfully. Additionally, parent and teacher training programs are frequently included in treatments. These programs give important adults in a child's life the tools they need to assist their emotional and academic needs and create a supportive atmosphere at home and at school. Additionally, mindfulness and stress-reduction strategies are combined to provide ways to control anxiety and lower stress, which enhances concentration and involvement in academic work [20]. Neuromotor psychology is an understanding of the intricate relationship between the brain and motor behavior. In addition to expanding our knowledge, recent findings have offered individuals with motor access to practical solutions for people with disabilities, top athletes, and others looking to enhance their motor skills. As technology develops and interdisciplinary cooperation increases, the field is poised for even more ground-breaking discoveries and applications in the years to come [21,22].

Physical activity through physiotherapy interventions provides evidence-based benefits for stress disorders through neuromuscular relaxation and autonomic nervous system rebalancing; for anxiety through exercise-induced parasympathetic activation and tension

relief; for depression through neurochemical modulation and behavioral activation; for ADHD through dopaminergic and noradrenergic enhancement; and for sleep disturbance through circadian rhythm regulation and sleep homeostasis promotion. Beyond psychiatric symptom reduction, physiotherapy addresses comorbid musculoskeletal conditions common in psychiatric populations while simultaneously improving psychiatric outcomes—a synergistic benefit unavailable from single-condition focused interventions.

Clinical recommendations for psychiatrists and mental health professionals include: (1) Integrating Physiotherapy into comprehensive treatment plans for psychiatric patients; (2) Referring patients with ADHD, depression, anxiety, and stress disorders for structured exercise programs; (3) Utilizing relaxation and breathing techniques as primary interventions for stress and anxiety; (4) Employing group-based exercise for social and recreational benefits; (5) Selecting Electrotherapy Modalities (LASER, Ultrasound) less likely to trigger distress in psychiatric populations; (6) Addressing comorbid musculoskeletal conditions through physical rehabilitation; and (7) Advocating for adequate physiotherapy resources in psychiatric institutions.

Future directions require: (1) Expanded research investigating physiotherapy outcomes in diverse psychiatric populations; (2) Comparative effectiveness studies between physiotherapy modalities; (3) Cost-effectiveness analyses supporting resource allocation; (4) Development of integrated treatment protocols combining psychiatric and physical rehabilitation approaches; (5) Training programs ensuring physiotherapists understand psychiatric symptomatology and safely manage psychiatric patients; and (6) Psychiatric clinician education regarding physiotherapy applications in psychiatric care.

In conclusion, physiotherapy represents a cost-effective, evidence-based, non-pharmacological intervention capable of substantially improving psychiatric and physical outcomes. By promoting good physical health through structured rehabilitation, physiotherapy enhances mental health and quality of life in psychiatric patients. The integration of physiotherapy into standard psychiatric care represents a significant opportunity to improve treatment efficacy and patient outcomes while addressing the holistic health needs of individuals with mental health disorders.

Funding: - No funding was provided for study.
Conflict of Interest: - No conflict of interest.
Acknowledgement: - The researcher would like to acknowledge the support and contribution of institute and co-authors.
Informed Consent Statement: - A prior written consent was taken from all the participants before the recruitment.
Data availability Statement: - The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

REFERENCES

1. World Health Organization. Preamble to the Constitution of the World Health Organization. Adopted by the International Health Conference, New York, 19-22 June 1946; Signed on 22 July 1946 by the representatives of 61 States (Official Records of the World Health Organisation, no. 2, p. 100). Official Records of the World Health Organisation, no. 2. 1948.
2. Horwitz AV, Scheid TL. A General Model for Classifying the Concept of Disorder. In: Horwitz AV, Scheid TL, eds. A Handbook for the Study of Mental Health: Social Contexts, Theories, and Systems. Cambridge: Cambridge University Press; 1999. p. 1-26.
3. Olfson M, Gerhard T, Huang C, Crystal S, Stroup TS. Premature mortality among adults with schizophrenia in the United States. Journal of Psychiatric Research. 2015;63:1-8. doi: 10.1016/j.jpsychires.2015.02.008
4. Gardiner MD, Dena M. The Principles of Exercise Therapy. 4th ed. New Delhi: CBS Publishers and Distributors; 2005. p. 145-201.
5. Ekkekakis P. The dual-mode theory of affective responses to exercise in metatheoretical context: II. Bodilynesses and 'the stone in my shoe'. International Review of Sport and Exercise Psychology. 2009;2(2):139-160. doi: 10.1080/17509840902960772
6. Sonuga-Barke EJ, Brandeis D, Cortese S, et al. Nonpharmacological interventions for ADHD: systematic review and meta-analyses of randomized controlled trials of dietary and physical interventions. American Journal of Psychiatry. 2013;170(3):275-289. doi: 10.1176/appi.ajp.2012.12070991
7. Gbiri CA, Akinpelu AO, Akinwande OM. Description of physiotherapy services in mental health institutions in Nigeria. South African Journal of Physiotherapy. 2011;67(3):2-7. doi: 10.4102/sajp.v67i3.67
8. Kaur J. Role of Physiotherapy in Mental Health Disorders. Delhi Psychiatry Journal. 2013;16(2):233-242.

9. Hirschowitz R, Orkin M. Trauma and Mental Health in South Africa. Social Indicators Research. 1997;41(1-3):169-182. doi: 10.1023/A:1006887627270
10. Girsa S, Saharan AK. Effect of Task Oriented Training with Conventional Therapy and Conventional Therapy Alone in Hemiparesis: A Comparative Study. Indian Journal of Physiotherapy & Occupational Therapy. 2022 Jul 1;16(3).
11. Pallewar M, Kumar Saharan A, Gouru V. The effect of neural mobilization with cervical traction in cervical radiculopathy patients. International Journal of Development Research. 2021;11(4):45913-7.
12. Jain P, Saharan AK, Vishnoi CS, Bhati MP, Sharma P. Single IASTM and cupping therapy session improves pain and disability in patients with non-specific low back pain. GSC Advanced Research and Reviews. 2022;11(3):045-50.
13. Nelakurthy S, Saharan M, Saharan AK. A Comparative Study to Evaluate the Effectiveness of Mulligan's BLR Versus Traction SLR Techinique in Non-Specific Low Back Pain. Journal of Shanghai Jiaotong University, ISSN. 2020 Sep:1007-172.
14. Nelakurthy S, Saharan M, Kushma P, kumar Saharan A. A Comparative study to evaluate the Effectiveness of Conventional Therapy Alone and Combined with Neural Mobilization in Patients with Cervico Brachial Pain. Pramana Research Journal, ISSN. 2020 (2249-2976).
15. Saharan DA, Kathju DV, Vyas DA. Participation in play & leisure activities of children with cerebral palsy in Rajasthan. International Journal of Development Research. 2017;7(10):16201-13.
16. Saharan A. Nutritional Strategies for Pain Relief. Pain Management in Physiotherapy. 2024:29.
17. Jain P, Saharan AK, Vishnoi CS, Bhati MP, Sharma P. Single IASTM and cupping therapy session improves pain and disability in patients with non-specific low back pain. GSC Advanced Research and Reviews. 2022;11(3):045-50.
18. Mahanta M. Women and mental health: a study of social attitude with special reference to the Sonitpur district of Assam (Doctoral dissertation).
19. Mahanta M. Myth, stereotype and illness: It's effect on human life. International Review of Social Sciences and Humanities. 2012;3(2):230-5.
20. Khan DI, Shrivastava DG, Sharma DS, Singh DI, Sharma MN. Understanding Learning Disabilities: Integrating Educational Strategies and Psychological Interventions. Educational Administration: Theory and Practice. 2024;30(4):1035-41.
21. S Sharma, A Sharma, N Vyas. Neuromotor Psychology. Editor Rajesh Kumar in Current Advances in Physical Education and Sports Science. AkiNik Publications, Edition: 2023, ISBN No. 978-93-5570-930-1.
22. Mahanta M. Double Stigmatization: Fighting with Mental Illness and Womanhood.