وزارة الصحة
Ministry of Health

Guide to Medical Rehabilitation Services in Mental Health

(First Edition)

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Ministry of Health

List of Content

I. List of definitions

- **A forensic patient:** is an individual (often a prisoner) who has been involved in the legal system due to mental health issues and is receiving treatment or care within a secure medical or psychiatric facilities (American Psychiatric Association, 2013) (Gold& Frierson,
- **Legal guardian:** is the person responsible for the patient legally, or legally entitled to sign on behalf of the patient in the event of his inability discriminatory, mental or health.
- **Mental health facility:** Mental health facility: It is the facility that meets the specifications of mental health care and provides psychological services, including diagnosis, treatment and rehabilitation. These facilities can be independent, such as psychiatric clinics or hospitals, or affiliated with other healthcare establishments, such as public or private hospitals. Executive-Regulation-of-Menatl-Health-Care (1).pdf
- **Patient Responsibilities**- accountabilities expected from a patient / family during their stay in the hospital.
- **Patient Rights** – privileges/ rights conferred to a patient during their stay in the hospital.

II. List of abbreviations

- **3MS**- Modified Mini-Mental State Examination
- **ACL**- Anterior Cruciate Ligament
- **ACLS**-Allen Cognitive Level Screen
- **ACT** - Acceptance and Commitment Therapy
- **ADHD**- Attention Deficit Hyperactivity Disorder
- **ADL**- Activities of Daily Living
- **AFO** - Ankle Foot Orthosis
- **AMPS**- Assessment of Motor and Process Skills
- **AusTOMs**-Australian Therapy Outcome Measures
- **BLS** - Basic Life Support Certificate
- **CBT**- Cognitive Behavioral Therapy
- **C.M.E** - Continued Medical Education
- **CMOP-E**- Canadian Model of Occupational Performance and Engagement
- **COMP**- Canadian Occupational Performance Measure
- **CPO**-Certified Prosthetics And Orthotics
- **CR**- Cognitive Remediation
- **CRT**- Cognitive Remediation Therapy
- **CV**-Curriculum Vitae
- **DACSA**-Domestic and Community Skills Assessment
- **DASS**- Depression, Anxiety, Stress Scale
- **FIM** - Functional Independence Measure
- **GAS**- Goal Attainment Scale
- **HoNOS**- Health of the Nation Outcome Scales
- **IADL** - Instrumental Activities of Daily Living
- **ICF**- International Classification of Functioning, Disability and Health framework
- **ILO**- International Labor Office
- **ILSA**- Independent Living Skills Assessment
- **KaFO** - Knee Ankle Foot Orthosis
- **HKAFO** – Hip Knee Ankle Foot Orthosis
- **LOTCA**-Lowenstein Occupational Therapy Cognitive Assessment
- **MDT**- Multidisciplinary Team
- **MHR**- Medical Health Rehabilitation
- **MMT** - Muscle Strength By Manual Muscle Testing
- **MOCA**- Montreal Cognitive Assessment
- **MOHOST** - Model of Human Occupation Screening Tool
- **MTP** - Metacarpophalangeal Joints Of The Fingers
- **NPRS**- Numeric Pain Rating Scale
- **OCAIRS** - Occupational Circumstances Assessment Interview and Rating Scale
- **OSA** - Occupational Self-Assessment
- **OT**- Occupational Therapy

- **PCL**- Posterior Cruciate Ligament
- **PEO** - Person Environment-Occupation Model
- **PHD** - Doctor of Philosophy
- **PIP**- Proximal Interphalangeal Joints Of The Fingers
- **PT** - Physical Therapy
- **PMR**- Physical Medicine And Rehabilitation
- **PTSD**- Post Traumatic Stress Disorder
- **QA**- Quality assurance
- **ROM** - Range of Motion
- **SCFHS** - Saudi Commission For Health Specialties
- **SCIT** - Social Cognition and Interaction Training
- **SMART**- stands for Specific, Measurable, Achievable, Relevant, and Time-bound
- **SLP**- Speech And Language Pathologist
- **SMH**- Severe Mental Health Disorders
- **SMI** - Severe Mental Illness
- **SOAP** - Subjective, Objective, Assessment, and Plan
- **TWPs**- Transitional Work Programs
- **VAS** - Visual Analogue Scale
- **WHO** - According to the World Health Organization
- **WRI** - Worker Role Interview
- **YWD**- Youth with Disabilities
- **WEIS**- Work Environment Impact Scale

1. Introduction

In 2021, the World Health Organization (WHO) defined rehabilitation as a set of interventions aimed at optimizing functioning and minimizing disability in individuals with health conditions, particularly in interaction with their environment. In the domain of mental health, medical rehabilitation services are focused on supporting individuals in recovering lost skills, enhancing their ability to cope with the demands of daily life, and restoring relationships that may have been impacted or strained due to mental health challenges (Timms & Killaspy, 2019).

In Saudi Arabia, the demand for medical rehabilitation services within mental health facilities has experienced substantial growth. These services are coordinated across various ministries, yet there is a pressing need for further development to effectively address the expanding needs of the population. While existing infrastructure for medical rehabilitation is available, its potential remains underutilized, revealing a gap in optimizing resources to meet the increasing demand.

The primary objective of this guideline is to enhance and advance medical rehabilitation services and programs in mental health facilities by integrating specialized therapeutic interventions and evidence-based practices. Specifically, it aims to reduce the length of stay for patients with mental health and addiction disorders, facilitating their engagement in programs designed to minimize the risk of relapse and to foster confidence in achieving independence in activities of daily living (ADLs). Furthermore, it emphasizes the effective utilization of available human resources and infrastructure to deliver specialized medical rehabilitation programs that support patients' reintegration into the workforce and their successful participation as productive members of society.

This guideline, while not mandatory, serves as a comprehensive resource to assist healthcare providers in mental health settings in delivering effective medical rehabilitation services for adult patients. It outlines the roles and responsibilities of various medical

rehabilitation professionals within mental health teams, highlighting the importance of clear communication and well-established referral protocols across multidisciplinary teams.

Additionally, the guideline offers insights into assessment and intervention approaches for different medical rehabilitation specialties. The intervention is focused on addressing the specific needs and goals of patients, with an emphasis on treating the underlying issues, irrespective of whether these issues are related to mental health conditions or substance use thereby ensuring a holistic and integrated approach to patient care.

2. Common conditions referred to medical rehabilitation services in mental health.

Usually, Adult patients aged 18 years and older who have a diagnosis of schizophrenia, schizoaffective disorder, bipolar disorder, substance use disorders, or any related illnesses could be referred to medical rehabilitation services. In addition, Kazdin and Rabbitt (2013) indicated that individuals with psychiatric and mental illnesses who regularly require assistance in various aspects of their daily lives (e.g learning, work, self-care, budgeting, shopping, cooking, managing money, etc.) are also referred to rehabilitation services

3. Medical rehabilitation role.

Medical rehabilitation in mental health plays a crucial role in fostering recovery, promoting community integration, and enhancing both function and quality of life for patients. Additionally, it supports individuals in developing essential skills, increasing independence, and accessing the resources needed to live successfully and satisfyingly in their preferred environment (Luo et al., 2018).

4. The importance, significance, and distinct value of medical rehabilitation services in mental health.

According to the World Health Organization, mental health issues contribute to various physical problems that can reduce life expectancy by as much as 21 years. However, timely and effective healthcare services can significantly improve health outcomes and life expectancy. Research indicates that individuals diagnosed with severe mental illness who receive mental health rehabilitation services within the first 10 years of diagnosis experience reductions in length of stay, readmission rates, and healthcare costs (Jones, 2013). A study conducted by Petrie and Mountain (2009) in the United Kingdom found statistically significant improvements following mental health rehabilitation (MHR) admissions, with the average number of occupied bed days decreasing from 478 to 115 and the number of readmissions reducing from 2.51 to 1.17.

The biopsychosocial model has underpinned clinical practice in rehabilitation services for many years, recognizing that any of its three components—biological, psychological, and social—may be more or less relevant at different times for a client. In recent years, rehabilitation services have become increasingly linked to recovery and social inclusion (Arbuthnott et al., 2009). Rehabilitation professionals tailor their support to meet the evolving needs of individuals as they progress in their recovery (Royal College of Psychiatrists, 2019). For instance, occupational therapy plays a vital role in mental health by promoting, preventing, and intervening across the lifespan to encourage participation in meaningful activities for those with, at risk of, or without mental health challenges (American Occupational Therapy Association, 2014).

5. Medical rehabilitation Specialties.

The medical rehabilitation team in mental health is made up of a group of people, each of whom possesses skills and expertise. Therefore, in this guideline, the multidisciplinary team consists of the following:

The medical rehabilitation team:

- Occupational therapist (OT).
- Physical therapist (PT)
- Speech-language pathologist (SLP).
- Physical medicine and rehabilitation physician (PM&R)
- Certified Prosthetics and Orthotics specialists (CPO).

Other important health disciplines involved in the rehabilitation process may include and not limited to the following:

- Psychiatrists.
- Psychologists.
- Social workers.
- Mental health Nurses.

The definition and a brief description of the roles for each discipline in the medical rehabilitation team and other important health disciplines is shown in (Figure 1).

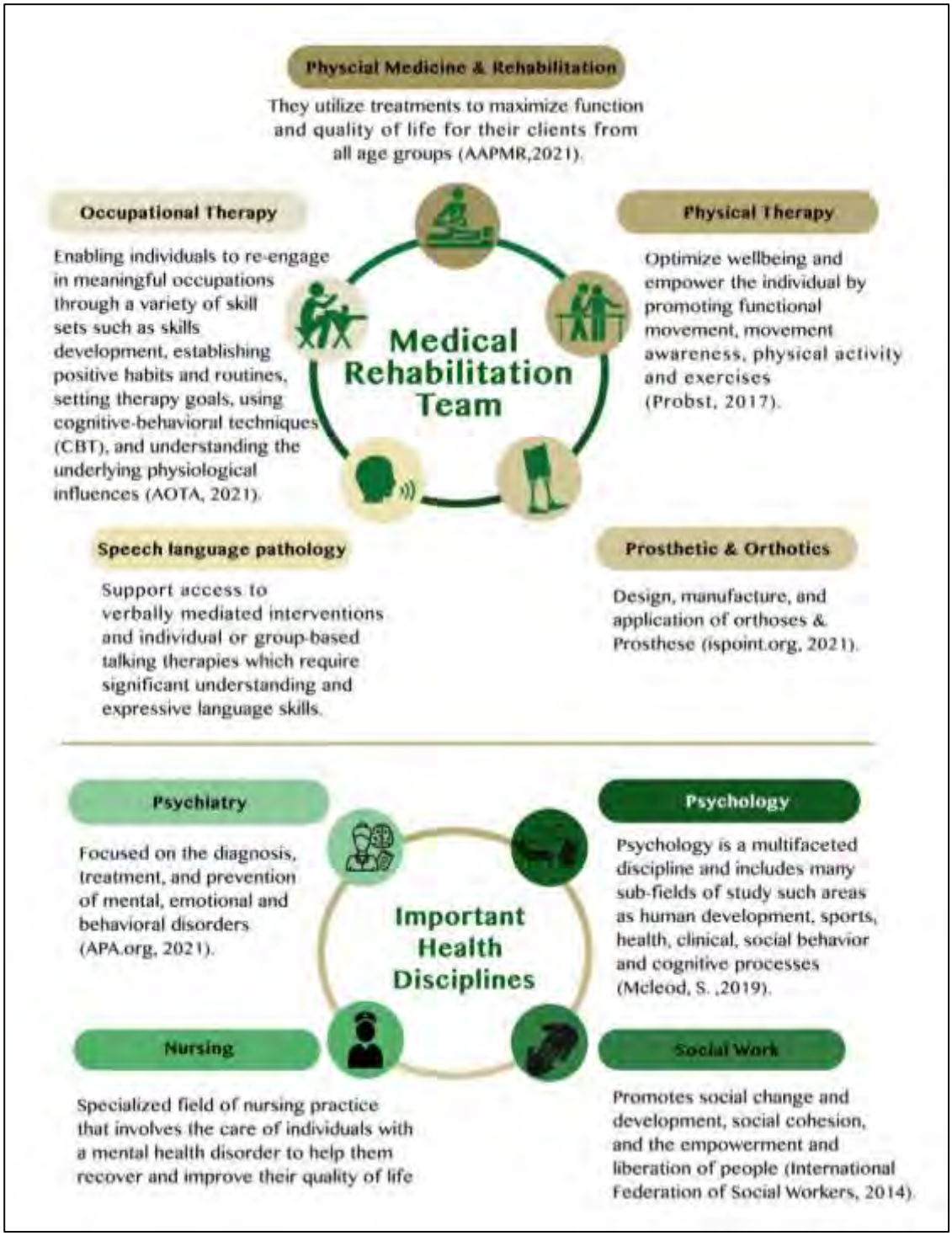

Figure 1

Medical rehabilitation team and other important health disciplines

The previously mentioned team members may adopt either a multidisciplinary or interdisciplinary approach. The multidisciplinary approach involves the collaboration of professionals from various disciplines, each contributing their expertise from their own perspective. This typically involves separate consultations with each professional, and in the absence of the patient, the team often meets regularly to discuss findings and plan the next steps in the patient's care. This approach brings together diverse knowledge and experience, offering a broader range of expertise than any single discipline could provide

In contrast, the interdisciplinary approach integrates the perspectives of multiple disciplines into a single, cohesive consultation. In this approach, the team collectively conducts the patient's history, assessment, diagnosis, intervention, and establishes both short- and long-term management goals, all while engaging the patient directly. The patient is actively involved in discussions about their condition, prognosis, and care plans, fostering a shared understanding and a holistic view of the patient's needs. This collaborative process empowers the patient to participate in decision-making and in setting goals for their care. Team members from various disciplines, along with the patient, are encouraged to question one another and explore alternative approaches to achieve the best possible outcome for the client.

6. Organizational Structure of Medical Rehabilitation Department.

The ideal structure for the medical rehabilitation departments in Mental Health facility is demonstrated in (Figure 2). Offering services such as Physical Medicine and Rehabilitation physicians and Orthotics units is based on the facility's needs and available resources.

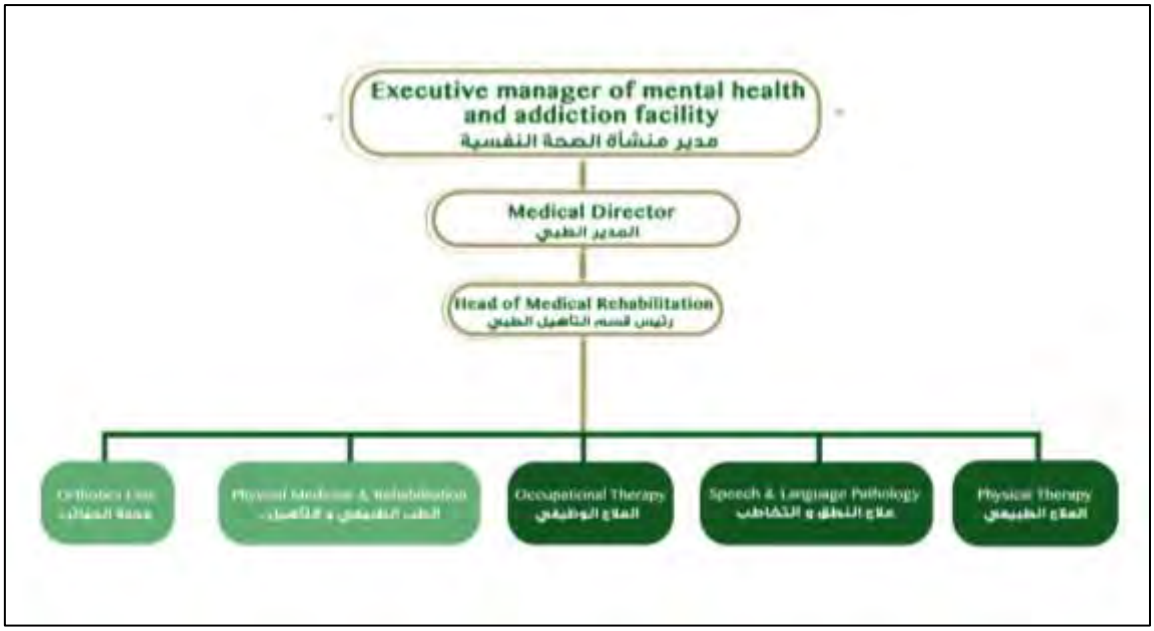

Figure 2 .
The Organizational structure of medical rehabilitation department

7. Scope of Service.

7.1 Overview:

The Medical Rehabilitation Department within mental health facilities is responsible for providing rehabilitation services to inpatients, outpatients, day care patients, and virtual clinic patients diagnosed with mental health and/or substance use disorders. The department is committed to delivering high-quality, safe, and efficient medical care, with a primary focus on improving patients' health and overall well-being. Additionally, the department prioritizes the continuous development and maintenance of professional competency by encouraging staff to stay informed about the latest evidence-based interventions.

7.2 Service Providers:

- Medical rehabilitation services are delivered by a multidisciplinary team, including Occupational Therapists (OT), Physiotherapists (PT), Speech-Language Pathologists (SLP), Physical Medicine & Rehabilitation (PMR) specialists, and Certified Prosthetics and Orthotics (CPO).
- All healthcare providers are required to be licensed by the Saudi Commission for Health Specialties and classified as technicians, specialists, senior specialists, consultants, or other relevant categories.
- All staff members maintain valid Basic Life Support (BLS) certifications and fulfill other mandatory professional requirements.

7.3 Clients:

Internal Customers:

- In-Patients
- Employees

External Customers:

- Out-Patients
- Ministry of Health
- Medical rehabilitation in clusters
- Health Holding company
- Trainees, students & volunteers

7.4 Interactions:

- Consultations are obtained from medical specialties such as psychiatry or other specialties as determined by the patient's specific condition.

7.5 Range of Services:

The medical Rehabilitation Department may provide Rehabilitation Services for:

- In-patient.
- Outpatient Rehabilitation.
- Virtual Clinics.
- Day Care Rehabilitation.

7.6 Age groups covered:

This guideline applies to adults aged 18 to 65 years and to geriatric individuals aged 65 years and older. However, individuals under the age of 18 may also benefit from medical rehabilitation services, depending on the availability of resources.

7.7 Genders: Both Males and Females

7.8 Periodic Performance improvement activities ,which may include:

- Rehabilitation Department meeting.
- Committee meetings.
- In-service training courses.
- In-service lectures.

8. Types of Medical rehabilitation services in Mental Health .

The availability of the following services (Figure 3) depends on the capacity of the facility and its resources.

Figure 3
Mental health facility setting

9. Staffing Plan.

Mental health facility should employ medical rehabilitation specialists based on their specific needs, available resources, and institutional capacity. This may include specialists in physical medicine and rehabilitation, physical therapy, occupational therapy, speech-language pathology, and orthotics and splinting. Such staffing is essential to achieving the scope of service and ensuring the provision of high-quality rehabilitation within mental health facilities. Additionally, in line with the MDT approach, other medical specialties such as nursing, psychology, psychiatry, social work, and other healthcare professionals in mental health facilities are essential to maximize and integrate rehabilitation services effectively.

The length of therapy sessions in mental health facilities can vary greatly based on the patients' specific needs and the facility's protocols. Typically, these sessions last between 45 to 60 minutes, which is ideal for a thorough approach that includes assessment, treatment, patient education, and documentation. The number of staff required to run mental health rehabilitation settings is determined by factors such as patient flow, the number of sessions conducted, and monthly and yearly statistics. This ensures that there are enough staff members to provide adequate care and support to all patients (Rocamora-Montenegro, Compañ-Gabucio, & de la Hera, 2021; Royal College of Speech and Language Therapists, n.d.; World Physiotherapy, n.d.)

10. Departmental orientation Program for Staff and Students.

Benefits of orientation:

- To reduce Startup-Costs by easy adjusting to a new job and developing associated job-related skills.
- To reduce anxiety from a new situation and provide guidelines for behaviors and conduct, therefore minimizing employee's doubts.
- To reduce employee turnover by providing the tools necessary for job success.
- To Save Time for Supervisors and Co-Workers.
- To Foster Positive Attitudes, Realistic Expectations for work, and Satisfaction

Responsibilities

The head of the department in medical rehabilitation for mental health is responsible for offering the orientation for new employee, trainee, student or volunteer. This responsibility could be delegated to assistant chief therapist who is covering during leaves using a checklist to ensure items are covered.

Process:

- All new staff must go through the orientation process and complete it within the first 40 days.
- Students and volunteers who are expected to spend around 30 working days in one of the departments in medical rehabilitation at a mental health facility must undergo an abbreviated orientation within the first week.
- Each department in medical rehabilitation in mental health facility should establish an orientation schedule; to standardize new employees' or students' departmental orientation.
- New employee should pay close attention and ensure s/he asks all questions necessary before signing the checklist with the immediate supervisor, manger or director.

Procedures

The person in charge of the Departmental Orientation Program shall review a checklist, as outlined in Appendix A : Orientation program table.

11. Training Plan for medical rehabilitation in Mental Health.

Medical rehabilitation staff are trained to address the diverse needs of patients; however, due to the limited focus on mental health education at the undergraduate level, it is essential to develop a targeted training plan for new employees and students. This plan should aim to enhance their understanding and skills in managing mental health aspects, ensuring comprehensive care for patients

Purpose:

The goal is to create an infrastructure that supports education, enhances staff skills, and keeps the department updated. This will be achieved through an educational program, with collaboration among training coordinators and department heads to ensure effectiveness of the program.

Goals:

1. Develop Skills: Train students to improve clinical and theoretical knowledge.
2. Performance Improvement: Boost department and trainee performance.
3. Regular Case Reviews: Hold weekly reviews for optimal patient care, or adjust frequency based on facility resources.
4. Scientific Discussions: Bi-weekly paper discussions to improve critical skills.
5. Enhance Clinical Research: Keep staff updated on the latest medical rehabilitation research.

Staff Training: New employees will undergo a three-month supervision period, followed by ongoing education. Personalized development plans will be created by senior therapists and the training coordinator. Therapists will conduct two annual case reviews for improvement.

Student Training: Educational programs will be regulated to provide practical experience and meet licensing requirements, with the Medical Rehabilitation Department and Academic Affairs overseeing implementation.

A structured training plan shall be created to ensure that new staff and students are well-prepared to deliver quality mental health care. A recommended training plan checklist can be utilized to guide a well-structured educational program process. A sample of checklist can be seen in Appendix B: Training plan checklist

12. Staff Peer Support.

Staff peer support in medical rehabilitation in mental health refers to a formalized system where healthcare professionals, particularly those working in rehabilitation and mental health services, offer mutual assistance, encouragement, and guidance. This approach not only promotes emotional well-being but also boosts job satisfaction and fosters a supportive environment in high-stress settings, such as mental health facilities. Peer support in rehabilitation settings helps address the challenges faced by healthcare professionals while ensuring high standards of care for patients.

Key Benefits of Peer Support in Medical Rehabilitation in Mental Health:

1. **Emotional Support:** Peer support provides a safe space for staff to share experiences, reducing emotional burdens and promoting resilience, helping mitigate burnout (Tummers et al., 2018; Moffat et al., 2021).
2. **Improved Team Cohesion:** Peer support enhances collaboration and team unity, improving care delivery and shared decision-making in multidisciplinary settings (Smith et al., 2020).
3. **Increased Job Satisfaction and Retention:** Offering emotional and professional support reduces burnout and turnover, boosting job satisfaction and retention (Perry et al., 2020; Lee & Mclaughlin, 2019).
4. **Enhanced Professional Development:** Peer support encourages knowledge sharing, fostering continuous learning and skill development (Fitzpatrick & McGill, 2020).
5. **Stress Reduction:** Peer support helps manage stress by providing a platform for sharing coping strategies and reducing burnout (Rosenberg et al., 2021).

Implementation of Peer Support in Medical Rehabilitation:

1. **Structured Peer Support Programs:** Institutions can formalize peer support by establishing structured programs in which experienced staff members are trained to provide support to newer or less experienced colleagues. These programs may involve regular check-ins, mentorship, or facilitated group discussions to ensure that the peer support system is sustainable and effective (Lazarus et al., 2019).
2. **Regular Peer Support Meetings:** Facilitating staff meetings promotes open communication and problem-solving (McAllister et al., 2020).
3. **Buddy Systems:** Pairing new staff with experienced professionals helps them adjust and reduces turnover (Grice & Schmitt, 2018).
4. **Confidentiality and Trust:** Ensuring confidentiality builds trust, making peer support meaningful (Haggerty et al., 2018).
5. **Integration with Staff Well-Being Programs:** Combining peer support with broader wellness initiatives improves staff satisfaction and well-being (Lange et al., 2021).
6. **The Use of Peer Support with Patients:**

Peer support is defined as social and emotional assistance provided by individuals who share similar experiences with the patient. Numerous studies have demonstrated that peer support groups positively impact mental health patients and their caregivers. For example, peer support enhances social support, coping strategies, and behavioral control, which leads to improvements in overall quality of life (Repper & Carter, 2011). Peer support programs are shown to reduce stigma, increase patient empowerment, and improve adherence to treatment (Pfeiffer et al., 2020).

13. Rules and Policies:

13.a General Policies:

There are general policies that workers must adhere to, including but not limited to the following:

a) Infection control
b) Fall prevention Protocols
c) Handover Endorsement Policies and Procedures and Protocols
d) Privacy and Confidentiality
e) Communication plan between departments
f) Patients' rights and responsibilities in Mental Health (Ministry of Health, n.d.)

13.b Forensic Policies:

Managing forensic cases in mental health facilities requires clear policies to ensure the safety and well-being of both patients and staff. These policies should balance security with effective therapeutic care. Key components include:

- **Risk Assessment and Management:** Structured tools to assess risk help guide treatment and safety measures, promoting both security and therapeutic progress (Singh et al., 2011).
- **Legal Framework:** Forensic Orders or Treatment Support Orders outline conditions for patient management, ensuring rights are respected while maintaining security (Kalinowski, 2016).
- **Interdisciplinary Approach:** Collaboration among professionals like psychiatrists, psychologists, and legal experts ensures comprehensive care and effective risk management (Mullen & Lester, 2014).
- **Secure Environment:** Facilities must include physical security measures, behavior management protocols, and crisis intervention training to ensure safety (Monahan, 2013).

- **Patient-Centered Care**: The goal is to provide compassionate, rehabilitative care, addressing mental health issues and promoting patient dignity, autonomy, and reintegration (Harty, 2017).
- **Rehabilitation and Recovery**: Policies should focus on rehabilitation, with tailored treatment plans addressing mental health and offending behaviors, aiming for community reintegration and mental health stabilization (Crighton et al., 2009).
- **Monitoring and Reporting**: Ongoing monitoring and reporting to authorities, such as the Chief Psychiatrist, ensure accountability, legal compliance, and high standards of care (Dolan & Tilley, 2007).

14. Referral pathways within rehabilitation disciplines:

Referral pathways within rehabilitation disciplines begin with a referral, which can be either intrafacility (from physicians within the same facility) or interfacility (from physicians outside the facility). Once the referral is received, either from the patient's primary physician or from the department of Physical Medicine and Rehabilitation, the rehabilitation team will initiate their assessment, intervention, and treatment plan. If any service identifies the need for additional intervention from another rehabilitation specialist, an intradepartmental referral can be made. The receiving department will then assess the patient and determine the appropriate course of action. In addition, in mental health facilities Patients are eligible for medical rehabilitation services once they have received doctor clearance. The following (Figure 4) illustrates the referral pathway.

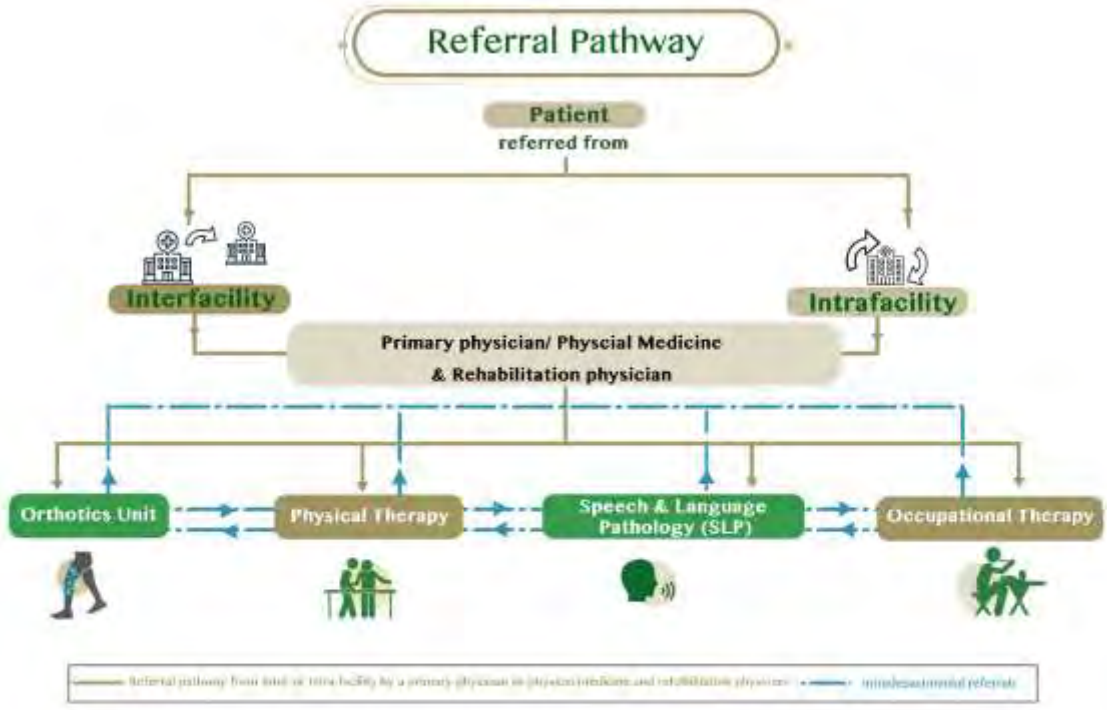

Figure 4
Referral pathway

15. Patient centered approach

It is defined as the provision of integrated, holistic, or biopsychosocial care that is sensitive to a person's needs and values, treats them with respect, decency, and compassion, and gives them a choice, engagement, and a partnership approach. Psychiatry, after all, follows a biopsychosocial approach and is fundamentally client-centered. Also, it has a long history of being accused of its emphasis on classifications of disorders that are perceived as dehumanizing people and labelling them as abnormal while disregarding significant elements of subjective experiences of culture, ethnicity, political oppression, and trauma. Therefore, implementing a person-centered approach could decrease this stigma. Though, it might pose additional difficulties due to the high number of patients held against their will and concerns about personal capability and conflicts between the individual and the public good. Nevertheless, it was found that one of the main obstacles to successful person-centred implementation in psychiatric practice is the healthcare practitioners' attitudes. (Boardman & Dave, 2020)

The ability of the healthcare provider to collaborate with patients varies greatly, according to observational studies of psychiatrists' interviewing techniques, raising concerns about professional practice and training standardization. Clinicians may mistakenly feel that providing person-centered care requires more resources and time.

Lastly, embracing a person-centered approach in medicine can have a powerful effect, bringing together not only medical professionals but other clinical and non-clinical groups working in health and social care.

16. Goal setting

Collaborative goal setting between clinicians and clients/families is considered a fundamental component in the mental health rehabilitation process (within the medical rehabilitation team). Research suggests that a fully collaborative goal setting between therapist and patient has significant and positive impact on supporting the organizational and individual time, energy, and resources to make it an integral part of the rehabilitation process (Brewer, Pollock & Wright, 2014). Also, Families play a significant role in achieving the care needs of individuals who require assistance in their recovery journey.

The process of goal setting can help families and patient prioritize their hopes by identifying something important to work toward. This collaborative goal setting can be achieved by interviewing the patient and his/her family to determine their strengths, skills, needs, interests, and challenges.

After interviewing the family and when formulating the goals, a therapist should consider the (SMART) method to set a Specific, Measurable, Attainable, Realistic, Timely-Bound goals. The following table (Table-1) provides an example of SMART vs. Vague goals (Bryant et al., 2014).

(Table-1) SMART and Vague goals	
Vague Goals ⊗	**SMART Goals ✓**
1. Sarah wants to learn to cook a meal her Mum would make.	1. Sarah is going to use the cookery group to plan and prepare a meal that she would have at home with her family within the next week.
2. Ahmed wants to take his children to the movie	2. Ahmed is going to take his children to the movies once within 3 months.

Furthermore, the following examples identifies each part of SMART goal

A - Goal: Enhance Sleep Hygiene

- **Specific:** The patient will follow a structured bedtime routine, including turning off screens one hour before sleep and going to bed at a consistent time.
- **Measurable:** The patient will maintain a sleep diary, tracking the time they go to bed and wake up, and their quality of sleep.
- **Achievable:** The patient has access to resources on sleep hygiene and has committed to improving their sleep habits.
- **Relevant:** Poor sleep is often a symptom of mental health conditions like depression and anxiety, and improving sleep is crucial for overall mental health recovery.

Time-bound: The goal will be evaluated after one month to assess the improvement in sleep duration and quality.

(Harvey, A. G., 2011)

B - **Goal: Increase Physical Activity for Mental Health**

- **Specific:** The patient will increase physical activity to support mental health by walking for 30 minutes, three times a week.
- **Measurable:** Track the number of days per week the patient engages in physical activity.
- **Achievable:** The patient is physically capable and motivated to start an exercise routine with support from the healthcare team.

- **Relevant:** Physical activity has been shown to improve mood and reduce symptoms of depression and anxiety.
- **Time-bound:** The goal will be evaluated after one month, with the possibility of adjusting the routine based on progress.

(Rebar et al. , 2015)

After setting the goals according to SMART it will be divided into two phases:

1. Short term goals: they are for primary patient's problems such as pain relief usually achieved within days to weeks.
2. Long term goals: they are for continuing patient's improvement in rehabilitation and increase independence then improve quality of life of patients.

Finally, there are various outcome measures that allows a patient to work collaboratively with his/her healthcare practitioner to set up individualized treatment goals. These goals may differ from patient to patient, but the goal attainment scale offers a standardized assessment of treatment intervention (McCue et al., 2019). For further information regarding the scoring criteria for GAS and an example for applying it refer to Appendix C: Scoring of goal attainment scale and Appendix D: Example of applying goal attainment scale

17. Progress Note (SOAP)

SOAP notes are a highly structured format for documenting the progress of a patient during treatment and is only one of many possible formats that could be used by a health professional. They are entered in the patients' medical record by healthcare professionals to communicate information to other providers of care, to provide evidence of patient contact and to inform the Clinical Reasoning process.

SOAP is an acronym for:

- **Subjective** - This section is for reporting client complaints and their concerns or questions. It can include:

    - Client's mood, feeling that day, and questions your client asked.
    - Another person's report of the client's mood, behavior, or progress (such as a teacher, parent, family member, or other medical professional).

- **Objective** - This section should be made up of quantitative, factual, and measurable data. This includes:

    - Observations of how a specific task is performed by the client.
    - How the client is performing throughout the therapeutic session.
    - Details about specific interventions or therapeutic activities the client engaged in and their response.

- **Assessment** – how the therapist analyzes the different elements of an assessment. It might include the following:
    - How the client is performing throughout the session.
    - How the client is progressing toward his/her therapeutic goal.

- **Plan** - How the intervention program will be designed to achieve the desired outcome (goals). This section is also where changes in future sessions would be documented. Such as:
    - Therapeutic activities, Objectives or Therapy frequency.
    - Does a new referral need to be made?
    - Are any accommodations or modifications recommended?

18. Discharge planning

Discharge planning is an essential part of the medical rehabilitation process, ensuring continuity of care as client's transition from healthcare facilities to their preferred environments. It involves creating a personalized plan that promotes a smooth transition, prevents complications, reduces medication errors, and minimizes the risk of readmission. Ideally, discharge planning begins as soon as a client is admitted and is based on a comprehensive assessment of their needs. It should be a collaborative process involving the client, their family, and the healthcare team.

Discharge decisions are made for two main reasons: when clients have achieved their goals and progress has been made, or when no further progress is expected and the client has reached their maximum therapeutic potential. Regardless of the reason, many clients will require ongoing care after discharge. To support this process, discharge checklists can help ensure that all necessary components for a safe transition are addressed.

A discharge summary is a key part of the plan, prepared while the patient is still in the facility, and provided to the client or sent to other healthcare providers. Once discharge is approved by the client and the rehabilitation team, the following should be provided:

- Contact information for the facility in case of emergency or follow-up appointments
- A written report detailing the client's plans and prognosis
- Family education sessions, led by a health educator, outlining what to expect, what to report, and when to seek professional help
- Prescriptions for medical equipment or environmental modifications, if needed
- Follow-up appointments at outpatient or virtual clinics
- Recommendations for community services, such as supported housing, day-care, or home care

Finally, healthcare providers should assist families by offering resources, including support groups, organizations, equipment recommendations, and helpful websites. This ensures the ongoing support and successful transition of the client into their community

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19. Medical rehabilitation in Mental health

A. Occupational Therapy

A.1. What Is Occupational Therapy?

Occupational therapy is a client-centered health profession that promote health and well-being via occupation. The fundamental purpose of occupational therapy is to enable people to engage in daily activities. This outcome could be achieved by working with people and communities to improve their capacity to engage in occupations that they desire, need, or are expected to do, or by modifying the environment or the occupation to support their occupational participation *(WFOT, 2012).*

A.2. Occupational Therapy in Mental Health

Occupational therapy understands how regular occupational activity affects both mental and physical health. Occupational therapists believe that the interaction between people and their settings affects occupational performance, organization, choice, and satisfaction. Occupational therapists' approach mental health with this unique perspective that considers a person's needs within context of family and community.

A.3. Who might need occupational therapy?

According to Margaret Swarbrick and Susan Noyes, people who are diagnosed with schizophrenia, bipolar, and major depressive disorder -the most common serious mental illness (SMI) diagnoses- can benefit from effective occupational therapy program that improve occupational functioning and engagement. Also, licensed occupational therapy practitioners can provide expertise to clients with barriers to wellness and recovery such as cognitive impairments; sensory needs; and difficulties with activities of daily living (ADLs), instrumental activities of daily living (IADLs), and social interactions (Swarbrick & Noyes, 2018).

A.4. Importance and significance of Occupational Therapy

Occupational therapy has a rich history of promoting mental health in all areas of practice through the use of meaningful and enjoyable occupations, and by using a wellness and recovery-oriented approach as it aligns with the person-centered and occupation-based practice. So, the aim of occupational therapy services in mental health is to help all individuals to develop and maintain positive mental health, prevent mental illness, and recover from mental health issues to live meaningful and productive lives (AOTA, 2016).

It is evident that occupational therapists can uniquely add to early intervention teams with their strong focus on function through occupational engagement. In addition, they found that providing effective evidence-based practice in the earliest stages of (SMI) can offset cognitive impairments and improve functioning and social relationships, these authors found s for occupational therapy interventions with this population included. These evidence-based practice included: cognitive remediation (CR), cognitive–behavioral therapy (CBT), supported employment and supported education, and family psychoeducation interventions. With expertise in identifying clients' strengths and goals and addressing their challenges, occupational therapists are well positioned to collaborate with adults with (SMI) and support their engagement in education and employment (Read and colleagues, 2018). In a systematic review of current research, Noyes et al., 2018 found strong evidence for interventions that was provided by occupational therapists to address employment, including those based on the individual placement and support model, as well as cognitive remediation and social skills training. These types of intervention demonstrated many positive results on clients, whether it was used individually or in combination, including longer job retention, increased competitive employment rates, and enhanced quality of life (Noyes et al., 2018).

A.5. The Role of occupational Therapy in Mental Health

Occupational therapists who work in mental health facilities are focused on helping clients to re-engage in meaningful occupations through:

- Working with clients and their families to identify the occupations and activities that are important for family and personal life.
- Identifying factors that influence success in home, community, school, etc.
- Educate about effective methods for coping with the symptoms of mental illness, such as relaxation techniques.
- Work with clients to better understand the impact of mental illness & improve their behavior.
- Help change unhealthy habits, such as substance use, with healthy, meaningful ones.
- Evaluate client's values, skills, interests, and strengths to assist them to keep, adjust, or acquire appropriate job through vocational rehabilitation.
- Implement activities that teach valuable skills & help to improve social interaction and participation e.g., social skills training with a peer support group.
- Engages the patients in activities, to help them overcome barriers or restrictions in areas such as self-care, homemaking, employment, studying, socializing, and leisure.
- Occupational Therapist uses occupation/activities to promote wellness and quality of life.
- Occupational Therapists help structure lives and organize daily activities so that clients can balance everything they want, need or are expected to do.
- The Occupational Therapist focuses on the capacity building with the aim of an individual making choices regarding his/her own desired outcomes. (CAOT, 2021)

A.6. Job description:

The following (Table A-1) describe the responsibilities, duties, qualifications, and experience for occupational therapy personnel.

(Table A-1) :Occupational Therapy Job description					
	Item	Consultant	Senior Therapist	Therapist	Technician
Duties and Responsibilities	Provide written Occupational Therapy evaluation, treatment, and intervention plans for all clients.	√	√	√	
	Conducts direct and supervises occupational therapy program activities designed to rehabilitate mentally or physically disabled patients	√	√		
	Lead and undertake research and intervention activities to improve service delivery	√	√		
	Supervises the interns & trainees in their immediate assignment	√	√		
	Incorporates quality improvement strategies in clinical practice.	√	√	√	
	Act as an Expert in Clinical Practice by managing a complex clinical case load	√			
	Act as an expert clinical recourse and work with colleagues in other professions to develop and promote the role of Occupational therapy Practice, including advising multi-disciplinary teams	√	√		
	Lead on the development of evidence-based clinical protocols and policies to improve outcomes of interventions	√	√		
	Act as a consultant on clinical problems and discuss diagnosis &treatment plans with the medical team.	√	√	√	

(Table A-1) :Occupational Therapy Job description					
	Item	Consultant	Senior Therapist	Therapist	Technician
Duties and	Directs and supervises the work of occupational therapy technicians and assistants.	√	√	√	
	Develops and Teaches activities of daily living for the physically or mentally disabled using appropriate techniques with adaptive equipment; devises appliances and gadgets as necessary to make it possible for patients to carry out tasks of everyday living to maximize independence.	√	√	√	
	Makes rounds with Physicians/Surgeons, as requested, to discuss patient progress under occupational therapy.	√	√	√	
	Provide occupational profile and performance analysis.	√	√	√	
	Prepares patients for discharge, teaching them precautions, and provide them with home exercise program)	√	√	√	
	Communicates all changes in patient condition to the physician.	√	√	√	
	Prepares orders for new materials needed or major equipment repairs; maintains records and inventory of property and supplies; prepares relevant budget and accountability report data.	√	√	√	
	Evaluates the home environment and suggests a modification to provide a barrier free environment.	√	√	√	

(Table A-1) :Occupational Therapy Job description					
	Item	Consultant	Senior Therapist	Therapist	Technician
	Assesses the pre-driving and driving behavior and abilities and retrain when necessary, using appropriate assistive devices.	√	√	√	
	Assessment in the areas of functional cognition, sensory-motor processing, skills, interests, employability/school performance, self-care, productivity, and leisure.	√	√	√	
	Educate the patient's family by demonstrating techniques designed to maintain or improve patients' independence.	√	√	√	
	Performing administrative duties including booking appointments and answering telephones.				√
	Gathering, evaluating, and documenting necessary data from patient, such as clinical history.				√
	Assist the therapist in the treatment of individuals of all ages & implement plan of intervention				√
	Maintaining accurate patient treatment records.	√	√	√	√
	Work is conducted in a professional manner and maintains patients' confidentiality when required.	√	√	√	√
Duties and Responsibili	Coordinates with the members of the team to conduct recreational activities for the patients.	√	√	√	√
	Participates in ongoing education programs developed by the department, e.g. Department	√	√	√	√

(Table A-1) :Occupational Therapy Job description					
	Item	Consultant	Senior Therapist	Therapist	Technician
	Policy and Procedures, Fire Safety, Risk Management, Environment control.				
	Complies with facility dress code.	√	√	√	√
	Performs other relevant tasks and obligations within the scope of the employee's skills, knowledge, and abilities.	√	√	√	√
	Holds monthly meetings, case review, journal reports and conferences.	√	√	√	
	Participates in the development of the overall department, QA issues , in-service education and support positive changes	√	√	√	
	Adheres to all facilities and Departmental Policies and Procedures as applicable	√	√	√	√
	Function as an autonomous Occupational Therapist, responsible for the delivery, safety, and effectiveness of occupational therapy services within the mental health program, in collaboration with the multi-disciplinary team.	√	√	√	
	Provide or consult on follow-up support to clients, families, employers/schools, and multi-disciplinary team consistent with Occupational Therapy treatment and intervention plan.	√	√	√	
	Maintain punctual and regular, established work hours	√	√	√	√

(Table A-1) :Occupational Therapy Job description					
	Item	Consultant	Senior Therapist	Therapist	Technician
Qualifications and experience	Valid basic life support BLS certificate + registered by Saudi Commission for health specialties SCFHS)	√	√	√	√
	PhD degree in occupational therapy and from an accredited institution (Rehabilitation), plus the required clinical internship for professional registration. 5 years' experience in OT.	√			
	Masters' degree in occupational therapy and from an accredited institution (Rehabilitation), plus the required clinical internship for professional registration. 2 years' experience in OT.		√		
	Bachelor's degree in occupational therapy and one year of internship experience			√	
	Diploma degree in occupational therapy and one year experience				√

A.7. Problem list

The problem list will be written according to client's priority. It may include, but not limited to:

- Motor (e.g., Psychomotor activity).
- Sensory (e.g., Hallucination, Delusion).
- Cognitive (e.g., Decision making, Problem solving).
- Intrapersonal (e.g., self-concept, feelings).
- Interpersonal (e.g., socialization, communication).

- Self-care (e.g., Basic and instrumental activities of daily living).
- Productivity (e.g., Work, job).
- Leisure (e.g., Interest, enjoyable activities).

A.8. Assessment

All interventions are built around rigorous and valid assessment, which is essential to determine the efficacy of any given intervention. Each evaluation is composed of initial screening and comprehensive assessment. The process of initial screening is necessary to decide whether occupational therapy services can be beneficial at this stage or not. Assessment begins from the moment a referral is received, however, there are some factors influencing whether to accept it or not, such as:

- Client's objectives, expectations, and perspectives on occupational therapy
- The available resources, including manpower and expertise
- The client's social networks and support systems
- The purpose of referral

After accepting a referral, a comprehensive evaluation is conducted to identify the client's needs, strengths, skills, interests, and objectives (goals). Moreover, effective assessment leads to setting SMART goals, outlining expected outcomes, and implementing appropriate interventions. It also establishes a baseline from which change can be measured (Bryant et al., *APPROACHES TO PRACTICE* 2014).

The Occupational Therapist in Mental Health aims to assess the individual's mental health status and function.

- **Initial assessment**

The initial assessment, undertaken at a location negotiated with the individual, uses a range of evidence-based assessment tools to determine rehabilitation requirements. This includes a comprehensive assessment considering all details of the illness history including:

- **Occupational profile:** Information regarding an individual's occupational history (including experiences, education, patterns of daily living, interests, values, and needs).
- **Analysis of occupational performance:** Assessments conducted to identify factors that facilitate or limit occupational performance, addressing the person (client/individual factors, performance skills), occupations, and environments.
- **Other components of the Initial Assessment may include:**
  - Assessing patients' appearance
  - Attitude towards the examiner
  - Mood and affect – depression or euphoria.
  - Thought – relevant or not. Any form of delusion.
  - Perception – any type of hallucination.
  - Speech – appropriate or not.
  - Orientation –time, place, and person.
  - Memory- immediate, recent, and remote.
  - Insight – about his illness.
  - Problem-solving and judgment
  - Behavior and psychomotor activity.
  - social skills

The assessment process involves gathering an occupational profile through informal and formal interviews with individuals and their families/support systems, and specific assessment tools (standardized and non-standardized), as indicated.

- **Assessment tools**

For individuals referred for occupational therapy services, a screening by OT is recommended. Screening allows for the occupational therapist to quickly assess whether an individual needs a more in-depth occupational therapy evaluation with treatment

recommendations and helps to determine the type of occupational therapy services to provide.

The following are examples of assessment tools - but not limited to- that can be used in mental health. Some of them needs a certain practice and certificate to be able to apply it:

- Canadian occupational performance measure (COMP)
- Comprehensive Occupational Therapy Evaluation Scale (COTE Scale)
- Lowenstein occupational therapy cognitive assessment
- Mini-mental state examination
- Modified mini-mental state examination
- Montreal cognitive assessment (MOCA)
- Depression, Anxiety, Stress Scale (DASS-42)
- Functional Independence Measure
- Independent Living Skills Assessment (ILSA)
- Assessment of Occupational Functioning
- The Modified Interest Checklist
- The role checklist
- Volitional questionnaire version 4.1
- Domestic and Community Skills Assessment (DACSA)
- Depression, Anxiety, Stress Scale (DASS-42) (Collister & Alexander 1991)
- Loewenstein Occupational Therapy Cognitive Assessment (LOTCA)
- Minnesota multiphasic Personality Inventory.
- Allen Cognitive Level Screen (ACLS-5)
- Worker Role Interview (WRI)
- Work Environment Impact Scale (WEIS)
- Bay area functional performance evaluation.
- Assessment of Motor and Process Skills (AMPS)

- The Occupational Circumstances Assessment Interview and Rating Scale (OCAIRS)

(Hemphill-Pearson, 2007)

A.9. Models of practice

A Practice Model provides practitioners with terms to describe the practice, an overview of the profession, assessment tools, and an intervention manual. Using a practice model allows for a systematic review of the client and is an important step in providing evidence-based practice.

Mental health occupational therapists prefer to use the functional model of disability, in which the focus is on what the client can and cannot do, and not on their illness (World federation of occupational therapists 2006).

The most common models used by occupational therapists in mental health are the Model of Human Occupation, or **MOHO** (Lee et al., 2012)**,** and the Person Environment-Occupation Model, or **PEO** (Law et al., 1996). MOHO model focuses on how an individual engages in activities within environments and how the individual shapes and is shaped by the activities (Kielhofner, 2008), through emphasizing the following:

- **Volition**: refers to a person's values, sense of ability, and level of satisfaction.
- **Habituation**: refers to a person's daily patterns and behaviors, including social duties.
- **Performance Capacity**: An individual's ability to do things based on physical and mental components, and how they experience the world.
- **Environment**: Consists of the physical surroundings, objects, interaction with other people, and any meaning associated with it.
- **Occupation**: In addition to the actual activities, it refers to participation, performance, skills, identity, competence, and adaptation.

Person-Environment-Occupation Model (**PEO)** focuses on the interaction between the person, occupations or activities in which they engage, and the environments or contexts that they are in. Together, these three components interact to form occupational performance.

Occupational performance is defined as the experience of a person engaging in activities within the environment. This model recognizes that occupational performance can change over time due to developmental changes, environmental challenges, or occupational needs. The use of this model allows for an occupational therapist to address these three main components to support an individual in improving occupational performance.

Similar to PEO and a very useful model is the Canadian Model of Occupational Performance and Engagement, or **CMOP-E** (Gunnarsson, et al (2021). **CMOP-E** model goes beyond occupational performance to cover the concept of occupational engagement. The engagement element makes the model unique and useful for patients with mental issues. This expansion is related to how this model can be used to enable clients to choose and perform meaningful occupations in their environment. In evaluation, occupational therapists may use the Canadian Occupational Performance Measure (COPM) tool to assess the client's occupational performance and its related difficulties. The client can also rates the level of satisfaction and performance of those identified difficult occupations. Occupational therapists are thus able to provide treatment according to the client's individual needs.

Additionally, Dunn's Model of Sensory Processing (Dunn, 2001) is used for sensory-specific assessments and interventions. This model considers the importance of neurological thresholds, response or self- regulation strategies, and the interaction between thresholds and strategies. The common terms used are:

- Low Registration (high neurological threshold, passive response strategies): An individual experiencing low registration may not notice environmental cues and appear to be oblivious or not fully connected. However, most events are not intense enough for them to process.
- Sensory Avoiding (low neurological threshold, active response strategies): abnormal or overwhelming sensory input may be disturbing or challenging to process. An individual may limit sensory input by having strict rules and habits or appear withdrawn.

- Sensory Seeking (high neurological threshold, active response strategies): A person seeking sensory input may appear to be highly active and energetic. New events and excessive stimulation are frequently sought to meet sensory needs.
- Sensory Sensitivity (low neurological threshold, passive response strategies): An individual may be much more aware of sensory input, which can be challenging in unstructured environments. Planning and forming activities that offer more predictability can be beneficial.

Occupational Adaptation may also be referenced, which is an occupational therapy model that is focused on the individual making internal adaptation or change to meet occupational demands (Ikiugu & Ciaravino, 2007).

Many frames of reference can supplement and be incorporated into occupational therapy practice, such as cognitive-behavioral, psychodynamic, and functional group models, to guide best practices (Wykes et al.,2008; Kielhofner, 2009; Creek and Lougher 2011). Occupational therapists can also integrate specific models or theories related to mental health practice of other disciplines such as the transtheoretical model of health behavior change (Prochaska & Velicer, 1997), harm reduction model (Harm Reduction Coalition, n.d.), and wellness model (Substance Abuse and Mental Health Services Administration, 2016).

Although Occupational justice not a model, it is an important component of occupational therapy practice. Occupational therapists recognize that individuals may experience injustices that may limit their ability to choose or participate in meaningful occupations and impact their quality-of-life (Stadnyk, Townshend, & Wilcock, 2010). By using an occupational justice approach, occupational therapists focus on removing the barriers and encouraging a diverse and inclusive society for all individuals.

Eventually, there are many types of models of practice that can be used for mental health rehabilitation by therapists. Selecting the model of practice depends on the patient's issues and needs as well as the skill and familiarity of the therapist in a selected model.

A.10. Intervention

Once the goals are identified, the client and occupational therapist collaborate to design an intervention plan. The responsibility is shared, so the individual can start taking ownership and control of their recovery. The aim of the intervention plan is to identify meaningful activities that will support and encourage the service user to re-engage in activities to help accomplish their goals. This can involve individual and/or group work and may involve caregivers, if the service user consents to this, and other professionals when appropriate (Bryant et al., 2014).

- *Choice of activity*

The skill of the therapist is to help the service users identify activities that are at the right level of challenge, to make it possible for them to succeed and reach their full potential. Tasks could vary from simple to difficult; for instance, preparing meals might involve anything from making a sandwich to coordinating, planning and cooking a dinner for a family. Within this process, the therapist will think about what skills are required during the performance of the activity, and how activities can be adapted to meet the skill level of the service user. This process is called 'task analysis' and it helps to identify the sequence of steps before carrying out a detailed activity analysis (Bryant et al., 2014).

The location and time of treatment session should be discussed and agreed upon by the client, occupational therapist, and other service providers. This considers:

- When the service user feels more alert and confident.
- The impact of medication.
- When energy levels are higher.
- Fitting in around everyday activities and duties.
- Ensuring it does not interfere with other activities the client is involved in during the day or week.
- Time factors involved, such as preparing for and setting up therapy session
- Risk management, to minimize the possibilities of any unpleasant incidents, yet permitting for positive risk-taking.

The therapeutic program should be developed with consideration for the client, occupational requirements, and goals. Group therapy can be run when the therapist is able to allocate other clients with similar functional needs and rehabilitation goals. They must have all agreed they would like to engage in a therapeutic group session to achieve their goals (Bryant et al., 2014). The suggested therapeutic activities may be influenced by different factors, such as:

- Motivation, interests, meaning of activity to service user.
- Occupational needs.
- Abilities and skills.
- Service users' values.
- Client's cultural and personal values
- How it relates to goals.
- The relevance to their environment and rehabilitation goals.
- Current skill level, according to task analysis and/or activity analysis.
- The therapist's expertise and abilities, as well as the available resources.

When the clients are unable to decide which activities they prefer and would help them reach their objectives, the therapist must be both innovative and reasonable in providing activity suggestions. This may include:

- Find out the activities that the client has recently participated in, either at home or in the community.
- Previous interested activities that provided an opportunity for personal accomplishment
- Activities that have motivated or provided a sense of achievement.
- Suggesting cultural activities.
- Obtaining information from the internet or journals.
- Interest checklists.

- spiritual experiences, such as prayer, attending places of worship, accessing online religious resources or singing song.

(Bryant et al., 2014).

➢ Occupational therapy Methods

Broad strategies as well as methods of interventions and outcomes are specified in the Occupational Therapy Practice Framework. The outcome of supporting health and participation in life through engagement in occupation is emphasized, but specific outcomes are also listed. This rendition of intervention makes it easier to set specific goals and to assess their outcomes. Because the practice framework defines broad strategies and methods of intervention, it also makes it easier to assess the outcomes of those strategies that you may use in practice. Methods are: (1) to create and promote health, called health promotion; (2) to establish or restore health, called remediation or restoration; (3) to maintain health; (4) to modify, called compensation or adaptation; and (5) to prevent, called disability prevention. These broad methods are delivered through four interventions (Cara et al, 2005):

a. **Consultation.**
b. **Education.**
c. **Therapeutic use of self** is defined in the practice framework as "a practitioner's planned use of his or her personality, insights, perceptions, and judgments as part of the therapeutic process"
d. **Therapeutic use of occupations** have been recognized throughout the history of occupational therapy as the core process of the profession. There are many ways to think about and discuss activities and occupations, and there is much information regarding activity and occupational analysis in occupational therapy. According to Fidler and Veldesview, the basic elements of an activity analysis are: (1) form and structure, (2) properties, (3) action processes, (4)

outcome, and (5) realistic and symbolic meaning. Each of these categories is explained in the following (Table A-2):

(Table A-2): Activity Analysis elements	
1. Form and structure	Provide the rules and procedures, time to complete, and sequences that ensure predictable products or outcomes. Form and structure tell us how extensive and explicit the rules are, if the rules can be changed without significantly changing the activity, what the sequences in the activity are, and how long the activity will take to complete. A comparison of two crafts, forming a hand-built ceramic pot or constructing a wooden birdhouse, gives different structure due to the inherent pliable (clay) and nonpliable (wood) nature of the materials. Likewise, a self-grooming activity (basic ADL) compared with completing a meal following a specific menu (Instrumental ADL) will provide more creativity and flexibility (self-grooming) or less creativity and flexibility (following a specific menu).
2. Properties	Properties of an activity are the objects, materials, space, setting, equipment, and number of people required for an activity. These requirements dictate the nature of the activity and how it will impact the client. For example, projects that can be accomplished by hand or with the aid of tools may convey different meanings. A knitting project that is done by hand usually claims more respect (and more money) in our society than a knitting project that uses a knitting tool.
3. Action process	Action processes identify the sensorimotor, cognitive, psychological, and interpersonal functions that the activity may demand. For example, a sports game such as flag football involves more sensorimotor processes than does watching sports, but watching sports may involve more cognitive processes than a sports game. Using the same example, the game of flag football may involve more psychological processes such as competition and aggression than cognitive processes of watching the game. Finally, the sports game may involve more interpersonal processes than watching sports if one watches a sport alone.
4. Outcome	The end product of activities may be a tangible product, such as a cake, or an abstract outcome, such as a decision made or a problem solved. Also, the end product may convey sociocultural meanings or meanings concerning individual values.
5. Realistic and	Activities and their elements have an actual, literal meaning and also have significance symbolically in personal associations or societal beliefs and cultural values. For example, a gardening project suggested for a client reflects the symbolic nature of nurturing and sustaining living things and contributing to one's

(Table A-2): Activity Analysis elements	
symbolic meaning	community, therefore, it may give the client a way of accepting that she/he has the ability to nurture and care for plants, and that others may extend that same nurturing to her/him.

According to (Bryant et al., 2014), Analyzing an activity enables the therapist to:

- Understand the demands the activity will make on the service user, i.e. the range of essential abilities required for its performance.
- Assess what needs the activity might satisfy.
- Decide the degree to which the activity might prevent unwanted behavior
- Analyze the activity and determine if it's within the client's capabilities.
- discover the skills that the activity can develop in the service user; these may be specific skills, such as threading a needle, or more general transferable skills, such as reading.
- Offer a foundation for modifying and grading activities to reach specific goals.

Activity Categorization

Fidler and Velde (1999) also classify activities into broad categories that can influence which activities one will use in practice according to each specific individual and context. Based on others' research (Moore & Anderson, cited in Fidler & Velde, 1999), socialization could be explained as developing from certain experiences with games and activities. Although this idea of how one develops through games and activities is readily acceptable when thinking of pediatrics, it is no less true when thinking about adults in mental health settings. So, this method of categorizing activities according to the characteristic of games that contribute a socializing factor in people's lives is particularly important for individuals with mental illness whose overarching problems keep them functioning as best they can in society. These categories are listed in the following (Table A-3). Therapists are encouraged to think of their

client's interests and values and how they are related to the activities that they pursue in their own lives (Cara et al, 2005).

(Table A-3) : Activity Categorization		
Activity Category	**Examples**	**Characteristics**
Puzzles	• Knitting, weaving, orienteering, survivor programs • Learning computer software Negotiating the Internet	- Contain much form and structure, predictable outcomes, clear sequences, and procedures. - Client can control and expect the result
Chance	• Card games—poker or solitaire • Board games—Scrabble or Sequence Watching sports	- Contain little form and structure, unpredictable outcomes, few rules and procedures. - Client has little control or expectation regarding the result.
Game of strategies	• Card games—bridge, hearts • Board games—chess, checkers Sports participation—tennis, basketball, soccer, softball, running track	- Contain some form and structure, sequences and procedures, but they depend on the other person playing—anticipation of the other's plan in conjunction with one's own plan—and are constantly and dynamically changing. - Client has some control but less prediction of outcomes.
Aesthetic	• Attending concerts, museums, plays and critiquing music, art, or drama • Obtaining antiques or "collectibles" • Refereeing sports Performing music, art, or drama for an audience	- Less defined external form and structure and rules and procedures determined by the person. Contains an evaluative element. - Client can control the process through element of making evaluative judgments or through performance. - Actual performance is subject to less control of other's evaluative judgments.

It is important to note that the following table describes some of the interventions, but it is not limited to them. Also, many interventions could be used interchangeably between domains, depending on the client's needs, as well the clinical reasoning of the therapist. For example, distress tolerance could be used for worrying in the cognitive domain and for emotional regulation in the affective domain. So, this table may provide the therapist with a vision of the various intervention ideas and techniques that are used in mental health, and for further information, you may visit the references used

(Table A-4): Occupational Therapy Intervention bank

Domain	Symptoms, Impairment, or Conditions	Occupational issues	Intervention
Cognitive	- Poor concentration - Forgetfulness - Poor problem-solving - Distorted, irrational ideas - Obsessions - Self-critical thoughts - Indecisiveness - Worrying - Poor attention - restlessness - distractibility	• Impulsivity leading to occupational overload and imbalance, for example, shopping sprees, excessive drinking, and reckless driving. • Inability to concentrate and attend to usual daily activities • Inability to initiate or sustain activity. • Activities of daily living limitations. As	**CBT include four characteristics that distinguish it from other psychosocial approaches, as follows:** 1. It is focused on the present. CBT includes a historical assessment of the individual to provide the context to current difficulties but the therapist using CBT is more interested in exploring the presenting problem and identifying ways in which it can be addressed. 2. It is time limited. The duration of intervention and the times for evaluating/reviewing therapy is arranged between the client and the therapist 3. It is collaborative intervention. Both the therapist and the client play a role in building a mutual understanding of the current issue

(Table A-4): Occupational Therapy Intervention bank			
Domain	**Symptoms, Impairment, or Conditions**	**Occupational issues**	**Intervention**
	- Impulsivity - Racing and pressurized thoughts and speech, flight of ideas, tangential or circumstantial thinking. Jokes and punning are common with rude or vulgar connotations (Crouch et al., 2014)	evidence suggests that common problems in activities of daily living (basic and instrumental) are due to limitations in cognitive functioning such as time management, initiation, planning and organization; other common problems are related to social interactions and emotions; physical limitations affecting ADL are not as frequent (Kajsa & Marie, 2018).	and actively explore efficient coping strategies. 4. It is problem focused. The therapist identifies the individual's problems and then arranges them (through negotiation with the service user) in hierarchical importance, in order to define a list of priorities and establish the focus of interventions. (Bryant et al., *COGNITIVE APPROACHES TO INTERVENTION* 2014) ***Anxiety and stress management training***. This is often the first treatment of choice for anxiety disorders using cognitive behavioral principles (Huppert et al. 2009). Also, Craske et al reported the efficacy and cost-effectiveness of occupational therapy services on anxiety and stress. (Craske 2009). • ***Cognitive remediation therapy*** **(CRT)** (McGurk et al. 2007) and ***social cognition and interaction training*** **(SCIT)** (Roberts and Penn 2008) show evidence of improvement in cognitive functioning, notably memory – which has an impact on occupational participation and performance.

(Table A-4): Occupational Therapy Intervention bank			
Domain	**Symptoms, Impairment, or Conditions**	**Occupational issues**	**Intervention**
			• ***Distress tolerance techniques*** help the client to prepare himself for intense emotions and empower himself to cope with them with a more positive long-term outlook (May JM,2016) Sample Exercise: Putting Your Body in Charge Climb the stairs. If you're inside, go outside. Change your body position from sitting to standing. The purpose is to improve the emotional status through distracting techniques. • ***Acceptance and Commitment Therapy (ACT)*** differs from traditional CBT in that, rather than trying to teach people to have greater control on their thoughts, feelings, sensations and memories. It educates them to be aware of their ideas and beliefs and to accept their current situation. Similar to CBT, it involves experiential exercises and values guided behavioral interventions (Harris 2008). • Emphasizes changing an individual's awareness of, and relationship to their thoughts, emotions and behaviors (Steven C. Hayes & Duckworth, 2006). **Bronnie Thompson** illustrated a case that faced a problem in shaving due to pain with explanation of occupational therapy intervention to help the client overcomes his "pain" while using ACT, please visit the following link for more details (Thompson, 2021).

(Table A-4): Occupational Therapy Intervention bank			
Domain	**Symptoms, Impairment, or Conditions**	**Occupational issues**	**Intervention**
			• A ***Mindfulness Based Stress Reduction training program*** consists of individuals developing a set of personal skills through varying practices; common practices learned through this type of training include Mindful Sitting Meditation, Body Scan, Mindful Movement, Three-Minute Breathing Space, Lovingkindness Meditation, mindful-based coping strategies, mindful speaking, yoga, mindful listening, and compassion for self and others (Asuero et al., 2014; Birnie et al., 2010; Fortney et al., 2013; Shapiro et al., 2008). Shapiro et al. (2008) Reported that the mindfulness-based stress reduction strategies focus on the idea of mindfulness, enabling clients to obtain better understanding and experience for directing their attention to the current moment (Coleman & Wilhelmi, 2016). ***Provide opportunities*** to successfully accomplish short-term, simple, concrete activities. For example, preparing a cup of tea. • ***Engage in movement activities*** and mindfulness-based activities, by explores new ways of thinking and experiencing and the acceptance of things as they are, in the moment (Cara et al., *Part III: Diagnosis and Dysfunction* 2013).

(Table A-4): Occupational Therapy Intervention bank			
Domain	**Symptoms, Impairment, or Conditions**	**Occupational issues**	**Intervention**
			• ***Reestablish normal routines***: structured planning of daily occupations, and simple behavioral lists (Cara et al., *Part III: Diagnosis and Dysfunction* 2013). • ***Engage in psychoeducational groups*** concerning symptoms, such as recognizing precursors to mood changes and managing medicines (Cara et al., *Part III: Diagnosis and Dysfunction* 2013)
Behavioral	- Substance abuse - Sleeping problems - Accident prone - Altered eating patterns - Social withdrawal - Increased creativity and productivity (Crouch et al., 2014) - Self-injurious behavior due to sensory problem (Helene Andersson et al., 2020).	• Increased creativity during hypomanic period. High quantity of productivity, sometimes poor quality. • **Occupational imbalance**, for example 'Workaholic' behavior. • **Occupational Deprivation** Illness behavior keeps person from using or enjoying life opportunities. Also, Time spent on avoidance behavior or compulsive rituals	• ***Social skills training*** makes use of role play, try-out, mirroring, modelling, feedback and repetition to consolidate each person's confidence in social situations (Volz et al. 2009). • ***Role play***. This involves the enactment of stressful situations under controlled circumstances to practice alternative responses. Behavior modification methods such as modelling, role reversal, doubling and role rehearsal in simulated problem situations are used as well as feedback, repetition and homework assignments to facilitate transfer of learning to everyday life (Blatner 1996). • ***Aromatherapy*** has been found to diminish pain, improve sleep, and increase comfort and relaxation (Buckle, 2003), following the sensory approach. • ***Relaxation therapy***. Deep breathing, progressive muscle relaxation (Heron, 1996) and

(Table A-4): Occupational Therapy Intervention bank			
Domain	**Symptoms, Impairment, or Conditions**	**Occupational issues**	**Intervention**
		may, for example, lead to reduced productivity. • Reduced occupational engagement leads to sensory deprivation or repetitive compulsions lead to sensory overload that in turn exacerbates anxiety symptoms • **Occupational alienation** The 'sick role' may be used for secondary gain. responsibilities avoidance can lead to tension on interpersonal relationships. • Inability to recognize and react to social cues. Extensive and invasive interpersonal relationships create tension in social	mentalization (mind-mindedness) help the person to diminish arousal states and ultimately cope with stress (Stahl et al. 2010). • ***Psychoeducation***. Lack of insight into the illness can compound the symptoms, as they do not understand what is happening to them or their body. Information about the disorders can be conveyed using videos, handouts and talks about diagnosis, medication, and the value of support groups (Walsh 2010). As people are empowered with knowledge of the illness and the control, they have to change it, they may already feel an improvement. • ***Assist client in goal setting and planning*** and in anticipating the consequences of actions by monitoring behavior during activities. (Cara et al., *Part III: Diagnosis and Dysfunction* 2013) • ***Set realistic, step-by-step goals and behavioral "to do" lists***, grading activities and environment for successful completion (Cara et al., *Part III: Diagnosis and Dysfunction* 2013). • ***Promoting a new lifestyle***, way of living and patterns of occupation. To do this, the occupational therapist should concentrate on the engagement of the client in purposeful therapeutic activities and occupations, which are graded to foster competency, mastery and self-esteem. This improves skills and abilities

(Table A-4): Occupational Therapy Intervention bank			
Domain	**Symptoms, Impairment, or Conditions**	**Occupational issues**	**Intervention**
		contexts. Overfamiliar with strangers in manic phase (Crouch et al., 2014)	in performance areas and components. Where necessary, the therapeutic plan should involve activities of daily living (ADL) such as home management, self-care, and childcare. It is extremely important to encourage meaningful free time and leisure activities, which could provide a balanced lifestyle (Crouch et al., 2014). • ***To plan for ongoing support and aftercare***. Counselling or teaching relevant people within the work, school, community or home setting. With the help of the social worker, help the client with financial affairs if this is a problem. Plan future goals related to a sober or drug-free lifestyle (Crouch et al., 2014). • ***Weighted Modalities*** Weighted items offer the sensation of physical holding and containment, and may facilitate self-organization when an individual's capacities are tenuous. For instance, one lady who had a history of self-mutilation described a weighted vest as a "bullet-proof vest" in which "nobody can hurt me." Instead of her behavior escalating to the point at which Seclusion and Restraint would have been used, the lady now asks for her vest and finds the pressure across her back and chest helps her "stay in control" (Stromberg et al., 2004). Weighted items should be heavy enough to be effective, as determined by the individual, yet light enough to be removed at will (CHAMPAGNE & STROMBERG, 2004).

(Table A-4): Occupational Therapy Intervention bank			
Domain	**Symptoms, Impairment, or Conditions**	**Occupational issues**	**Intervention**
			• ***Reality focused*** combining unconditional acceptance with confrontation of the consequences of maladaptive behaviors, the occupational therapist guides and affirms the individual's efforts in working towards recovery and well-being.
Affective	• stress • fear • tension, • confusion • overwhelmed • angry • violent (Helene Andersson et al., 2020) • Low self-esteem • Irritability • Mood swings • Aggression • Depression (Crouch et al., 2014)	• Insufficient drive, low self-esteem and negative self-talk may lead to poor self-care, an unkempt appearance and a disorganized, untidy or dirty environment at home and at work. • **Occupational deprivation, due** to difficulty processing sensory input in the office since the lack of coordination in the office space made auditory and visual input unpredictable and was so stressful that may lead an individual to left his position.	• ***Creative activity groups.*** Concrete products are made, or practical tasks executed during these sessions, often through the exertion of creativity, while introducing participants to a new skill or leisure opportunity. Although group members do not have to sit in a circle, everyone in the room is working toward a shared goal in the 'here and now', that is, on the 'doing' and the 'being' in action as a means for clarifying feelings, motives, needs and response patterns (Croch et al., 2014). • ***Support groups.*** The purpose is to enable members to get emotional awareness by permitting clients to express their thoughts and talk about current experience that need to be processed for their recovery, as well as reflect on their life and relationships with others (Crouch et al., 2014). • ***Gaining emotional insight into the illness***. Individual counselling and group work, which can include psychoeducation, are used by the team and the occupational therapist who can provide individual

(Table A-4): Occupational Therapy Intervention bank			
Domain	**Symptoms, Impairment, or Conditions**	**Occupational issues**	**Intervention**
		• Reduced pleasure and self-efficacy in previously valued hobbies and interests • Apathy may lead to poor productivity that in turn may reinforce a low self-esteem, setting up a vicious cycle of poor occupational performance. • Multiple sensations cause stress (Helene Andersson et al., 2020).	sessions and expert occupational group therapy (Crouch et al., 2014). • ***Recreational activities*** the value of recreational activities in an occupational therapy program is that they allow for externalization of aggression and frustration and have a motivating factor by reducing apathy and negativity. They remind the client about the benefits of exercise, sports, and hobbies as methods for relieving stress and coping with tension. • These informal group activities are an important social assessment tool and provide a model for constructive leisure time use (Crouch et al., 2014). Some recommended activities include: • Sport and recreation (e.g. swimming, adapted baseball, tennis, volleyball and board games such as Trivial Pursuit, Pictionary and Scrabble) • Outings such as movies, picnics, hikes and cultural outing experiences • Ward barbecues or cooking and baking. • Concerts with talent shows. Remember: some senses, particularly smell,

(Table A-4): Occupational Therapy Intervention bank			
Domain	**Symptoms, Impairment, or Conditions**	**Occupational issues**	**Intervention**

			may be strongly linked with memories and act as a powerful trigger.
			
			• ***Creating a sensory space at home.*** The environment has a significant role in producing either a secure or anguish area. Altering the environment by using calming features or moving to a less overwhelming context was the most common strategy reported for managing sensory overstimulation (Helene Andersson et al., 2020).
			
			• ***Creating a personal sensory kit***, based on the individual preferences. the following are suggestion of tools that could be used in the client kit:
			  • Smell: Fragrances, intensities, essential oils, etc.
			  • Taste: different flavors and textured food, etc.
			  • Touch: hand cream, etc.
			  • Hearing: Singing, listening to music, etc.
			  • Sight - Light, color, moving visuals, etc.
			  • Proprioception (Awareness of body in space): Yoga, Tai chi, light stretching, weighted objects, etc.
			  • Vestibular/movement (Sensation of moving): Walking, rocking chair, etc.

(Table A-4): Occupational Therapy Intervention bank			
Domain	**Symptoms, Impairment, or Conditions**	**Occupational issues**	**Intervention**
			(Mental Health Occupational Therapy Sensory Approaches Clinical Group, 2019) • ***Engage patients in meaningful occupations*** that support personal performance successes to enhance self-efficacy while counteracting dysfunctional cognitive beliefs related to occupational performance. Offer interventions that combine belief-oriented individual and group CBT interventions with vocational training to enhance self-efficacy beliefs, reframe other dysfunctional beliefs, and improve work performance. (Ex: practicing self-monitoring that includes paying attention to thoughts and beliefs associated with each activity; rating pleasure from 0-10, helps the client create positive beliefs about mastery and ability to engage in activity.) based on Cognitive Behavioral Frame of Reference
Physical	Physical symptoms associated with sensory processing issues • Nausea • Headache • Dizziness. • Body pain. • Exhaustion, or fatigue.	• Background sensations interrupt occupations: evoking irrelevant thoughts that disrupted their daily occupations (Helene Andersson et al., 2020). • Excessive sweating causing body odour, hence social	• **Sensory diet** Designing a sensory diet involves finding experiences or activities that aid in a process known as "self-organization," by helping clients focus, calm down from an overloaded state or stay alert. For example, exercising, cleaning, moving furniture, performing isometrics, and chewing gum are examples of sensorimotor activities that are performed against resistance (CHAMPAGNE & STROMBERG, 2004).

(Table A-4): Occupational Therapy Intervention bank			
Domain	**Symptoms, Impairment, or Conditions**	**Occupational issues**	**Intervention**
	(Helene Andersson et al., 2020) Physical symptoms associated with panic attack • High blood pressure • Tachycardia • Migraine • Stomach ulcers • Dyspnea • Frequency of urination • Skin rashes • Diarrhoea or irritable bowl. (Crouch et al., 2014)	withdrawal (Crouch et al., 2014) . • Unkempt appearance from hair pulling or nail-biting Crouch et al., 2014).	When assisting people to build and implement a sensory diet, a variety of sensorimotor activities should be investigated, such as: - Calming activities: rocking in a rocking chair or listening to an audiotape of sea waves (AKA: white noise) - Alerting activities: sucking sour candy or taking a cool shower - Resistance activities: setting up tables and chairs for a group or playing tug of war (CHAMPAGNE & STROMBERG, 2004). Other interventions related to sensory approaches could be used to handle physical impairment secondary to sensory processing issues • If a panic attack happens in the middle of a session, the occupational therapist should: • In a calm manner, inform the clients that they are experiencing a panic episode and can get control by slowing their breathing. Then direct patient step by step to induce smooth, calm, regular, and fairly shallow breathing • Tell the client to put his/ her hands over the mouth, so that just a little amount of air may enter the lungs, until the carbon

(Table A-4): Occupational Therapy Intervention bank			
Domain	**Symptoms, Impairment, or Conditions**	**Occupational issues**	**Intervention**
			dioxide calms the breathing. • Encourages the person to stay rather than avoid the situation, clearly stating what will happen next and that control over the panic reaction is possible. • Reviews the incident with the person after it has passed, allays fears and devises practical ways to cope with future attacks. • If necessary, notify the medical staff about the client's panic attack. (Crouch et al., 2014) • Structuring daily routine for the client to maximize utilization of the daytime and fill the leisure and free time with activity of interests.

A.11. Vocational Rehabilitation

The concept of vocational or work rehabilitation is interpreted in various ways by different groups and professions. In the field of occupational therapy, Vocational Rehabilitation is a structured, evidence-based approach provided through a range of services, settings, and activities for working-age individuals who face health-related limitations, disabilities, or challenges with work functioning. Its primary goal is to enhance work participation (Chimara et al., 2021).

For individuals with mental health conditions, vocational rehabilitation counselors can draw from a variety of models and theoretical frameworks. These may include the Model of Human Occupation, the bio-psycho-social model, the International Classification of

Functioning (ICF), the Disability Management Model, the Person–Environment–Occupation Model, and the Model of Creative Ability (Crouch et al., 2014).

The International Labour Organization (ILO) outlines five steps in its approach to vocational rehabilitation:

(1) Vocational assessment:

- Initial interview. During the initial interview, the occupational therapist should evaluate the individual's education and training, mental health status, medical history, current treatment, and present functional abilities, including activities of daily living and leisure involvement. The therapist should also review the client's employment history, determine if they are currently employed, and, if not, how long they have been unemployed. In some cases, the client may be entering the workforce for the first time. Additionally, throughout the interview, the occupational therapist will make qualitative observations related to verbal and non-verbal behavior, communication, insight, concentration, anxiety, and other relevant factors (Crouch et al., 2014).

- Physical screening evaluation. It is essential to perform physical screening evaluation, in order to identify any physical pharmaceutical side effects and the presence of any physical and/or neurological conditions. A mobility evaluation (stooping, squatting, crouching, working overhead, handling weights, walking, climbing stairs, etc.) as well as coordination, balance and hand function screening may be of value (Crouch et al., 2014).

- Psychosocial/mental health evaluation: psychosocial or mental health evaluation is important to assess the client's emotional well-being, coping strategies, and mental health history. This evaluation helps identify any psychological or social factors that may impact the client's ability to function in a work environment. It includes evaluating the client's mood, behavior, cognitive abilities, interpersonal relationships, and any potential mental health conditions that could influence their participation in vocational activities.

- Pre-vocational skill evaluation. Include motivation to work, work habits and work endurance. The client's level of pre-vocational skills will give the occupational therapist an indication of placement options (Crouch et al., 2014).

- Vocational skill evaluation. Evaluating the skills related to specific occupation, occupational level, possible alternative occupation, and the work environment or context. The use of work samples, work simulation and on-the-job evaluations can be used to obtain an indication of work-specific abilities (Crouch et al., 2014).

- Evaluation of the workplace: This involves conducting a work visit and job analysis to assess the demands of the workplace and the specific requirements of the job. It helps identify any potential barriers or accommodations needed to support the client's successful integration into the work environment.

(2) Vocational guidance and intervention,

The following Table (A-5) describes the different interventions in Vocational Rehabilitation:

Intervention	Description
Pre-vocational skills training	Treatment of cognitive and psychosocial performance components such as attention span, planning skills, interpersonal skills, time management skills and coping skills. Occupational group therapy can be used very effectively in treating these performance components. participants undergo a period of preparation, before being encouraged to seek competitive employment (Crowther et al., 2001)
Transitional work programs (TWPs)	Workers with mental illness, who are employed at the time of the initial vocational assessment, could return to employment using TWPs where they return to work in a restricted or modified capacity for a specific length of time. These programs are graded in terms of time and work requirements and depending on the contribution (work output) for the employer, the worker may be remunerated.
Work hardening	programs which are interdisciplinary in nature, and which make use of conditioning tasks that are graded to progressively improve the biomechanical, neuromuscular, cardiovascular/metabolic and psychosocial functions of the person in conjunction with real or simulated work activities. Work hardening

Intervention	Description
	programs are invaluable in building up self-esteem, confidence and consolidating work (Crowther et al., 2001).
Case management	Case management has been increasingly used to assist clients with mental issues to return to work. Vocational case management activities may include 'counselling and encouragement, referral to services, co-ordination of service provision, and support to and facilitation into work'. (Crowther et al., 2001).
Supported employment	Supported employment: Supported employment is a strategy developed to assist people with mental illnesses in finding and retaining competitive employment. The purpose of supported employment is to facilitate the process of job seeking, finding competitive careers and providing ongoing assistance to remain in their jobs (Bond 2001; Mueser 2004).

(3) Vocational preparation and training,

Clients may enroll in formal vocational training programs at universities, colleges, schools, training centers and special training institutions as part of their vocational rehabilitation program. The role of the occupational therapist in this instance would be to help the client select an appropriate course of training, assist with the application and enrolment process, assist the client to determine the need for reasonable accommodations if necessary. Moreover, once the client has started his/her education, the occupational therapist must schedule for regular supportive follow up. (Crouch et al., 2014).

(4) Selective placement, and

Placement usually involves four distinct phases:

(A) Vocational re-assessment where a comprehensive understanding of the client's strengths and limitations after vocational intervention is implemented.

(B) Workplace assessment where the occupational therapist has performed a work visit and identified the essential requirements of the work.

(C) Matching the client's strengths and limitations to the requirements of the identified job. Possible barriers to adapting the client to the demands of the job

should be addressed and managed through reasonable accommodation, raising awareness of the employer, and other approaches.

(D) Effecting the placement. Depending on the client, various interventions may be required. Clients may require assistance in terms of job seeking skills such as compiling curriculum vitae (CV), completing job application forms and preparing for an interview.

(5) Follow-up.

Follow-up and closure are the final stage of the vocational rehabilitation process. It measures how effectively the program objectives have been achieved.

The following (Table A-6) shows examples of some issues faced by people with mental illness. It is important to note that vocational rehabilitation could be provided by occupational therapist, or vocational rehabilitation counselor

(Table A-6) : Examples of Vocational Issues

Issue	Frame of reference	Solutions	Description	Session setting	Types of intervention
Lack of qualifications	Rehabilitative frame of reference (FOR) Used with clients who are having permanent impairments which are less likely to improve or with	Focusing of technical jobs opportunity such as gate keeper	Focusing on training client on technicality of the most fitted job	Outpatient Daycare inpatient	1-1 sessions

(Table A-6) : Examples of Vocational Issues					
Issue	**Frame of reference**	**Solutions**	**Description**	**Session setting**	**Types of intervention**
Patient is not engaged	clients who lack the interest to engage in the therapy program. The theory behind this FOR, is the emphasis on the remaining clients' abilities regardless of any disabilities, in order to achieve the highest level of functioning.	Using motivational interviewing techniques	Applying the principles CBT & motivational interviewing techniques with the client		1-1 Sessions Group therapy
Stress at the interview		Mimic interview at the clinic	Mimicking the job interview at the facility to reduce stress by going through		1-1 Sessions Group therapy
Lack of transportation means		By providing assistance in using public transportation	Training and educating clients to use public transportations		1-1 session
Lack of proper accommodations		Encouraging the employer to provide a reasonable accommodation to the workplace and environment based upon the client deficits	A reasonable accommodation is any modifications that could be done either on the application, interviewing, hiring process or work environment that allows a person with a disability to		1-1 session

(Table A-6) : Examples of Vocational Issues					
Issue	**Frame of reference**	**Solutions**	**Description**	**Session setting**	**Types of intervention**
			perform the essential functions of that job and enjoy equal employment opportunities		
Cognitive deficits in attention, memory, problem solving and decision making.	Allen Cognitive Model of assessment and treatment based on functional cognition, or the interaction between cognitive abilities and the activity setting that results in performance	By conducting cognitive assessments and treatment plans based upon client's deficits and job requirements	providing cognitive therapy sessions to the clients based upon their needs	Outpatient Daycare Inpatient	1-1 session
Stigma	Cognitive-Perceptual Frame of Reference A treatment model in which patients and their families are educated about their diseases in order to change their thinking and behavior	To educate client and employer about the nature of their diseases and how that might impact the performance.	Many of employers does not prefer to hire a psychiatric patient due to the lack of knowledge about	Outpatient	1-1 session

(Table A-6) : Examples of Vocational Issues					
Issue	**Frame of reference**	**Solutions**	**Description**	**Session setting**	**Types of intervention**
			the patient diagnosis		
Abrupt cessation in employment	Behavioral Modification: Positive or negative reinforcement is applied to induce desired responses.	Continuous follow up for the client and solve any rising issues	Clients stops showing up in their jobs suddenly due to the nature of their diagnosis	Outpatients	1-1 session

A.12. Re-evaluation & Outcome measures

Occupational therapists need to select an outcome measure that is appropriate for the specific identified measurement purpose. There isn't and probably never will be a 'one size fits all' outcome measure for all fields of practice. This reflects the breadth of occupational therapy intervention and the diversity of service users' circumstances and needs.

The following are examples of some assessments and outcome measures that were mentioned earlier and could be used for re-assessment:

- Assessment of Motor and Process Skills (AMPS), (Fisher & Bray Jones, 2012)
- Australian Therapy Outcome Measures (AusTOMs), (Unsworth & Duncombe, 2014)
- Canadian Occupational Performance Measure (COPM), (Law et al., 1994.
- EQ-5D (EuroQol Group, 2009)
- Health of the Nation Outcome Scales (HoNOS), (Wing et al., 1996)
- MOHO (Model of Human Occupation) Assessments (Kielhofner, 1980).
- QALYs (Howren, 2014)
- Body-Mind-Spirit Well-Being Inventory (Ng et al., 2005)
- Occupational Self-Assessment (OSA), (Baron et al., 2006).
- General Psychological Wellbeing Scale, (Khumalo et al., 2010)
- KIDSCREEN-10 score, (Ravens-Sieberer et al., 2010)
- Binary Individualized Outcome Measure, (Spreadbury & Cook, 1995)
- Goal Attainment Scaling, (Ottenbacher & Cusick, 1993)
- Measuring job satisfaction, organizational engagement, mental health, and work-related well-being, (Stride et al., 2007).

وزارة الصحة
Ministry of Health

19. Medical Rehabilitation in Mental Health

B. Physical Therapy

B.1. What is Physical Therapy?

A branch of rehabilitative health that uses specially designed exercises, therapeutic programs and equipment to help patients regain or improve their physical abilities and functions.

B.2. Physical Therapy in Mental Health.

Physical therapy (PT) is increasingly recognized for its role in managing and treating various mental health conditions, highlighting the mind-body connection and the importance of holistic, multidisciplinary approaches to care. Mental health disorders often lead to poor physical health, and while psychotropic medications may alleviate psychiatric symptoms, they can negatively impact physical health, particularly affecting cardiometabolic, endocrine, and neuromotor systems (Fibbins, Lederman & Rosenbaum, 2021). Individuals with severe mental illness (SMI), who are less physically active and face lifestyle-related health issues, can benefit from PT (Vancampfort et al., 2012). PT approaches, such as physical activity, therapeutic exercise, relaxation training, and body awareness, support physical and mental health. Physiotherapists in mental health provide health promotion, preventive care, treatment, and rehabilitation within a therapeutic, supportive environment, addressing both biological and psychosocial factors to enhance physical well-being and empower individuals (Probst, 2017).

B.3. Who Might Need Physical Therapy?

Patient-centered physiotherapy in mental health is provided to individuals with mild to severe mental health disorders, both acute and chronic, across primary, community, inpatient, and outpatient settings (Stathopoulos, 2020). Common conditions include obsessive-compulsive, trauma-related, dissociative, substance-related, and neurocognitive disorders, while severe disorders encompass schizophrenia, bipolar disorder, and mood disorders. These mental health conditions often coexist with physical diseases such as

cardiovascular disease, Parkinson's, arthritis, hypertension, diabetes, obesity, osteoporosis, musculoskeletal dysfunction, chronic pain, and respiratory problems. Psychotropic medications, sedentary behavior, and inactivity frequently exacerbate physical health complaints in these patients (Probst, 2017), which can be alleviated through physical therapy.

Physiotherapists can address a range of conditions, but certain red flags (e.g., cauda equina syndrome, fractures, tumors, unrelenting night pain, and bladder/bowel incontinence) require immediate referral to a specialist in Physical Medicine and Rehabilitation (PM&R) or the attending physician (Finucane, 2020; Melman et al., 2022). For further guidance, refer to the flag classification system (Appendix E: Physical therapy flags system).

B.4. Importance and significance of Physical Therapy.

Physiotherapy (PT) plays a crucial role in mental health and psychiatric care, particularly for individuals with severe mental health disorders (SMHDs) like schizophrenia or bipolar disorder, who face higher morbidity and mortality rates than the general population (Baxter et al., 2016)). These individuals often experience impairments in psychosocial functioning and are at increased risk for physical conditions like cardiovascular disease, diabetes, and obesity (Firth et al., 2019). People with severe mental illness are less physically active than the general population and struggle to meet the recommended 150 minutes of moderate-intensity activity per week (Vancampfort et al., 2017), with an average of 8–12 hours spent sedentary each day. Engagement in physical activity varies by mental health condition, with individuals with bipolar disorder generally being more active than those with schizophrenia or depression (Fibbins, Lederman & Rosenbaum, 2021). Symptom severity and medication side effects often influence activity levels.

Sleep disturbances, affecting up to 90% of patients with mental illness, are also common, contributing to weight gain and increasing the risk of obesity and metabolic disorders (Abad et al., 2005; Afonso et al., 2014; Correll et al., 2011). Regular physical activity is associated with improved sleep quality and better self-reported sleep outcomes in this population (Lederman et al., 2018).

Research consistently demonstrates that physical activity has positive effects on mental health (Holley et al., 2011), physical health, and quality of life (Faulkner et al., 2016; Vancampfort et al., 2013; Hu et al., 2020). Recent studies support the role of physiotherapists in implementing physical activity programs (Vancampfort et al., 2010; Mittal et al., 2017), with evidence showing that physiotherapy-based therapies effectively improve mental health outcomes (Vancampfort et al., 2012b). Achieving an active lifestyle can reduce the burden of comorbidities and improve quality of life for individuals with severe mental illness (Vancampfort et al., 2016).

PT connects physical and mental health needs, with systematic reviews showing improvements in psychiatric symptoms, anxiety, health-related quality of life, and physical fitness through interventions like aerobic exercises, muscle strength training, progressive muscle relaxation, and yoga (Vancampfort et al., 2012). Physical activity has also been found to lower cortisol levels, reducing stress and alleviating mood disorder symptoms, such as anxiety and depression (Stanton et al., 2021). A meta-analysis by Rebar et al. (2015) further supports physical activity as a complementary treatment for depression, offering a potential alternative to pharmacological approaches.

Physiotherapists contribute significantly to mental health rehabilitation, applying scientific evidence and clinical expertise to improve patient outcomes (Stubbs et al., 2014). By increasing access to physiotherapy, healthcare providers can offer the most appropriate treatment for individuals with mental illness, addressing both their physical and mental health needs (Australian Physiotherapy Association, 2016).

B.5. The Role of Physical Therapy in Mental Health

Physical therapy (PT) plays an integral role in supporting mental health by addressing the physical determinants that influence psychological well-being. In particular, providing an important bridge between physical and mental health (Stubbs,Soundy, Probst,De Hert, De Herdt, & Vancampfort,2014). The following outlines how PT contributes to mental health:

1. Physical Health Improvement and Its Mental Health Implications

- **Pain Management**: **Pain Management**: Chronic pain worsens mental health disorders like depression and anxiety. PT alleviates pain through exercises, manual therapy, and modalities like heat/cold therapy, reducing psychological burden (Harris et al., 2018).
- **Musculoskeletal Health:** PT interventions targeting musculoskeletal issues, such as poor posture, muscular tension, and joint stiffness, have been shown to positively influence mood and mental health. Improved flexibility, strength, and functional mobility contribute to reductions in physical discomfort, which often correlates with psychological improvement (Mikkelsen et al., 2019).
- **Fall prevention**: PT is a critical intervention for individuals with mental health disorders, as they are at an increased risk of falls due to factors such as medication side effects, impaired balance, reduced physical activity, and cognitive dysfunction (Vancampfort et al., 2012). PT interventions such as balance training, strengthening exercises, gait correction, cognitive-behavioral strategies, and coordination training, PT can significantly reduce the risk of falls and improve overall quality of life for this vulnerable population (Probst, 2017).

2. Reduction of Anxiety and Depression

- **Endorphin Release and Exercise**: Physical therapy often incorporates exercise-based interventions, which promote the release of endorphins and other neurochemicals associated with improved mood. Research consistently shows that physical activity, even in the form of structured rehabilitation exercises, can reduce symptoms of anxiety and depression through both physiological (neurochemical) and psychological mechanisms (Craft & Perna, 2004).
- **Relaxation Techniques**: PT frequently includes relaxation strategies such as deep breathing and progressive muscle relaxation. These techniques activate the parasympathetic nervous system, reducing the body's stress response, lowering heart

rate and blood pressure, and contributing to a sense of calm and reduced anxiety (Bouchard et al., 2017).

3. Enhancing Sleep Quality

- Physical therapy that includes exercise has been shown to enhance sleep patterns and quality. Insomnia and poor sleep are common symptoms of mental health disorders. PT interventions, such as structured exercise programs, have been shown to improve sleep quality by regulating circadian rhythms and enhancing restorative sleep, which supports mental health (Choi et al., 2014; Kline et al., 2011).

4. Promotion of Physical Activity and Fitness

- **Exercise as a Therapeutic Modality**: Regular physical activity in PT reduces symptoms of depression, anxiety, and stress, boosting cognitive function and self-esteem (Rethorst & Trivedi, 2013).

- **Goal Setting and Motivation**: PT encourages the setting and achievement of physical goals, fostering a sense of accomplishment and self-efficacy. This process is particularly beneficial for individuals experiencing mental health challenges, as it promotes psychological resilience and confidence.(Seidel et al., 2020).

5. Cognitive Function enhancement

PT exercises that emphasize balance, coordination, and functional movements have been shown to enhance cognitive function. Such exercises can improve attention, memory, and decision-making, particularly in individuals whose cognitive processes may be impaired due to depression or anxiety. (Brasure et al., 2015).

6. Rehabilitation Following Injury or Illness

- **Recovery from Trauma:** PT supports recovery from physical injury or illness, improving physical and mental health by reducing anxiety and depression (Jahnke et al., 2010).

- **Reintegration into Daily Activities:** PT aids in returning to normal activities, supporting emotional stability during recovery

7. Integration with Holistic Treatment Approaches

- **Complementing Mental Health Therapies**: PT can complement psychological treatments such as cognitive behavioral therapy (CBT) and psychotherapy. When combined, physical and mental health treatments can result in more holistic, effective outcomes for individuals dealing with both physical and psychological concerns.
- **Social Support**: PT often involves group physical therapy sessions or community-based exercise programs can foster social interactions, providing individuals with opportunities for social engagement. Social isolation is a significant risk factor for the exacerbation of mental health conditions, particularly depression and anxiety (Cacioppo & Cacioppo, 2018). Group exercises, such as those involving team-based activities or group yoga, can provide a sense of belonging and support, reducing feelings of loneliness and promoting emotional well-being.

8. Development of Self-Management Skills

- **Coping Strategies**: PT teaches stress and pain management techniques, empowering individuals to handle daily challenges.
- **Promoting Autonomy**: By involving patients actively in their recovery, PT helps cultivate a sense of autonomy and self-efficacy. This can significantly contribute to improved mental health by reinforcing a patient's ability to manage their overall well-being (Fenton et al., 2014).

All in all, Physical therapy offers significant contributions to mental health by addressing both physical and psychological components. Its role in pain management, exercise, sleep improvement, and rehabilitation can alleviate symptoms of anxiety, depression, and stress. Furthermore, by supporting cognitive function and promoting self-

efficacy, PT enhances emotional well-being, making it a valuable component of comprehensive mental health treatment.

B.6. Job description

The following table (Table B-1) describes the responsibilities, duties, qualifications, and experience for physical therapy personnel.

(Table B-1) Physical Therapy Job description

	Item	Consultant	Senior Therapist	Therapist	Technician
Duties and Responsibilities	Provide written physical therapy evaluation, treatment, and intervention plans for all clients.	√	√	√	
	Conducts direct and supervises physical therapy program activities designed to rehabilitate mentally or physically disabled patients	√	√	√	
	Lead and undertake research and intervention activities to improve service delivery	√	√		
	Supervises the interns & trainees in their immediate assignment	√	√		
	Incorporates quality improvement strategies in clinical practice.	√	√	√	
	Act as an Expert in Clinical Practice by managing a complex clinical caseload	√			
	Act as an expert clinical recourse and work with colleagues in other professions to develop and promote the role of Physical therapy Practice, including advising Multi-disciplinary teams	√	√		

(Table B-1) Physical Therapy Job description					
	Item	Consultant	Senior Therapist	Therapist	Technician
	Lead on the development of evidence-based clinical protocols and policies to improve outcomes of interventions	√	√		
	Act as a consultant on clinical problems, and discuss diagnosis &treatment plans with the medical team.	√	√	√	
	Directs and supervises the work of physical therapy technicians and assistants.	√	√	√	
	Make rounds with Physicians/Surgeons, as requested, to discuss patient progress under physical therapy.	√	√	√	
	Prepares patients and caregivers for discharge, teaching them precautions, basic procedures& giving home instructions.	√	√	√	
	Communicates all changes in patient condition to the physician.	√	√	√	
	Ensues preventive maintenance program of equipment is carried out.	√	√	√	√
	Educate the patient's family by demonstrating techniques designed to maintain patients' independence to minimize over protection	√	√	√	
	Doing administrative duties including booking appointments and answering phones.				√
	Documenting all patient's data such as evaluation, clinical history, and progress notes.				√
	Assist the therapist in the treatment of individuals of all ages & implement plan of intervention				√

(Table B-1) Physical Therapy Job description					
	Item	Consultant	Senior Therapist	Therapist	Technician
	Maintaining accurate patient treatment records.	√	√	√	√
	Work is conducted in a professional manner and maintains patients' confidentiality when required.	√	√	√	√
	Coordinates with the members of the team to conduct therapeutic program for the patients.	√	√	√	√
	Participates in ongoing education programs developed by the department, e.g., Department Policy and Procedures, Fire Safety, Risk Management, Environment control.	√	√	√	√
	Complies with facility dress code.	√	√	√	√
	Makes other duties and obligations that have been allocated within the worker's knowledge, skills, and abilities.	√	√	√	√
	Holds monthly meetings, case review, journal reports and conferences.	√	√	√	
	Participates in the development of the overall department, QA issues , in-service education and support positive changes	√	√	√	
	Adheres to all facility and Departmental Policies and Procedures as applicable	√	√	√	√
	Conduct various intervention techniques and modalities. Supervises the junior staff in carrying out treatment plan.	√	√		
	Provide or consult on follow-up support to clients, families, employers/schools, and multi-disciplinary teams consistent with physical Therapy treatment and intervention plan.	√	√	√	

(Table B-1) Physical Therapy Job description					
	Item	Consultant	Senior Therapist	Therapist	Technician
	Maintain punctual and regular, established work hours	√	√	√	√
Qualifications and experience	Diploma degree in physical therapy and one year experience				√
	Bachelor's degree in physical therapy and one year of internship experience			√	
	Masters' degree in physical therapy and from an accredited institution (Rehabilitation), plus the required clinical internship for professional registration. 2 years' experience in PT.		√		
	PhD degree in physical therapy and from an accredited institution (Rehabilitation), plus the required clinical internship for professional registration. 5 years experience in PT.	√			
	Valid basic life support BLS certificate + registered by Saudi Commission for health specialties SCFHS)	√	√	√	√

B.7. Problem List

A structured, five-step problem-solving approach is used to guide the rehabilitation assessment process. This approach includes problem orientation, problem identification, generation of alternatives, decision-making, and verification. It helps identify and prioritize patient issues to set goals and develop solutions. The problem list is categorized into the most important, important, and less important problems, followed by a physical therapy impression to inform treatment decisions.

Common problem areas addressed by physical therapy in psychiatric patients include:

- Decreased physical activity and mobility
- Poor posture
- Balance and coordination issues
- Musculoskeletal problems
- Psychosomatic issues
- Body weight issues and obesity
- Sleep disturbances
- Stress-related issues
- Pain management
- Drug withdrawal symptoms
- Smoking cessation and tobacco use
- Respiratory and cardiovascular complications
- Fall risk
- Overweight and obesity

B.8. Assessment

Physical therapy assessment in mental health involves a comprehensive evaluation of an individual's physical health, functional abilities, and how these factors interact with their mental health condition. The primary goal of this assessment is to identify physical impairments that may contribute to or exacerbate mental health symptoms, as well as to develop a targeted rehabilitation plan to improve both physical and psychological well-being.

Historically, assessment has been considered an important aspect of the rehabilitation process and has been viewed as a key service aimed at enhancing rehabilitation outcomes of persons with all types of disability (Andrew, 1981; Chan, Reid, et al., 1997). Assessment is the process of objectively understanding the state or condition, by observation and measurement. Physical therapy assessment consists of:

1. **History taking** (past, chief complaints, medical, and family)
2. **Clinical examination** (inspection for changes, discoloration & swelling; pain, functional assessment and mobility (Gait; observation; joints range of motion; muscle testing; neurological condition test and special tests)

Assessment tools include but not limited to :

3. Visual Analogue Scale (VAS) or Numeric Pain Rating Scale (NPRS) for pain assessment.
4. Range of Motion (ROM) by means of Goniometer.
5. Muscle strength by manual muscle testing (MMT).
6. Special test pre and post-treatment.
7. Berg balance scale.
8. Gait analysis pre and post-treatment.
9. Tape measure to measure waist circumference or edema

B.9. Models of Practice

Historically, PT was primarily rooted in the biomedical model, which focused on the idea that disease and disability are the result of physiological deviations from what is considered normal for the population. According to this model, these deviations are viewed as unrelated to human behavior or broader environmental factors.

In contrast, over the past few decades, George Engel introduced the **biopsychosocial model**, which presents a more holistic view of health. This model asserts that health outcomes are influenced not only by biological factors but also by behavioral, psychological, and social elements. Engel's framework consists of a hierarchical system with 15 levels,

ranging from the biosphere down to subcellular structures. Seven levels represent the patient's macroenvironment, one level pertains to the individual patient, and seven levels describe the microenvironment surrounding the patient. The stability of interactions between these levels, as well as their integration, is central to maintaining health. Engel argued that the diagnostic accuracy of healthcare professionals could improve significantly by adopting this comprehensive, integrated approach to understanding health.

The practice models in PT emphasize patient management strategies that consider the individual as a whole, rather than focusing solely on isolated organ systems. While few conceptual models have been developed in PT, one significant early advocate was Hislop, who emphasized the value of a unified approach to patient care. Hislop argued that physical therapy's core purpose is to restore motion, maintain homeostasis, and enhance physiological function and adaptation. He proposed a **motion-based model of practice**, viewing PT as a multi-level process where clinical expertise must be balanced with personal attributes such as empathy and a genuine desire to serve patients.

As the field evolved, these various approaches were integrated into diverse intervention strategies. Therapists now draw on multiple models to guide their practice, customizing treatment plans to address both the physiological and broader psychosocial needs of their patients. Some of them were summarized in the following (box B-1) :

Box B-1: Common Approach/Frame of Reference involve in physical therapy intervention for patients with the mental health issues but not limited to :
Psycho-physical therapy & the mind-body relationship approach. The mind-body connection refers to the concept that physical aspects of health, such as exercise, nutrition, and sleep, can often impact mental and emotional aspects of health. Similarly, a person's cognitions, attitudes, and emotions may influence physical and biological emotions may influence physical and biological Functioning.(Bowen, (n.d.). Psychophysical therapy **Basic body awareness approach.** This methodology defines movement awareness as sensitivity to movement nuances, awareness of the individual's movements in relation to energy, space, and time, and

identification of precise movement reactions to internal and environmental conditions (Probst, 2017).

Psychosomatic physiotherapy approach.
Illness, according to the psychosomatic approach, is a form of communication between the conscious and unconscious minds via the body. Illness is a person's way of adapting to the environment (Probst, 2017).

Psychomotor based on a health-related approach and psychosocial-related approach.
The approach focuses on the somatic effects of physical activity and the physio-psychological effects as the core of the treatment. (Probst, 2017).

Psychosocial-related and psychophysiological approaches
Emphasizes the acquisition of mental and physical skills related to the 'moving body' and supports of people's ability to function independently in society and to improve their quality of life.

Cognitive-behavioral approach (Herning, et al., 2005)
It can be another tool for promoting physical activity. By incorporating concepts of CBT into their fitness practice, physical therapists can help patients see the connection between their thoughts about exercise and their behavior.

Norwegian psychomotor physiotherapy (Probst, 2017).
The psychoanalytic approach develops the client's awareness of what can be done to correct the harmful effects of the past by focusing on how the past continues to influence the present. The emphasis is on respiration because it can be linked to emotion and cognition.

Psychotherapeutic-oriented physiotherapy approach
Uses the motor domain as a gateway to ameliorate social affective functioning. This approach focuses on raising awareness of psychosocial functioning and facilitating change rather than emphasizing skill acquisition.

B.10. Intervention

The central focus of physical therapy in mental health is to enhance overall well-being and empower individuals through the promotion of functional movement, movement awareness, physical activity, and exercise, while simultaneously integrating physical and

mental health components (Stathopoulos, 2020). By incorporating physical therapy into mental health treatment plans, individuals can experience not only improvements in their physical health but also in their mental and emotional well-being. The following (Table B-2) outlines various interventions that physical therapists may offer, though this list is not exhaustive:

(Table B-2) : Physical Therapy Intervention Bank

Domain	Symptoms / Issues/ Problems	Causes	Approach/Frame of Reference	Aims & mechanism	Intervention
Physical	▪ chronic spinal flexion ▪ Mal-posture	The body is affected by concerns such as low self-worth, decreased motivation, hopelessness, social withdrawnness & depression Common in Mental disorders case depression, Phobia, Bipolar, Schizophrenia,	Psycho-physical therapy & the mind-body relationship approach.(Bowen, (n.d.). Psychophysical therapy	The physical body is an essential factor in fostering psychological well-being. The study suggested Improve body posture is likely to promote positive emotional change, thoughts, and the way a person thinks which in turn will enhance the mental state	Adjusting patients' spinal alignment through correction exercises and advice thus achieving an upright posture is likely to promote positive emotional change, thoughts, and mental state.

	▪ Fibromyalgia or other unexplained rheumatic pain, ▪ Fatigue ▪ Headache ▪ Neck pain ▪ shoulder pain	Psychological Factors can greatly influence a physical condition. Symptoms can be a subconscious defense mechanism.	Psychosomatic physiotherapy approach. (Probst, 2017).	The aim is to recognize & gain insight into the complex relationship between motor & psycho-logical performance within a psychosocial context and positively influence disrupted internal and external regulation mechanisms. The psychosomatic physiotherapist focuses specifically on the psychophysiological and behavioral characteristics of the client's motor performance-related problem.	The scope of psychosomatic physiotherapy is broad, including the treatment of physical symptoms such as pain, and fatigue by modalities and therapeutic techniques. Also, treat hyperventilation and distress in relation to psychosocial problems. Moreover, the intervention includes graded activity and active pacing therapy. The therapist uses a number of specific awareness-raising methods such as relaxation techniques, breathing and communication methods, (bio-) feedback, problem-solving

					strategies, and stress management technique (Probst, 2017).
	A decline in physical activity & Reduction of mobility High risk of obesity & weight gain	side effects of psychotropic medication Depressive episodes lead to Loss of interest in activities Sedentary life Common in Geriatric psychiatry, Bipolar, Depression & Schizophrenia.	1-Psychomotor based on a health-related approach and psychosocial-related approach. (Probst, 2017). 2- Cognitive-behavioral approach (Herning, et al., 2005)	The goal is to improve physical activity and limit sedentary behavior) Also, to stimulate a positive self-image and personal well-being in a balanced social relationship using movement activities.	Adapting physical exercise to each client's capacities in order to improve quality of life. uses systematically a wide variety of (adapted) physical activities as well as movement, body, and sensory awareness to stimulate and integrate motor, cognitive and affective competencies within the psychosocial context. (Probst, 2017).

					2- For specific and detailed intervention refer to physical therapy protocols for (Obesity, schizophrenia , Bipolar, and geriatric psychiatry) 3- Also, applying Cognitive-behavioral therapy promotes exercise behavior in older adults (Herning, et al., 2005)
Physical	Complications such as decreased cardiovascular function (heart disease, stroke, type 2 DM), osteoporosis	Decrease physical activities	The physical health-related approach (Probst, 2017).	Improve the global physical health of the person with mental health Problems can improve cardiovascular fitness, improved sleep, better endurance, a positive influence on metabolic	Tailored regular exercise (aerobic & strength) in individual or group sessions The client needs to fulfill the recommended weekly physical activity standards of

				syndrome and diabetes, increased energy, and reduced tiredness	150 minutes of moderate-intensity activity (Vancampfort, Firth, et al., 2017).
	Muscle weakness	-Chronic sedation -Due to the psychopharmaceutical treatment Side effect	The physical health-related approach (Probst, 2017).	Increase muscle power& strength	Strength exercise program (individual or group program)
	▪ Incoordination ▪ Balance problems	- When Persons are not aware or have a lack of contact with the physical body& the emotional body (internal life) or are not aware of the physical environment & their relationship to other people & when persons are cut off from reality, express this lack of awareness throughout their body. This can be seen as dysfunctional motions, such as	Basic body awareness approach. (Probst, 2017). Common seen in Aging psychiatry & Mental disorders ▪ Depression ▪ Bipolar ▪ Schizophrenia	Enforcing the attending to both the patient's own performance and to the patient's experience during the exercises is a central element of body awareness that stimulates mental presence and awareness that aims to provide increased body consciousness.	Basic body awareness therapy: combines a series of exercises that are related to posture, coordination, free-breathing, and awareness it encompasses a range of different elements including slow movement, strengthening exercise, Breathing, **"hands-on"** techniques , and mindfulness in order to restore

		those with low vitality, flow, rhythm, and cohesion.			freedom, balance, and harmony between the body and mind. It is frequently performed while the patient is laying, sitting, standing, walking, or running. The physiotherapists must encourage the patients to move & increase postural control, balance, coordination, and free movement. (Ekerholt, Schau, Mathismoen,& Bergland, 2014).
Physical	The risks of falling	Due to the psychopharmaceutical treatment. Balance problem, muscle weakness or weakening of the possibilities of vision and gait especially in an elderly patient		Reduction of the risks of falling Through increase body awareness and avoiding leading factors	
	Catatonia can be (slow or diminished movement or excess or agitated Including	Bipolar disorder & depression are the most common disorders in which catatonia manifests Some studies suggestions say	Psychomotor based on a health-related approach	To treat the impact of catatonia symptoms after receiving the medication	Bed mobility ex's, transfer, & gait training, & family education initially. Then Progressing to balance re-education and

	▪ Immobility ▪ Mutism ▪ Posturing ▪ Staring ▪ Rigidity ▪ Catalepsy ▪ Echolalia	due to an excess or lack of neurotransmitters			age-appropriate functional tasks the patient was able to progress and be discharged to home with family with a recommendation for continued PT treatment in the outpatient setting.
Affective & psychological	**Manic episode**: **Mood** problems (feeling high) **Behavior changes** talking very fast, easily distracted, restless, sleeping little **Depressive episode Mood**: feeling worried or empty Loss of interest in activities **Behavior changes** Feeling tired	very common in mental disorders, Bipolar, Schizophrenia, Addiction Also, abusing substances or alcohol can cause a manic episode	Psychosocial-related and psychophysiological approaches	The activities aim at learning, acquiring, and training psychomotor, sensorimotor, perceptual, social, and emotional proficiencies. Exercises augment physical and mental resilience; improve the quality of sleep; enhance self-confidence, energy,	Well-balanced and regularly executed endurance activities (walking, biking, jogging, and swimming) power training (fitness training), and Aerobic exercise (Donaghy, Nicol,& Davidson, 2008) and resistance training have been found beneficial in improving an individual's mood & relief of stress

	Change in eating or sleeping Thinking of death			endurance, and relaxation (Richards, et al. 2016).	Also, mindfulness-derived exercises such as relaxation education, relaxation skills, stress management, breathing techniques, psychomotor and sensory skills, & also cognitive, expression, and social skills & meditation. The learning of the basic rules of communication is integrated with exercise (Probst, Knapen, Poot, & Vancampfort, 2010).
	Insomnia, Sleep disturbance				
	Communication issue				
	▪ Low self-esteem ▪ Low body image				
	Anxiety	Stress-related problems Very Common in	Norwegian psychomotor physiotherapy (Probst, 2017).	Breathing can contribute to the reduction of somatic disorders in stress-related or	A treatment session is mostly individual in nature and may be short, being composed of active exercises in standing, sitting or lying positions only, or

		▪ post-traumatic stress disorder (PTSD) ▪ Attention deficit hyperactivity disorder ▪ ADHD diagnosis ▪ Anxiety ▪ Phobia ▪ Depression	The psycho-physiological approach involves the use of a physical activity to influence mental health problems	psychosomatic disorders. It aims to release respiration through interaction among breathing, the musculoskeletal system, and emotions and to develop flexibility, versatile, quality and stability of the person [48]	it may belong, consisting of manual therapy of the recumbent body only. Also, using visual or auditory monitoring to teach people how to control their symptoms of stress and anxiety, such as increased heart rate, body temperature, and muscle tension. That will lead to making the patient able to relax and reduced his signs and symptoms. A biofeedback session usually will last between 30 and 60 minutes. And the patient wears a sensor (electrode) connected to the screen and sitting in front of the mentor or screen and records his heart rate, muscle tension and etc . therapist asks the patient by doing different mental

	▪ social isolation withdrawal symptoms ▪ impulses and lack of abilities)	▪ stress ▪ frustration ▪ Low self-esteem ▪ Drastic shifts in thoughts and moods. ▪ feelings of guilt or regret these issues are very common with ▪ Bipolar ▪ Depression ▪ Aging psychiatry ▪ Schizophrenia Mental disorders	Psychotherapeutic-oriented physiotherapy approach	The main aim is to assist clients to develop deep understanding of how they are functioning.	exercises that may include Using movement activities, the physiotherapist creates a setting that favors the initiation and development of a process. Patients are encouraged to step outside their comfort zone, think creatively, try new things, get more in touch with their inner selves, and cope with a variety of emotions (stress, fear, anger, guilt, feelings of unease, depressive feelings, dissatisfaction, and estrangement) and negative thoughts during these activities (morbid, preoccupations, intrusion,

					worrying, and Obsession) The careful guidance & encouragement of the physiotherapist to experience feelings in a safe environment allow the patient to develop behavior, which would not have developed otherwise. Although the underlying problems are not necessarily resolved, the therapist tries to improve the problem management. Initially, the patient articulates his emotions, ideas, and behavior, with the therapist, and then with his peers. Experiences and its responses are

					given more importance as they serve as a dynamic source of power
Cognitive	Lack of ability to concentrate on physical activities of daily living. Poor orientation to time, people & place Cognitive impairment problems in remembering, processing, and making decisions	Adverse effects from using the psychotropic medication In the case of dementia it results from the death of cells in the cerebral cortex, the area of the brain responsible for memory and cognition(Abnormal proteins) In addition, cognitive problems are common in Depression , Bipolar Schizophrenia ,Aging psychiatry	Goal-oriented based on Enhanced Medical Rehabilitation (EMR) approach: an approach in which physical and occupational therapists work to engage patients more fully during therapy sessions Goal-directed training is an activity-based approach to therapy. Also can use psychosocial-related approach	Patient will have more active time and regained better mobility with improve attention compared to those receiving traditional forms of therapy. Exercise improves brain health and cognitive function by encouraging neurogenesis, cell proliferation, and decreasing apoptosis. It also has a role in the promotion of neurotrophic factors, which are necessary	1- (EMR) is a collaborative training program that applies a structured, innovative approach to therapy 2- Physiotherapists can use a multimodal cognitive and physical rehabilitation program with graded physical activity to facilitate concentration (Chew, Chong, Fong, & Tay, 2015). 3-Adapted therapeutic exercises such as yoga-, tai chi

				for brain function, synaptic plasticity, and learning. Exercise is also important for lowering inflammation, which can restrict the beneficial effects of brain-derived neurotrophic factors. Exercise affects several brain areas disrupted in psychotic disorders, including those associated with cognitive control, memory processing, motor behavior, and reward (Mittal, Vargas, Juston Osborne, Dean, Gupta, Ristanovic, & Shankman, 2017).	& mindfulness-derived exercises. 1–3 times/ week; 4 weeks (Huet al., 2020). 4-Body scan meditation is beneficial. Patients Lie on their back with legs extended & arms at their sides, palms facing up. Focus attention slowly and deliberately on each part of the body from toe to head or head to toe. Be aware of any sensations, emotions, or thoughts associated with each part of the body. **Sitting meditation.** Patients Sit comfortably with their back straight, feet flat on the floor & hands in their lap. Breathing through nose,

					focus on breath moving in & out of the body. If physical sensations or thoughts interrupt meditation, note the experience, then return focus to breath. **Walking meditation.** Fin d a quiet place 10 to 20 feet in length, & begin to walk slowly. Patients Focus on the experience of walking, being aware of the sensations of standing, & the subtle movements that keep balance. When reach the end of path, turn & continue walking, maintaining awareness of self sensations

B.11. Health Education Program

The World Health Organization (WHO) defines health as complete physical, psychological, and social well-being, not merely the absence of disease (WHO, 1948). Health is influenced by individual, financial, community, and environmental factors, some of which are beyond an individual's control. Health promotion is essential for raising awareness and encouraging lifestyle changes that enhance overall well-being (Stathopoulos, 2020). Wellness is a holistic concept encompassing physical, mental, and spiritual health, integrating eight dimensions: physical, cognitive, spiritual, cultural, emotional, occupational, economic, and behavioral (Myers et al., 2000).

Physical therapists, traditionally focused on rehabilitation, also play a crucial role in promoting fitness and wellness. They encourage active living, provide early disease diagnosis, prescribe tailored exercise treatments, and help overcome personal and cultural barriers to enhance lifestyle (Probst, 2017). Using non-pharmacological interventions like patient education, physical therapists help prevent and manage chronic conditions (Herning et al., 2005).

In health promotion, physical therapists take on roles such as continuous learning, patient access, research, awareness raising, and consultations (Herning et al., 2005). They are key in integrating health promotion within the healthcare system, focusing on increasing activity levels and human-centered care. Essential skills include advising on hygiene, wound care, smoking cessation, nutrition, and weight management (Probst, 2017). Patient education is vital for developing effective treatment plans, and addressing emotional aspects is crucial to support rehabilitation and long-term wellness goals (Stathopoulos, 2020; Probst, 2017).

B.12. Revaluation and Outcome measures

Reevaluation: The clinician reassesses the patient as necessary during the duration of care to evaluate progress or change in patient status and modifies the plan of care accordingly or discontinues rehabilitation services. Re-evaluations are done more frequently as needed at specific times.

A reevaluation may be conducted:

- In response to any significant change/s in the patient's condition.
- If the patient's diagnosis has changed and the care needs require revised planning.
- To determine if treatment has been successful and the patient can be discharged.

Outcome measures

Outcome measurement tools are specific tests and measures that physical therapists may use to quantify overall function. Outcome measuring tools can be used for a variety of purposes. Among them include, but are not limited to:

- To assist with goal-setting
- As a technique of motivating people
- to assist in treatment planning
- To give a prognosis and measure the progression of treatment
- To justify a course of treatment.

<u>Common outcome measure tools used in physical therapy</u>

The previous assessment tools mentioned in the assessment section in PT can be used pre and post-treatment to measure the outcomes: this includes (pain assessment, (VAS) or (NPRS), ROM, MMT, special test, and gait analysis.)

Additionally, there is Standardized outcome measures based on a specific case such as:

- FIM score.
- Berg balance scale.
- 6 minutes walk test.

- 10 meters walk test.
- Time up and go and etc.

Conclusion

The incorporation of physical therapy into the management of mental health disorders offers a promising avenue for improving both physical and psychological well-being. By addressing physical activity, sleep, stress, and trauma, physical therapy interventions have the potential to reduce the symptoms of anxiety, depression, PTSD, and chronic pain, while enhancing psychosocial outcomes such as self-esteem, social interaction, and overall quality of life. A multidisciplinary approach that includes physical therapy as part of mental health care is essential for providing comprehensive, patient-centered treatment that fosters holistic healing and well-being.

وزارة الصحة
Ministry of Health

19. Medical rehabilitation in Mental health

C. Physical Medicine and Rehabilitation

C.1. What is Physical Medicine and Rehabilitation?

Physical medicine and rehabilitation (PM&R), also known as physiatrist or rehabilitation medicine, aims to enhance and restore functional ability and quality of life to those with physical impairments. Physiatrists are specialized in evaluating and assessing patients and identifying their medical needs then providing patient-centered treatment plan. In contrast with other medical specialties who focus only on a medical "cure," the goal of the physiatrist is to utilize cutting-edge as well as time-tested treatments to maximize function and quality of life for their clients. (AAPMR,2021).

C.2. Physical Medicine and Rehabilitation in Mental Health

Physical Medicine and Rehabilitation physicians diagnose the cause of pain and develop a comprehensive treatment plan. They have a broad medical expertise to help patients with a range of pain-causing conditions that can occur at any age (Ratini, 2021).

Physical Medicine and Rehabilitation (PMR) plays an important role in the comprehensive care of psychiatric patients. This multidisciplinary approach integrates physical and psychological interventions to improve overall patient outcomes. PMR in mental health addressing the physical aspects of recovery (Ratini, 2021), improving quality of life, and supporting mental well-being. While PM&R primarily focuses on restoring function and mobility, its methods and interdisciplinary approach can significantly contribute to the treatment and management of mental health conditions in several ways.

C.3. The Role of PMR in mental health

The Physiatrist focus on the whole body not just a single problem area and assembles a treatment team to optimize care and recovery. A physiatrist's design an individualized treatment plan for each patient. Depending on the root of the problem, a physiatrist may focus on neurorehabilitation, pain medicine, musculoskeletal care, sport injuries, and post-operative care.

PM&R integrates various treatment techniques aimed at restoring mobility, functionality, and independence. The therapeutic strategies employed, such as physical

therapy, occupational therapy, and neurorehabilitation, are designed not only to address physical limitations but also to improve mental health by promoting physical activity, reducing pain, enhancing cognitive function, and fostering social engagement.

C.4. Assessment

PM&R specialists conduct thorough evaluations of psychiatric patients, considering both physical and mental health aspects. This comprehensive approach helps identify and address co-existing medical conditions that may impact mental health

C.5. Job Description:

The following table (Table C-1) describe the responsibilities, duties, qualifications, and experience for medicine and rehabilitation (PM&R).

(Table C-1) Physical medicine and rehabilitation (PM&R) job description

	Item	Specialist	Consultant
Duties and responsibilities	Deliver medical treatment within their scope of service and their clinical privileges for both in-patients and out-patients.	√	√
	Follow clinically relevant framework and scientifically valid standards, guidelines, and criteria.	√	√
	Regularly conducts ward rounds individually or as part of a team in order to develop a multidisciplinary treatment plan.	√	√
	Within the scope of the specialty, performs diagnostic and therapeutic procedures on patients.	√	√
	Making assessment and referrals for patients to any other medical services inside or outside the facility.	√	√
	Responds to emergencies to offer advice and actively participate in the resolution of problems relating to their specialty.	√	√
	Respects and protects patients' rights to security, confidentiality, and privacy.	√	√
	Maintains appropriate records of all patients with accurate, timely legible completion of patient's medical records.	√	√
	Participating in Continued Medical Education (C.M.E.) and	√	√

(Table C-1) Physical medicine and rehabilitation (PM&R) job description			
	Item	Specialist	Consultant
	facilities activities such as morning report meetings, rounds, clinical tutorials and seminars, journal club, radiology or clinical-pathological conferences. In addition, symposia, conferences, National and International meetings.		
	Actively participate in training programs related to his/her field and organizations within the facility for training of junior medical staff and in-service training for nursing staff and technicians.	√	√
	Continuous update of the employee's knowledge in the medical field as well as continuously upgrading level of skill in his/her field of profession.	√	√
	Actively participate in quality Improvement, Infection Control committee and Projects management.	√	√
	Adhering to facility by-laws, Rules and Regulations as well as departmental Policies and Procedures.	√	√
	Makes other duties and obligations that have been allocated within the employee's knowledge, skills, and abilities.	√	√
Qualifications	Master or Fellowship in Physical Medicine and Rehabilitation, or Equivalent and accredited from Saudi council and regulations.	√	
	Qualifications: A PHD degree from a recognized medical school or college or Fellowship in Physical Medicine and Rehabilitation, or Equivalent and accredited from Saudi council and regulations.		√
	Minimum five (2) years' experience Post Qualification. Valid license to practice medicine in the specialty area.	√	√
	Valid basic life support BLS certificate + registered by Saudi Commission for health specialties SCFHS).	√	√

C.6. Intervention and Health Education Program

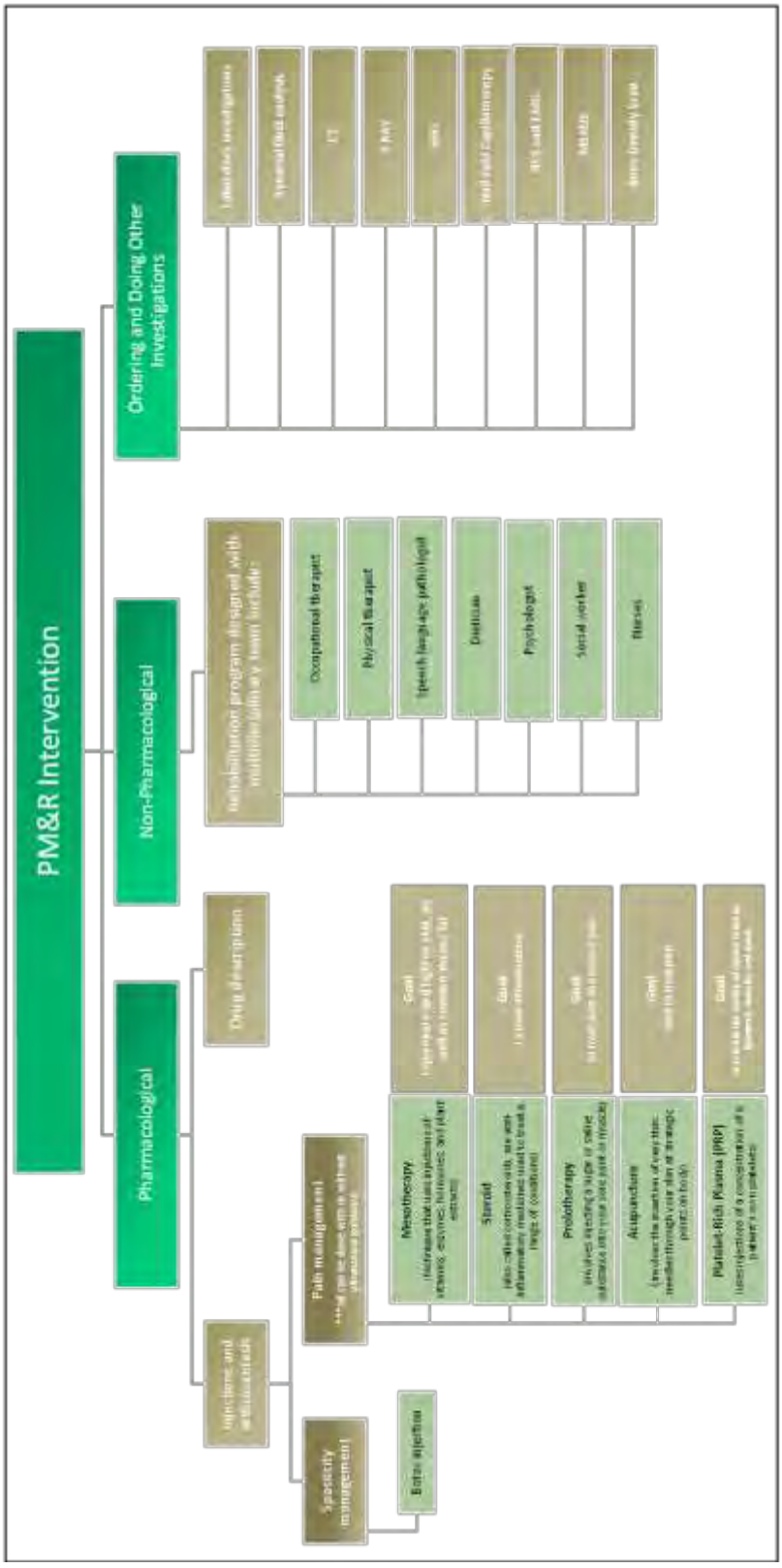
I) Aim of PM&R Intervention

- **Pain Management:** Many mental health patients also suffer from chronic pain, and Physical Medicine and Rehabilitation (PMR) doctors are uniquely qualified to manage these conditions. Effective pain management can improve mental health outcomes, especially for those with comorbid chronic pain (Sullivan& McCaffery, 2015).
- Prescribing medications, local injection Botox injection.
- Requesting other investigations needed such as x-ray, lab investigations. etc that need for medical rehabilitation.
- Appropriate Refereed patients to Occupational Therapy, Physical therapy, or Speech therapy
- Ordering special orthosis and prosthesis.
- Improving or maintaining current physical, psychological, and social functions, compensating for loss of function.
- Preventing or slowing disability.
- Encouraging social integration and decreasing cardiovascular risk

II) Types of Interventions:

The following chart (Chart C-1) present the different interventions a physiatrist may provide:

(Chart C-1)
PM&R Interventions



وزارة الصحة
Ministry of Health

19. Medical rehabilitation in Mental health

D. Speech Language Pathology

D.1. What is Speech-language pathologists (SLPs)?

Speech-language pathologists (SLPs) focus on the prevention, assessment, diagnosis, and treatment of disorders related to speech, language, voice, fluency, social communication, cognitive-communication, and swallowing.

D.2. Speech-language pathologists in Mental Health

Communication disorders frequently co-occur with mental health issues. Bryan and Roach (2001) stated that people with mental health issues have higher incidence rate of speech and language disorders than the general population.

Whitehouse (2009) identified that mental health was highly represented in adults with communication impairments. Developmental language disorders have been found to contribute to the development of personality disorders in adulthood (Mourisden & Hauschild, 2009).

D.3. The Role of Speech-language pathologists

According to (RCSLT.org, 2021) Speech-language pathologists are integral members of the multidisciplinary team supporting clients with mental health problems. They:

- Assessing communication skills, both verbal and nonverbal communication. This is especially important for individuals with mental health disorders, such schizophrenia, depression, or bipolar disorder.
- Improve social communication, such as maintaining conversations, interpreting social cues, and responding appropriately in social contexts. This is crucial for patients with conditions like autism spectrum disorders or social anxiety.
- Support cognitive communication issues that can arise from conditions such as dementia and severe mental illness.
- Treating voice and speech disorders, especially when dealing with high level of stress.

- Collaborating in multidisciplinary teams including psychologists, psychiatrists, and occupational therapists to provide comprehensive care and improve the overall well-being of patients.

D.4. Job Description

The following table (Table D-1) presents the duties, responsibilities , qualifications, and experience for speech language pathologists.

(Table D-1) : Speech and Language Pathology (SLP) job description				
	Item	Consultant	Senior therapist	Therapist
Duties and Responsibilities	History taking, physical examination and interpretation of common diagnostic test.	√	√	√
	Provide written speech language pathology evaluation, treatment, and intervention plans for all clients.	√	√	√
	Participate actively in the on-call of the department for patient care and admission.	√	√	
	Keeping an updated follow up in the progress notes.	√	√	√
	Conducts direct and supervises speech language pathology programs designed to rehabilitate mentally or physically disabled patients.	√	√	
	Lead and undertake research and intervention activities to improve service delivery.	√	√	

(Table D-1) : Speech and Language Pathology (SLP) job description				
	Item	Consultant	Senior therapist	Therapist
	Supervises the interns and trainees in their immediate assignment.	√	√	
	Incorporates quality improvement strategies in clinical practice.	√	√	√
	Act as an Expert in Clinical Practice by managing a complex clinical caseload.	√		
	Act as an expert clinical recourses and work with colleagues in other professions to develop and promote the role of SLP Practice, including advising multi-disciplinary teams.	√	√	
	Lead on the development of evidence-based clinical protocols and policies to improve outcomes of Interventions.	√	√	
	Act as a consultant on clinical problems and discuss diagnosis and treatment plans with the medical team.	√	√	√
	Directs and supervises the work of Speech and Language Therapists.	√	√	
	Instructs patients and caregivers in home program for continuous improvement and prepare all discharge summaries on related patients.	√	√	√
	Makes rounds with Physicians/Surgeons, as requested, to discuss patient progress under SLP.	√	√	√
	Prepares patients for discharge, educating them about precautions, basic procedures and proving home instructions.	√	√	√
	Communicates all changes in patient condition to the physicians in charge.	√	√	√
	Provide Clinical and Professional leadership for an expanding SLP service.	√		
	Provides peer review to colleagues rotating through areas of specialty and evaluate their performance.	√	√	

(Table D-1) : Speech and Language Pathology (SLP) job description				
	Item	Consultant	Senior therapist	Therapist
	Conduct work in a professional manner and maintains patients' confidentiality when required.	√	√	√
	Coordinates with the members of the team to conduct therapeutical programs for the patients.	√	√	√
	Participates in ongoing education programs developed by the department, e.g., Department Policy and Procedures, Fire Safety, Risk Management, Environment control.	√	√	√
	Complies with facility dress code.	√	√	√
	Perform other job-related responsibilities and duties as assigned within the employees' abilities, skills, and knowledge.	√	√	√
	Holds monthly meetings, case review, journal reports and conferences.	√	√	√
	Participates in the development of the overall department, questions and answers issues, in-service education and support positive changes.	√	√	√
	Adheres to all facility and Departmental Policies and Procedures as applicable.	√	√	√
	Provide or consult on follow-up support to clients, families, employers/schools, and multi-disciplinary team consistent with SLP treatment and intervention plan.	√	√	√
	Maintain punctual and regular, established work hours.	√	√	√

(Table D-1) : Speech and Language Pathology (SLP) job description				
	Item	Consultant	Senior therapist	Therapist
Qualifications & Experience	Valid basic life support BLS certificate + registered by Saudi Commission for health specialties SCFHS).	√	√	√
	PhD degree in SLP and from an accredited institution, plus the required clinical internship for professional registration. 5 years' experience in SLP	√		
	Masters' degree in SLP and from an accredited institution , plus The required clinical internship for professional registration. 2 years' experience in SLP.		√	
	Bachelor's degree in SLP and one year of internship experience.			√

D.5. Intervention

(Table D-2) Speech and Language Pathology Interventions

Issues	Rationales	Solutions	Description	Session setting	Types of interventions
Speech – Articulation.	Communication and Mental Illness Theoretical and Practical Approaches (Jenny France ،Sarah Krame)	Improvement of speech sound discrimination between the target sound and incorrect production.	difficulties in articulating specific types of sounds	Outpatient Inpatient Daycare	1-1 sessions family counseling
Fluency – Stuttering.		Reduce physical tension. Family counselling.	Client is not fluent when talking.		
Fluency – Clutteringg.		Improvement of the fluency and intelligibility.	Abnormal pattern of speech and include breaks in normal speech production.		
Language – Receptive Delay.		Improve comprehension of the client. Provide counseling to the family.	Difficulties in understanding spoken language.		
Language – Receptive & Expressive Delay (Mixed).		Improve clients' phonology, semantics, morphology and syntax, and pragmatics as well as comprehension.	Difficulties in understanding and in communicating verbally.		
Language – Expressive Delay.		Improvement of the clients' ability to communicate verbally & to express themselves and their needs using language.	Difficulties conveying or expressing information in speech & in responding to others.		
Voice Disorders.		Improvement of voice production.	Disorder with tone, volume or pitch of voice.		1-1 sessions

وزارة الصحة
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E. Prosthetic and Orthotics

E.1. What is Prosthetics and Orthotics?

Prosthetics is a branch of healthcare technology that focuses on the design, fabrication, and implementation of prostheses A prosthesis is defined as an "externally applied device used to replace wholly, or in part, an absent or deficient limb segment" (Ispoint.org, 2021).

Orthotics is a branch of healthcare technology that focuses on the design, fabrication, and application of orthoses (braces). Orthosis is defined as an "externally applied device used to modify the structural and functional characteristics of the neuromuscular and skeletal system" (ispoint.org, 2021).

E.2. Prosthetics and Orthotics in Mental Health

The Prosthetics and Orthotics Department provides services that include the design and installation of orthopedic devices to enhance the patient's body functions. Medical assistance and mechanical devices are provided to patients who have body parts that are disabled or who have lost organs due to accident or disease. These specialized mechanical devices support or supplement weak or abnormal joints and limbs. In addition, the department plays a role in the comprehensive management of neuromuscular skeletal disorders and critical physical injury cases in pediatrics and adults. (Desmond and MacLachlan, 2002).

Prosthetics and orthotics in the context of mental health are often linked to the rehabilitation process for individuals who have experienced traumatic injuries, amputations, or disabilities. These devices can play a significant role not only in restoring physical function but also in improving psychological well-being.

E.3. The Role of Prosthetics and Orthotics in mental health.

The intersection of prosthetics, orthotics, and mental health has gained attention, especially in rehabilitation after traumatic injuries, amputations, and disabilities. Prosthetic and orthotic devices restore physical function and significantly improve psychological well-being.

Restoring Function and Well-Being

Prosthetics help regain mobility and independence after limb loss, improving self-esteem and reducing feelings of helplessness. Orthotics alleviate pain, improve mobility, and reduce anxiety linked to functional limitations (Schoenfeld et al., 2020).

Psychological Impacts

Adjusting to body image changes after amputation or injury is a challenge. Prosthetics can improve body image and reduce social isolation. Psychological distress, such as anxiety and grief, is common during adaptation, requiring psychological support (Schoenfeld et al., 2020).

Improved Quality of Life

Prosthetics and orthotics enhance mobility, helping individuals engage in work, social, and recreational activities. This reduces isolation and boosts self-esteem, which protects against mental health issues like depression and PTSD (Kuhn et al., 2021).

Multidisciplinary Approach

Effective rehabilitation requires collaboration between prosthetics, orthotics, physical therapists, and mental health professionals, ensuring both physical and psychological needs are met. Cognitive-behavioral therapy (CBT) helps individuals cope with emotional challenges related to prosthetic use.

Long-Term Psychological Benefits

With increased proficiency, individuals experience empowerment and control, boosting motivation and fostering psychological recovery. Achieving physical rehabilitation goals also provides a renewed sense of purpose and improves mental health outcomes.

E.4. Job Description

The following table (Table E-1) presents the duties, responsibilities , qualifications and experience for prosthetics and Orthotics.

(Table E-1) : Prosthetics and orthotics job description					
	Item	Consultant	Senior therapist	Therapist	Technician
Duties and Responsibilities	Coordinates with physicians to formulate specifications and prescriptions for orthopedic and/or prosthetic devices.	√			
	Designs orthopedic and prosthetic devices in accordance with physician prescriptions, as well as patient evaluation and measurement.	√			
	Examines, interviews, and measures patients to determine their appliance needs, and to identify factors that could affect appliance fit.	√	√		
	Provides and customizes plaster casts for the areas that need to be fitted with the orthoses or prostheses during the device fabrication process.	√	√	√	
	Chooses appropriate materials and specific parts to be used, based on device design.	√	√		
	Fits, tests and evaluates devices on patients, and adjusts for proper fit, function and comfort.	√	√	√	
	Educates patients about proper use and maintenance of orthoses and prostheses.	√	√	√	
	Trains and supervises Orthopedic and Prosthetic Assistants, Technicians, and other support staff.	√	√		
	Attends workshops and seminars to develop skills and knowledge.	√	√	√	
	Maintains patient records.	√	√		

(Table E-1) : Prosthetics and orthotics job description					
	Item	Consultant	Senior therapist	Therapist	Technician
	Selects the most appropriate device for various pathological disorders based on their expertise about different diagnostic methods.	√	√	√	
Duties and Responsibilities	Aware and capable of fabricating immobilization equipment such as KAFO and AFO, as well as techniques of drawing shape and size on paper.	√	√	√	
	Reads x-ray of the spine and takes measurements for fabricating spinal devices e.g., BOSTON BRACE.	√	√	√	
	Constructs both low and high temperature splints for the lower and upper limbs and takes gypsum measurements.	√	√	√	√
	Manufactures both upper and lower limb prostheses.	√	√	√	√
	Provides treatment for pediatrics and adults with lower - limb abnormalities and deformities such as leg length discrepancy, flat feet, club feet, and intoeing.	√	√	√	
	Recognizes and treats pathological gait patterns.	√	√	√	
	Follows safety procedure inside the workshop, chemical handling, and preservation techniques.	√	√	√	√
	Fabricates and refurbishes prosthetic devices from plaster cast positives and assessment forms.			√	√
	Makes prosthetic devices using materials such as thermoplastic and thermosetting materials, metal alloys and leather.		√	√	√
	Provides services and repairs appliances as required.		√	√	√

(Table E-1) : Prosthetics and orthotics job description					
	Item	Consultant	Senior therapist	Therapist	Technician
	Maintains an inventory of materials.				√
	Assists prosthetics working with patients.		√	√	√
	Repairs machinery used in the fabrication of devices.			√	√
	Follows all facility facility related policies and procedures.	√	√	√	√
	Contributes to self and others' training, education and development as needed.	√	√	√	√
	Performs other related duties as assigned.	√	√	√	√
Qualifications & Experience	Valid basic life support BLS certificate + registered by Saudi Commission for health specialties SCFHS).	√	√	√	√
	PhD degree in prosthetics and orthotics and five years' experience in prosthetics and orthotics.	√			
	Masters' degree in prosthetics and orthotics and two years' experience in prosthetics and orthotics.		√		
	Bachelor's degree in prosthetics and orthotics and one year of internship experience.			√	
	Diploma degree in prosthetics and orthotics and one-year experience.				√

E.5. Intervention list

The following table (Table E-2) shows the different prostheses and orthosis prescribed by a prosthetics and orthotics.

(Table E-2): Prosthetics and orthotics Interventions		
Item	**Description**	**Goals**
Cervical orthoses		
Soft collar	Used in cases of muscle tension or minor cervical injuries.	Reduce Pain & Improve correction
Rigid collar	Restrict head rotation and side-to-side movement more than softer collars.	
Philadelphia collar	Hard, hypoallergenic, latex-free foam collar that supports the front and back of neck with hard plastic.	
Minerva brace	Used to help stabilize your spine after injury or surgery. It helps to hold your spinal column in good alignment during the healing process.	
Spinal Orthoses		
Clavicle support	The brace keeps the collarbone area immobilized after a simple break or fracture so the bone can heal.	Provide Stability
Rib belt	An elastic strap that may help reduce pain from chest muscle strain or rib fracture.	Reduce Pain
Hyperextension orthoses	Supports the recovery of fractures in the middle and lower thoracic spine and upper lumbar spine.	prevent deformity
Chairback brace	Short brace that may provide low back pain relief and spinal stability after surgery.	provide and support back mucsles after surgery
Knight Taylor brace	Prescribed for Anterior Compression Fractures or in cases where a person's torso tends to lean forward.	Improve correction
Jewett Brace	Hard brace that supports the thoracic and lumbar spine by limiting rotation (moving sideways) and flexion (moving forward).	Improve correction
Lumbar sacro support	Created to reduce lumbar or lumbosacral aches and discomfort	Reduce Pain
Boston brace for scoliosis	A body jacket which is made of plastic and used to treat youth with idiopathic scoliosis.	Improve correction

(Table E-2): Prosthetics and orthotics Interventions		
Item	**Description**	**Goals**
Upper Limb Orthosis		
Humeral fracture brace	Used to preserve motion in the forearm and hand while stabilizing fractures of the upper arm.	Provide Stability
Arm abduction brace	A static brace that holds the arm in abduction with the elbow flexed and the forearm pronated.	
Shoulder immobilizer	Device used to keep your arm from moving while your shoulder heals.	Provide Stability
Carpal tunnel splint	People with mild to moderate carpal tunnel syndrome wear a splint at night for a few weeks.	Reduce Pain
Cork-up wrist splint	Type of wrist hand orthosis which may be used to treat a wide range of conditions localized at or near the wrist and hand	Reduce Pain & increase ROM
Wrist splint	Supported and held in the neutral position reducing the strain on the tendons.	Reduce Pain & Provide Stability
Cork-up/ resting hand splint	A kind of wrist-hand orthosis that can be applied to treat a variety of conditions that are localized at or close to the wrist and hand	Provide Stability
Thumb/Wrist splint	Used to keep the thumb and/or wrist immobile while permitting the other digits to move freely.	Reduce Pain
Dynamic hand splint	Uses a tension spring that is integrated into a brace, usually via a mechanical hinge.	Improve ROM
Tennis elbow brace	Applies pressure to the muscles of the forearm, reducing pressure on the injured tendon in the elbow.	Reduce Pain
Rom elbow brace	Created to provide an individualized, customized fit by allowing adjustable elbow extension.	Increase ROM
Finger extension splint	Developed to provide support for the proximal interphalangeal joint, often known as the PIP,	Reduce pain & increase ROM

(Table E-2): Prosthetics and orthotics Interventions		
Item	**Description**	**Goals**
	which connects the MTP joint (or palm) to the middle of the finger.	
Mallet splint	Plastic splint, which keeps it straight, with the end joint slightly bent backwards.	Increase ROM
Lower Limb (knees)		
Elastic knee support	Provides moderate support for weak, stiff or sore knees	Reduce Pain
Hinged knee brace	Prevents hyperextension, control the speed and range of leg movements, and promote a certain alignment of the joint.	Provide Stability & Improve Balance
Knee immobilizer	Protects knees with extensor weakness after femoral nerve block, to limit flexion or varus–valgus motion.	
Ligament knee brace	Supports this major ligament of the knee.	
Functional knee brace for ACL/PCL	Protects an injured ACL or ACL graft and to minimize further intra-articular injury by decreasing abnormal anterior translation of the tibia in relation to the femur.	
Lower Limb - Ankle / foot		
Fixed Ankle walker	Limits the movement of the ankle and/or foot	provide protection and correction
Rigid AFO	Prevents any mobility and gives complete support to the back of the leg.	provide stability & correction
Dynamic AFO	Customized for individuals who have paralysis in the area of foot and ankle. The Dynamic AFO has flexible hinges.	provide correction & ROM
Swedish AFO	Injection-molded polypropylene splint which stabilizes the entire foot-ankle laterally and assists in static dorsiflexion.	provide stability & correction
Rigid/dynamic KAFO	It spans the length of the knee, ankle and foot in an effort to support the muscles, stabilize the joints and assist safe ambulation.	
Rigid/dynamic HKAFO	Custom-made brace that supports the foot and ankle while standing, walking, or resting to hold them gently in a more functional position.	

(Table E-2): Prosthetics and orthotics Interventions		
Item	**Description**	**Goals**
Plantar Fasciitis splint	Night splint holds the Plantar Fascia and Achilles tendon in a stretch position during sleep.	Reduce pain
Ankle Brace	A garment worn around the ankle to provide protection or immobilization while enabling it to heal from minor injuries such as sprains.	reduce pain & stability
Hip Orthosis	Designed to provide adjustable abduction of the hip during gait training, limited ambulation or for use while in a bed or wheelchair.	provide Correction
Hallux Valgus splint	Device that is placed over the big toe and physically pushes it away from other toes in an attempt to correct its alignment.	Reduce pain
Arch support	Supporting the foot arches through shoe inserts.	
Silicone insole		
Silicone Heel Pad		

20. Conclusion

In conclusion, this initial version of the guideline, while not mandatory, is a crucial resource for healthcare providers in mental health settings, offering a structured framework for effective medical rehabilitation services. It defines the roles of medical rehabilitation

professionals and stresses the importance of clear communication and referral protocols, ensuring a cohesive, multidisciplinary approach to care.

The guideline's detailed insights into various therapeutic intervention strategies support a holistic and integrated model of care, ultimately enhancing the quality of life for individuals facing mental health challenges. Additionally, by optimizing the use of available human resources and infrastructure within mental health facilities, it promotes the development of specialized rehabilitation programs that aid patients in reintegrating into the workforce and becoming productive members of society. Through these efforts, the guideline contributes to the overarching goal of optimizing functioning and minimizing disability in individuals with mental health conditions, thereby supporting their recovery and overall well-being

21. Recommendations

We recommend the establishment of a permanent inter-ministerial committee dedicated to the development and continuous improvement of medical rehabilitation services within mental health facilities. Given the significant effort required for the success of this initiative, facilitating its implementation will help accelerate progress and enhance overall outcomes. Additionally, we recommend that the second version of the manual be regularly updated to remain relevant and effective. It is also evident that there are existing gaps, particularly in research and funding, and therefore, further investment in these areas is strongly recommended to address these challenges and support sustained advancement.

22. Conflict of Interest

No conflict of interest.

23. Funding

None

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Appendices

Appendix A: Orientation program table

Departmental Orientation program for new staff or student/interns in medical rehabilitation					
	Specialty:	***Name***			
	□ ***New employee student*** **trainee**	**ID no.**			
	Mobile no. :	***Date***			
	Date of staff hire or student start:			**Department**	
	Check list	**Orientation Week**	**Assigned Staff Name**	**Date of Completion**	**New Employee's Sign**
1	Welcome, introduction to the staff members.				
2	Department tour, Rotates in related facility department /units				
3	*Working hours' timesheet, tardiness and absences, leaves. *Health Services for staff or students .				
4	Uniforms, dress code & wearing the facility ID card				
5	*Review administrative and departmental P & P, Mission, Vision, Goals, scope &, organization & departmental chart.				
6	Job Description & evaluation				
7	Overview of required records, statistics, progress notes, forms assessment & reports.				
8	Type of clients in mental health with the patient's rights, privacy and confidentiality.				
9	Modalities and equipment used for treatment and how to use it properly reporting malfunction				
10	Infection Control program, hand Hygiene, medical waste.				
11	Quality Management and Patient Safety program.(OVR), adverse & sentinel event.				
12	Fire safety, Security Rules, evacuation &plan in disaster& emergencies.				
13	Continuous education program				

I have read the Job Description, Policy and Procedure manual and completed the orientation program.

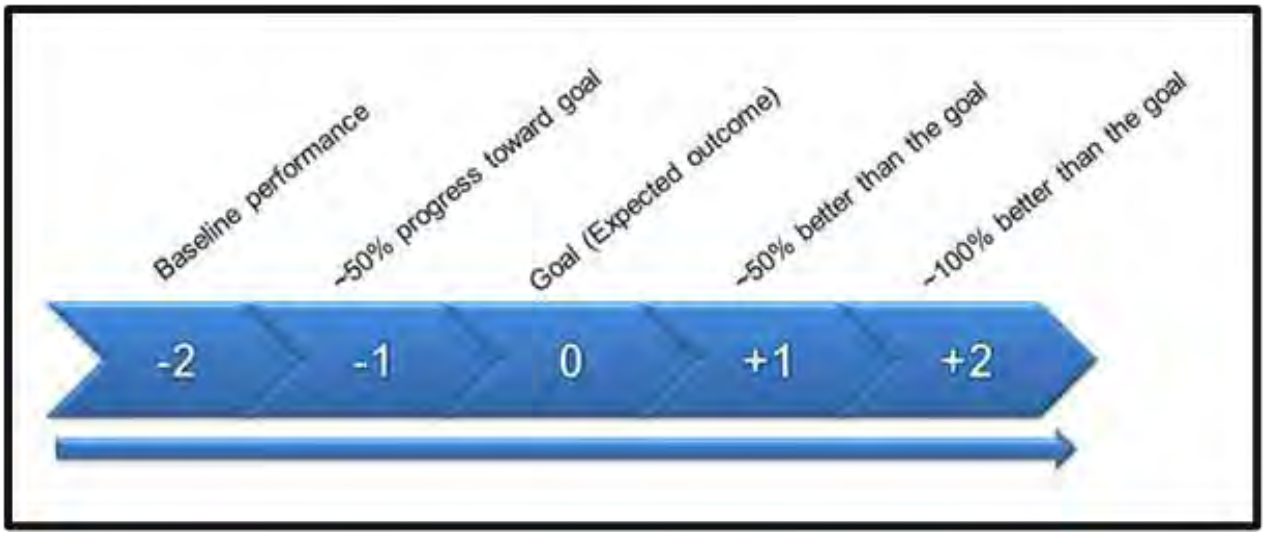
Signature of the new Employee /student: ***Head of Department:***

Appendix B: Training plan checklist

Duration	Program/Activity
One week	**Orientation week:** - Welcome. - Dept. vision, mission, and values. - Policies and Procedures of the Dept. - Infection control and patient Safety. - Training ID Card. - Round in the departments of Medical Rehab. - Reflection, Feedback, Expectation, impression. - Distribution trainees in the dept.
2 weeks	- Explain assessment and evaluation for patients and filling assessment, progress notes forms.
6 weeks	-Start trainees in treating cases -Discussion about musculoskeletal, Neurological, and Paediatric training
3 weeks	ADLs Rehabilitation training
2 weeks	Substance use Rehabilitation training.
2 weeks	Acute psychiatry Rehabilitation training.
2 weeks	Chronic psychiatry Rehabilitation training.
2 weeks	Cognitive Rehabilitation training.
3 weeks	Vocational/Recreational therapy Rehabilitation training.
One week	Presentation by trainees. -Exams

	-Reflection and meeting.

Appendix C: Scoring of goal attainment scale



Appendix D: Example of applying goal attainment scale

Imagine that one of your depression treatment goals is to be able to improve aspects of your social life. In this scenario, you would like to be able to increase the frequency with which you see friends and family and/or attend social gatherings.

To help you track your progress toward this treatment goal, your provider suggests that you both establish a framework for assessment. Together, you create the following scoring matrix to evaluate your progress.

In this example, you and your provider agree that a goal would be for you to schedule and attend one social event a week. You also agree that not scheduling or attending a social event would represent less than expected progress and that scheduling and attending more than one social event would represent more than expected progress.

Goal Attainment Level	Score	Goal: Increase Social Engagement
Much better than expected	2	Scheduled and attended two social events in the past week
Somewhat better than expected	1	Scheduled two and attended one social event in the past week
The expected level of attainment	0	Schedule and attend one social event in the past week
Somewhat less than expected	-1	Scheduled but did not attend one social event in the past week
Much less than expected	-2	Did not schedule or attend a social event in the past week

At your first meeting, you and your provider would identify your current status in the assessment matrix which would represent your baseline or the point from which your progress would be measured. Over the course of your treatment, you would meet with your provider approximately every 6 weeks to assess your progress of attaining your goal. At the end of treatment, your provider would determine your outcome in relation to the assessment matrix, and your progress would be scored resulting in a numeric representation of your goal attainment.

Appendix E: Physical therapy flags system

Physical therapy flags system		
Flag	**Nature**	**Examples**
Red	Signs of serious pathology	Cauda equina syndrome, fracture, tumor, unremitting night pain, sudden weight loss of 10 pounds over 3 months, bladder & bowel incontinence, previous history of cancer, saddle anaesthesia
Orange	Psychiatric symptoms	Clinical depression, personality disorder
Yellow	Beliefs, appraisals, and judgments	Being pessimistic about pain, expecting the pain to increase and not to controlled. Predicting that intervention is not helping, late work returning.
	Emotional Responses	Distress does not meeting criteria for diagnosis of mental disorder. Worry, fears, anxiety.
	Pain behaviour (including pain and coping strategies)	avoiding exercises and activities due to fear of pain and potential reinjury. Over-reliance on passive treatments.
Blue	Perceptions about the connection between health and job	Perception that work is difficult and mostly contributing to further injury. Belief that workplace supervisor and workmates are unsupportive.
Black	System or contextual obstacles	Legislation restricting options for return to work. Conflict with insurance staff over injury claim. Overly solicitous family and health care providers. Hard work, with limited chances to modify tasks. Performing clerical tasks