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# The connection between MENTAL HEALTH and PHYSIOTHERAPY

**P**hysiotherapists have an important role in improving a patient's Mental Health as an integral part of the multi-disciplinary team. There are a number of problems Physiotherapists can help with:

**Sedentary life style:** A lack of exercise can cause further depression and anxiety. Physiotherapists are experts in prescribing a specific exercise programme to the patient's needs, monitoring exercises with the patient.

**Pain and tension:** Pain and tension increases in a linear fashion with Depression. Pain can cause further mental health problems such as Depression and Anxiety. In a systematic review with Meta-analysis: The prevalence of pain in Bipolar Disorder; it was concluded that people with Bipolar Disorder experience significantly increased levels of pain (particularly chronic pain and migraine). The assessment and treatment of pain should form an integral part of the management of Bipolar Disorder. A physiotherapist treats pain with orthopedic manipulative therapy, myofascial release, chronic pain guidelines, exercise etc.

**Poor breathing patterns:** In patients with Anxiety Disorders or Depression, training for breathing difficulties can serve as an empowering adjunctive treatment. Physiotherapists are trained to teach patients correct breathing exercises and the management of Anxiety Attacks.

**Trauma experiences causing decreased bodily flexibility:** There is a strong association both between Trauma experiences and bodily flexibility and between bodily and psychological reactions. Interestingly there are about 10 times more sympathetic fibres in fascia than in muscle. Physiotherapists use exercise, fascial stretching, posture re-education and flexibility exercises to help improve the decreased body flexibility.

## There are three categories of Mental Health Physiotherapy:

1. Physical activity
2. Chronic pain treatment
3. Body and Mind connection

## Physical Activity

Physical activity is defined as any bodily movement produced by skeletal muscles that require energy expenditure. Physical inactivity has been identified as the fourth leading risk factor for global mortality causing an estimated 3.2 million deaths globally.

**Physiotherapists can have a direct effect on Depression and other Mental Health conditions through exercising patients according to research guidelines.**

High-level research shows that exercise and physical activity can be as effective as anti-depressant medication in treating mild to moderate Depression.

According to the World Confederation for Physical Therapy (WCPT) Policy statement: "Physical Therapists are exercise experts across the life span" and "exercise is the foundation of Physical Therapy." (Patman S., Evands C., Plani N., Yamanda S.)

Physical activity has also been shown to enhance the effectiveness of psychological therapies. It has a role in improving quality of life and symptom management for people with a wide range of Mental Health problems. There is a two-fold benefit, as Mental Health problems increase the risk of physical health problems, including cardiovascular diseases, endocrine disorders and obesity. Today, more and more Psychiatrists are convinced that medication, counselling and physical activities are the basic standards for therapy in mental illness.

There are a number of reasons why physical activity improves a patient's Mental Health condition:

**The endorphin hypothesis:** Endorphins interact with the receptors in your brain reducing the perception of pain. They also trigger a positive feeling in the body, similar to morphine.

**The monoamine hypothesis:** It has been proposed that there is an increase of central monoamine neurotransmitters particularly noradrenaline.

**The brain derived neurotrophic factor (BDNF) hypothesis:** Prolonged exposure to stress hormones (e.g. corticosteroids) is harmful for neuronal health and survival, particularly in the hippocampus.

BDNF is very important for neuron growth and neuron health.

### Some other benefits of exercise in Mental Health patients include:

#### Anxiety

Exercise training can reduce trait Anxiety and single exercise sessions can result in reductions in state Anxiety.

#### Depression

The anti-depressant effect of exercise can be of the same magnitude as that found for other psychotherapeutic interventions.

#### Emotion and Mood

Physical activity and exercise have consistently been associated with positive mood and affect.

#### Dementia

Physical activity has been shown to be inversely associated with cognitive decline.

#### Self-Esteem

Exercise can be used as a medium to promote physical self-worth and other important physical self-perceptions such as body image. In some situations, this improvement is accompanied by improved self-esteem.

#### Cognitive Functioning

The majority of cross-sectional studies show that fit, older adults display better cognitive performance than less fit older adults.

#### Sleep

Individuals who exercise regularly have a lower risk of disturbed sleep but causal effects are less well established.

#### Smoking cessation

There is increasing evidence that single sessions of exercise, at a low to moderate intensity (e.g. walking) can help temporary abstainers to cope with withdrawal symptoms and nicotine cravings, particularly in laboratory conditions.

#### Neuro inflammation

Exercise has a neuroprotective and anti-inflammatory effect on the brain and stress-related neuropsychiatric pathologies.

# PAIN

## Chronic Pain

The rate of major Depression increased in a linear fashion with greater pain severity (Curie et al.) Chronic pain and Depression are two of the most common health problems health professionals encounter. Physiotherapists have an integral role to play to decrease chronic pain in psychiatric patients.

The physiotherapy treatment for chronic pain, according to clinical guidelines, is listed below. Treatment does not only involve manual therapy such as joint mobilisation, myofascial release, dry needling therapy and electrotherapy, but also involves:

- Exercise therapy shown to decrease chronic pain very effectively
- Neurophysiology education: reframing/restructuring of the threat by giving good neurophysiology explanations to the patient
- Relaxation techniques
- Biofeedback
- Mindfulness-based technique among others

## Body and Mind Connection

### Breathing Exercises

Anxious or depressed individuals breathe only from the upper chest, in a shallow fashion, whereas individuals who have an integrated mind-body system breathe deeply, from the diaphragm. This is an empowering adjunctive treatment for these Mental Health challenges.

Diaphragmatic breathing decreases an excessively active sympathetic nervous system. When practiced, it appropriately energises the sympathetic nervous system on the inhale, and the exhale appropriately engages the parasympathetic system (Brown 2009). Papworth Method, used to treat asthma and its accompanying Anxiety, produces significantly less Anxiety and Depression in a treatment group as compared to a control group after five sessions and at a one-year follow-up (Holloway 2007).

### Posture Re-education

With regard to posture, it was also found that patients with recurrent Major Depressive Disorder (MDD) had greater postural misalignment than non-recurrent. MDD patients with recurrent MDD had rounder shoulders, worse thoracic kyphosis and less lumbar lordosis compared to single MDD patients. Physiotherapists retrain the patient to engage a better posture, which through bio-feedback, can have a positive effect on one's mind.

## Conclusion

As seen above, the involvement of a physiotherapist in a mental health team is imperative. The above topics just skim the surface of the impact a physiotherapist can have. Physiotherapy treatment in mental health is a relatively recent and evolving domain in South Africa. In order to evaluate the effectiveness of physiotherapy interventions in different populations and settings and to develop more evidence-based treatment programmes, more research still needs to be done.

**MHM**