

Physical exercise for depression: Time for implementation is now

Vajira Dharmawardene




Though we are in the age of evidence-based medicine, presence of evidence does not always get translated into practice. Many effective interventions get neglected for interventions that lack evidence or comparatively poor in evidence.

Physical exercise for depression could be considered one such intervention that has accumulated significant evidence base over the years but yet to be implemented widely for the benefit of the patient. Although the efficacy of physical exercise for prevention of physical morbidity and mortality is well established,¹ the evidence base for benefits of exercise for “above neck” conditions like depressive disorder had long been considered inadequate and anecdotal.

The situation has changed now with a series of meta-analysis^{2,3} confirming the efficacy of physical exercise for depression. There is evidence for a dose response relationship between intensity of exercise and therapeutic benefit and additionally, physical exercise has been found to be therapeutic for anxiety and nonspecific psychological distress as well. The evidence has been categorized on evidence hierarchy as consistent across level 1 studies. The effect sizes are moderate to large and interestingly are either comparable or superior to the available antidepressant medications. The overview by Ben Singh and coworkers³ indicate all forms of exercise can benefit mental health, although higher-intensity activities produce the strongest benefits. When duration of the exercise program is considered briefer exercise programs provide more benefits than longer regimens. Curiously benefits of physical activity interventions diminished with longer-duration programs, indicating that individuals with depression need not commit to intensive, long-term exercise to achieve the required therapeutic benefit.

Correspondence:

Department of Psychiatry,
Faculty of Medicine,
Sabaragamuwa University of Sri Lanka
vajirad@med.sab.ac.lk

 <https://orcid.org/0000-0003-4794-4749>

The proposed mechanisms for efficacy of exercise for depression include increased expression of brain derived neurotrophic factor in brain, blunting of pro inflammatory cytokines, modulation of hormonal effects, release of endocannabinoids and often forgotten psychosocial factors associated with an exercise program.

Depression is considered the 'common cold' in psychiatry and together with anxiety disorders contributing as the leading cause for burden of disease associated with mental and behavioral disorders. Over 300 million people live with depressive disorder, equating to approximately 4.4% of the world's population. Currently, the recommended treatments for depression (and anxiety) are either psychotherapy and antidepressant medication (or a combination). Remission rates achieved by either is around 50% and psychotherapy is often a luxury available for a few even in developed countries. While relapses while on antidepressant medication is not uncommon, the side effects could be a problem specially when depression occurs with other physical illnesses. Exercise has the advantage of being free of side effects and of additional benefit for comorbid physical illnesses that are associated with depression. Another issue of global importance is given the dearth of mental health professionals only a minority receives even a cheap antidepressant.

In the context of suboptimal treatment response and above factors, it is unfortunate that exercise is yet to come widely to established clinical guidelines as a recommended treatment. Some clinical guidelines (National Collaborating Centre for Mental Health and National Institute for Health and Care Excellence, Scottish Intercollegiate Guidelines Network, Royal Australian and New Zealand College of Psychiatrists) have, to their credit, included exercise as a treatment option for depression.

The reasons for not adapting exercise for depression include exclusive emphasis on the biological etiology for depression and prescribers not adequately informed about the exercise prescription. Patients with depression are "lacking in motivation" is another often given reason.

There are few problems in the last argument. Firstly, the withdrawn and retarded patients are actually at the end of the spectrum of depressive disorders. Individuals with subthreshold, mild, and moderate symptoms tend to be more interested in pursuing the treatment option. Secondly, available RCTs show no difference in dropout rates between exercise and control or comparison groups. Thirdly, early evidence suggests that exercise is regarded as an acceptable and credible form of treatment by at least some individuals with depression.⁴

Given these findings there is probably no reason from the illness angle that prohibits physical exercise being adapted as a treatment for depression. As ancient Greeks believed doctors are foremostly advocates of physical activity. It is imperative that when treatment options are discussed, physical exercise option to be always on the agenda.

References

1. Naci H, Ioannidis JPA Comparative effectiveness of exercise and drug interventions on mortality outcomes: metaepidemiological study *British Journal of Sports Medicine* 2015;49:1414-1422.
2. Heissel A, Heinen D, Brokmeier LL, et al Exercise as medicine for depressive symptoms? A systematic review and meta-analysis with meta-regression. *British Journal of Sports Medicine* 2023; 57:1049-1057.
3. Singh B, Olds T, Curtis R, et al Effectiveness of physical activity interventions for improving depression, anxiety and distress: an overview of systematic reviews *British Journal of Sports Medicine* 2023;57:1203-1209.
4. Ekkekakis P, Murri MB. Exercise as antidepressant treatment: Time for the transition from trials to clinic? *Gen Hosp Psychiatry*. 2017 Nov; 49:1. doi: 10.1016/j.genhosppsy.2017.04.008. Epub 2017 Apr 27. PMID: 29122144.