

# Effectiveness of Physical Exercise in Treating Depression Versus Conventional Treatments: A Systematic Review

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## INTRODUCTION

Depression is a mood disorder characterized by a combination of cognitive, behavioral, emotional, and physical symptoms. Individuals are diagnosed by licensed psychologists or psychiatrists using DSM-V's criteria. Symptoms are varied, and not every individual with depression has every symptom that encompasses the disorder. Severities are based on how extreme the symptoms are in that specific individual.

The rate of depression has been rapidly increasing worldwide, affecting both men and women of all ages. It is the leading cause of disability and is a major contributor to mortality and morbidity.

The current standard treatments for depression include antidepressants and cognitive behavioral therapy (CBT). Some use these treatments alone, and some use them together for added benefits. While these interventions are successful for some people, there is still a need for alternative treatments. CBT can be intimidating and uncomfortable, and availability is limited. Antidepressants can be expensive, time consuming, and have many side effects.

### Major Depressive Episode

- 5 or more depressive symptoms for ≥ 2 weeks
- Must have either depressed mood or loss of interest/pleasure
- Symptoms must cause significant distress or impairment
- No manic or hypomanic behavior

### Minor Depressive Episode

- 2-4 depressive symptoms for ≥ 2 weeks
- Must have either depressed mood or loss of interest or pleasure
- Symptoms must cause significant distress or impairment
- No manic or hypomanic behavior

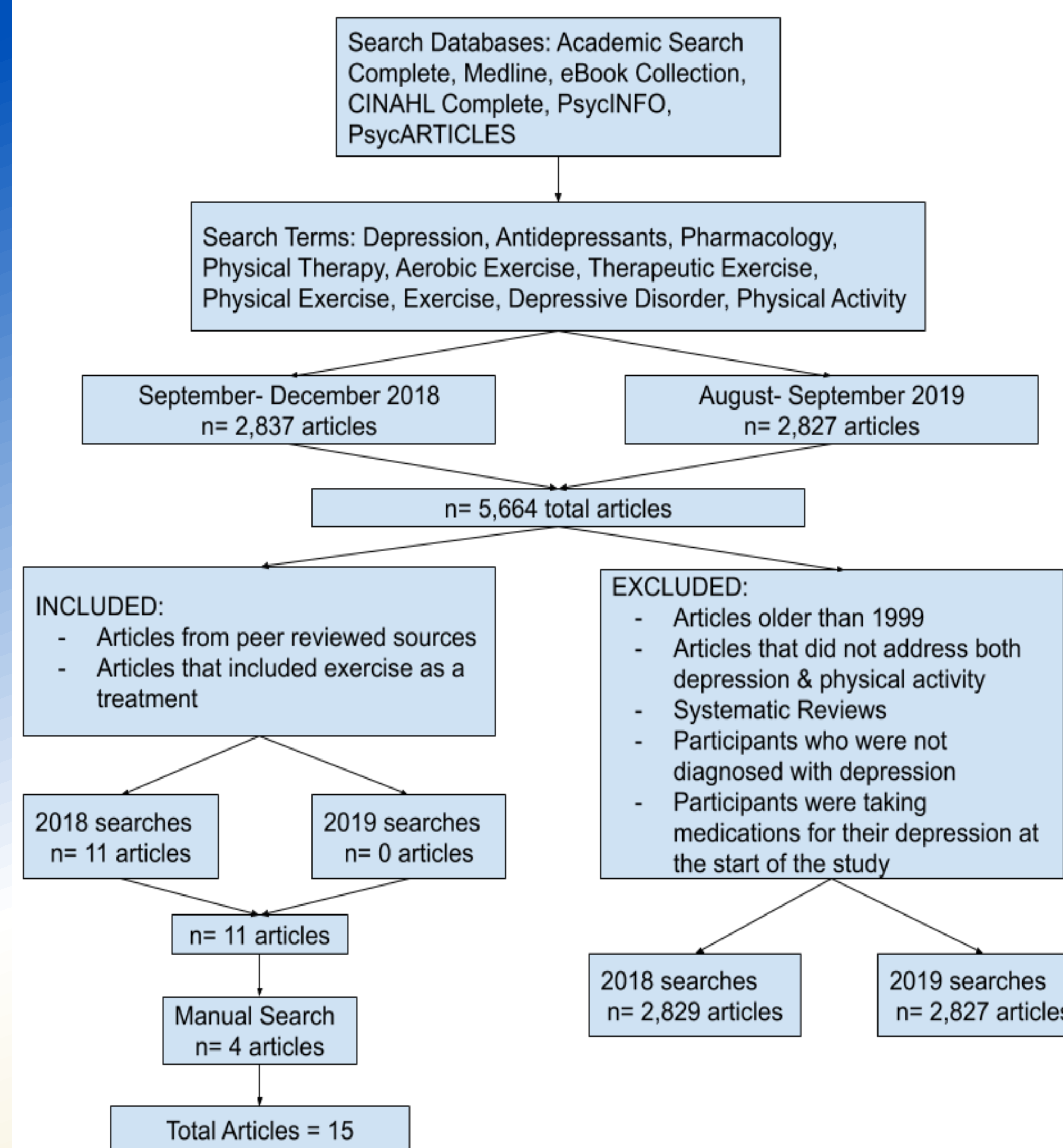
### Depressive Symptoms

- Depressed mood
- Markedly diminished interest or pleasure in most or all activities
- Significant weight loss (or poor appetite) or weight gain
- Insomnia or hypersomnia
- Psychomotor retardation
- Fatigue or loss of energy
- Feelings of worthlessness or excessive or inappropriate guilt
- Diminished ability to think or concentrate, or indecisiveness
- Recurrent thought of death (not just fear of dying), or suicidal ideation, plan, or attempt

## PURPOSE

The purpose of the systematic review is to compare the effects of physical exercise to the effects of current standard treatments on depression. There is currently not a collective source that condenses studies on this topic within the area of physical therapy. This systematic review serves as a source of information that health professionals, including physical therapists, can use to gain broad knowledge of the topic to apply in their practice.

## METHODS



Searches were completed between September and December of 2018, as well as August and September of 2019. Fifteen articles met inclusion and exclusion criteria and were included in the systematic review. Data and findings were compiled from thirteen articles that studied participants' response to exercise as a treatment for depression, and two systematic reviews that include information about exercise's effects on depression.

Exercise VS Antidepressants	<ul style="list-style-type: none"> <li>• Exercise is more beneficial than no treatment at all, and can possibly be an effective form of treatment in some individuals with depression</li> <li>• Exercise, medication, and a combination of exercise and medication are all effective forms of depression treatment</li> <li>• Exercise is just as effective as antidepressants in the short term</li> <li>• Exercise is more effective than antidepressants long term as shown with decreased relapse rates</li> </ul>
Additional Treatment for MDD	<ul style="list-style-type: none"> <li>• All participants taking antidepressants (control group) and some <u>participants initiated</u> exercise as an additional treatment</li> <li>• Those who exercised showed greater improvements on HRSD scores and had fewer relapses long term</li> <li>• Those who were exercising required lower doses of the antidepressants than those who were not exercising</li> <li>• The combination of exercise and medication was more effective than medication alone</li> </ul>
Aerobic Exercise VS Stretching	<ul style="list-style-type: none"> <li>• Both forms of exercise are effective in reducing depression</li> <li>• Aerobic exercise was more effective than stretching because it amplified the effects of the antidepressants</li> <li>• Higher remission rates with aerobic exercise</li> <li>• Participants subjectively reported feeling better when performing aerobic exercise as compared to stretching</li> </ul>
Timing of Exercise	<ul style="list-style-type: none"> <li>• Summer exercise versus fall exercise as depression treatment</li> <li>• No significant difference in results between the <u>two time</u> frames</li> <li>• Exercise found to be an effective treatment option during any time of the year</li> </ul>
Internet-based CBT VS In-person CBT VS Exercise	<ul style="list-style-type: none"> <li>• In-person CBT is a current standard treatment for depression</li> <li>• Internet-based CBT and exercise both found to be more effective than in-person CBT in reducing depressive symptoms</li> <li>• Higher remission rates and better <u>long term</u> effects with internet-based CBT and exercise</li> </ul>
Group Exercise	<ul style="list-style-type: none"> <li>• Group aspect of exercise contributed to positive feelings and decreased depressive symptoms</li> <li>• Exercising in groups or with a partner may be more beneficial than exercising alone, and may increase the benefits of exercise in those with depression</li> </ul>
External Factors	<ul style="list-style-type: none"> <li>• Depression can be triggered by external factors and life events</li> <li>• The addition of exercise into the physical therapy sessions used to treat work related injuries contributed to the improvement of depression</li> </ul>

## CLINICAL IMPLICATIONS

It is important for physical therapists to understand how exercise affects those with depression because any patient they are treating could have depression as a secondary diagnosis. These depressive symptoms, including decreased motivation, fatigue, fear of failure, and hopelessness may impact an individual's ability to fully and actively participate in their treatment program. Incorporating aerobic exercise interventions that have meaning to that individual may make them more successful. Creating meaningful relationships with patients may also add to their motivation and ultimate success.

## REFERENCES

References available upon request.

## CONCLUSION

All articles concluded that physical exercise is beneficial in the treatment of depression. With mild to moderate depression, it may be used as a standalone treatment, and in more severe cases, it may be used in conjunction with antidepressant medication.

## FURTHER RESEARCH

Further research should be conducted in the United States because most of the studies included in this review were conducted in other countries and results may not be generalizable to the American population. Most participants were middle aged, and further research should focus on younger populations, especially because depression is prominent in these age groups. Although several studies followed up with participants, more long term studies need to be conducted to determine whether or not exercise is a viable treatment for depression in the long run.