



PHYSICAL ACTIVITY IN THE TREATMENT AND PREVENTION OF DEPRESSION IN ADOLESCENTS

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INTRODUCTION

- Depression in adolescents is a major public health concern.
- According to the National Comorbidity Survey-Adolescent Supplement, approximately 11% of adolescents have depression by the age of 18 and the risk for depression increases with age (1).
- Depression has been found to be associated with other mental illnesses, obesity, substance use/abuse, and self-harm (2,3,4).
- The World Health Organization (2014)(5) reports depression as the leading cause of illness and disability across all ages.
- Suicide is the third leading cause of death among adolescents (5).
- Treatment of depression frequently includes the use of antidepressants; however, compliance is often low because of unpleasant side effects and low perception of effectiveness among patients (6, 7).
- Evidence suggests PA can be effective as a treatment for depression in adolescents (8,9,10,11,12).
- Exercise is a low cost therapy that can be added to existing treatments or used on its own.
- Exercise has fewer side effects than medication, and overall physical health benefits are helpful in the treatment of low self-esteem.
- Current recommendations are for adolescents to participate in at least 60 minutes of PA every day to promote positive physical effects, increase self-confidence, and decrease depression (13).

PURPOSE

The purpose of this integrative literature review was to identify the role physical activity (PA) plays in the treatment and prevention of depression to improve the care provided to adolescents diagnosed with depression.

METHODS

- An electronic search was conducted by Shepard and Trefren using the databases: PubMed, CINAHL, EBSCO, Psycinfo, and Cochrane.
- Search terms included depression, depressive disorder, physical activity, sports, exercise, adolescents, primary care, prevention, and treatment.
- Search was limited to English language, human subjects, and peer reviewed sources.
- Sources had to be within the past ten years (2005-2015), address adolescents between the ages of 12-18, and address both depression and physical activity.

SAMPLE

- 11 studies were included in review
 - Seven were cross sectional
 - One was a systematic review
 - Two were longitudinal
 - One was a cohort

LIMITATIONS

- Type of studies included could potentially have a causality effect.
- Different measurement tools used in studies for depression and PA.
- Most studies relied on self-report of PA and the participants had to recall past activities.
- In the studies that measured PA it was done for a short duration (2-4 days) and not at the same time depression was assessed.
- In the longitudinal studies, not all participants followed-up.
- Not all studies defined PA or included sports participation

REFERENCES

See provided reference list

RESULTS

- Mixed results
- Some studies showed up to a 25% decrease in depression and 12% in suicide risk, while others showed only a weak correlation
- Results varied between males and females
- Rigid PA programs gave females little to negative effects on depression
- Males with no structured PA were more likely to suffer depression
- Males tended to have less depression, but no effect on anxiety
- Females had less anxiety, but no effect on depression
- Adolescents that participated in vigorous PA had less long term effects on depression
- Females that participated in PA had a lower physical burden with depression
- Adolescents with low PA had a strong (males) and weak (females) correlation between low PA and level of depression
- In objective measures of PA and depression, there were no longitudinal association

CONCLUSION

- Most studies demonstrated an inverse relationship between PA and depression, but the exact role is unknown.
- Many studies indicated that PA is important for physical and mental health, even if solid conclusions could not be made related to PA and depression.
- No randomized control studies (RCTs) were identified in this review.
- More research, particularly RCTs, are needed to determine the exact role PA has in adolescent depression.
- Sports participation could further be looked into in relation to depression prevention and treatment.

CLINICAL IMPLICATIONS

- Providers should **consider promoting PA** as a way to provide treatment and perhaps have a preventative effect on depression.
- This is a low cost option that can be **helpful for the mental health** of both male and female patients.
- There are also many **added benefits** associated with PA.
- PA **may have a higher adherence rate** than medications and other forms of depression treatment.
- It can also be **used as adjunctive therapy**.