

Physical activity in the treatment and prevention of adolescent depression

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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, and to hopefully prevent more cases of depression and associated adverse effects.

Introduction

- 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 (Depression in children and adolescents, 2014).
- The World Health Organization (2014) reports depression as the leading cause of illness and disability across all ages.
- Suicide is the third leading cause of death among adolescents (WHO, 2014).
- Treatment of depression frequently includes the use of antidepressants; however, compliance is often low because of unpleasant side effects and a low perception of effectiveness among patients (Kruisdijk, Hendriksen, Tak, Beekman, & Hopman-Rock, 2012; Shultz & Malone, 2013).
- Exercise is a low cost therapy that can be added to existing treatments or used on its own.

Methods/Sample

- PubMed, CINAHL, EBSCO, Psycinfo, and Cochrane.
- Search terms: depression, depressive disorder, physical activity, sports, exercise, adolescents, primary care, prevention, and treatment.
- Limited to: English language, human subjects, and peer reviewed articles.
- 10 year search (2005-2014), age range of 12-18, and address both depression and physical activity.
- 11 studies:
 - Seven were cross sectional
 - One was a systematic review
 - Two were longitudinal
 - One was a cohort

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 in females had little to negative (worsening) effects on depression
- Males with no structured PA are more likely to suffer depression
- Males tended to have less depression but no effect of anxiety while females had less anxiety but no effect of depression
- Adolescents that had participated in vigorous PA had less long term effects on depression

Results...

- Females who participated in PA have a lower physical burden with depression
- Adolescents with low physical activity have a strong (males) and weak (females) correlation between low PA and level of depression
- In objective measures of PA and depression, there is no longitudinal association

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.
- Most studies had a short duration of PA and was not conducted concurrently with depression assessments
- In the longitudinal studies, not all participants followed-up.
- Not all included studies defined PA or sports participation.

Conclusion

- The 11 studies included in the review presented mixed results related to the effects of PA on current depressive symptoms, as well as the prevention of depression.
- Most studies that there is 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.

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.

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Questions?