

Preventing depression in children and adolescents through psychological and educational interventions: Evidence and implications for public health

Review on which this evidence summary is based:

Merry, S.N. Hetrick, S.E., Cox, G.R., Brudevold-Iversen, T., Bir, J.J., McDowell, H. (2011). **Psychological and educational interventions for preventing depression in children and adolescents**. *Cochrane Database of Systematic Reviews* 2011(12) Art. No.: CD003380. DOI: 10.1002/14651858.CD003380.pub3.

Review Focus

- P** Children and adolescents ages 5 to 19 years old
- I** Psychological or educational programs, or both, which are either targeted or universal
- C** Placebo, any comparison intervention, or no intervention
- O** Prevalence of depressive disorder and depressive symptoms

Review Quality Rating:

10 (strong) *Details on the methodological quality are available [here](#).*

Considerations for Public Health Practice

Conclusions from Health Evidence

This methodologically strong review is based on 68 randomized controlled trials of moderate quality.

Psychological and educational interventions are effective at preventing depressive disorder and reducing depression symptoms in children and adolescents aged 5 to 19 years. Effectiveness is maintained from immediately post-intervention, to 3 to 9 months, and 12 months post intervention. The longer term impact is unclear.

Targeted and universal interventions show similar levels of effectiveness up to 9 months post intervention. Only targeted interventions show effects at 12 months. No effect has been shown to persist beyond 24 months for both targeted and universal interventions.

General Implications

- Public Health *should* provide psychological and educational interventions to prevent depression in children and adolescents up to 12 months post intervention.
- Public Health *should not* expect children and adolescents to experience positive effects more than 12 months after intervention.
- Public Health *should* consider how the effects of psychological and educational interventions can best be maintained.

Evidence and Implications

What's the evidence?

1. Diagnosis of depressive disorder (16 RCTs, 3,240 subjects)

- Compared to no intervention, intervention participants showed a very small statistically significant reduced risk of depressive disorder immediately post-intervention (**15 studies; RD -0.09; 95% CI -0.14 to -0.05**), at 3 to 9 months (**14 studies; RD -0.11; 95% CI -0.16 to -0.06**), and at 12 months

Implications for practice and policy

1. Diagnosis of depressive disorder

- Public Health decision makers should employ psychological and educational interventions to prevent depressive disorders in children and adolescents aged 5 -19 years. While both targeted and universally applied interventions show impact up to 9 months post-intervention, interventions should target students at high risk of

| | |
|--|--|
| <p>(10 studies; RD -0.06; 95% CI -0.11 to -0.01)</p> <ul style="list-style-type: none"> For interventions targeting high-risk individuals, Risk reduction is maintained at 3 to 9 months (10 studies; RD -0.06; 95% CI -0.10, -0.03) as well as interventions that are universally applied regardless of risk factors (9 studies; RD -0.10, 95% CI -0.33, -0.05). At 12 months, only targeted interventions with high-risk subjects had significantly reduced risk of depressive disorder (3 studies; RD -0.14; 95% CI -0.24, -0.04), There was no risk reduction at 24 months (8 studies), but a very small statistically significant risk reduction at 36 months (2 studies; RD -0.10; 95%CI -0.19 to -0.02) | <p>depression in order to be effective at 12 months.</p> <ul style="list-style-type: none"> Public Health decision makers should explore the impact of follow-up interventions after 12 months to determine whether preventative effects can be maintained in the longer term. |
| <p>2. Depression Scores (55 RCTs, 14,406 subjects)</p> <ul style="list-style-type: none"> Compared to no intervention, intervention participants showed a small to very small statistically significant decrease in depression symptoms immediately post-intervention (50 studies; SMD -0.20; 95% CI -0.26 to -0.14), at 3 to 9 months (31 studies; SMD -0.16; 95% CI -0.23 to -0.10), and at 12 months (19 studies; SMD -0.10; 95% CI -0.18 to -0.02). <u>No impact</u> on depression symptoms at 24 months (12 studies) and 36 months (5 studies). Interventions targeting high risk subjects and those universally applied resulted in decreased depression symptoms from immediately post-intervention to 9 months post intervention. At 12 months, only targeted interventions showed a decrease in depression symptoms. No decrease was seen at 24 months. <u>No impact</u> on depression symptoms post-intervention when the intervention is compared to a placebo (5 studies) | <p>2. Depression Scores</p> <ul style="list-style-type: none"> Public Health decision makers should consider employing psychological and educational interventions to reduce depression symptoms in children and adolescents aged 5 - 19. While both targeted and universally applied interventions show impact up to 9 months post-intervention, interventions should target students at high risk of depression in order to be effective at 12 months post-intervention. Public Health decision makers should explore the impact of follow-up interventions after 12 months to determine whether preventative effects of the intervention can be maintained in the longer term. |
| <p>Legend: P – Population; I – Intervention; C – Comparison group; O – Outcomes; CI – Confidence Interval; OR – Odds Ratio; RD –Risk Difference</p> <p>**For definitions see the healthevidence.org glossary at http://www.healthevidence.org/glossary.aspx</p> | |

Why this issue is of interest to public health in Canada:

It is estimated that between 7.9% and 8.6% of Canadian adults will be diagnosed with major depression in their lifetime¹. While most Canadian are diagnosed in their 20s and 30s, children and adolescents are not immune.¹ Over a 12-month period, 2.8% of children under 13 years of age will suffer from major depression, with this number doubling to 5.6% of adolescents.² High stress levels and feelings of depression are more common between the ages for 18 and 19 than in any other age group.³ The World Health Organization estimates that depression represents the largest burden of disease to Canadians older than 14 years of age, as the years lost to premature death and disability from depression outnumber those lost to any other disease.⁴ Moreover, 15% of those diagnosed with major depression will end their own life.⁵ Preventing depression among children and adolescents would mitigate considerable future morbidity and mortality.

1. Public Health Agency of Canada (2002) A Report on Mental Illnesses in Canada. Retrieved http://www.phac-aspc.gc.ca/publicat/miic-mmhc/chap_2-eng.php
2. Merry, S.N. Hetrick, S.E., Cox, G.R., Brudevold-Iversen, T., Bir, J.J., McDowell, H. (2011). Psychological and educational interventions for preventing depression in children and adolescents. *Cochrane Database of Systematic Reviews* 2011(12) Art. No.: CD003380. DOI: 10.1002/14651858.CD003380.pub3.
3. Centre for Addiction and Mental Health (2012) *Mental Health and Addiction 101 Series*. Retrieved from http://www.camh.ca/education/online_courses_webinars/mha101/depression/Depression_.htm
4. Public Health Agency of Canada (2011) The Chief Public Health Officer's Report on the State of Public Health in Canada, 2011. Retrieved from <http://www.phac-aspc.gc.ca/cphorsphc-respcacsp/2011/cphorsphc-respcacsp-06-eng.php>
5. Langlois, K.A., Samokhvalov, A.V., Rehm, J., Spence, S.T., Gorber, S.C. (2012) *Health state descriptions for Canadians: Mental illness*. Retrieved from <http://www.statcan.gc.ca/pub/82-619-m/82-619-m2012004-eng.pdf>

Other quality reviews on this topic are available on www.healthevidence.org.

Suggested citation:

Edmonds, M., DeCorby, K., & Dobbins, M. (2013). Preventing depression in children through psychological and educational interventions: Evidence and implications for public health. Hamilton, ON: McMaster University. Retrieved from http://www.healthevidence.org/documents/byid/16702/Merry2011_EvidenceSummary_EN.pdf

This evidence summary was written to condense the work of the authors of the review referenced on page one. The intent of this summary is to provide an overview of the findings and implications of the full review. For more information on individual studies included in the review, please see the review itself.

The opinion and ideas contained in this document are those of the evidence summary author(s) and healthevidence.org. They do not necessarily reflect or represent the views of the author's employer or other contracting organizations. Links from this site to other sites are presented as a convenience to healthevidence.org internet users. Healthevidence.org does not endorse nor accept any responsibility for the content found at these sites.

The production of this evidence summary was funded with support from the Public Health Agency of Canada. The views expressed herein do not necessarily represent the views of the Public Health Agency of Canada.