

Preventing depression in schools: A systematic review and meta-analysis

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Introduction

Depression is the **leading global cause of health related disability**, accounting for 8.2% of the global disability burden in 2010.

In Australia, it is estimated that **1 in 5 children and adolescents** will experience a depressive episode by age 18. Depression in children is associated with self-harm, suicide and depression in adulthood.

The Australian mental health system is currently undergoing significant reform, with greater emphasis on preventive interventions under the **National Preventative Health Strategy**. Evidence around the efficacy of preventive interventions for depression is needed to inform the restructuring of mental health services in Australia.

Aims

The aims of this study were to:

1. Determine the efficacy of universal, school-based preventive interventions in preventing the development of **depressive disorder** in children and adolescents
2. Determine the efficacy of universal, school-based preventive interventions in preventing the development of **depressive symptoms** in children and adolescents

Method

- A systematic review of reviews in the electronic databases PubMed, Medline, PSYCINFO and the Cochrane Library of Systematic Reviews was conducted in August 2013.
- We included randomised controlled trials of interventions designed to prevent the onset of depression among children aged 5-18 years, delivered in the school setting.
- Meta-analyses were conducted in MetaXL using the inverse variance heterogeneity model, for the two primary outcomes:

1. Diagnosis of depression
2. Depressive symptoms

Results

Search results: Our combined search yielded a total of 96 unique trials (comprising 126 study arms) and 45,904 participants.

Outcome 1 - Risk of developing a depressive disorder

Immediately post-intervention the risk of developing a depressive disorder was reduced among intervention participants compared to controls (Figure 1; 7 studies, n = 1100, Risk Difference (RD) = -0.06, 95% Confidence Interval (CI): -0.20 to 0.08).

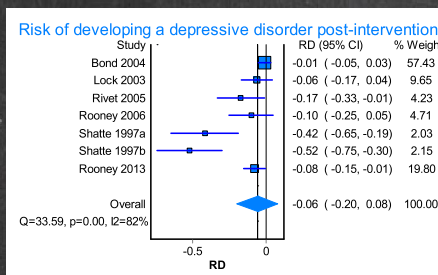


Figure 1. Risk Difference (RD) of developing a depressive disorder at post-test in the intervention group relative to controls using the MetaXL inverse variance heterogeneity model.

At 6 months post-intervention, the risk of developing a depressive disorder was reduced in the intervention group (Figure 2, 8 studies, n = 532, RD = -0.03, 95% CI: -0.09 to 0.02).

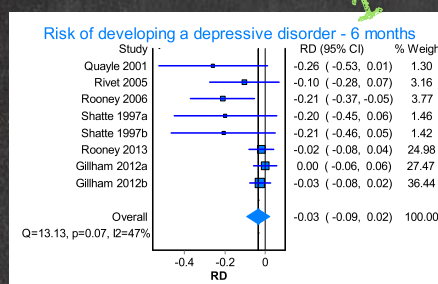


Figure 2. Risk Difference (RD) of developing a depressive disorder at 6 months follow-up in the intervention group relative to controls using the MetaXL inverse variance heterogeneity model.

At 12 month post-intervention, the risk of developing a depressive disorder was reduced in the intervention group however this effect was weaker than at post-test and 6 month follow-up (Figure 3, 7 studies, n = 1158, RD = -0.01, 95% CI: -0.07 to 0.04).

Outcome 2 - Change in depressive symptoms

Meta-analyses revealed no significant reduction in depressive symptoms at post-intervention (38 studies, n = 8822, RD = 0.00, 95% CI: 0.00 to 0.00); 6 months (25 studies, n = 4428, RD = 0.00, 95% CI: -0.01 to 0.01) or 12-month follow-ups (17 studies, n = 5160, RD = 0.00, 95% CI: -0.01 to 0.01).

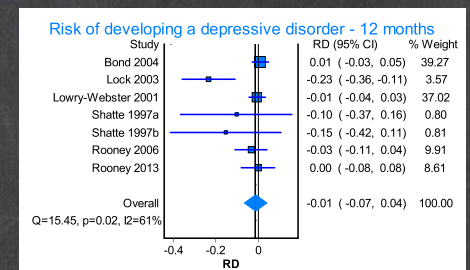


Figure 3. Risk Difference (RD) of developing a depressive disorder at 12 months follow-up in the intervention group relative to controls using the MetaXL inverse variance heterogeneity model.



Conclusion

- Universal school-based preventive interventions for depression result in small, but non-significant reductions in the onset of depressive disorder.
- No evidence was found for the reduction in depressive symptoms.
- Universal preventive interventions show promise for being implemented at a population level within the Australian mental health system.

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