

Depression prevention programs for children and adolescents: Evidence and implications for public health

Review on which this evidence summary is based:

Stice, E., Shaw, H., Bohon, C., Marti, C.N., & Rohde, P. (2009). A meta-analytic review of depression prevention programs for children and adolescents: Factors that predict magnitude of intervention effects. *Journal of Consulting and Clinical Psychology*, 77(3), 486-503.

Review Focus

- P** Children and Adolescents (up to age 22)
- I** Depression prevention programs
- C** No intervention/“Usual care”
- O** *Primary Outcomes:* depressive symptoms or episode

Review Quality Rating:

9 (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 46 moderate quality trials evaluating 32 prevention programs.
- Overall, small effects were found for reducing depressive symptoms in 41% of 32 evaluated depression prevention programs; and 13% reported small reductions in risk for future depressive disorder
 - Participant features: Programs appeared *more effective* when included participants were: at high risk for depression, targeted to receive the program, female, greater than 13.5 years of age, and group composition was less than 83% Caucasian
 - Intervention features: Programs were *more effective when:* shorter in duration and they included homework
 - Provider features: Programs were *more effective in the longer term when* delivered by professional interventionists
 - Some included studies may have been too small to detect an effect of the modifying variable

General Implications

The overall findings suggest that depression prevention programs should be implemented to reduce depressive symptoms and to reduce risk for future depressive disorder.

Programs should: target those at high risk for depression, include more females than males, include ethnic minorities and focus on adolescent participants.

Programs should be short in duration and include homework. Professional interventionists should deliver longer-term programs.

Evidence and Implications

What's the evidence?

1. Depression prevention programs (46 trials evaluating 32 prevention programs)

Implications for practice and policy

1. Depression prevention programs
 - Should be implemented to reduce

<ul style="list-style-type: none"> • 13 programs (41%) reported small reductions in depressive symptoms (mean post-test effect size was $r = .15$; range $-.47$ to $.68$); (mean follow-up effect size was $r = .11$; range $-.18$ to $.76$) • 4 programs (13%) reported significant reductions in risk for future depressive disorder compared to controls (no data provided) while other trials found no effect 	<p>depressive symptoms and reduce risk for future depressive disorder.</p>
<p>2. Factors moderating effect sizes (46 trials evaluating 32 programs)</p> <p><u>Participant features</u></p> <ul style="list-style-type: none"> • Moderate effects were found in: <ul style="list-style-type: none"> ○ selective (i.e. involving high risk participants) trials (mean effect size $r = .23$; $p < 0.001$, $n = 34$) compared to non-significant effects found in universally implemented programs ($n = 25$) ○ selective programs including participants with higher risk status (mean effect size $r = .14$; $p < 0.001$, $n = 28$) compared to small effects found in universally implemented programs ($r = .06$, $n = 21$) ○ programs that included more ($\geq 53\%$) females (mean effect size $r = .22$, $p < .001$, $n = 22$) compared to those with fewer females ($n = 26$); effects of programs that included more females were also larger at (mean 11.91 mos.) follow-up ($r = .21$, $p < .001$, $n = 27$) compared to those with fewer females ($r = .09$, $p < .001$, $n = 21$) ○ trials including less than 55% Caucasian participants (mean effect size $r = .24$; $p < 0.001$, $n = 11$) and for those including between 55 and 83% white participants ($r = .25$; $p < 0.001$, $n = 13$) compared to non-significant effects found in those including $> 83\%$ white participants ($n = 11$) ○ programs that included participants above the median age of 13.5 years (mean effect size $r = .23$, $p < .001$, $n = 29$) compared to non-significant effects among those including participants younger than 13.5 years ($n = 26$); effects at follow up were larger in programs with participants above 15.1 years ($r = .15$, $p < .001$, $n = 15$) compared to those younger than 12.1 years ($r = .08$, $p < .01$, $n = 14$) and those between 12.1 and 15.1 years ($r = .07$, $p < .001$, $n = 16$) <p><u>Intervention features</u></p> <ul style="list-style-type: none"> ○ Small effects were found at post-test for programs below median duration (i.e. 12 hours) (mean effect size $r = .19$, $p < .001$, $n = 23$) compared to non-significant findings in programs longer than 12 hours ($n = 29$) 	<p>2. Depression prevention programs:</p> <ul style="list-style-type: none"> • Should be specifically targeted to high risk individuals (rather than be implemented universally) • Should include more females than males; include ethnic minorities and should include individuals older than 13.5 years of age • Should be short in duration, and should be delivered by professional interventionists • Should include homework <p>Programs may or may not: aim to reduce negative cognitions (cognitive change), encourage engagement in pleasant activities (behavioural activation), promote problem solving skills, or promote social skill development as these factors do not impact the success of the program</p>

- Larger effects were found at follow-up (mean 11.91 mos.) for programs that included homework (mean effect size $r = .13$, $p < .001$, $n = 34$) compared to those without homework ($r = .07$, $p < .001$, $n = 15$)
- Programs that: aimed to reduce negative cognitions (cognitive change), encourage engagement in pleasant activities (behavioural activation), promoted problem solving skills, and promoted social skill development did not predict effect sizes (i.e. did not moderate program effectiveness)

Provider features - small effects at follow-up for programs delivered by professional interventionists (mean effect size $r = .14$, $p < .001$, $n = 38$) and trivial effects for those delivered by endogenous providers (mean effect size $r = .03$, $p < .05$, $n = 11$; at post-test there was no difference in effect

Design features: No impact for random assignment, use of diagnostic interviews, incorrect unit of analysis, length of follow-up, or publication status

Legend: P – Population; I – Intervention; C – Comparison group; O – Outcomes; CI – Confidence Interval; OR – Odds Ratio; RR – Relative Risk; ES – effect size

**For definitions see the [healthevidence.org](http://www.healthevidence.org/glossary.aspx) glossary at <http://www.healthevidence.org/glossary.aspx>

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

The World Health Organization (WHO) has ranked depression as the world's leading single cause of disability, and is a major contributor to the global burden of disease (WHO, 2012).¹ About 10-20% of the Canadian youth are impacted by a mental illness or disorder.² An estimate of 3.2 million Canadian youth, ages 12-19 years, are at risk of developing depression.² About half (48%) of the Canadian population who suffer from depression or anxiety never consults a doctor³, which can lead to suicidal thoughts and attempts. 24% of all deaths among 15-24 year olds is due to suicide, making suicide the second leading cause of death within this age group.³ However, if appropriate recognition and aids for depression are provided, 80% of the affected youth can be helped to get back to their regular activities.³

1. World Health Organization. (2012). Depression. Retrieved from <http://www.who.int/mediacentre/factsheets/fs369/en/index.html>
2. Public Safety Canada. (2012). *A statistical snapshot of youth at risk and youth offending in Canada*. Ottawa, ON: National Crime Prevention Centre (NCPCC). Retrieved from <http://www.publicsafety.gc.ca/res/cp/res/fl/ssyr-eng.pdf>
3. Canadian Mental Health Association. (n.d.). Fast facts about mental illness. Retrieved from <http://www.cmha.ca/media/fast-facts-about-mental-illness/#.UZDqhrXqJiR>

Other quality reviews on this topic are available on <http://www.healthevidence.org>.

Suggested citation:

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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.

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