

Evidence summary Title:

Parent Training Programs for Improving Maternal Psychosocial Health: Evidence and implications for public health

Review Quality Rating: 9 (strong)

Review on which this evidence summary is based:

Barlow J, Coren E, Stewart-Brown SSB. (2003). **Parent-training programmes for improving maternal psychosocial health.** *Cochrane Database of Systematic Reviews*, Issue 4. Art. No.: CD002020. DOI: 10.1002/14651858.CD002020.pub2

Note: The Cochrane review that this evidence summary is based on has been updated. This evidence summary summarizes the above-cited version of this review, not the updated version. An updated evidence summary will be provided as soon as possible..

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This is an evidence summary written to condense the work of the authors of this systematic review, referenced above. 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.

Review content summary

This meta-analysis of 26 randomized controlled trials aimed to determine the effectiveness of group-based parenting programmes in improving maternal psychosocial health, including anxiety, depression, and self-esteem. Participants studied were either clinical or population samples. To be included, studies had to examine at least one group-based parenting programme, along with and one standardised instrument measuring maternal psychosocial health. They also had to randomly assign participants to an experimental or control group. Interventions described in this review include group interventions with a structured programme, developed with the intention of helping parents to manage children's behaviour and improve family functioning and relationships. The intervention could have been developed with theoretical framework. Outcomes measured include a range of aspects of psychosocial functioning, including: depression, anxiety, stress, self-esteem, social competence, social support and guilt. Authors report that data was sufficient to combine in a meta-analysis for only five outcomes (depression; anxiety/stress; self-esteem; social support; and relationship with spouse/marital adjustment). The results of the meta-analyses show statistically significant results favouring the intervention group for depression; anxiety/stress; self-esteem; and relationship with spouse/marital adjustment in 22% of the assessments. Furthermore, non-significant differences favoring the intervention group was observed in 56% of assessments. The meta-analysis of the social support data showed no evidence of effectiveness. A meta-analysis of the follow-up data on three outcomes was also conducted - depression, self-esteem and relationship with spouse/marital adjustment. The results show that there was a continued improvement in self-esteem, depression, and marital adjustment at follow-up, although the latter two findings were not statistically significant. The results of the individual studies showed few differences in outcome despite the presence of differences in the content of the programme, i.e., irrespective of the type of parenting programme many studies produced results favouring the intervention group in approximately one-third to one-half of the outcomes measured. The authors acknowledge that while not all studies favour group-based parenting programmes, the overall positive result suggests that they play an important role in mental health promotion, for both mother and child..

Comments on this review's methodology

This is a methodologically strong meta-analysis. A focused clinical question was clearly identified. Appropriate inclusion criteria were used to guide the search. A comprehensive search was employed using health, psychological, and educational databases; reviewing reference lists of primary studies; and contacting key informants. The search was limited by language (to which languages). Primary studies were assessed for methodological quality using a modified version of the Journal of the American Medical Association published criteria, which evaluated allocation method, blinding, attrition and distribution of confounders. The methods were described in sufficient detail so as to allow replication and two reviewers were involved in quality appraisal. Any discrepancies in appraisal results were rectified by discussion. The results of this review were transparent. Results were clearly presented in graphical form so as to allow for comparisons across studies. Heterogeneity was assessed. Appropriate analytical methods (fixed effects, random effects) were employed to enable the synthesis of study results. The decision about whether to combine data in this way was determined by the level of heterogeneity present in the population, intervention and outcomes being used in the primary studies. Where it was inappropriate to combine the data in a meta-analysis, the effect sizes and 95% confidence intervals for individual outcomes in individual studies were presented.

Why this issue is of interest to public health

A growing body of evidence suggests that mental health issues encountered in adulthood may be linked to experiences in infancy and childhood. In particular, maternal psychosocial health seemingly plays an important role in shaping one's early experiences in life¹. Canada is recognized worldwide as having among the healthiest populations of mothers and children². Concerns regarding maternal mental health still need to be addressed, as many cases of postpartum mood disorders continue to go undiagnosed¹. Given that between 10% and 20% of pregnant women and new mothers may experience some mood changes during this time in their lives, this issue cannot be ignored³. Moreover, it is not always obvious which women may be at risk for a decline in psychosocial health both antepartum and postpartum³. Consequently, the adoption of group-based parenting programmes may have the ability to promote the psychosocial health of mothers, while preventing future behavioral, social and mental health issues in their children and the demands on social services.

Evidence and implications

Evidence points are in order of the strength of evidence

What's the evidence?	Implications for practice and policy:
<p>1. Depression</p> <p>1.1. Participants in group-based parenting programs were significantly more likely to experience post-intervention reductions in measures of depression than participants in control groups (statistical mean differences [SMD] = -0.26, 95% CI -0.40 to -0.11) (11 studies, 793 participants).</p> <p>1.2. When quasi-experimental studies were excluded from the meta-analysis, participants in group-based parenting programs were significantly more likely to experience reductions in measures of depression than those in control groups (-0.23, 95% CI -0.37 to -0.08) (10 studies, 755 participants).</p> <p>1.3. Participants in group-based parenting programs were no more or less likely to experience reductions in measures of depression at follow-up than participants in control groups (-0.17, 95% CI -0.35 to 0.01) (6 studies, 478 participants).</p>	<p>1. Depression</p> <p>1.1. Group-based parenting programs appear to be effective in reducing depression among parents at least in the short term</p> <p>1.2. Public health programs that aim to improve maternal health, including reducing maternal depression, should include group-based parenting programs.</p> <p>1.3. Parenting programmes should include the following components:</p> <p>1.3.1. Group-based format;</p> <p>1.3.2. Structured programme;</p> <p>1.3.3. Any theoretical framework including Behavioural, Family Systems, Adlerian, Psychodynamic etc.;</p> <p>1.3.4. Developed largely with the intention of helping parents to manage children's behaviour and improve family functioning and relationships</p>
<p>2. Stress/anxiety</p> <p>2.1. Participants in group-based parenting programs were significantly more likely to experience post-intervention reductions in measures of stress/anxiety than participants in control groups (SMD= -0.42, 95% CI -0.60 to -0.24) (10 studies, 486 participants).</p> <p>2.1.1. When quasi-experimental studies were excluded from the meta-analysis, participants in group-based parenting programs were significantly more likely to experience reductions in measures of stress/anxiety than those in control groups (-0.39, 95% CI -0.59 to -0.19) (8 studies, 404 participants).</p>	<p>2. Stress/anxiety</p> <p>2.1. Group-based parenting programs appear to be effective in reducing parental stress/anxiety in the short term.</p> <p>2.2. Public health programs that aim to improve maternal health, including reducing maternal stress and anxiety, should include group-based parenting programs.</p>
<p>3. Social support (4 studies, 234 participants)</p> <p>3.1. Participants in group-based parenting programs were no more or less likely to experience post-intervention increases in measures of social support than participants in control groups (SMD= -0.04, 95% CI -0.31 to 0.24).</p>	<p>3. Social Support</p> <p>3.1. Group-based parenting programs do not appear to be effective in improving social support among participants in the short term. No long term data on effectiveness was available.</p> <p>3.2. Public health programs that aim to improve maternal social support should include interventions other than group-based parenting programs.</p>
<p>4. Relationship with spouse</p> <p>4.1. Participants in group-based parenting programs were significantly more likely to experience post-intervention improvements in measures of marital adjustment of relationships with spouse than participants in control groups (SMD=-0.43, 95% CI -0.71 to -0.15) (4 studies, 202 participants).</p> <p>4.2. When quasi-experimental studies were excluded from the meta-analysis, participants in group-based parenting programs were significantly more likely to experience improvements in measures of relationships with spouse than those in control groups (-0.34, 95% CI -0.65 to -0.04) (3 studies, 168 participants).</p> <p>4.3. Participants in group-based parenting programs were no more or less likely to experience improvements in measures of</p>	<p>4. Relationship with spouse</p> <p>4.1. Group-based parenting programs appear to be effective in improving parents' spousal relationships or marital adjustment at least in the short term</p> <p>4.2. Public health programs that aim to improve maternal health, including marital adjustment and spousal relationship, should include group-based parenting programs.</p>

marital adjustment at follow-up than participants in control groups (-0.33, 95% CI -0.76 to 0.10) (2 studies, 86 participants).	
5. Self esteem (6 studies, 341 participants) 5.1. Participants in group-based parenting programs were significantly more likely to experience post-intervention improvements in measures of self esteem than participants in control groups (SMD=-0.30, 95% CI -0.51 to -0.08). 5.2. Participants in group-based parenting programs were significantly more likely to experience improvements in measures of self esteem at follow-up than participants in control groups (-0.36, 95% CI -0.58 to -0.14) (6 studies, 325 participants).	5. Self esteem 5.1. Group-based parenting program appear to be effective in improving parental self esteem in both the short and long term. 5.2. Public health programs that aim to improve maternal health, including maternal self esteem, should include group-based parenting programs
6. Methodological Issues with the Primary Studies in the Review 6.1. Failure to specify method of allocation concealment. 6.2. Failure to provided sufficient data to include in calculation of effect size (4 studies). 6.3. Drop out rate ranged from 6-44% among studies. 6.4. Failure to account for or describe drop-outs. 6.5. Failure to analyse participants in groups to which they were randomized regardless of drop out status (e.g., intention-to-treat analysis). 6.6. Failure to report on distribution of possible confounders (8 studies). 6.7. Inappropriate use of outcome measures (e.g., social support). 6.8. Limited follow-up data (only 12 studies reported follow-up data; only 6 provided follow-up data sufficient to calculate effect sizes). 6.9. Limited power to detect statistically significant differences between groups (e.g., small sample size). 6.10. Lack of validated outcome measures. 6.11. Inadequate demographic data on study participants	6. Implications for Future Research 6.1. Rigorous program evaluations and high quality research should be conducted to add to the body of knowledge on this topic. This research should address the deficits noted in the methodology of the included primary studies. 6.2. Interventions aimed at recruitment and retention should be employed in order to ensure adequate power (sample size) to detect statistically significant differences in outcomes between treatment and control groups. Program evaluation data on other aspects of maternal health should also be collected.
7. Cost Benefit or Cost-effectiveness Information 7.1. No cost related information was included in the review	7. Cost Benefit or Cost-effectiveness Information 7.1. Future research should assess cost benefit or cost-effectiveness of the interventions
General Implications <ul style="list-style-type: none"> • Group-based parenting programs can be effective in promoting maternal health related to: <ul style="list-style-type: none"> ○ depression, anxiety and stress, self esteem, and spousal relationships at least in the short term; ○ long term parental self esteem • The group facilitator/leader has an important part to play in helping parents not only to persist with a particular programme, but in facilitating an atmosphere of openness and trust between the participating parents, and in helping parents to feel respected, understood, and supported. • Group leaders can play an important role in modelling attributes such as empathy, honesty and respect; and personal qualities such as a sense of humour, enthusiasm, flexibility, and warmth. • Group-based parenting programs do not appear to be effective in promoting social support for parents. • Rigorous program evaluations and high quality research should be conducted to address: <ul style="list-style-type: none"> ○ long term effectiveness of group-based parenting programs; ○ relative effectiveness of the various approaches and treatment types regarding the outcomes assessed in this review. 	
Legend: CI – Confidence Interval; OR – Odds Ratio; RR – Relative Risk **For definitions see the healthevidence.org glossary http://www.healthevidence.org/glossary.aspx	

References used to outline issue

1. Barlow J, Coren E, Stewart-Brown SSB. Parent-training programmes for improving maternal psychosocial health. *Cochrane Database of Systematic Reviews* 2003, Issue 4. Art. No.: CD002020. DOI: 10.1002/14651858.CD002020.pub2.
2. Women's Health Concerns Clinic (2008). Mood changes due to pregnancy. Hamilton, ON: St. Joseph's Healthcare Centre. <http://www.stjosham.on.ca/default.asp?action=article&ID=340>
3. Public Health Agency of Canada (2005). Make every mother and child count: Report on maternal and child health in Canada. http://www.phac-aspc.gc.ca/rhs-ssg/pdf/whd_05epi_e.pdf

Other quality reviews on this topic

- Barlow, J., Simpkins, D., Stewart-Brown, S. (2003). Interventions to prevent or ameliorate child physical abuse and neglect: Findings from a systematic review. *Journal of Children's Services*. 1, 6-28.

- Britton C, McCormick FM, Renfrew MJ, Wade A, King SE. (2007) Support for breastfeeding mothers. *Cochrane Database of Systematic Reviews*, Issue 1. Art. No.: CD001141. DOI: 10.1002/14651858.CD001141.pub3.
- Dennis CL, Creedy D. (2004). Psychosocial and psychological interventions for preventing postpartum depression. *Cochrane Database of Systematic Reviews*, Issue 4. Art. No.: CD001134. DOI: 10.1002/14651858.CD001134.pub2.
- Dennis CL. (2005). Psychosocial and psychological interventions for preventing postpartum depression: Systematic review. *BMJ*. 33 (7507), 15-18.
- Doggett C, Burrett S, Osborn DA. (2005). Home visits during pregnancy and after birth for women with an alcohol or drug problem. *Cochrane Database of Systematic Reviews*, Issue 4. Art. No.: CD004456. DOI: 10.1002/14651858.CD004456.pub2.
- Gardner, M.R., Deatrick, J.A. (2006). Understanding interventions and outcomes in mothers of infants. *Issues in Comprehensive Pediatric Nursing*. 1, 25-44.

Related links

- Canadian Association of Family Resource Programs: <http://www.frp.ca/>
- Ontario Ministry of Health and Long Term Care, Healthy Babies Healthy Children Report Card: http://www.health.gov.on.ca/english/public/pub/ministry_reports/healthy_babies_report/hbabies_report.html
- Public Health Agency of Canada, Family/Parenting: http://www.phac-aspc.gc.ca/dca-dea/family_famille/welcometo-eng.php
- The ReproPsych Group, Motherisk, The Hospital for Sick Children: <http://www.motherisk.org/prof/reproPsych>.

Suggested citation

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