Evidence Summary Title:
Enhancing partner support and interaction to improve smoking cessation: Evidence and implications for public health

Review Quality Rating: 10 (strong)

Review on which this evidence summary is based:

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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 9 randomized controlled trials aimed to determine the effectiveness of strategies to enhance partner support to increase smoking cessation. Participants studied were: smokers and their partners. To be included, studies had to: compare partner support to no partner support with smoking cessation interventions. All studies had a follow-up interval of at least 6 months. Interventions described in this review included: training smokers in obtaining social support, encouraging increased contact between smokers and supportive partners, providing partners with training or written materials to assist them in engaging in supportive behaviours, or intervening with smoker-partner pairs in couples therapy or in larger groups to encourage supportive interactions. Outcomes measured include: abstinence, for which data was attained by self-report (9 studies) and/or biochemical assessment involving measures of carbon monoxide levels and saliva cotinine-thiocyanate (4 studies) They also assessed the level of partner support as a secondary outcome, with the Partner Interaction Questionnaire (PIQ) or another method. Authors report that partner support was not effective in relation to smoking cessation.

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 not limited by language. Primary studies were assessed for methodological quality using the Jadad 5-point scale, assessing: randomization, double blinding, and description of withdrawals and drop-outs. 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.

Why this issue is of interest to public health
Reducing tobacco use is a public health priority in Canada. In 2005, an estimated 5.9 million Canadians, or 22% of the population above age 12, were smokers. The human and socio-economic costs associated with smoking-related mortality and morbidity are immense. Tobacco is the leading cause of preventable disease, disability, and mortality in Canada, accounting for more than 47,500 deaths per year. The Canadian Centre on Substance Abuse (CCSA) estimates that the direct and indirect costs of smoking in 2002 totaled 17 billion dollars nationally. Approximately 30% of former smokers report that they quit on their own without any preparation or help. However at least 20% of the population 15 years and older who smoked in 2004 represent the hard to reach population and likely require more refined approaches. Effective self-help materials could potentially increase the quit rate and are consistent with three of the five strategic directions in the National Strategy.

Evidence and implications

<table>
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<th>What’s the evidence?</th>
<th>Implications for practice and policy:</th>
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<tr>
<td>1. Smoking cessation</td>
<td>1. Smoking cessation</td>
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<tr>
<td>1.1. Smoking cessation interventions enhanced by partner support</td>
<td>1.1. At this time public health units and primary care settings</td>
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are no more effective in increasing smoking cessation than smoking cessation interventions alone

1.1.1. at 6–9 months (9 studies) Odds ratio = 1.08 (95% CI, 0.81 to 1.44)
1.1.2. at 12 months (5 studies) Odds ration = 1.0 (95% CI, 0.75 to 1.34)

1.2. It is likely that included studies lacked the power to determine statistical significance. (See # 5)
1.3. Methodological concerns that could impact findings were noted with all included studies. (See # 5)

### 2. Partner Support (6 studies)

2.1. Interventions to increase partner support for smoking cessation were not effective in increasing partner support as measured by the PIQ measurement tool.

2.1.1. Two studies reported that partner support was increased after the partner support intervention but when the data were pooled across studies the effect was not statistically significant.

2.1.2. The three remaining studies reported no effect.

2.2. The impact of the nature of the partnership (spouse, intimate other, friend, relative, or coworker) was unable to be determined due to the heterogeneous nature of the studies in this regard or failure to report on this variable.

### 3. Other outcome measures

3.1. Data was incomplete for studies that assessed the impact of partner support on the number of other measures of tobacco use such as the # of cigarettes smoked and carbon monoxide levels

3.2. Because the interventions were primarily those of an educational and problem solving nature, the failure of these interventions to increase smoking cessation may result from their lack of systemic orientation.

3.3. Further research is required before reassessing the potential impact of partner support interventions.

### 4. Partner relationship

4.1. The nature of the partner relationship may impact abstinence rates.

4.2. The perceived closeness of partner relationship in the intervention group was associated with higher abstinence rates (one study)

4.3. Negative interaction criticism was associated with lower abstinence rates.

4.4. Negative interaction and criticism by the partner is associated with lower abstinence rates. These behaviours are not easily changed by the interventions used in the studies.

4.5. Partner support interventions should focus on enhancing positive and supportive behaviours.

### 5. Methodological Issues with the Primary Studies in the Review

5.1. It is likely that included studies lacked the power to determine statistical significance
5.2. Methodological concerns that could impact findings were noted with all included studies. These included the:
   5.2.1. study power
   5.2.2. intervention dose
   5.2.3. allocation concealment
   5.2.4. validity of outcome measures of abstinence and partner support
   5.2.5. effectiveness of partner support interventions

### 6. Implications for Future Research

5.1. High quality research and program evaluation are needed to determine

5.1.1. Effective interventions for enhancing partner support
5.1.2. The effectiveness of smoking cessation programs enhanced with effective partner support interventions
5.2. Quality program evaluations should be incorporated in program planning process from the program’s inception
5.3. Quality program evaluations and research studies need to be funded with adequate resources to ensure that they

5.3.1. Provide interventions with sufficient dose (intensity, frequency, and duration) to achieve results
5.3.2. Have sufficient power (e.g., sample size) to determine statistical significant differences between groups
5.3.3. Include interventions with sufficient dose (intensity, duration, frequency) to impact outcomes
5.3.4. Use valid outcome measures of abstinence
5.3.5. Use valid measures of the quantity, quality, type,
### General Implications

The results of this review suggest that smoking cessation interventions with partner support are no more effective in increasing abstinence rates than smoking cessation programs alone. The primary studies included in this meta-analysis were assessed to have various methodological issues that may have impacted these results. Further high quality research is needed.

**Legend:** CI – Confidence Interval; OR – Odds Ratio; RR – Relative Risk

**For definitions see the healthevidence.org glossary**

[http://www.healthevidence.org/glossary.aspx](http://www.healthevidence.org/glossary.aspx)

### References used to outline issue


### Other quality reviews on this topic


### Related links

- Health Canada’s tobacco website ([http://www.hc-sc.gc.ca/hl-vs/tobac-tabac/index_e.html](http://www.hc-sc.gc.ca/hl-vs/tobac-tabac/index_e.html)) provides various programs and options for self-help smoking cessation that include the recommendations of this study.

### Suggested citation


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