Smoking cessation interventions involving significant others: the role of social support

Author: Lion Shahab
Editor: Andy McEwen
Date of last review: March 2025

Executive summary

It is well established that the social environment influences smoking initiation and maintenance, as well as cessation. The effect, particularly on cessation, is likely to be partly mediated by the social support provided to people who smoke by significant others. Indeed, observational studies investigating the natural progression towards smoking cessation show that social support is clearly associated with abstinence – positive social support generally increasing the likelihood of successfully stopping smoking and negative social support undermining it. Positive social support is thought to motivate those attempting to quit, model desired behaviour and act as a stress buffer thus improving chances of quitting successfully. Whilst intra-treatment social support, the support provided by clinicians and other participants within intensive behavioural treatment, constitutes an essential and effective part of smoking cessation interventions, interventions with extra-treatment social support components aimed at enhancing the social support from significant others have yielded surprisingly equivocal results. This may be due to a number of practical as well as theoretical limitations associated with improving social support provided by others. Given this lack of evidence of effectiveness, current smoking cessation guidelines do not explicitly advocate the use of extra-treatment social support in smoking cessation interventions.

Smoking cessation interventions involving significant others: the role of social support

Key points

1. The social environment and smoking

1.1 Smoking initiation

- The uptake of smoking is strongly influenced by the smoking behaviour of others. In particular, there is ample evidence to suggest that smoking by parents, siblings, friends, peers or romantic partners greatly increases the risk of smoking initiation.[1,2]
- In addition, smoking in the wider social environment also impacts uptake. Smoking in the work place,[3] a more tolerant attitude towards smoking in schools[4] and public depiction of smoking (e.g. in films[5] or in advertisements[6]) have all been shown to increase the likelihood of starting to smoke.

1.2 Smoking maintenance

- Whilst social factors are clearly important for the uptake of smoking, they also contribute to the continuation of tobacco use.[7] In population samples, those who have a partner who objects to smoking,[8] experience social pressure to stop,[9] or those living in homes with a smoking ban,[10,11] are more likely to attempt to quit.
- By contrast, the presence of other people who smoke reduces the likelihood of being able to stop smoking and increases the risk of relapse. This is the case if these people are friends[12] or romantic partners,[13] though there are differences by gender with women being more likely to be influenced by partner smoking than men,[14] and smoking maintenance is positively correlated with the number of people who smoke in one's social network.[15] Indeed, studies suggest that the majority of relapses occur in the presence of other people who smoke[16] and that those who successfully stop tend to have fewer social contacts who smoke.[16,17]

1.3 Causal role of social environment

- The effect of the environment on smoking initiation and maintenance is most likely due to smoking in the environment effectively normalising the behaviour and people who smoke providing modeling cues.[18–20] This creates a more favourable perception of smoking which has been linked to relapse.[21]
- In addition, it has been argued that the social environment exerts influence on smoking and smoking cessation through social support, or the lack thereof, that is provided to people who smoke.[22]

Smoking cessation interventions involving significant others: the role of social support

2. Social support and smoking

2.1 Definitions of social support

- Social support is defined as 'any behavior by others that is presumed by either the giver or receiver to facilitate a positive and desired behaviour change'.[23] It can be conceptualised both in terms of the quantity of social relations, as structural social support, and in terms of the perceived quality of these relations, as functional social support.[24]
- The functions of social support can be described as emotional (e.g. give reassurance), informational (e.g. give advice) and instrumental (e.g. assist with a problem).[25] Social support in the context of smoking can be general or abstinence specific, i.e. directly address the health behaviour in question.[26]

2.2 Impact of naturally occurring social support

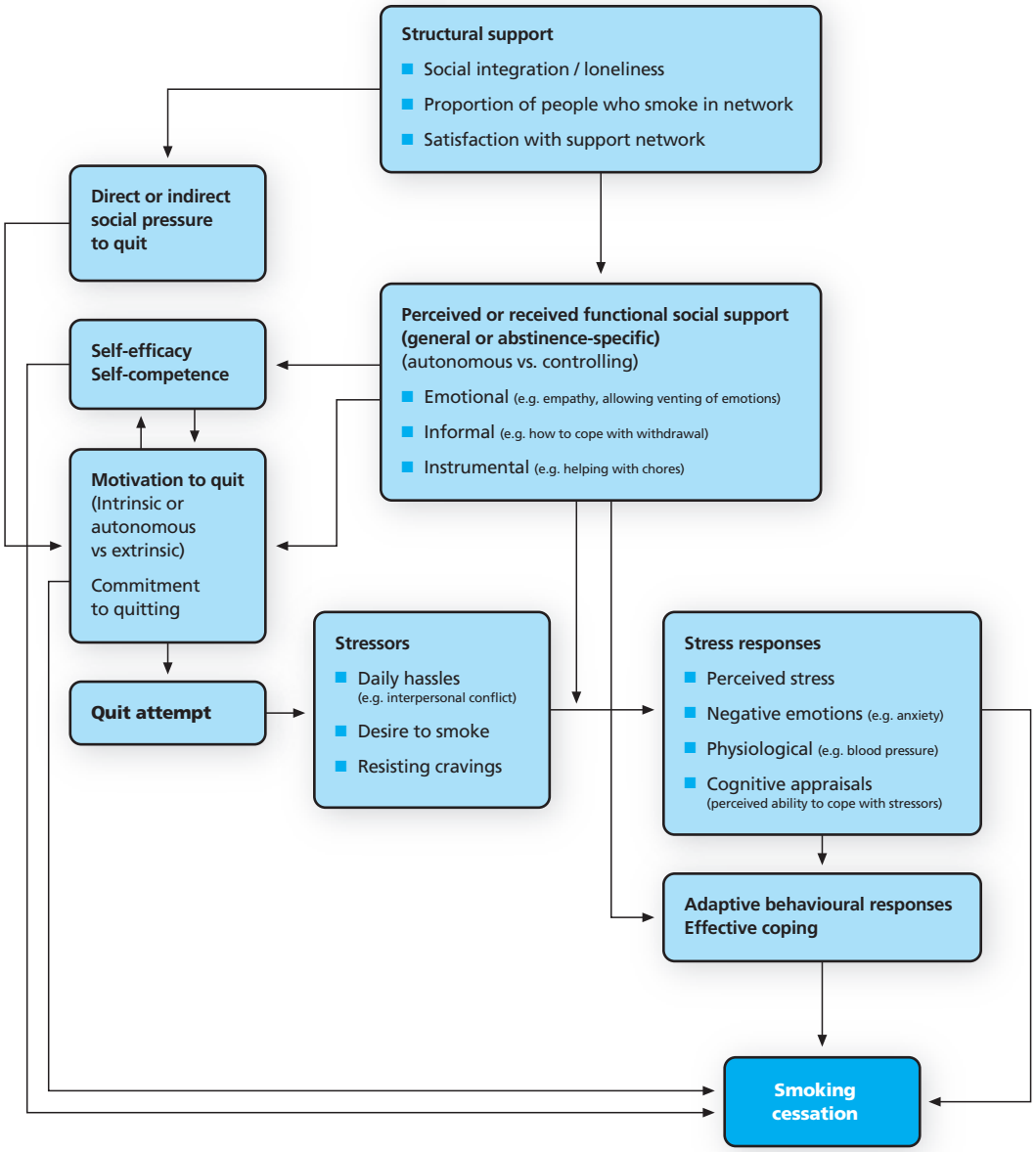
- In observational studies both general support and abstinence-specific support by partners, friends and colleagues have generally been found to predict success in stopping smoking[20,27–33] and in the cessation of other addictive behaviours.[34]
- However, the impact of social support appears to be dependent both on the timing of when it is provided and whether it is perceived as positive or negative. Studies suggest that positive social support and decrease in negative support aid smoking cessation, whilst negative support such as nagging or policing may in fact undermine quit attempts.[29–31,35–37] Indeed, it would seem that significant others who smoke provide more negative support than those who have never smoked.[38] In addition, positive social support may be particularly important at the initial stages of a quit attempt.[22,28,35,39]

2.3 Mechanism of action of social support

- There are a number of reasons as to why this association of social support with smoking behaviour is observed. First, social support may motivate behaviour change directly; second, it may model desired or undesired behaviours and third, it may indirectly affect smoking cessation through modifying other factors important for behaviour change such as by creating a calm interpersonal environment, alleviating daily hassles, stress or negative emotions and in supporting adaptive coping strategies.[27,40] Figure 1 provides a comprehensive overview of potential pathways through which social support may influence smoking cessation.

Smoking cessation interventions involving significant others: the role of social support

Figure 1. Potential pathways mediating influence of social support on smoking cessation. Adapted from Westmaas et al, 2010.[40]



Smoking cessation interventions involving significant others: the role of social support

- Given the evidence for a strong association of naturally occurring social support with smoking cessation outcomes from observational studies, it has been suggested that smoking cessation interventions should include measures to increase social support.[13,16,22,41] Social support interventions can be conceptualised as being incorporated into treatment (intra-treatment social support) when people who smoke are provided with encouragement through direct contact with empathetic clinicians.[42] By contrast, social support can also occur outside of the direct treatment setting (extra-treatment social support), when people who smoke are given tools or assistance to seek support elsewhere or when friends and family are encouraged to aid and support a person's quit attempt.

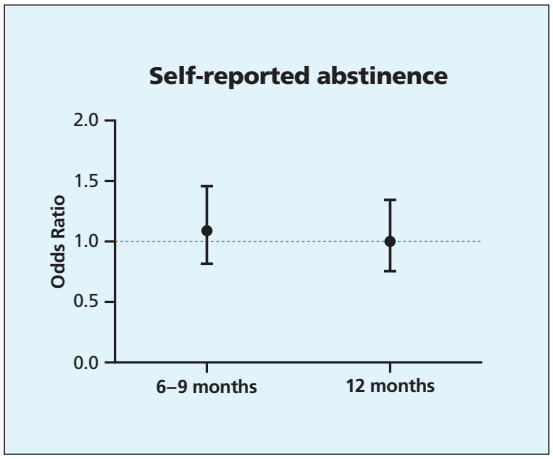
3. Smoking cessation interventions to enhance social support

3.1 Extra-treatment social support

- Rather surprisingly, interventions that have attempted to increase social support by targeting significant others have produced mixed results at best. A number of studies have shown superior abstinence rates by encouraging a support person to attend treatment sessions (but this effect was mostly present in men, not women),[13,43,44] by providing support training to significant others[45] or by initiating new contacts and pairing people with others who smoke ('buddies') who also attended treatment sessions.[46] However, these effects tend to be relatively short-lived and in observational studies are likely to be due to self-selection.[47]
- Trials that have used stricter study methodology do not tend to find an additional benefit for smoking outcomes by involving buddies[48] or romantic partners who smoke in treatment,[49] or by providing additional material to increase social support from significant others.[50,51] Although the somewhat contradictory findings of effects of extra-treatment social support may in part be due to methodological problems (small sample sizes, diverse approaches), meta-analyses and systematic reviews tend to find no overall evidence that such social support interventions increase abstinence rates (see Figure 2).[47,52,53]

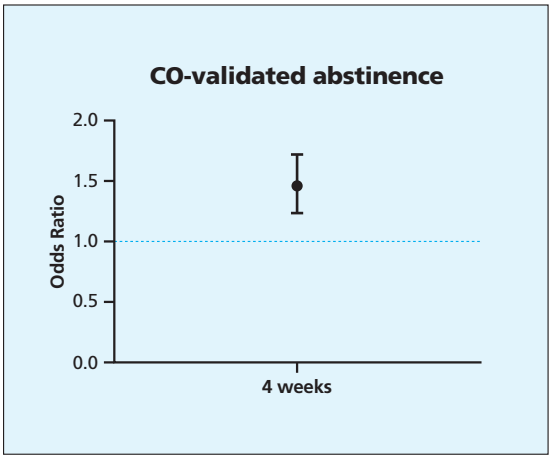
Smoking cessation interventions involving significant others: the role of social support

Figure 2. Effect of partner support interventions on self-reported abstinence at different time points.



Pooled odds ratios (95% confidence intervals) for abstinence in randomised controlled trials comparing interventions with and without partner support. Data from Park et al.[52]

Figure 3. Effect of group compared with one-to-one behavioural conselling on CO-validated abstinence.



Pooled odds ratios (95% confidence intervals) from observational studies reporting abstinence in group compared with one-to-one behavioural counselling. Raw data from Bauld et al[54] and McEwen et al.[55]

3.2 Intra-treatment social support

- In contrast to extra-treatment social support, consensus panel guidelines consider intra-treatment social support to be an important and effective component of intensive behavioral interventions.[42,56] The best evidence to suggest that such intra-treatment social support has an active effect comes from indirect comparisons of group and individual treatments showing that effect sizes obtained by group treatments are somewhat higher.[57,58] For instance, observational studies that have compared the abstinence rates of people who elect to either stop smoking using a group service or one-to-one treatment report that group participants are 1.38[54] to 2.27[55] more likely to be abstinent (see Figure 3).
- However, whilst confounders are controlled for in such observational studies, they cannot control for non-specific or placebo effects. Further evidence for the importance of intra-treatment social support comes from experimental trials which show that increasing social cohesion and increasing social support within groups (e.g. by stressing commitment to the group) improves abstinence rates compared with normal treatment.[59–61]

Smoking cessation interventions involving significant others: the role of social support

3.3 Reconciling evidence

- Given the clear association of naturally occurring social support with smoking outcomes and the importance of intra-treatment social support, it is surprising that interventions designed to enhance social support from others are not more effective. An obvious explanation for this finding may be that it is difficult to create social support for someone if it is not naturally available.[13] In fact, most studies that measured the impact of interventions on social support found this had not increased in the treatment condition.[62]
- An additional consideration is the possibility that social support has its effect not due to increasing social integration but due to the absence of the negative effects of isolation.[63] Following from this hypothesis, it may be the case that increases in social support beyond a certain threshold may have a ceiling effect and not improve outcomes.[25] This interpretation is consistent with the finding that buddy interventions are effective when added to one-to-one but not group treatments which already exhibit high levels of social support.[48]
- Lastly, it has been argued that insufficient theoretical rigor and confusion between concepts of social support may contribute to the negative findings and that better theoretical frameworks are needed.[40] One approach which has shown some promise is the family-consultation model.[64] It postulates that social support cannot be simply reduced to learning and implementing various support skills but requires an acknowledgement that smoking is inextricably linked to the social relationships in which it occurs and that significant others need to be involved not just as providers of social support but as participants with a stake in the change process.[65]

References

1. Tyas SL, Pederson LL. Psychosocial factors related to adolescent smoking: a critical review of the literature. Tob Control 1998; 7(4):409–420.

2. Daly KA, Lund EM, Harty KC, Ersted SA. Factors associated with late smoking initiation in Minnesota women. Am J Public Health 1993; 83(9):1333–1335.

3. Farkas AJ, Gilpin EA, White MM, Pierce JP. Association between household and workplace smoking restrictions and adolescent smoking. JAMA 2000; 284(6):717–722.

4. O'Loughlin J, Karp I, Koulis T, Paradis G, Difranza J. Determinants of first puff and daily cigarette smoking in adolescents. Am J Epidemiol 2009; 170(5):585–597.

5. Dalton MA, Sargent JD, Beach ML, Titus-Ernstoff L, Gibson JJ, Ahrens MB et al. Effect of viewing smoking in movies on adolescent smoking initiation: a cohort study. Lancet 2003; 362(9380):281–285.

6. Charlton A, While D, Kelly S. Boys' smoking and cigarette-brand-sponsored motor racing. Lancet 1997; 350(9089):1474.

7. Hirschman RS, Leventhal H, Glynn K. The Development of Smoking-Behavior – Conceptualization and Supportive Cross-Sectional Survey Data. Journal of Applied Social Psychology 1984; 14(3):184–206.

8. West R, McEwen A, Bolling K, Owen L. Smoking cessation and smoking patterns in the general population: a 1-year follow-up. Addiction 2001; 96(6):891–902.

9. Hellman R, Cummings KM, Haughey BP, Zielezny MA, O'Shea RM. Predictors of attempting and succeeding at smoking cessation. Health Educ Res 1991; 6(1):77–86.

10. Li L, Feng G, Jiang Y, Yong HH, Borland R, Fong GT. Prospective predictors of quitting behaviours among adult smokers in six cities in China: findings from the International Tobacco Control (ITC) China Survey. Addiction 2011; 106(7):1335–1345.

11. Li L, Borland R, Yong HH, Fong GT, Bansal-Travers M, Quah AC et al. Predictors of smoking cessation among adult smokers in Malaysia and Thailand: findings from the International Tobacco Control Southeast Asia Survey. Nicotine Tob Res 2010; 12 Suppl:S34–S44.

12. Richmond RL, Kehoe LA, Webster IW. Multivariate models for predicting abstention following intervention to stop smoking by general practitioners. Addiction 1993; 88(8):1127–1135.

13. Murray RP, Johnston JJ, Dolce JJ, Lee WW, O'Hara P. Social support for smoking cessation and abstinence: the Lung Health Study. Lung Health Study Research Group. Addict Behav 1995; 20(2):159–170.

14. Homish GG, Leonard KE. Spousal influence on smoking behaviors in a US community sample of newly married couples. Soc Sci Med 2005; 61(12):2557–2567.

15. Marlatt GA, Curry S, Gordon JR. A longitudinal analysis of unaided smoking cessation. J Consult Clin Psychol 1988; 56(5):715–720.

16. Venters MH, Solberg LI, Kottke TE, Brekke M, Pechacek TF, Grimm RH, Jr. Smoking patterns among social contacts of smokers, ex-smokers, and never smokers: the Doctors Helping Smokers Study. Prev Med 1987; 16(5):626–635.

17. Foss R. Personality, social influence and cigarette smoking. J Health Soc Behav 1973; 14(3):279–286.

18. Grove JR. Attributional correlates of cessation self-efficacy among smokers. Addict Behav 1993; 18(3):311–320.

19. Berkman LF. The role of social relations in health promotion. Psychosom Med 1995; 57(3):245–254.

20. Morgan GD, Ashenberg ZS, Fisher EB, Jr. Abstinence from smoking and the social environment. J Consult Clin Psychol 1988; 56(2):298–301.

21. Gibbons FX, Eggleston TJ. Smoker networks and the "typical smoker": a prospective analysis of smoking cessation. Health Psychol 1996; 15(6):469–477.

Smoking cessation interventions involving significant others: the role of social support

22. Mermelstein R, Cohen S, Lichtenstein E, Baer JS, Kamarck T. Social support and smoking cessation and maintenance. J Consult Clin Psychol 1986; 54(4):447–453.

23. Cohen S, Lichtenstein E, Mermelstein R, McIntyre-Kingsolver K, Baer J, Karmach T. Social support interventions for smoking cessation. In: Gottlieb B, editor. Marshalling social support: Formats, processes and effects. Newbury Park, CA: Sage; 1988. 211–240.

24. Verheijden MW, Bakx JC, van WC, Koelen MA, van Staveren WA. Role of social support in lifestyle-focused weight management interventions. Eur J Clin Nutr 2005; 59 Suppl 1:S179–S186.

25. Cohen S, Wills TA. Stress, social support, and the buffering hypothesis. Psychol Bull 1985; 98(2):310–357.

26. Wasserman DA, Stewart AL, Delucchi KL. Social support and abstinence from opiates and cocaine during opioid maintenance treatment. Drug Alcohol Depend 2001; 65(1):65–75.

27. Coppotelli HC, Orleans CT. Partner support and other determinants of smoking cessation maintenance among women. J Consult Clin Psychol 1985; 53(4):455–460.

28. Rice VH, Templin T, Fox DH, Jarosz P, Mullin M, Seiggreen M et al. Social context variables as predictors of smoking cessation. Tob Control 1996; 5(4):280–285.

29. Cohen S, Lichtenstein E. Partner behaviors that support quitting smoking. J Consult Clin Psychol 1990; 58(3):304–309.

30. Roski J, Schmid LA, Lando HA. Long-term associations of helpful and harmful spousal behaviors with smoking cessation. Addict Behav 1996; 21(2):173–185.

31. Mermelstein R, Lichtenstein E, McIntyre K. Partner support and relapse in smoking-cessation programs. J Consult Clin Psychol 1983; 51(3):465–466.

32. West DW, Graham S, Swanson M, Wilkinson G. Five year follow-up of a smoking withdrawal clinic population. Am J Public Health 1977; 67(6):536–544.

33. Chandola T, Head J, Bartley M. Socio-demographic predictors of quitting smoking: how important are household factors? Addiction 2004; 99(6):770–777.

34. Havassy BE, Hall SM, Wasserman DA. Social support and relapse: commonalities among alcoholics, opiate users, and cigarette smokers. Addict Behav 1991; 16(5):235–246.

35. Lawhon D, Humfleet GL, Hall SM, Munoz RF, Reus VI. Longitudinal analysis of abstinence-specific social support and smoking cessation. Health Psychol 2009; 28(4):465–472.

36. Thomas JL, Patten CA, Decker PA, Croghan IT, Cowles ML, Bronars CA et al. Development and preliminary evaluation of a measure of support provided to a smoker among young adults. Addict Behav 2005; 30(7):1351–1369.

37. Glasgow RE, Klesges RC, O'Neill HK. Programming social support for smoking modification: an extension and replication. Addict Behav 1986; 11(4):453–457.

38. Stewart D, Thomas J, Copeland A. Perceptions of social support provided to smokers. Journal of Smoking Cessation 2010; 5:95–101.

39. May S, West R, Hajek P, McEwen A, McRobbie H. Social support and success at stopping smoking. Journal of Smoking Cessation 2007; 2:47–53.

40. Westmaas JL, Bontemps-Jones J, Bauer JE. Social support in smoking cessation: reconciling theory and evidence. Nicotine Tob Res 2010; 12(7):695–707.

41. Lennox AS. Determinants of outcome in smoking cessation. Br J Gen Pract 1992; 42(359):247–252.

42. USDHHS. Clinical Practical Guidelines. Treating Tobacco Use and Dependence – 2008 Update. Rockville, MD: US Department of Health and Human Services, P.H.S.; 2008.

43. Kviz F, Crittenden K, Madura K, Warnecke R. Use and effectiveness of buddy support in a self-help smoking cessation programme. Americal Journal of Health Promotion 1994; 8:191–201.

Smoking cessation interventions involving significant others: the role of social support

44. Carlson LE, Goodey E, Bennett MH, Taenzer P, Koopmans J. The addition of social support to a community-based large-group behavioral smoking cessation intervention: improved cessation rates and gender differences. Addict Behav 2002; 27(4):547–559.

45. Gruder CL, Mermelstein RJ, Kirkendol S, Hedeker D, Wong SC, Schreckengost J et al. Effects of social support and relapse prevention training as adjuncts to a televised smoking-cessation intervention. J Consult Clin Psychol 1993; 61(1):113–120.

46. West R, Edwards M, Hajek P. A randomized controlled trial of a "buddy" systems to improve success at giving up smoking in general practice. Addiction 1998; 93(7):1007–1011.

47. May S, West R. Do social support interventions ("buddy systems") aid smoking cessation? A review. Tob Control 2000; 9(4):415–422.

48. May S, West R, Hajek P, McEwen A, McRobbie H. Randomized controlled trial of a social support ('buddy') intervention for smoking cessation. Patient Educ Couns 2006; 64(1–3):235–241.

49. Nyborg K, Nevid J. Couples who smoke: a comparison of couples training versus individual training for smoking cessation. Behavior Therapy 1986; 17:620–625.

50. Orleans CT, Schoenbach VJ, Wagner EH, Quade D, Salmon MA, Pearson DC et al. Self-Help Quit Smoking Interventions – Effects of Self-Help Materials, Social Support Instructions, and Telephone Counseling. J Consult Clin Psychol 1991; 59(3):439–448.

51. McBride CM, Baucom DH, Peterson BL, Pollak KI, Palmer C, Westman E et al. Prenatal and postpartum smoking abstinence a partner-assisted approach. Am J Prev Med 2004; 27(3):232–238.

52. Park EW, Tudiver F, Schultz JK, Campbell T. Does enhancing partner support and interaction improve smoking cessation? A meta-analysis. Ann Fam Med 2004; 2(2):170–174.

53. Luker KA, Chalmers KI, Caress AL, Salmon MP. Smoking cessation interventions in chronic obstructive pulmonary disease and the role of the family: a systematic literature review. J Adv Nurs 2007; 59(6):559–568.

54. Judge K, Bauld L, Chesterman J, Ferguson J. The English smoking treatment services: short-term outcomes. Addiction 2005; 100 Suppl 2:46–58.

55. McEwen A, West R, McRobbie H. Effectiveness of specialist group treatment for smoking cessation vs. one-to-one treatment in primary care. Addict Behav 2006; 31(9):1650–1660.

56. Raw M, McNeill A, West R. Smoking cessation guidelines for health professionals. A guide to effective smoking cessation interventions for the health care system. Health Education Authority. Thorax 1998; 53(Suppl 5 Pt 1):S1–19.

57. Stead LF, Lancaster T. Group behaviour therapy programmes for smoking cessation. Cochrane Database Syst Rev 2005;(2):CD001007.

58. Lancaster T, Stead LF. Individual behavioural counselling for smoking cessation. Cochrane Database Syst Rev 2005;(2):CD001292.

59. Digiusto E, Bird KD. Matching smokers to treatment: self-control versus social support. J Consult Clin Psychol 1995; 63(2):290–295.

60. Hajek P, Belcher M, Stapleton J. Enhancing the impact of groups: an evaluation of two group formats for smokers. Br J Clin Psychol 1985; 24 (Pt 4):289–294.

61. Etringer BD, Gregory VR, Lando HA. Influence of group cohesion on the behavioral treatment of smoking. J Consult Clin Psychol 1984; 52(6):1080–1086.

62. Park EW, Schultz JK, Tudiver F, Campbell T, Becker L. Enhancing partner support to improve smoking cessation. Cochrane Database Syst Rev 2004;(3):CD002928.

63. Cohen S, Syme SL. Issues in the study and application of social support. In: Cohen S, Syme SL, editors. Social support and health. Orlando: Academic Press; 1985. 3–22.

64. Shoham V, Rohrbaugh MJ, Trost SE, Muramoto M. A family consultation intervention for health-compromised smokers. J Subst Abuse Treat 2006; 31(4):395–402.

65. Rohrbaugh MJ, Shoham V, Trost S, Muramoto M, Cate RM, Leischow S. Couple dynamics of change-resistant smoking: toward a family consultation model. Fam Process 2001; 40(1):15–31.