

# 6 Summary





In this thesis we have described the development and evaluation of an evidence based adolescent smoking cessation program. Our introductory work identified a major paradox with regard to adolescent smoking cessation: Although more than 40% of all smokers reported that they have tried to quit smoking within the last 12 months, the majority of adolescents indicates that they would not participate in a smoking cessation intervention. In addition our pilot study showed that it would be difficult to implement smoking cessation interventions in the Danish school setting. Therefore the main questions for this thesis have been: 1) Which are the effective methods and strategies for adolescent smoking cessation? 2) How do we communicate or deliver these in a format that is easily implemented in a Danish school setting and in a way that we recruit a sizeable amount of adolescent smokers?

As part as the needs assessment research we conducted a qualitative study with group discussions and individual interviews during April–May 2004 with 26 persons aged 15–21yrs who all initiated a quit attempt on 1 January 2004. The main research questions were 1) Which cognitive and behavioural strategies do adolescents use in their attempts to quit smoking? 2) Which attitudes and beliefs do adolescents have towards the process of smoking cessation and smoking cessation interventions? The main finding was that adolescent smoking cessation should be seen as an individual process and that all stages in this process are characterized by a broad variety of quit and maintenance strategies. We could not identify a strategy being superior in explaining the success of quit attempts, but we found that success was related to whether or not the quitter was committed to a learning process in which different strategies were tested, evaluated re-tested, et cetera. In addition the study revealed that adolescents considered ‘willpower’ as the most important determinant of smoking cessation, that they expected cessation interventions to be patronizing, and that they regarded seeking support for an internal personal process as excessive.

We used the Intervention Mapping (IM) as framework for planning the smoking cessation intervention. Based on a needs assessment we identified important and changeable determinants of cessation behaviour, specified change objectives for the intervention program, selected theoretical change methods for accomplishing intervention objectives, and finally operationalized change methods into practical intervention strategies. We found that adolescent smoking cessation should be seen as a process influenced by both individual determinants (e.g. knowledge, attitudes, self-efficacy and coping skills) and interpersonal determinants (e.g. friends support), and that quitting was related to the following performance objec-

tives: Decide to quit, decide to make a committed effort to quit, prepare coping plans, quit smoking, identify trigger situations, make/perform coping plans, and evaluate and adjust coping strategies. Further we identified a line of change objectives related to each of these performance objective and we identified Self-Regulation Theory, the Trans Theoretical Model and Social Cognitive Theory (85) as relevant theories for program development, and from these theories we selected guided practice, modelling, self-monitoring, coping planning, consciousness raising, dramatic relief and decisional balance as methods suitable for adolescent smoking cessation interventions. In the strategic translation of these methods into practical strategies, we selected 'biofeedback', 'Motivational Interviewing' and 'Behavioural Journalism' as the main intervention strategies. Since the anticipation of implementation and recruitment of smokers was crucial in the intervention development, we secured in the production phase that the intervention format took into account the factors found in the needs assessment that seemed essential for recruitment and implementation. Consequently, we designed an intervention based upon voluntary participation that did not require registration beforehand, that was easy accessible, that included the provision of motivational incentives and a non-patronizing support.

We tested the intervention in a cluster randomised trial at 22 continuation schools for students age 15-21. Our main research questions were whether the intervention was effective in reaching a sizeable amount of the adolescent daily smokers, and whether it was effective in increasing the one-month- and 14 month cessation rates. In addition, we tested whether the intervention had any effects on short and long term cessation attempt and factors thought to influence the cessation process. We found positive short term effects of the intervention regarding cessation, self-efficacy change and intention change. However, none of these effects were maintained at one-year follow up. The intervention was successful in reaching more than half of all daily smokers in the target group with more than 30% receiving counseling at least once in the intervention period. Process evaluations showed a high level of satisfaction with the intervention among the counselors and schools principals, but also revealed a large variation in reach between schools indicating room for improvement in future interventions.

In a wider perspective our project have shown that it is possible to develop an intervention that is easily implemented in a Danish school educational setting and that we can achieve modest short term effects, but that additional research is needed in order to maintain the effects at long term.