

Effect of smoking cessation interventions in groups with low socio-economic status

This is an excerpt from the full technical report, which is written in Norwegian.

The excerpt provides the report's main messages in English.

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We would like to thank all contributors for their expertise in this project. Norwegian Knowledge Centre for the Health Services assumes final responsibility for the content of this report.

Norwegian Knowledge Centre for the Health Services
Oslo, August 2007

Key messages

Background

This report is the first review of effects on interventions to different socio-economic groups, and which assess smoking cessation interventions.

Objective

What is the effect of interventions: 1) to reduce smoking among different socio-economic groups 2) to reduce smoking in lower socio-economic groups?

Methods: We searched systematically for relevant literature in international databases, and appraised and synthesized studies which fulfilled our inclusion criteria.

Results

We summarized results from four reviews and 19 randomized control studies. We have defined four main target groups for smoking cessation interventions: Studies of smoking prevention in schools showed compounded results. Students with technical college and lower academic education had stronger intention to smoke. Free nicotine patches and supporting telephone calls for pregnant showed only short-term effect on smoking cessation. High family income and few smoking friends were important factors for smoking cessation. The interventions toward adult daily smokers were effective. High socio-economic status, high motivation to quit, low nicotine dependence and amount of time spent with non-smokers are important factors for duration of smoking cessation. The interventions toward patients with better social networks have higher probability of quitting smoking. Counselling increased smoking cessation among lower socio-economic groups compared with high socio-economic groups.

Conclusion

Smoking cessation interventions are most efficient for groups with high socio-economic status. Few studies report separate effects for groups with lower socio-economic status, though.

Executive summary

BACKGROUND

Previously, some Norwegian cause-effect studies of social inequality documenting a social gradient in smoking cessation, future smoking identity and knowledge about interventions offered by the health services have been reported. Among lower socio-economic groups, fewer quit smoking than among higher socio-economic groups. There are few effect studies about interventions for helping low socio-economic groups to reduce their smoking.

MANDATE

The Norwegian Directorate for Health and Social Affairs (SHDir) commissioned the Norwegian Knowledge Centre for the Health Services to sum up the effect of smoking cessation interventions in groups with low socio-economic status.

The present overview will be a basic document in the Directorate's work with interventions toward relevant target groups, and shall identify the need for national intervention research. It is important to document effective interventions to reduce smoking in groups with low socio-economic status.

METHODS

We conducted a systematic literature search in the following electronic databases: Medline, Embase, Cochrane Library, PsychInfo, Cinahl, Social Services Abstracts, Sociological Abstracts, Eric, International Bibliography of the Social Sciences, Social Sciences Citation Index, Social Care Online, C2-SPECTR, SveMed, BiblioMap, Bibsys and Google Scholar until November 2006. Relevance and study quality is appraised according to the Knowledge Centre's methodological handbook.

We included effect studies dealing with reduction of daily smoking and/or smoking cessation in groups with low socio-economic status, or a reduction in differences in smoking cessation between groups with different socio-economic status.

RESULTS

A total of 4 reviews and 19 primary studies are included in this report. We found several studies that reported socio-economic data at the start of the intervention (baseline), but they did not use background variables like income and education to analyze differences between socio-economic groups. The included studies can be categorised according to target group for intervention.

School/students/youth

A Dutch study showed that friends' smoking behaviour had a significant effect on intention to smoke and own smoking behaviour. Parents' permission to smoke had a significant effect on smoking initiation. Students with technical school and lower academic education had higher intention to smoke.

A British study showed that nicotine-replacements were not effective in young daily smokers, and after 13 weeks everyone were still smoking. The participation was low. The relapse rate was also high.

A skill group, where the intervention tried to increase the participants' self-confidence, focusing on problem solving and communication methods to deal with smoking pressure, showed somewhat better results over time. This American study with students with lower socio-economic status showed that the skill group had somewhat better results compared to the education group and the control group.

An American study on smoking prevention interventions with Latin-American background had an effect on smoking behaviour and there were fewer in the intervention group that reported smoking after the intervention.

Use of health-promoting interventions did not change smoking behaviour over a follow-up period of two years, but contributed to increase the level of knowledge among the participants about possible consequences of smoking. There is a socio-economic gradient in smoking cessation showing that students from families with lower education have higher intention to smoke.

Pregnant/maternal and child health centre/ young mothers

In a Turkish study on pregnant women, the researchers studied short-term interventions to increase smoking cessation. Both intervention groups had a significant increase in smoking cessation and change in smoking pattern, compared with the control group. High family income, participation in intervention group and few smoking friends were important factors for predicting smoking cessation among the women.

In an American study, pregnant women received a self-help booklet and telephone smoking cessation interventions. 20 percent of the participants managed to quit, without significant difference between the intervention groups. Quit rates were 22.5% in the first group, 16.7% in the second group, and 20.8% in the third group. High- and low status groups were under-represented, and therefore the results cannot be generalised to all public clinics.

An American study of women in fertile age who received free nicotine patches and supporting telephone calls showed a short-term effect of smoking cessation, but no differences after six months follow-up, meaning that follow-up telephone counseling amplified the short-term effects but not the long-term effects of the smoking cessation interventions.

Population/geographic areas/adults

A British study shows that a cognitive behaviour programme had an effect on smoking cessation. After 12 months follow-up, 20% of the intervention group had quit smoking and 9% had reduced their consumption by 25%. Six percent in the control group had quit smoking, and no one had managed to reduce their daily consumption.

A Danish study comparing a high-intensity to a low-intensity intervention showed that after one year there were 16.3 percent non-smokers in the high-intensity group compared to 12.7 percent in the low-intensity group. In the rest of the population there were 12.7 percent non-smokers.

An American study of daily smokers who received a self-help booklet, personal feedback and telephone counseling showed an effect at the 3 and 12-month follow-ups.

In an Australian study, age and motivation predicted smoking cessation after 3 months. After 6 months, socio-economic status, motivation, low nicotine dependence, and time spent with non-smokers were important factors for duration of smoking cessation.

A Swiss study tested the effect of a tailored smoking cessation programme. Smoking cessation was 2.6 times larger in the intervention group than in the control group. The programme was more effective among the group with higher education than among the group with lower education.

High socio-economic status, high age at smoking initiation and low intention to smoke are important success criteria for smoking cessation. The interventions **increased the differences** among socio-economic groups, because there were more persons with high socio-economic status who managed to quit as a result of the intervention compared to smokers with low socio-economic status.

High-risk groups/patient groups

In a Danish hospital study, smoking cessation interventions were directed toward patients with hip problems. Men with a good social network had larger probability of succeeding with quitting smoking. The researchers also found that more than 4 hours of weekly physical exercise and a high education level were important success factors for smoking cessation.

A Norwegian study showed that counseling about smoking cessation was especially effective toward lower socio-economic groups. Among the quitters, the lower socio-economic groups reduced their blood cholesterol level more than other groups. This was the **only** study that was more effective among lower socio-economic groups in increasing smoking cessation.

CONCLUSION

We have identified studies that fill some of the knowledge gap, but there is still a need for more Norwegian effect studies. A thought-provoking result from this overview is that most studies show better results for groups with high income and education, implying increasing differences between socio-economic groups. It is therefore important to focus on interventions that are especially designed for lower socio-economic groups. In the eight included studies, several of the same interventions such as nicotine replacement, supporting telephone calls, and supporting persons are used.

In general there is little intervention research directed toward daily smokers in the lower socio-economic groups. In effect studies background data are collected at the start of the studies (baseline), and, thus, many studies report socio-economic data to appraise whether the groups are comparable. We have identified a need for analysing socio-economic differences in existing data from effect studies using the reports of background data. But this is a time-consuming process, and it is difficult to do.