

Smoking cessation and gender differences – results from a Swedish sample

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ABSTRACT

AIM – Previous research has concluded that prevalence of smoking, reasons to quit and strategies to become smoke-free vary markedly by gender. Yet we lack a more comprehensive understanding of the process leading to a quit attempt and a positive long-term outcome, and of the gender-specific mechanisms behind successful cessation. My aim is therefore to investigate reasons of smoking and motives, mechanisms and factors of smoking cessation, with special regard to gender differences. **DATA/METHOD** – Between October 2009 and May 2010, respondents were recruited through the Swedish Monitor project. Each month 1 500 individuals from a representative sample in the Swedish population (n=12 000) were interviewed on the telephone. In a screening process, previous daily smokers who had been smoke-free for at least 12 months were asked to answer a postal survey (n=1 683) concerning their process to a smoke-free life. The analyses consist of both descriptive statistics and factor analyses. **RESULTS** – The results indicate that women's smoking filled an important role in life and that the cessation process was quite complex. Women often met harsh consequences from smoking, quitting for the sake of others. They tended to plan their cessation in advance and made more often use of professional help and nicotine replacement therapy (NRT) than men. Men tended to experience their smoking as quite unproblematic and typically quit for more self-oriented reasons. They seldom planned their cessation in advance, but many made use of snuff or snus, and about half were still using it. More than men, women perceived physical problems in not smoking, but also more social and personal benefits. **CONCLUSIONS** – Gender differences were found in reasons to smoke, reasons to quit and strategies to quit smoking. Because the smoking cessation process is gendered, strategies and policy decisions should be gender sensitive, taking into account an array of specific needs. **KEYWORDS** – Smoking cessation, process, gender differences, Sweden, factor analyses

Submitted 22.05.2014

Final version accepted 10.10.2014

Introduction

Tobacco consumption is increasing globally while decreasing in some high-income and upper middle-income countries (World Bank, 1999), and the unequal distribution between countries is obvious. Sweden, a high-income country, has seen

a continuous decline in daily smoking since the 1980s because of a consistently decreasing number of people who start to smoke and because an increasing number have managed to quit smoking. Indeed, Sweden was the first country to reach the

Acknowledgements

This study has been financed by the Swedish Council for Working Life and Social Research [FAS] project no. 140 67 02. The project was positively reviewed by the Regional Ethical Board (2009/2102-31).

World Health Organisation's (WHO) goal of less than 20 per cent daily smokers. Today, Sweden has the lowest rate of daily smokers among the adult population in the EU (OECD, 2012), which has often been attributed to the rather frequent use of *snus* (smokeless tobacco), especially among men.

Globally, the prevalence of smoking varies markedly by gender and socio-economic background (Amos & Mackay, 2010). A comparison between EU countries shows that smoking is currently more common among men and among the low educated than among women and the higher educated (OECD, 2012). The development of smoking in Sweden however differs from many other countries as concerns gender. Historically, more Swedish men than women have been smoking cigarettes, but this distribution has undergone a change over time: at the end of the 1980s smoking was as common among women as among men (Statistics Sweden, 2004). The continuous decline in daily smoking has since been more rapid among men than among women, which has led to the internationally unique situation that Sweden from the mid-1990s and until quite recently has had more daily smoking women than men (Statistics Sweden, 2004). According to the Public Health Agency of Sweden [Folkhälsomyndigheten] (2014), this gender difference has now closed, and in 2013 the prevalence of daily smoking was about 11 per cent among both women and men.

Previous research has indicated that the reasons to quit smoking may to some extent vary between genders. For example, findings from the UK suggest that women cite such reasons as saving money, quitting for the sake of their family and not want-

ing to smell of smoke, while men more often talk about wanting to quit to improve their own health and fitness (West, McEwen & Bates, 1999). In line with these findings Grotvedt & Stavem (2005) conclude in a study from Norway that women usually mention concerns about their children and aesthetic reasons for smoking cessation, whereas men more often quit smoking in order to improve their physical fitness. More women than men also state that they have been advised by a doctor to quit smoking, which is likely to be correlated with pregnancy (West et al., 1999), and a study on British women found pregnancy to be an important predictor for giving up smoking (Graham & Der, 1999).

The World Health Organisation (WHO) and the European Union (EU) are two key actors in the development of restrictive tobacco controls. The Swedish Tobacco Act (1993:581) now includes rules on smoke-free environments, marketing and warning texts. There is also a separate law on tobacco taxation (1961:34) and two legislations aimed at reducing tobacco consumption and decreasing smoking prevalence. In addition to these legislative measures, information is seen as an important part of prevention efforts.

In addition, the common use of *snus* in Sweden has also been suggested as an explanation of the low number of smokers. Indeed, in 2012 around 19 per cent of all Swedish men used *snus* on a daily basis (Sohlberg, 2012). However, while tobacco companies have increasingly tried to market *snus* to female customers (by manufacturing flavoured *snus*, for example, as well as mini portion bags and coloured cans), the prevalence of daily *snus* users among women is still not more than around 4 per

cent (Sohlberg, 2012). Several previous studies have claimed the use of *snus* to be an important means for men to quit smoking in Sweden (Gilljam & Galanti, 2003; Ramström & Foulds, 2006), and certainly, approximately 26 per cent of all male Swedish *snus* users are former smokers (SNIPH, 2012). Besides the potential role of *snus*, there has emerged a market in Sweden for Nicotine Replacement Therapies (NRTs) and other types of medical help to support smokers in their attempts to quit smoking and to stay smoke-free. In fact, among current adult Swedish smokers, about 70 per cent state that they would like to become smoke-free, and about one out of three report wanting professional support (SNIPH, 2004). In the UK, West et al. (1999) have found that women more often than men turn to smokers' clinics for professional help, but also that very few use professional help at all. There is further some evidence that supports the efficacy of counselling, bupropion-sustained release (BSR) and NRTs but whether any of these interventions are more effective for women or for men is unknown (Singleton et al., 2005). Finally, findings in Norway indicate that *snus* is a common method among male smokers to quit smoking, while women prefer the use of NRT (Scheffels, Lund, & McNeill, 2012).

Overall, contemporary research on smoking cessation seems typically to investigate the effectiveness of pharmacological aids, various forms of nicotine replacement substances and different kinds of support programmes, such as telephone helplines. However, both classical and more recent studies have in fact indicated that the large majority of those who quit smoking do so without any form of organ-

ised help (Schachter, 1982; Arborelius, 1993; Flöter & Kröger, 2007). Although gender differences have been found among smokers and quitters concerning prevalence, demographics and to some extent strategies of becoming smoke-free, we lack a more comprehensive understanding of the smoking cessation process and the gender-specific mechanisms behind a successful quit attempt and a positive long-term outcome. A previous study (Sohlberg & Wennberg, 2014) has however described developmental pathways to smoking cessation based on the same data as in the present study. The variables were then summarised into domains, covering the process from initiation to cessation, by the use of factor analyses, and this procedure forms the basic assumption on how the variables relate to each other. That study did not however consider possible gender differences.

Aims

The aim of this study is to analyse reasons to smoke as well as motives, mechanisms and underlying factors of smoking cessation in a representative Swedish sample (N= 1683) of successful quitters. Another aim is to investigate if, and to which extent, gender differences suggested by previous research can be corroborated also in this sample.

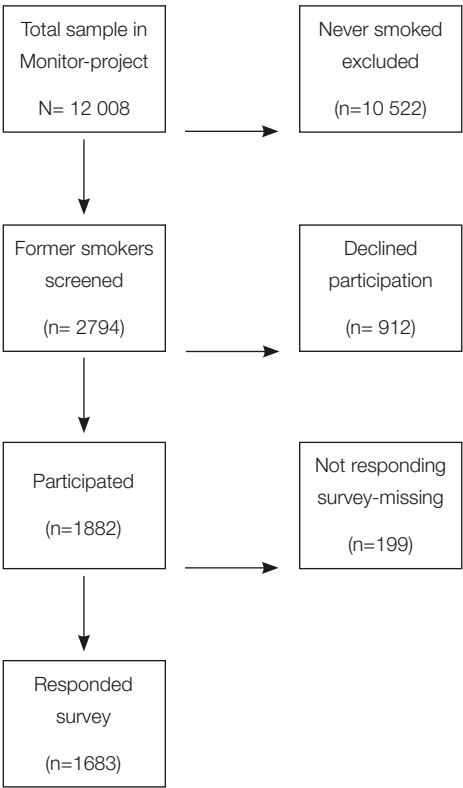
Data and method

Data

The respondents in the study were recruited from the Monitor project, which was a running survey directed to a representative sample of 1 500 individuals (aged 16–80 years) in Sweden each month (about 18 000 individuals annually) and

was conducted by the Centre for Social Research on Alcohol and Drugs SoRAD at Stockholm University between the years 2000 and 2012. During the period October 2009–May 2010, questions concerning previous and current smoking habits were added to the questionnaire. The purpose was to recruit a representative sample of former smokers (see Figure 1 for flow chart) for further study.

Figure 1. Sample sizes



Out of these former smokers (n=2 794), 1 882 agreed to respond to a postal survey that encompassed basic socio-demographic data, questions covering their previous smoking habits and various aspects of the quitting process. In total, 1 638 persons

(87 per cent) responded to the survey in April 2010–January 2011. A non-response analysis showed no significant differences between participants and non-participants in such sample characteristics as gender, age, education, occupation, income and civil status.

The survey covered the respondents' smoking careers from initiation to cessation, including questions about:

- background and social situation when the respondents had started to smoke, at present and after smoking cessation;
- degree of dependence (FTQ scale) when smoking the most;
- positive and negative consequences from smoking;
- motives and triggers for smoking cessation (external events, personal reasons, influence of significant others, impact of different policy decisions);
- different forms of planning to quit and maintenance factors for staying smoke-free; and
- positive and negative consequences from ceasing to smoke.

Questions and analyses

Most questions in the survey had pre-coded response alternatives and were analysed by cross- tables, using chi² tests to assess gender differences. A few questions (such as nicotine dependence) used scale values and were analysed by F-statistics. Finally, a number of questions used inventories consisting of several items, where respondents could mark yes/no or agree on 4-grade scales (from do not agree at all to agree totally) to indicate if they, for example, had experienced a certain event or judged that certain experiences

had influenced their decision to quit, or helped them to accomplish their goals. The answers to these questions were analysed with factor analyses (principal components factor analysis; varimax rotation; eigenvalues > 1). Factor scores were compared between genders with ANOVA. In the following, the data analyses performed are described in more detail under four main headings.

Descriptive analyses

Analyses reported under the heading Socio-demographic background and basic data about respondents' smoking include current age, age when started to smoke and when quit smoking, time as a smoker and time since cessation, average number of cigarettes smoked per day, and previous attempts to quit as well as the level of dependence according to the Fagerström Tolerance Questionnaire (FTQ) scale. This scale has been slightly adapted to fit the retrospective design of the study (for the full scale, see e.g. Fagerström & Schneider, 1989). Life as a smoker contains the respondents' understanding of their own smoking measured by a number of yes/no questions (multiple choices were possible) to various statements. The smoking cessation process is analysed by asking if and to what extent respondents had planned their smoking cessation in advance and to what extent they had used strategies such as switching to lighter cigarettes, cutting down the number of cigarettes, and/or agreeing with friend/family member to quit together. In addition, this heading covers analyses of respondents' answers to the extent to which they had used professional help and various nicotine products (snus and/or NRTs) either as a temporary

aid to quit or as a more permanent substitute for smoking.

Last, to illustrate their lives as non-smokers, the respondents were asked to estimate their perceived risk of relapse (starting to smoke again) on a 10-grade scale and to describe their emotional state after quitting. Results of the descriptive analyses are presented in tables and/or described in the text.

Factor analyses

In relation to the respondents' experiences of their lives as smokers, two inventories were analysed. Reasons to smoke were assessed by an inventory of 11 items and generated three factors: physical and psychological reasons, social reasons and a pleasure factor. Another inventory on perceived consequences of smoking, with a total of 13 items, also generated three factors, psychological, physical and social consequences.

In assessing the smoking cessation process, two inventories were used. First, reported reasons to quit included 34 items, and the factor analysis generated no fewer than five factors: external circumstances, physical and psychological health, medical problems, external pressure and family pressure/demands to quit. The second inventory measured the extent to which respondents considered their smoking cessation to have been influenced by various policy interventions. This inventory consisted of 8 items and generated two factors, bans and information.

Three additional inventories were used to explore the respondents' lives as non-smokers. Maintenance factors, with a total of 7 items, generated two factors of which the first refers to a social aspect and

the second to a physical aspect. Negative side effects of not smoking consisted of 12 items and generated two factors, namely psychological problems and physical problems. And last, benefits of not smoking, with a total of 12 items, also generated two factors, physical and psychological, and social and personal.

Item factor loadings are shown in Appendix 1, in relation to each inventory and factor together with explained variance, and KMO/Bartlett's Test of Sphericity. Gender-stratified means scores and significances for each factor are shown in Table 2. The overall results are described in the text.

Results

Background

Basic background data of the sample and the respondents' smoking history are shown in Table 1.

As indicated by the Table, the mean age for starting to smoke was about 18, while the mean age for quitting was about 40. The average respondent had thus been a daily smoker for slightly more than two decades and had smoked on average slightly less than a large pack of cigarettes per day. Overall there were only few significant gender differences in the aspects shown in the Table, but these did turn out to be significant in a couple of instances. Men had smoked somewhat more per day than women and displayed a somewhat higher degree of dependence according to the FTQ scale, although the value was in fact quite low among both women and men.

Table 2 shows the factor scores by gender. The results are presented in relation to each stage in the smoking career.

Table 1. Descriptive background of the sample

	Women (n=934)	Men (n=733)	p-value*
Age (mean)			
Current	56.1	59.8	0.000
When started to smoke	18.3	18.0	0.466
When quit smoking	39.9	40.8	0.347
Time as smoker, year (mean)	21.1	22.8	0.587
Time since cessation, year (mean)	16.2	19.0	0.087
Cigarettes/day (mean)	14.0	15.0	0.000
Previous attempts to quit (%)			0.180
0	34.7	39.0	
1-5	54.9	52.2	
More than 5	10.3	8.8	
FTQ-scale (mean)	3.3	3.9	0.000

*Differences between women and men measured with chi².

Life as a smoker

The gender-based analysis of women's and men's reasons to smoke (Table 2) revealed that women endorsed physical, psychological and social reasons significantly more strongly (p<.001) than men, whereas there was no significant difference concerning the pleasure factor. Moreover, women reported stronger psychological negative consequences than men (p < .001), but there were no significant differences between women and men in the physical and social negative consequences.

As concerns the respondents' understanding of their own smoking when smoking the most, (not shown in Table

Table 2. Gender specific mean scores for each factor

	Women	Men	p-value*
Reasons to smoke			
Physical and psychological	0.192	-0.244	0.000
Social	0.123	-0.155	0.000
Pleasure	-0.038	0.0432	0.099
Perceived consequences			
Psychological	0.206	-0.269	0.000
Physical	0.058	-0.078	0.009
Social	-0.05	0.069	0.022
Perceived reasons to quit			
External circumstances	-0.012	0.017	0.543
Physical and psychological health	0.115	-0.139	0.000
Medical problems	-0.059	0.084	0.004
External pressure	0.046	-0.053	0.043
Family pressure/demands	0.037	-0.054	0.062
Policy interventions			
Bans	-0.005	0.053	0.724
Information	0.014	-0.059	0.049
Maintenance factors			
Social aspects	0.001	-0.005	0.900
Physical aspects	0.028	-0.026	0.270
Side effects of not smoking			
Psychological	0.034	-0.046	0.100
Physical	0.111	-0.142	0.000
Benefits of not smoking			
Physical and psychological	0.052	-0.058	0.023
Social and other	0.112	-0.143	0.000

*Differences between women and men tested with t-test.

format), the analysis showed that the large majority viewed smoking as a rather unproblematic habit. About a third stated that they saw their smoking as physical dependence, whereas somewhat more identified it as psychological dependence. Not surprisingly, a vast majority disagreed in retrospect with the statement that smoking was a disease that they could not recover from by themselves. However, significantly more men than women ($p < .001$) reported seeing their smoking as a largely non-troubling habit, while significantly

more women reported considering their smoking an expression of their weak character ($p < .001$).

The smoking cessation process

Table 3 demonstrates to what extent respondents claim to have planned smoking cessation in advance, and if so, how long in advance they did this.

As this shows, the majority did not plan their smoking cessation in advance. However, there is a significant gender difference in that it was more common among

Table 3. Planning smoking cessation in advance (%)

	Women	Men	p-value*
Planning	(n=790)	(n=645)	0.000
None	50.3	62.0	
Not more than one month	30.0	26.8	
More than one month	19.7	11.2	

*Differences between women and men tested with χ^2 .

men to quit without any planning at all, and that more women than men made far-reaching plans before the actual cessation. Other strategies (not shown in Table), such as switching to lighter cigarettes, agreeing with a friend or family member to quit together and/or reducing the consumption, were separately regarded as further indications of planning. Among those who said that they had planned to quit, there were no significant gender differences in switching to lighter cigarettes (about 12 per cent) or quitting together with someone close to them (about a fourth of all women and men). However, more women (31.9 per cent) than men (24.2 per cent) reported to have cut the number of daily cigarettes ($p<.05$).

As for reported reasons to quit smoking, in Table 2, the analyses showed that physical and psychological health was significantly more strongly endorsed by women than men ($p<.001$), and that medical problems were significantly more strongly endorsed by men than by women ($p<.05$). However, there were no significant differences between women and men in terms of external circumstances, external pressure and pressure/demands from family. Moreover, few respondents, among both women and men, mentioned policy interventions (Table 2) as having played any significant role in their cessation process.

As discussed, other potential means to quit smoking may include seeking some kind of professional help or making use of NRTs or snus.

As can be seen in Table 4, using snus was significantly more common among the male quitters (35.1 per cent) than among the female quitters (9.0 per cent), whereas more women (28.3 percent) than men (14.3 per cent) used medical NRTs (28.3 per cent) or other forms of medical help (10.0 per cent of women, 5.9 per cent of men). Of the various options of professional help (not shown in Table) the most common was a doctor's prescription for Zyban or Champix¹. The most commonly used NRTs among both women and men were nicotine chewing gums.

Of all who used snus in their cessation process, significantly more men than women were still using it (39.3 per cent of women and 52.5 per cent of men). This suggests that snus for men is more often a smokeless substitute for cigarettes than part of a process to become nicotine-free.

Life as a non-smoker

Table 2 makes clear that neither social nor physical maintenance factors of staying smoke-free show any significant gender differences. As to the reported negative side effects of not smoking, the gender-based analysis revealed that women were

Table 4. Use of different kinds of help in the cessation process (%). N= 1 629

	Women (n=913)	Men (n=716)	p-value*
Use of professional help			
Yes	10.0	5.9	0.000
Use of NRT			
Yes	28.3	14.5	0.000
Use of snus			
Yes	9.0	35.1	0.000
<i>Continued use (yes)</i>	39.3	52.5	0.000

*Differences between women and men tested with χ^2 .

significantly more fraught with physical problems than men ($p<.001$), while no gender difference was found for psychological problems. Moreover, the comparison between women and men concerning perceived benefits of not smoking (Table 2) showed that social and personal improvements of being smoke-free were significantly more strongly endorsed by women than by men ($p<.001$), while there was no gender difference on physical and psychological benefits. Respondents were also asked to estimate their perceived risk of relapsing (starting to smoke again) on a 10-grade scale, a risk that was considered almost zero among both women and men. Finally (not shown in Table), slightly more than one third of both women and men reported feeling happier after they quit smoking.

Discussion

To sum up, the results indicate quite a few differences between female and male ex-smokers as concerns their reported experiences of smoking and smoking cessation. Thus, in retrospect, smoking appears to have played a more important role in life for female ex-smokers than for male

ex-smokers both on an individual level, such as preventing weight gain, and on a social level, such as experiencing oneself as part of a (smoking) community. At the same time, women seem to have faced quite harsh consequences from smoking, including a poor self-image, feelings of inferiority, a sense of having lost control over their own actions and interpreting their smoking as a result of a weak character. As for the cessation process, women wanted to quit smoking to regain control, but also to improve their fitness and to feel fresh. Further, women often planned the cessation in advance and cut their cigarette consumption. It was also more common for women than for men to make use of professional help and, in particular, to use medications like Zyban or Champix. Even though more men than women made use of *snus*, the use of NRTs in all different forms was a more common choice for women than for men. After quitting, women faced both psychological and physical problems but also felt a lot of different improvements.

For male ex-smokers, smoking does not in retrospect seem to have played an equally important role in their lives. They

reported fewer negative consequences from smoking than women, and they perceived their smoking largely as an unproblematic habit, even though they cited medical problems as an important reason to quit. Moreover, the male ex-smokers seldom planned their smoking cessation in advance and did not use professional help as much as women, although they more often used *snus*, to a large extent as a substitute for smoking. However, men often experienced that the feeling of being tired and depressed, ugly and boring during the year before cessation contributed to their smoking cessation.

Limitations

The results must be considered in light of certain limitations. First, this study has a retrospective design and is as such most certainly associated with recall effects when dating the smoking cessation back in time. Also, the study takes into consideration emotional experiences and thoughts in relation to the cessation process, which probably makes it more vulnerable to recall bias. However, retrospectively reported information on more concrete things such as age at smoking onset (Johnson & Mott, 2001; Hudmon et al., 2005), is found to be acceptable. Studies comparing retrospective and contemporaneous reports on smoking status have also concluded that the status is usually quite accurate (Bernaards et al., 2001; Kenkel, Lillard & Mathios, 2003). Inaccurate recall may nevertheless apply to socio-economic factors and life-cycle events, as well as emotional experiences and thoughts dated back in time. Coughlin (1990) has found inaccurate recall to be determined by the significance to, and motivation for, the re-

spondent. The postal survey in the present study was accompanied by an information letter that hopefully stimulated the motivation by emphasising the importance of the respondents' own experiences of becoming smoke-free and their possibility to help others to quit. Every section in the survey was also prefaced with an instruction intended to stir the memory of that special occurrence (for example, "Think of where you lived, or who you socialised with when you started to smoke"), in order to decrease the recall effect. Even so, there may be some inaccurate recall which is hard to control for.

Second, the sample consists of female and male ex-smokers, and differences found in these analyses do therefore not necessarily apply to female and male current smokers. The experiences perceived by the studied ex-smokers may be different for active smokers.

Third, the time for the last, successful, cessation varies. Some of the respondents quit smoking quite a long time ago, so the findings may not apply to smokers who quit today. For example, the tobacco policy has been sharpened over time, probably leading to more negative social attitudes toward smoking (and smokers). The use of *snus* may be more acceptable today than 20 years ago, not least for women, and access to different NRTs has increased.

Fourth, the Monitor database is thought to constitute a representative sample of the Swedish population. However, this design has some built-in limitations. As the market research company interviewed and delivered data from 1 500 individuals each month, respondents who could not be reached were eventually replaced with others. Over time, the missing data

increased from 40 per cent in 2004 to 60 per cent in 2010 (Ramstedt et al., 2013), which raises issues of representativity. An analysis of the effects of the missing data did not however indicate any difference in the level of reported tobacco use (Wennberg et al., 2011).

Main conclusions

In spite of such limitations, the size and representativeness of the sample, together with the high response rate and the fact that the survey covered the whole smoking cessation process from starting to quitting, justifies the claim that the study has been able to give a rather comprehensive picture of, and some new insights into, smoking cessation. It also shows how core aspects of this process differ between women and men.

To some extent, the results corroborate findings from previous research. Thus, for example, more women than men in the present study mention not wanting to smell of smoke, or other aesthetic reasons to quit, whereas men more often mention health and fitness. However, when looking at the whole cessation process and not just single variables, the results indicate wider and more complex differences in terms of what smoking and quitting has meant for female and male ex-smokers.

Overall the findings suggest that women's smoking and cessation is a complex process. The factor analyses indicate that smoking may fill several functions in their lives, more than just nicotine reinforcement. The female ex-smokers seem to have been emotionally attached to smoking as an integral, although not unproblematic, part of everyday life. They also tended to perceive consequences

of a psychological nature and to blame themselves for being smokers to a greater extent than men did. Another issue to consider is the fact that differences between various socio-economic groups in Sweden have increased since the 1980s (Magnusson & Nordgren, 1994). Smoking is more common among women with a low income and with a low level of education, and these groups are generally considered to have more risky living habits (SNIPH, 2011). In such a vulnerable situation, smoking may be a means of distressing and a help to cope, as suggested by a previous study (West et al., 1999). This may partly explain the major role in everyday life that smoking was shown to constitute in the present study.

Men, on the other hand, tended to see smoking as rather unproblematic but nevertheless experienced somewhat negative emotional states, feelings possibly related to perceived medical problems. Indeed, men's reason to quit was to improve their own physique, which indicates more self-oriented reasons, also in line with findings from the UK (West et al., 1999).

Women's planning and preparation of their forthcoming cessation accords with their more complex experience of smoking. In a way, women seem to have distrusted their own capability to become smoke-free, turning to doctors and other professionals. But, and this should be underlined, most ex-smokers (both women and men) actually quit smoking without such help or nicotine products (NRTs and/or *snus*). While this was the case, the use of these means was apparently gendered: more women used NRTs and more men resorted to *snus*. This is in line with the gendered pattern on the prevalence of *snus* in

Sweden. Women do however quit smoking without *snus* almost to the same extent as men (SNIPH, 2009), which to a degree contradicts their distrust in their own ability of becoming smoke-free.

A vast majority of all who made use of *snus* to become smoke-free were still using it, which raises the question of smoke-free versus nicotine-free. Sweden's low smoking prevalence can partly be explained by the use of *snus*, and if the goal is to cease smoking, switching to *snus* can be a viable alternative for the individual. Findings from Norway show that *snus* increases the probability to quit smoking completely in comparison to medicinal nicotine products, but that study also indicated that *snus* as a method of quitting smoking may result in continued nicotine use (Lund et al., 2010).

Swedish men use *snus* fairly commonly, which renders the lack of significant gender differences for psychological problems shown in this study somewhat surprising. Perceived stress, craving and depression are problems often related to the lack of nicotine, so an expected result should therefore have been that women, who less often than men use *snus* after smoking cessation, would have perceived these problems to a higher extent than men.

The use of *snus* may also partly account for the gender difference in the perceived social and personal benefits of being smoke-free: more women than men gained improved finances, a better complexion and also medical improvement.

The Swedish tobacco policy has traditionally been characterised by a strong belief in the power of information. Also, following increasingly strict international tobacco regulations, the Swedish Tobacco

Act (1993:581) has been sharpened several times, and is today largely the outcome of national decisions to implement WHO and EU regulations and prevention strategies (Cisneros Örnberg & Sohlberg, 2012). So, even though Sweden's low smoking prevalence may partly stem from the use of *snus*, there is also a wide range of regulations which stress the value of a comprehensive approach to decrease the smoking prevalence. However, neither legislation nor prevention strategies seem to take gender into account to any greater extent.

Contemporary Sweden is a relatively equal country in terms of gender, and most women are gainfully employed. This has a positive effect on financial equality, which also impacts on gender equality. Still, women mention weight control as a reason for smoking and quit to improve their complexion, for example, to avoid wrinkles and to feel fresh. They also fear weight gain after cessation to a greater extent than men. In many aspects women seem to quit smoking for the sake of others while men more often appear to act on their own behalf.

A question to be raised is if gender sensitive policies are needed when just as many women as men smoke in Sweden. As shown in this study, gender differences are evident in reasons to smoke, reasons to quit and strategies to quit smoking. A plausible answer would be that since the smoking cessation process is clearly gendered, strategies to help people quit should be gender sensitive as well – taking specific needs into account and broadening the perspective on initiation, motivational factors and cessation aid.

Future research with a focus on active

smokers is therefore needed to try to disentangle the meanings and needs fulfilled by smoking.

Declaration of interest None.

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NOTE

- 1 Zyban (active substance Bupropion) and Champix (active substance Vareniklin) are nicotine-free medications to help people quit smoking.

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APPENDIX 1

Domains, factors, items and factor loadings

WHEN SMOKING

	Factor loading 1	Factor loading 2	Factor loading 3	Explained variance (%)
REASONS TO SMOKE				
<i>Physical and psychological reasons</i>				21.6
Prevent weight gain	0.570			
Relaxation	0.630			
Increase concentration	0.676			
Comfort	0.671			
Reward	0.668			
Break from work	0.445			
<i>Social reasons</i>				15.9
Met nice persons		0.658		
Not to feel outside the context		0.823		
Ritual		0.596		
<i>Pleasure</i>				14.3
Tasted good			0.701	
Routine after a meal or in connection with alcohol			0.753	
KMO=0.796, Bartlett's Test of Sphericity= 0.000				
PERCEIVED CONSEQUENSES				
<i>Psychological</i>				21.9
Felt inferior/of weak character	0.759			
Being a bad role model	0.795			
No control over own actions	0.710			
Hair/clothing smelling bad	0.586			
Felt unfresh	0.655			
<i>Physical</i>				15.7
Poor fitness		0.685		
Impaired oral hygiene		0.696		
Got a disease		0.386		
Bad complexion/wrinkles		0.465		
Impaired economy		0.495		
<i>Social</i>				14.5
Refrained from certain contacts			0.747	
Refrained from certain interests			0.759	
Experienced relationship problems			0.653	
KMO=0.860, Bartlett's Test of Sphericity= 0.000				

THE SMOKING CESSATION PROCESS.

	Factor loading	Factor loading	Factor loading	Factor loading	Factor loading	Explained variance (%)
	1	2	3	4	5	
PERCEIVED REASONS TO QUIT						
<i>External circumstances</i>						27.6
Changed work	0.608					
Retired	0.763					
Unemployed for a month or more	0.838					
Started working after long residence	0.832					
Great changes at work	0.702					
Household finance deteriorated	0.660					
Household finance improved	0.720					
Broke up with partner	0.749					
Started new relationship/became cohabit/got married	0.603					
Pregnancy	0.450					
<i>Physical and psychological health</i>						11.6
Improvement of fitness		0.754				
Improvement of oral hygiene		0.748				
Improvement of complexion/ avoid wrinkles		0.738				
Not to smell of smoke		0.810				
To feel fresh		0.816				
Wanted to take control over own actions		0.493				
<i>Medical problems</i>						9.8
Suffered from disease			0.609			
Information from medical doctor/dentist			0.602			
Unable due to hospitalization			0.520			
<i>External pressure</i>						5.6
From relatives/friends				0.522		
From employer/colleagues				0.559		
Not socially accepted/stigmatizing				0.675		
Ashamed/bad self-esteem				0.609		
Did not want to be a bad role-model				0.455		
Convenience				0.681		
Information on tobacco packages				0.549		
<i>Family pressure/demands</i>						4.7
From partner					0.745	
From child/children					0.644	
KMO=0.917, Bartlett's Test of Sphericity= 0.000						

	Factor loading 1	Factor loading 2	Factor loading 3	Factor loading 4	Factor loading 5	Explained variance (%)
POLICY INTERVENTIONS						
<i>Bans</i>						42.2
Raised taxes on tobacco	0.497					
Ban against smoking in public indoor places	0.896					
Ban against smoking on public transports	0.874					
Restrictions on smoking in restaurants/bars	0.866					
	0.805					
<i>Information</i>						26.4
Warning labels on tobacco packages		0.846				
Information campaigns		0.835				
Ban on cigarettes in 10-packages		0.620				
KMO=0.876, Bartlett's Test of Sphericity= 0.000						

LIFE AS A NON-SMOKER

	Factor loading 1	Factor loading 2	Explained variance (%)
MAINTENANCE FACTORS			
<i>Social aspects</i>			31.9
Changed social company	0.757		
Changed alcohol habits	0.760		
Broke other habits associated with smoking	0.732		
Avoided situations where smoking is common	0.680		
Eats more food/pastries/ sweets	0.512		
<i>Physical aspects</i>			21.3
Started to exercise/ intensified the exercise		0.887	
Got myself a healthier life-style in other respects like diet, sleep, leisure time		0.859	
KMO=0.800, Bartlett's Test of Sphericity= 0.000			

	Factor loading 1	Factor loading 2	Explained variance (%)
SIDE EFFECTS OF SMOKING			
<i>Psychological problems</i>			37.8
Intense craving	0.758		
Lack of enjoyment	0.777		
Stressed out/irritated	0.692		
Concentration problems	0.591		
Depressed	0.617		
Lacks the social networks with other smokers	0.678		
Feel excluded from a social context	0.599		
Miss the routine	0.783		
Experience a feeling of emptiness	0.727		
<i>Physical problems</i>			21.5
Gained weight/been afraid of gaining weight		0.597	
Excessive sweating		0.822	
Sleeping problems		0.677	
KMO=0.921, Bartlett's Test of Sphericity= 0.000			
BENEFITS OF NOT SMOKING			
<i>Physical and psychological</i>			28.9
Improved fitness	0.625		
Improved oral hygiene	0.488		
Relief to gain control	0.683		
Improved self-esteem	0.552		
General improvement	0.758		
Experience more flavor and aroma	0.657		
Feel fresher and healthier	0.758		
<i>Social and personal</i>			23.9
Other medical improvement		0.522	
Started with a new activity		0.759	
Met new friends		0.857	
Gained an improved complexion		0.655	
Gained an improved finance		0.445	
KMO=0.908, Bartlett's Test of Sphericity= 0.000			

