

CENTRE FOR SOCIAL RESEARCH ON ALCOHOL
AND DRUGS (SoRAD)
No. 13

Smoking cessation in Sweden

- gender, pathways and identity

Tove Sohlberg

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ISSN 1650-819X
ISBN 978-91-7649-037-2

Cover picture: Elise Axelsson

Printed in Sweden by PrintCenter US-AB, Stockholm 2014
Distributor: Centre for Social Research on Alcohol and Drugs (SoRAD)

To Emily, Martina, Ivan, Elise and to
all my old friends – we are family.
... and to Gordon who always looked
after this motley crew.

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Acknowledgements

When starting my studies in Sociology I was determined to stay far away from drugs, alcohol and treatment systems. As a child of two social workers I grew up in a treatment home, loving every minute of good company with the clients who always had time for me. However, enough is enough and I decided to go my own way. So much for that! My bachelor thesis happened to be a report on alcohol consumption among Greek adolescents and my Master about alcohol consumption among individuals born outside Sweden, now living here. Since then I have been involved in projects and research covering narcotics, treatment, more alcohol and also abstinence, and of course – tobacco. That is how “my own way” turned out.

First: thank you Dissertation! You made me want to go to work every day, you offered me structure and made me believe in a future in times of emotion. You also helped me to keep my focus when flying sky high during good times.

Foremost I would like to thank all respondents who made this possible by answering a quite long survey in hope that their experiences would help others to become smoke-free, and by letting me into their homes and telling me openheartedly about their lives.

Almost foremost I wish to thank my supervisors who, each and one, has had great knowledge on different sections of my dissertation and together comprising an almost bottomless gathering of wisdom and expertise.

Jan Blomqvist. We started out as colleagues and developed a friendship, based on shared beliefs on solidarity and “togetherness”. And indeed, together we discussed the need for tobacco research and you had the guts to give me a chance to do this – thank you for that! I very much appreciate, not only your broad knowledge and your willingness to share it, but also your friendship and open mindedness.

Thanks to Peter Wennberg for the indispensable advice when “*something* does not work out”; Identify the problem. And solve it. I wrote it down and kept it on a post-it note. Sometimes it is not harder than that. Sometimes I considered burning it. Also, thank you for your everyday check-ups on me and for being a friend. I also appreciated the discussions on the perfect length of a sentence; you see, Peter does not understand the need of semi-colons but is in favour of writing short sentences and ending them with a determinant dot, making it too short according to my opinion, but more vigorous according to Peters. This sentence is for you;

Results

I could do this.

To Karin Bergmark who has always been supportive and utmost present. In the beginning more as an interested, including, and strong role-model for me as a woman in the academia. Later on as an inspiring and knowledgeable supervisor who always saw the possible ways forward making the conclusion that this was doable.

My career at SoRAD is thanks to many; Klara Hradilova Selin and Eckart Kühllhorn who agreed to supervise my master thesis and were my first contacts with SoRAD, later on becoming my friends. Eckart for letting me work with him, and from whom I learned so much and had so much fun. Bo Sandberg who took me under his wings, both professionally, and as a friend. To Kerstin Stenius who gave me the opportunity to work in her project, and thereby extend my knowledge. To all the colleagues in the Monitor-project under the lead of Mats Ramsted. This latter period is where I actually (tried to) coin the phrase “Tobaks-Tove” [Tobacco-Tove].

As has been underlined in former acknowledgements in dissertations from SoRAD - this has been, and is, a working environment where your colleagues easily turn into friends, and sometimes into your extended family; Thank you Nina-Katri Gustafsson for your very much appreciated friendship – a friendship that could be manifested through an apposite comic strip you sent me; “Real friends are the ones you see lifting each other up instead of tearing each other down”... Not necessarily up, however, but forward- no excuses! This attitude gets me going (most of the other apposite comic strips she taped to my office door during her late working nights, making me laugh hysterically in the mornings – and yes, Nina-K... I have kept them all). In memory of our lecturing together I dedicate the “tårtdiagram” in colour on page 43 to you! Thank you Jenny Cisneros Örnberg for being one of the first who actually acknowledged me at SoRAD and for reaching out a hand, for friendship and guidance, and who has proven to be both a great friend, and a mentor. We have had great years, and we will have many more to come.

Thank you also to Jessica Storbjörk for always being open to bad (and fun) ideas, sometimes ending up with injuries, but mostly with great laughs and memories. Thank you Johan Edman for our discussions over a beer and cheap red wine, all over Stockholm, and for being straight forward. On all topics. Thank you Irja Christophs - with whom I actually shared a house in Rätansbyn, Jämtland, however some years in between, for all our open hearted conversations during the last years and thanks to us, Irja, for being the best Safety representatives, ever! Filip Roumeliotis for late nights with profound conversations. Josefin Bernhardsson for always listening to what life brought in my way. Mimmi Tinghög for her wonderful humour and her generous personality.

And, of course, all past and present colleagues, not mentioned above but however not forgotten, who have made this journey into a great time while skiing, eating, drinking, dancing, laughing and working together.

I give my appreciation to the department of Sociology for letting me teach. What at first seemed to be a frightening challenge gave my confidence a real boost. I understood that I actually had attained some accumulated knowledge and was able to share it with my students. This made me grow.

Thanks also to SIRUS (Oslo, Norway) for letting me take part of your great competence in tobacco research during a couple of stays, and a special thanks to Karl-Erik Lund for your great comments on my draft at the end seminar. It made the final manuscript so much better. Thanks also to Janne Scheffels who was kind enough to comment on an early draft of the interview guide.

I would also like to thank Pirkko Hautamäki for correcting my English in the introductory chapter and in Paper III, and Christina Turner, not only for being a dear friend, but also for correcting my English in this Acknowledgement, including this sentence.

Suzanne Kriström Alonzo, my childhood friend, so close to me that we sometimes mix each other up - friend, sister. Suzanne, who also has the great advantage to work in the academia, this sometimes strange but inspiring world, thank you for always being there for me.

A special thanks to all my friends who did *not* pep me with happy outcries but only wholeheartedly and without hesitation believed in me.

Emily, Martina, Ivan, Elise – all of you so unique, and yet so alike. Thank you for being part of my life is not enough. You are my private cheerleaders, and I love you for being interested and proud and for always having a supportive comment on my new findings or whereabouts. A “cool, mum!” is sometimes all that is needed. You are all truly the loves of my life.

To Annica who brought me love and laughter. Thank you for patiently listening to my never-ending monologues concerning super interesting topics like trajectories, analyses, and the fantastic world of sociology. And for being understanding when it came to strange working hours. I’m truly grateful for a lot.

In memoriam; Staffan Sohlberg, Professor in Psychology at Uppsala University, my cousin and close friend, who always believed in my capability, not only as a researcher but as a human being. I wish we could have shared this moment.

Then one day, many, many moons after starting, I finally crossed the finishing line
(yeehah).

And a new adventure is about to begin.

List of papers

PAPER I

Sohlberg, Tove. Changes in smoking in Sweden since the mid 20th century: The influence of age, gender, education and socio-economic status. Submitted

PAPER II

Sohlberg, Tove & Wennberg, Peter (2014) Developmental pathways to smoking cessation. Published in *Drugs and Alcohol Today* 14(2): 96–106.

PAPER III

Sohlberg, Tove. Smoking cessation and gender differences: Results from a Swedish sample. Accepted 2014 in *Nordic Studies on Alcohol and Drugs (NAD)*.

PAPER IV

Sohlberg, Tove. Identity changes in smoking cessation: Results from a Swedish sample of stable former smokers. Manuscript

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Abbreviations

ANDT	Alcohol, narcotics, doping and tobacco in Sweden
CAN	Centralförbundet för Alkohol och Narkotika- upplysning [The Swedish Council for Information on Alcohol and Other Drugs]
CATI	Computer-Aided Telephone Interviews
DSM	Diagnostic and Statistical Manual of Mental Disor- ders
EU	European Union
FCTC	Framework Convention on Tobacco Control
FTQ	Fagerström Tolerance Questionnaire
ICD	International Classification of Diseases
NGO	Non-governmental organisation
NRT	Nicotine Replacement Therapy
OECD	Organisation for Economic Co-operation and Development
RDD	Random-Digit Dialing
SNIPH	Swedish National Institute of Public Health, in 2013 replaced by the Public Health Authority
SIRUS	Statens Institut for Rusmiddelforskning
SoRAD	Centre for Social Research on Alcohol and Drugs
SOU	Statens Offentliga Utredningar [Swedish Govern- ment Official Reports]
TFI	Tobacco Free Initiative
TTM	Transtheoretical Model (“Stages of Change”)
WHO	World Health Organisation

INTRODUCTION

“It’s easy to quit smoking. I’ve done it hundreds of times.”

Mark Twain

What is the attraction in smoking? The fact that there are negative health consequences related to smoking (such as lung cancer) must be considered common knowledge, even though the medical details may be less clear to the general public. In a world of rational individuals, smoking would not be an issue. But people do smoke, and for many different reasons. Yet smoking prevalence has continuously declined in Sweden since the 1980s (Swedish National Institute of Public Health [SNIPH], 2007; Statistics Sweden, 2007), and just as there are different reasons to smoke, there are various reasons to quit smoking and various ways to become smoke-free – and this is what my dissertation aims to disentangle, explain and learn from.

Only a half-century ago, the use of tobacco was generally regarded as a pleasurable recreational activity (e.g. Hakkarainen, 2013), while in most circles today it is seen as a major public health problem causing death and ill health on a large scale. Smoking is now typically described in terms of a global epidemic (Lopez et al., 1994; Thun et al. 2012), and during the past decades, international regulations (mostly issued by the World Health Organisation (WHO) and the European Union [EU]) have influenced national tobacco controls. As a consequence, increasing resources and efforts have been spent to counter this epidemic and the harms it causes.

Smoking and tobacco use is also an expanding research area, spurred by increasing public consciousness about tobacco-related harms. Epidemiological research abounds on changes in the smoking prevalence in different countries as well as on tobacco-related mortality and the associations between smoking and various forms of physical harm. This research has pointed to significant changes over time and substantial differences between, above all, developed and developing countries. There is also a relatively large body of research on policy making and the effects of various control measures, and on attempts to prevent people from starting to smoke.

However, relatively little research has been devoted to trying to explain these changes over time and between-country differences. A rather obvious

reason for this is that the bulk of smoking research has been conducted in a public health context, where the focus is on prevalence data and the association between smoking and ill health, or within a medical context, where one focuses on tobacco-related diseases and/or on the effects of various, pharmacological and/or behavioural treatment interventions aimed at helping smokers to quit.

Fewer studies on smoking have taken their point of departure in a social sciences context, and still fewer have taken on the task to analyse why individuals start and – even more importantly – cease to smoke, and how and why smoking patterns on an aggregate level change over time and vary between different population groups. Such questions form the starting point for this dissertation.

Background to this dissertation

In spring 2008, a research team from the Centre for Social Research on Alcohol and Drugs (SoRAD) at Stockholm University was granted a four-year grant within the Swedish Council for Working Life and Social Research (FAS)¹ call “Women’s Health”.

This opened up an opportunity to study tobacco use, an arena which until then had been somewhat neglected at SoRAD. This dissertation is part of the project that came to be called “Women, Health and Substance use”, and has smoking cessation as its main focus.

Much of the existing research on tobacco use is grounded in epidemiology, tobacco-related diseases (studies on determining the relationship between smoking and various diseases), and tobacco control. Moreover, the prevalence is frequently mapped by different actors, which creates useful time-series of smoking patterns in the Swedish population. SoRAD was at the time one of these monitoring actors within the Monitor Project, described in more detail in the Data section, keeping an eye on smoking prevalence and tobacco habits. While such mapping is performed, changes in these patterns are seldom explained in relation to the societal context.

Swedish statistics show that the smoking prevalence has decreased during the last decades. This decrease differs between women and men, but the background to these conditions has remained rather unexplored. To a great extent we have also lacked knowledge about women’s and men’s (possibly different) reasons to quit smoking.

Furthermore, studies on smoking cessations have tended to focus on ef-

¹ FAS changed its name in 2013 to FORTE, the Swedish Research Council for Health, Working Life and Welfare.

fects from different support programmes and means; few studies have tried to capture the long-term process. This gap in knowledge is important to fill, not least because a majority of those who have given up smoking have managed to do so by themselves, without any help. Also, individual quit attempts do not seem very successful: only about 5 per cent of all single attempts lead to abstinence for more than 12 months (West et al., 2001), and several attempts are often necessary before a stable smoke-free life can be attained (Hughes et al., 2004). This indicates that a successful smoking cessation is the cumulative effect of repeated quit attempts, often over many years, which draws the interest to the long-term cessation process.

So, by situating itself in social science, this dissertation will add knowledge on and deepen our understanding of the process of smoking cessation.

Aims

This dissertation seeks to analyse changes in the Swedish tobacco consumption since the 1950s, highlighting in particular the decrease in smoking from the following angles: i) socio-economic, gender and contextual differences over time concerning who has started and who has quit smoking during different time periods; ii) long-term typical pathways to a smoke-free life (trajectories); iii) motives, mechanisms and underlying factors behind a smoking cessation, and differences between women and men in these respects; iv) identity changes in relation to smoking cessation.

Thus, the first paper explores if and how the changes in the Swedish smoking patterns since the mid-twentieth century can be understood and explained in light of the Swedish welfare state development during these years and in relation to socio-demographic and socio-economic circumstances. The second paper focuses on the long-term path to smoking cessation by recognising several distinct trajectories from smoker to non-smoker, and by discussing the implications of these findings for tobacco control policy. Further, the third paper analyses gender differences with regard to reasons and experiences of smoking, as well as with regard to key elements in the cessation process. The fourth paper then discusses to what extent smoking cessation can be described as a process of identity change.

PERSPECTIVES ON SMOKING

This chapter will, with a certain focus on Sweden, provide a brief historical overview over how the governing images of smoking have change over the past century.

“The good old days”

The Swedish tobacco industry was nationalised in 1915 through the establishment of AB Svenska Tobaksmonopolet [Swedish Tobacco Monopoly], which then controlled manufacturing. The state monopoly expanded to also include import and retail, and during the 1940s and 1950s the state controls on tobacco were almost total (Magnusson & Nordgren, 1994).

As discussed in the Introduction, smoking in Sweden in the mid-1900s was still an appreciated and pleasurable habit among successful and independent men and to some extent women – a picture that was conveyed not least in advertising. Prestigious professionals, such as dentists and doctors, as well as manly men and beautiful women appeared in the media as smokers, recommending certain brands.

During the 1950s and 1960s cigarettes were marketed to women as a symbol of women’s liberation and equality (Magnusson & Nordgren, 1994), and there was indeed a drastic increase in female smoking from 9 to 46 per cent between 1946 and 1977 (Statistics Sweden – Welfare and Health, 2002).



Source: The *Damernas Värld* magazine (1968), photographed by Filip Roumeliotis

Picturing smoking as part of a desirable lifestyle and tobacco as a commodity among other commodities (even if handled by the state) was however about to slowly change in line with new medical findings on the negative health consequences associated with smoking.

Not an ordinary commodity after all

A drastic increase in the rate of lung cancer among men was observed already at the beginning of the twentieth century, first in the United Kingdom and later in other countries. In 1950 five case-control studies reported an association between smoking and lung cancer (Doll & Hill, 1950; Levin, Goldstein & Gerhardt, 1950; Mills & Porter, 1950; Schrek et al., 1950; Wynder & Graham, 1950), and even though the findings were debated, epidemiologists around the world agreed that they were important. Several cohort studies followed. Among the earliest were The British Doctors' Study and the Hammond Horn Study which published their results in 1954 and established that tobacco use was an important cause of cancer and other diseases. The scientific consensus grew, and by the late 1950s at least six scientific groups had come to the same conclusion. These reviews were convened by the health ministries in the United Kingdom, United States, Canada, the Netherlands, Sweden and cancer societies in Denmark, Norway and Finland

(Thun & Henley, 2010). By the early 1960s there was strong evidence on the causation between active smoking and ill health.

Passive smoking became an issue at a later stage. There had been some scattered reports on the possible effects of second-hand smoke and health (see Samet, 2010), but the most important knowledge production on the relation between passive smoking and lung cancer came in 1981 when one cohort study in Japan (Hirayama, 1981) and one case-control study in Athens (Trichopoulos et al., 1981) were published. The evidence that passive smoking is a cause of lung cancer among non-smokers was supported by other studies that followed (see, for example, International Agency for Research on Cancer, 1986). Other diseases, such as coronary heart disease, were also found to be associated with passive smoking (Whincup et al., 2004).

An expansion of focus from the individual smoker to a “harm to others” perspective enabled the emergence of a juridical approach. In particular, evidence on children’s vulnerability when exposed to tobacco smoke has been suggested to have increased the possibilities for worldwide smoke-free policies (Samet, 2010).

Smoking as a global public health problem

Globalisation opened up new markets for the tobacco industry and smoking spread from the developed to the developing world. Nearly 80 per cent of the world’s about one billion smokers live in low- and middle-income countries (WHO, 2011), and the number of daily smokers is expected to increase to 2 billion by 2030 (World Bank, 1999; Mackay & Eriksen, 2002). Tobacco is now estimated to kill nearly 6 million people each year, including about 600 000 non-smokers as a result of their being exposed to second-hand smoke. The WHO estimates that unless urgent action is taken, the annual death toll could rise to more than 8 million by 2030 (WHO, 2011). More than anything, this highlights smoking as a major global public health problem.

While increasing globally, the total tobacco consumption is decreasing in some high-income and upper middle-income countries such as Sweden. Even so, about 6 600 Swedes die each year because of smoking and about 100 000 people are annually (2010–2012) afflicted by smoking-related diseases (Public Health Agency of Sweden, 2012)².

² There is also an economic aspect: an estimation of the total cost of tobacco smoking in 2001 came up to 26 billion, of which 2.2 billion were medical costs, 6 billion were down to lost productivity (death and disability pensions) and 18 billion were costs for sick leave (Bolin & Lindgren, 2004).

Since the 1950s, an increasing number of international scientific studies have shown a strong correlation between several diseases, many of them fatal, and smoking (see, for example, Hackshaw, 2010; Thun & Henley, 2010). The medical effects related to smoking are many, including trouble with the respiratory passages, cardiovascular diseases and loosening of teeth – and lung cancer which is the most common cause of death by cancer in the world and where the primary cause is tobacco smoking (SOU, 2000).

As long as the society did not consider smoking a public health problem but more as an individual choice, information directed to the smoker was seen as the key to reduce smoking (Cisneros Örnberg & Sohlberg, 2012). Regulations on smoking have increased in line with growing research-based knowledge on the harms. A report was published already in 1979 by the WHO Expert Committee on Smoking Control, suggesting that the World Health Assembly (the WHO's highest policy-making body) should use its treaty-making powers to control the tobacco epidemic (WHO, 2009). The WHO has since drawn up an international tobacco control agenda, and a number of countries around the world – mostly developed countries – have implemented some of the recommended actions (such as price and tax measures, smoke-free environments and age limits for purchase). Differences in cultures and economic resources mean that effective tobacco regulations differ between countries, emphasising the need for concerted national and international action. In addition to the WHO, the European Union (EU) is a major international actor that has developed a prominent role in tobacco control over the years.

The influence of these two main actors on the Swedish tobacco policy is described in more detail in “The development of Swedish Tobacco policy in context”.

Smoking as a physiological or psychological dependence?

The medical tradition explains cigarette smoking in terms of addiction to a substance, namely nicotine.

In a report from 1988, the US Surgeon General identified cigarette smoking as nicotine addiction, while The Royal College of Physicians in the United Kingdom concluded that nicotine was an addictive drug on par with heroin and cocaine, and that the primary purpose of smoking tobacco was to deliver a dose of nicotine to the brain (WHO, 2004). The International Classification of Diseases (ICD) and the Diagnostic and Statistical Manual of Mental Disorders (DSM) both use checklist criteria to classify individuals as dependent or not. The ICD uses the term “tobacco dependence”, whereas the

most recent version of DSM (DSM-5 which came into force in May 2013) uses the term “tobacco use disorder”, both recognising a medical condition.

Even if this medical tradition suggests a relationship between nicotine use and dependence, it has been shown that as many as over 39 per cent of daily smokers never reached nicotine dependence as measured by DSM-IV (Donny & Dierker, 2007), and still they continued to smoke. Obviously, nicotine as such is an important factor in maintaining smoking but apparently not the only one.

It has been suggested that smoking is a conditioned habit and that smokers relish the rituals related to smoking (Fagerström, 2012b). Indeed, both nicotine and denicotinised cigarettes have been shown to release dopamine, and denicotinised cigarettes have been found to reduce craving as much as nicotine cigarettes (Rose & Behm, 1995; Domino et al., 2013). So, cigarette smoking seems to be much more than just nicotine reinforcement. It also includes both sensory and behavioural effects such as the act of inhaling, taste and aroma, and the respiratory tract sensation. This makes cigarette smoking much more rewarding than alternative methods of delivering nicotine that do not include the act of smoking (Rose & Behm, 1995). In short, cigarette smokers long for a cigarette, not nicotine (Fagerström & Bridgman, 2014).

In line with this focus on the meanings of cigarette smoking, the initial factor analyses in Paper II show that smoking fulfils both social and psychological functions of various kinds, such as the pleasure of smoking and/or smoking being a ritual or a routine. In addition, Paper III shows that women endorse social reasons of smoking (such as the ritual and/or being part of a social context) and physical and psychological reasons (including relaxation, comfort and reward) significantly more strongly than men, but that there was no gender difference on the experienced pleasure. It is thus clear that cigarette smoking fills not only the need for nicotine but also, and mainly for women, several social and symbolic functions.

The discussion on whether to view the use of tobacco as a substance dependence rather than as a habit (even though injurious to one’s health) is ongoing, despite the fact that individuals seldom refer to smoking as an addiction. They prefer to see it as a bad habit that can be controlled with the right motivation (Blomqvist, 2009), and indeed most smokers quit without any assistance (cf. “Research on smoking cessation”).

Tobacco use and smoking can apparently be understood and interpreted from different angles. Basically, this dissertation does not take a final stance on this issue, but explores from a social science point of view changes in smoking prevalence over time and – and above all – mechanisms and processes in smoking cessation.

RESEARCH ON SMOKING CESSATION

This chapter reviews earlier research that has, from various points of departure and various perspectives tried to explore smoking cessation
Studies on psycho-social treatments

Studies on psychosocial treatments

It could be argued that the consequences of smoking are mostly medical rather than social, but there is research that broadens the perspective from seeing smoking simply as nicotine dependence. According to Peele (1985), for example, individuals become addicted to an experience which stems from pharmacological sources but takes its form from cultural and individual constructions of experience. By engaging several aspects such as social, situational and personality variables, this experience takes the context into consideration. There are also treatments that have been developed on these or similar grounds.

A common tenet in many psychosocial models is that giving up a cemented habit is a complex process involving several dimensions and that it is crucial to understand this process in order to tailor effective interventions. Prochaska's and DiClemente's Transtheoretical Model (TTM) (Prochaska & DiClemente, 1983), perhaps better known as "Stages of Change", is a model of conceptualising the process of intentional behavioural change. It has been influential in understanding the process of smoking cessation and in designing treatments. It places the individual in one of five stages, depending on her or his readiness to change. The identification of stages in the TTM allows stage-based interventions, which is thought to improve the effectiveness of interventions. However, it has been shown that stage-matched interventions are not significantly more effective than non-stage-based control interventions (Aveyard et al., 2009). Despite critique of its inability to verify its predictions empirically (Whitelaw et al., 2000; Sutton, 2001), the TTM has been the basis for many attempts to develop interventions to promote health behaviour change. It has influenced, for example, motivational interviewing and the Swedish telephone helpline Quit smoking.

West (2005), a critic of the TTM model, has pointed out that the model does not take into consideration all the personal and situational factors that influence the motivation to make a quit attempt. He therefore proposes the synthetic and testable Prime Theory of Motivation (see West, 2006) as a basis for developing aids for smoking cessation. This is a broad theory which does not attempt to capture details of drug actions or social forces but it provides a coherent framework within existing knowledge and where future findings can be integrated. West argues that a synthetic theory is essentially a theory about motivation and it must be able to account for all the complexity of human behaviour. A central task of such a theory is to be able to account for both conscious and unconscious motivation processes. West claims that the human motivational system operates at five levels of complexity, a system that can be captured by the acronym “p.r.i.m.e”: plans, responses, impulses, motives and evaluations. One central concept in this theory is identity (self). We have beliefs about what we are, whether we like ourselves or not, and what we would like to be and not to be – we are able to form mental representations of ourselves. The significance of identity in the smoking cessation process constitutes the base in Paper IV.

Studies of the effects of pharmacological treatment and NRT

The WHO maintains that the identification and approval of nicotine as a dependence-producing drug, as well as an improved understanding of dependence, have been crucial to the development of medications (and behavioural treatments) for nicotine dependence (WHO, 2004).

When viewing smoking as foremost a medical condition (nicotine dependence), the natural choice might be to treat it with medicines such as NRTs, but also with such pharmacological aids not containing nicotine as Zyban (active substance bupropion) or Champix (active substance varenicline). The efficacy of these products has been evaluated in several studies with a more clinical approach. These include tests on Champix/Zyban (see, for example, West et al., 2008; Blak et al., 2010), which have showed positive effects in e.g. reducing craving; comparisons in efficacy between bupropion/varenicline and NRT (for example, Jorenby et al., 1999; Aubin et al., 2008), showing e.g. greater abstinence with the help of pharmacological aids than with NRT; and tests on NRTs alone (for example, Stead et al., 2008), which have concluded that NRTs can increase the chance to become

smoke-free. NRTs in comparison with snus have been mentioned in “Smoking in Sweden”.

Nicotine replacement may however be considered to enjoy a somewhat special status: NRT in the form of chewing gum is a Swedish invention, launched in 1981. At the time it was only available on prescription, and it took until 1990 before it could be bought over-the-counter in pharmacies. In 2008 a new law (Law 2007:1455) came into force that permitted the sale of nicotine products in retail stores (Cisneros Örnberg, 2012). According to Keane, NRT as a prescription medication linked doctor, patient and substance in a medicalised network, thereby stabilising smoking as addiction. However, when NRTs moved away from the medical control and into the retail stores, it turned into a more consumer-like product, normalised addiction and made smokers rational consumers (Keane, 2013).

Studies on self-managed smoking cessation

As shown, both restrictions and interventions have become more multifaceted in line with increased epidemiological evidence on the negative health consequences related to smoking. These include medicinal aid as discussed above and several different forms of other professional treatments such as hypnosis, acupuncture, information and support from a district health care centre or psychological treatment.

However, and in spite of many attempts to develop effective interventions, a classical study by Schachter (1982) indicated that what may be described as self-managed smoking cessations are relatively common. This early finding has been supported over the years (Fiore et al., 1990; Arborelius, 1993; Zhu et al., 2000; Flöter & Kröger, 2007; Solberg et al., 2007). Unassisted smoking cessation is somewhat neglected in research though, as most published papers on smoking cessation deal with assisted cessations. Also, campaigns, clinical encounters and guidelines seldom highlight that most smokers quit without assistance (Chapman & MacKenzie, 2010).

Smoking cessation is becoming increasingly pathologised, to the obvious benefit of pharmaceutical companies (*ibid.*). Moreover, it has been claimed that financial support of medical research by pharmaceutical companies has increased during the two last decades (Moses & Martin, 2001), which leads to the question of disproportionate research focus due to funding. While many studies on medicalisation in artificial settings have funding from pharmaceutical companies, there is little research on the effects of medicalisation in real-world settings, on the pathways and strategies to a smoke-free life (as shown in paper II in this dissertation) and on unassisted smoking cessations. This is the case even if Chapman & MacKenzie (2010) claim: “/... with the existence of many millions of unassisted ex-smokers and given

the ways that international variations in their distribution reflect social, cultural, and public-health policy variables, smoking cessation in populations is explained by far more than neurobiology and pharmacology”.

DATA AND METHODS

Data

The four papers in this dissertation have made use of four different data sources: the Monitor Project, which is a running survey with the overall aim of estimating unregistered alcohol and tobacco consumption; a postal survey directed to respondents in the Monitor survey who have ceased smoking; semi-structured personal interviews with a number of these former smokers; and official texts, reports and statistics.

The Monitor Project

This project was run at SoRAD between the years 2000–2012, with the aim to follow the unregistered alcohol consumption in Sweden after Swedish entry into the EU in 1995. Commissioned by SoRAD, the data collection was run by a market research agency. Ipsos Synovate (former TEMO) conducted monthly telephone interviews, using Random-Digit Dialing (RDD), with 1 500 individuals aged 16–84 from a representative sample of the Swedish population. All in all, this amounted to about 18 000 interviews per year. The interviews were collected via Computer-Aided Telephone Interviews (CATI), where the interviewer follows a computerised questionnaire and where the respondents were selected through the method of “latest birthday in the household”. From 2004 to 2010, the non-response rate in the Monitor Project increased from about 40 per cent to 60 per cent (Ramstedt et al., 2013), a fact discussed in the section on limitations below. Apart from basic socio-demographic data and other respondent characteristics, the questionnaire covered different aspects of alcohol purchases and use, and from 2003 on, also questions about tobacco: travellers’ import, purchases of smuggled tobacco and purchases via Internet. The respondents were also asked about their smoking and snus (Swedish smoke-less tobacco) use habits during the past 12 months.

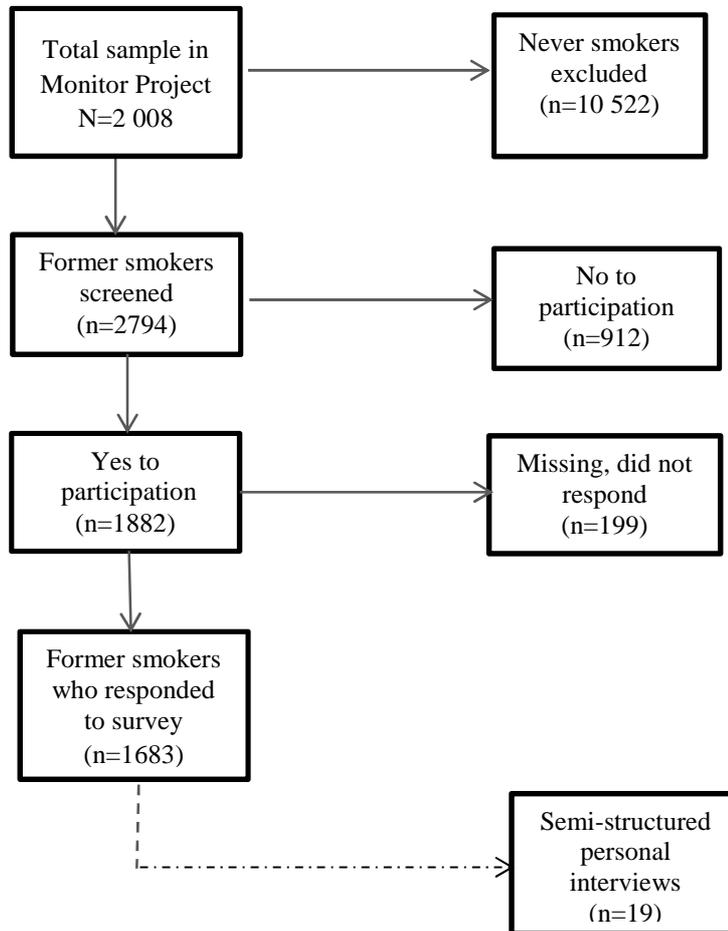
Since the Monitor Project allowed for adding questions for special research projects, more detailed questions on tobacco use were included during the period October 2009–May 2010. More specifically, these questions

aimed at sorting out current smokers from non-smokers, and, among the latter, respondents who had smoked but had been smoke-free for at least 12 months (former smokers). Data from the Monitor Project is the empirical basis of analyses in Paper I (see Appendix 1 for the questionnaire).

The survey

In addition to providing the empirical underpinning of Paper I, the Monitor data has also served to screen out former smokers (see Figure 1 for a flow chart) for a study focusing on various aspects of the smoking cessation process. The project was positively reviewed by the Regional Ethical Board. During the period (October 2009–May 2010), then, 12 008 respondents were asked whether they had ever smoked on a daily basis, but been smoke-free for at least 12 months. On the basis of this definition, 2 794 respondents were considered to be former smokers, and out of them 1 882 (67 per cent) agreed to participate.

Figure 1. Flow chart showing respondent recruitment



As shown in Table 1, there are no great differences in sample characteristics between those who agreed to answer the survey and those who declined.

Table 1. Non-response analysis of the screened former smokers. N=2 794

	Agreed to participate (n=1 882)	Declined to participate (n=912)
Gender (%)		
Women	54.5	51.9
Men	45.5	48.1
Age (mean)	56.4	56.0
Education		
Compulsory (9 years)	22.1	25.4
High school	42.2	39.0
University	35.7	35.5
Occupation		
Self-employed	7.3	8.0
Servant	29.2	28.2
Worker	23.1	22.4
Unemployed	2.8	3.1
Retired	35.8	35.3
Else	1.8	3.1
Income (SEK)		
–14 999	21.6	27.0
15 000–29 999	53.9	49.5
30 000–	24.5	23.5
Civil status		
Married/cohabiting	71.4	70.0
Unmarried	28.6	30.0

It appears that among those who declined participation in the study there were somewhat more men, more with a low education level, more self-employed or unemployed, and more with a low income. None of these findings nevertheless reached a significant level.

The postal survey covered:

- respondents' smoking careers from start to cessation (cigarettes/day, changes in frequency and amounts, smoke-free periods, etc.)
- nicotine dependence when smoking the most (modified FTQ3)
- socio-demographic circumstances and personal characteristics (when started, when smoked the most, when stopped, and at the time of the survey)
- personal benefits and negative consequences from smoking
- motives and triggers for the last (successful) effort to quit
- temporal aspects of the quitting process
- use of formal assistance (nicotine products, other medications, therapeutically)
- use of snus (smoke-free tobacco)
- personal benefits and negative consequences from having stopped smoking
- maintenance factors for staying smoke-free.

Most of the questions used pre-coded response alternatives; just a few were open-ended questions. Some questions with many potential response alternatives used inventories that made it possible to confirm or contest the presence of various events or influences. The Fagerström Tolerance Questionnaire (FTQ; see Fagerström & Schneider, 1989) was used to measure the degree to which respondents had been dependent on their smoking at the time when they smoked the most. This questionnaire had 8 questions to assess the degree of dependence on a scale from 0 to 11.4. The retrospective design of the survey has led to slight modifications of the FTQ scale⁵.

A first draft of the survey was presented and discussed at a seminar at SoRAD, including external tobacco research expertise. After revision, based

³ Fagerström Tolerance Questionnaire (see further below).

⁴ The questions on the FTQ scale are: *How soon after you wake up do you smoke your first cigarette* (within 30 minutes, after 30 minutes); *Do you find it difficult to refrain from smoking in places where it is forbidden* (yes, no); *Which cigarette would you hate most to give up* (the first one in the morning, any other); *How many cigarettes/day do you smoke* (15 or less, 16–25, 26 or more); *Do you smoke more frequently during the first hours after waking up than during the rest of the day* (yes, no); *Do you smoke even if you are so ill that you are in bed all day* (yes, no); *What is the nicotine level of your usual brand of cigarettes* (0.9 mg or less, 1.0–1.2 mg, 1.3 mg or more); *Do you inhale* (yes, no).

⁵ First, the tense was changed from present to past (do you/did you). Second, the response options to *What was the nicotine level of your usual brand of cigarette* were changed from cutoff points measured in mg nicotine to the broader Light/Gold, Regular cigarettes with filter, Cigarettes without filter. This was adjusted in order to make it easier for the respondent to recall the strength of his/her regular cigarettes.

on comments from colleagues, the survey was dispatched in April–May 2010. In order to increase the response rate, every questionnaire came with two free cinema tickets which the respondent could keep even if he/she did not return a completed form. Three reminders were sent out at regular intervals, and the data collection ended in January 2011. By that time, 1 683 respondents (out of 1 882) had answered, yielding a response rate of 89 per cent.

The answers were continuously coded into a SPSS data file from June onwards by Tove Sohlberg and a research assistant. This data forms the empirical basis for the analyses in Paper II and III.

Semi-structured interviews

As part of the postal survey, respondents were also asked if they were willing to take part in a personal interview about their smoking cessation process. In all, 745 respondents (44 per cent) consented to being interviewed.

For convenience reasons a smaller number ($n=150$) who were residents in Stockholm county were randomly chosen from the survey data (using SPSS version 18.0). Of those, 75 had previously agreed to participation.

An information letter with a new request was sent out, resulting in 41 respondents still willing to be interviewed, and 10 women and 10 men were randomly chosen. They were contacted at least three times via telephone during April and May 2012, resulting in 19 interviews with 10 women and 9 men.

The aim of these interviews was to get a more in-depth and personal account of what smoking and smoking cessation had meant to these respondents. The interviews followed a semi-structured interview guide, which had been discussed first with colleagues at SoRAD and thereafter with colleagues at Statens Institutt for Rusmiddelforskning (SIRUS) in Norway (Janne Scheffels et al.). After revisions of the guide, pilot interviews were performed during spring 2012. Some further, minor revisions were made before the final interviews were performed.

In these final interviews, the respondents were first asked to draw a timeline and mark periods when they, according to their own definition, smoked a lot, smoked a little and did not smoke. The interview then addressed how the respondents experienced, understood and interpreted these changes (how they explained them, what the context was, how they felt, how people around them reacted, etc.). Special attention was devoted to identity matters and whether the changes in smoking also implied changes in the respondents' identities (Koski-Jännes, 2002). The interviews were recorded and fully transcribed.

Official texts, reports and statistics

The official data sources are various, including Statistics Sweden, The Swedish Council for Information on Alcohol and Other Drugs, the Public Health Agency of Sweden, The Swedish National Institute of Public Health, SOU reports from the Swedish Government and international sources such as the WHO, the European Commission and the OECD.

These official sources are listed in the references, in each paper and in this chapter.

Methods

Quantitative analyses

Apart from regular univariate and bivariate analyses, some more specific statistical methods were used in some of the papers.

Logistic regressions were applied in Paper I to analyse the association between personal characteristics and smoking status. Categorical variables (dummy coded) were entered into logistic regression models, aimed at revealing the odds ratios for smoking initiation and for an eventual smoking cessation. The logistic regressions were performed using the statistical program SAS 9.3.

Nagelkerkes quasi R² value provided an indication of the variation in the dependent variable explained by the model.

In order to reduce items in the inventories to a smaller number of hypothetical variables (Kim & Mueller, 1978), factor analysis (Principal component factor analyses, SPSS version 19) was used in Papers II and III. The number of factors to be extracted was determined by the use of eigenvalue ≥ 1 . Moreover, rotation (Varimax rotation; see Kaiser, 1958) of the factor dimensions, identified in the initial extraction of factors, was performed in order to obtain simple and interpretable factors (Yaremko et al., 1986), which were then labelled and given an accurate model specification based on theoretical assumptions.

In Paper II, a multivariate statistical technique of cluster analysis (Aldenderfer & Blashfield, 1984) was thereafter used in order to create homogeneous groups of different persons (units). Persons belonging to the same cluster have a maximal degree of similarity on relevant variables, as

they at the same time distinguish themselves as much as possible from other clusters, i.e. their degree of similarity to other clusters is minimal.

All values were z-standardised, and a hierarchical cluster analysis (WARDs method) was performed by SPSS version 19. The transition of individuals between clusters was made visible by cross tabulating the cluster solutions of different domains and by analysing in each cell whether the specific configuration was more frequent (labelled “types”) or less frequent (labelled “antitypes”) than could be expected by chance in binomial tests. This analysis was conducted with the module EXACON in the computer program Sleipner (Bergman & El-Khoury, 1987).

Qualitative analyses

The transcriptions of the semi-structured interviews were analyzed using basic Content Analysis (e.g. Morgan, 1993; White & Marsch, 2006) to test to what extent changes in smoking were related to identity changes.

The data was analysed by searching for statements that indicated identity change after smoking cessation, and if there were important differences between women's and men's descriptions. Identity was defined in a broad perspective, including statements about loss of identity, own perceptions of identity change, and also positioning as now being non-smokers.

Methodological issues

Reliability and validity in retrospective studies on smoking

Initially, the respondents were labelled as former smokers on the basis of direct questions on smoking habits relating to the last 12 months (see Appendix 1). Previous studies which have compared retrospective reports with contemporaneous reports have concluded that the smoking status (whether the respondents smoke or not) is usually accurate (Kesmodel & Olsen, 1999; Bernaards et al., 2001; Kenkel, Lillard & Mathios, 2003). This is in line with findings from a meta-analysis of studies that compared contemporaneous self-reported smoking status with biochemical markers (Patrick et al., 1994). According to Krall et al. (1989) the agreement on smoking status was valid

even for 32-year recall (no difference between genders), which is why a time period of 12 months, a criterion in the present study, seems acceptable.

Inaccurate recall is also found to be determined by the significance and motivation of the respondent (Coughlin, 1990). The information letter that accompanied the postal survey underlined the importance of the respondents' own experiences of becoming smoke-free, and that they now had the possibility to actually help others to be smoke-free – which was hoped to boost the motivation.

These former smokers (who agreed to participate) were then expected to answer a questionnaire with a retrospective design. As such, the questionnaire was most certainly associated with recall inaccuracy not only in terms of the respondents' dating smoking onset and cessation back in time but also when recalling such socio-economic factors and life-cycle events as employment, marriage and ill-health as well as emotional experiences and thoughts in relation to the cessation process. Morgenstern & Barrett (1974) compared reported unemployment during "the previous week" with reported unemployment during "the previous year" and found that all (women more than men) understated their unemployment when recalling it up to a year, in comparison to the previous week. Furthermore, an early study by Withey (1954) concluded that accuracy of recall of income generally was not reliable if one was not satisfied with rather gross measures. There is most certainly, then, a recall effect concerning both smoking habits and other variables in this study. As a possible way of decreasing the effect, every section in the survey (on previous smoking habits, for example) was prefaced with an instruction or reminder designed to stimulate the memory of that special occurrence. The preface could read as follows: "To activate your memory it can be helpful to think of where you lived, who you spent time with, where you worked, etc." Moreover, several response alternatives (such as income, education and previous quit attempts) were collapsed into broader categories, accepting some inaccuracy in details. Kenkel et al. (2003) suggests that addiction researchers who study life-time histories of smoking status should be cautious and use appropriate statistical methods to predict the probability of error. In the absence of valid sub-samples no such analyses have been performed in the present study. A reliability test has however been performed on 20 per cent of the survey data material (SPSS Data Entry) by Tove Sohlberg and a research assistant. One systematic error was discovered in one specific question, and this was corrected in the whole dataset. Otherwise there were a few random errors which were controlled in the specific questionnaires and corrected.

Limitations and strengths

The results presented in this dissertation need to be considered in the light of some limitations.

The market research agency which performed the interviews in the Monitor Project, delivered data from 1500 individuals each month. Respondents who could not be reached were replaced with other respondents by the same RDD method. The sample may therefore not represent the general population, so all data was weighted (with weights constructed by Ipsos) for gender, age, region and household size, making the sample more representative (Gustafsson, 2010).⁶ It is also hard to actually grasp the eventual consequences of the decreasing response rate during the studied period. In 2010, however, respondents who only could be reached via mobile phone were included in the sample in order to compare this group to the “usual” sample, interviewed via telephone at home. The analyses focused on alcohol, indicating no difference between the groups that would have affected the total consumption (Ramstedt et al., 2013). Moreover, an analysis of the effects of missing data was performed by Wennberg et al., (2011). A sample of non-respondents were followed up a year later and then compared to a concurrent sample of respondents. The results indicated no difference in the level of reported tobacco use between the groups.

Keeping this in mind, the Monitor survey data is unique in terms of the great sample size and for being fairly representative of the Swedish population. The project has also been evaluated by international researchers from the Nordic countries, Canada and the USA who have found neither any serious criticism against the Swedish way of measuring alcohol (and tobacco) consumption nor better methods (Appendix 1 in Ramstedt et al., 2009).

The data also makes it possible to categorise the respondents into *never smokers* (have never smoked on a daily basis), *daily smokers* (currently smoking on a daily basis) and *former smokers* (have smoked daily previously but quit and have at the time of the interview been smoke-free for at last 12 months), and to analyse which socio-demographic factors characterise these different categories of smoking behaviour. However, since the study aimed at exploring the long-term process to a smoke-free life (not necessarily tobacco-free), the focus is on former daily smokers who have been smoke-free for at least the last 12 months. Current daily smokers and never smokers were used as reference categories. Occasional smoking has not been taken into special consideration because the question concerning smoking “from time to time” was only asked to former smokers. All occasional smokers

⁶ Item non-response (missing data on certain questions) is not a great issue in the Monitor Project thanks to CATI, where the interviewer is not allowed to continue in the questionnaire without choosing an answer. In the survey this was handled by inputting data in the inventories (SPSS, 18.0).

who have never smoked daily are categorised as non-smokers, leading to an underestimation of smokers in these data.

In the postal survey, designed for the project that this dissertation is the result of, the data comes only from those who have succeeded to quit smoking. Factors that may oppose a successful cessation are therefore not taken into consideration. As already mentioned in the section on “methodological issues”, this study has a retrospective design, focusing not only on specific events but also on emotional experiences and thoughts dated back in time, making it far more vulnerable for recall bias.

Moreover, there are fairly great variations in time since the last successful attempt, and therefore it might be a difference in the then prevailing social context and in the use of Nicotine Replacement Therapies (NRTs) or snus over time and between age groups.

However, this sample of successful quitters is unique in being fairly representative of the Swedish population and as a relatively large sample of 1683 respondents. The survey had a response rate of more than 89 per cent, but it is important to keep in mind that the respondents made an active choice to participate in this study already in the screening process. It was not just another questionnaire that appeared in their letterbox but a study the purpose of which the respondents were clear about. This data and design also enable the capturing of factors that are important in the long-term process to a successful cessation. Rather than looking at single variables, this study explores the whole process, revealing a more comprehensive picture of smoking cessation.

THE CONTEXT: SWEDEN AS A WELFARE STATE

Since this dissertation analyses and discusses smoking cessation from a social science perspective, and explores how smoking and smoking cessation, as well as changes over time in these respects, are related to socio-demographic and socio-economic factors as well as structural conditions, this chapter aims at presenting some basic contextual prerequisites for this analysis. Sweden is one of the Nordic countries partly sharing history and moreover, social structure, and in 1995 Sweden became member of the EU, where the member states choose to co-operate on some issues and where the EU has the right to impose certain rules in certain areas that the member states are obliged to follow.

Sweden is today considered a high-income country with relatively small income inequalities and a high average life expectancy. According to the United Nations Human Development Index (2012a), Sweden has the world's seventh highest living standard and a high level of educational attainment (with 11.7 mean years of schooling).

These facets can be related to the development of the welfare state and increasing equality in Sweden.

Social equality

At the beginning of the nineteenth century Sweden was one of the poorest countries in Europe but evolved into a rich welfare state with state-guaranteed welfare principles, such as equal social rights and health care (Cisneros Örnberg & Sohlberg, 2012). Key to this process is the fact that much of the societal resources are managed by the public sector, that is, by the state, municipalities and county councils (SOU 1998:6). The growth of the welfare state and the social security system are often attributed to the struggle of the labour movement for a more equal society (Wilensky, 1975).

Also, the Swedish health care system is state-based: most hospitals and primary care centres are publicly owned and offer high-quality care with a full range of services for everyone, reflecting a strong commitment to equality (Olsen, 2013).

Gender equality

Women's liberation included demands for equality, participation in working and social life on equal terms and possibilities of having a career outside home.

By the end of the 1960s, Sweden had taken the lead in Europe on developing a new family policy. During the 1970s, gender equality policies began to be formulated, and labour market issues were a high priority. The first Equality Act came into force in 1979 and was revised in 1992 (1991:433). This Act became an important tool of promoting women's and men's equal rights in terms of work, conditions of employment, other working conditions and work-related development opportunities (SOU 2004:59). The most prominent question was women's long-term place in working life, which required well-developed childcare.

In contemporary Sweden most women are gainfully employed. This is made possible by measures such as childcare and parental insurance allowing both parents to combine work with family life. These measures have positive effects on both gender equality and financial equality within the family. Sweden ranks second in terms of the gender aspect on the Human Development Index (2012b), not least because of advances in the labour market.

SMOKING IN SWEDEN

This chapter gives, based on previous research as well as some of the results from the papers in this dissertation, a historical overview over how smoking and other forms of tobacco use have developed. The focus is predominantly on the past half-century and on how the described changes may be explained.-

Tobacco use in Sweden historically

Tobacco was introduced to the Swedish population as early as the beginning of the seventeenth century by soldiers returning from the Thirty Years War. National tobacco plantations emerged in the eighteenth century. At this time Sweden was a poor country, and the government was keen to increase exports and reduce imports (Tobacco and Match Museum, 2014). With support from the Swedish National Board of Trade [Kommerskollegium]⁷, tobacco was at the end of the eighteenth century grown widely in Sweden, from south to north. The last tobacco plantation closed in 1964 (Magnusson & Nordgren, 1994).

Tobacco use – pipe tobacco and dry nasal snus – became more prevalent in the latter half of the nineteenth century, leading to a considerable demand for raw tobacco. At the beginning of the twentieth century, the most common form of tobacco was moisturized snus to put under the lip (The Swedish Council for Information on Alcohol and Other Drugs [CAN], 2012). Cigarettes were not yet widely used.

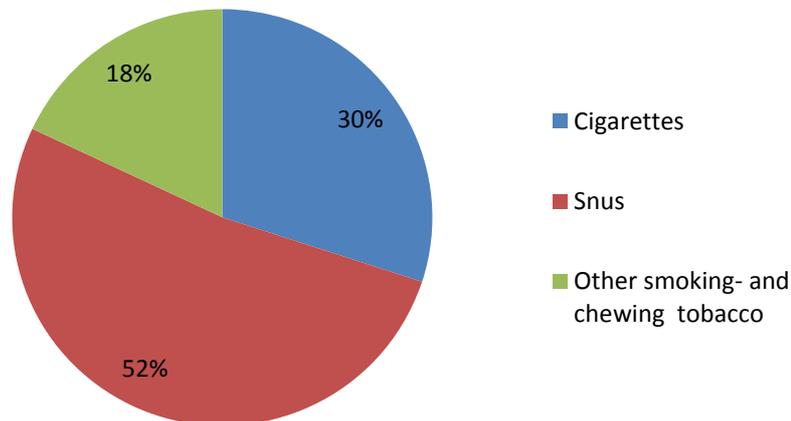
Cigarette sales and consumption

During the years before the Second World War, about 2 billion cigarettes annually were sold in Sweden, and in 1939 the total amount of tobacco con-

⁷ Founded in 1651 and then responsible for industry, trade and shipping.

sumed was about 8 200 tons (Magnusson & Nordgren, 1994). Figure 2 shows the approximate distribution of different tobacco products sold.

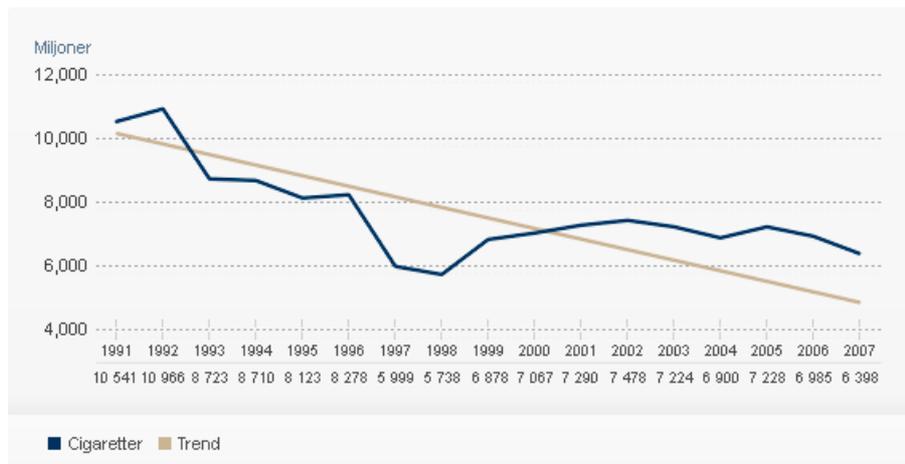
Figure 2. Total tobacco sales in 1939, per cent of tons



Source: Figure based on data from Magnusson & Nordgren, 1994.

A few years later, in the mid-1940s, cigarettes still accounted for less than one-third of the total amount of tobacco consumed in Sweden, while snus represented about 40 per cent and pipe tobacco about one-fifth of the total Swedish consumption (European Commission, 2004). After the war cigarette sales increased rapidly at the expense of sales of cigars / cigarillos, snus and to some extent pipe tobacco (Magnusson & Nordgren, 1994). By 1963, cigarettes accounted for almost 65 per cent of the total amount of tobacco consumed, and around 80 per cent of all the tobacco smoked. As Figure 3 shows, cigarette sales started to decrease during the late 1900s and slightly increased again at the turn of the millennium.

Figure 3. Sales of cigarettes (millions)



Source: Swedish Match/Skatteverket

Retrieved from swedishmatch.com on October 7, 2014

Even so, the share of cigarettes of the total amount of tobacco consumed had declined at the turn of the millennium and constituted about 40 per cent (83 per cent of the tobacco smoked) while snus accounted for about 53 per cent (European Commission, 2004).

More recent data has estimated the total cigarette consumption in Sweden at about 6.5 billion (defined as legal cigarettes that are taxed plus unregistered cigarettes brought to Sweden for example from travels, and smuggled cigarettes) (Sohlberg, 2012). Snus is measured in tons (in 2012 estimated sales of about 6.1 tons; Ministry of Finance, 2014), which prevents direct comparison, but Swedish Match⁸ (2014) claims that snus sales increased for a long time while cigarette sales declined. However, this pattern changed in 2007, and both cigarette and snus sales decreased.

In the EU, manufactured cigarettes are the most preferred tobacco product and constitute over 90 per cent of the tobacco sold.

⁸ Swedish Match is a tobacco company with a leading position in the Scandinavian snus market. Swedish Match tobacco operations have their origins in AB Svenska Tobaksmonopolet founded in 1915.

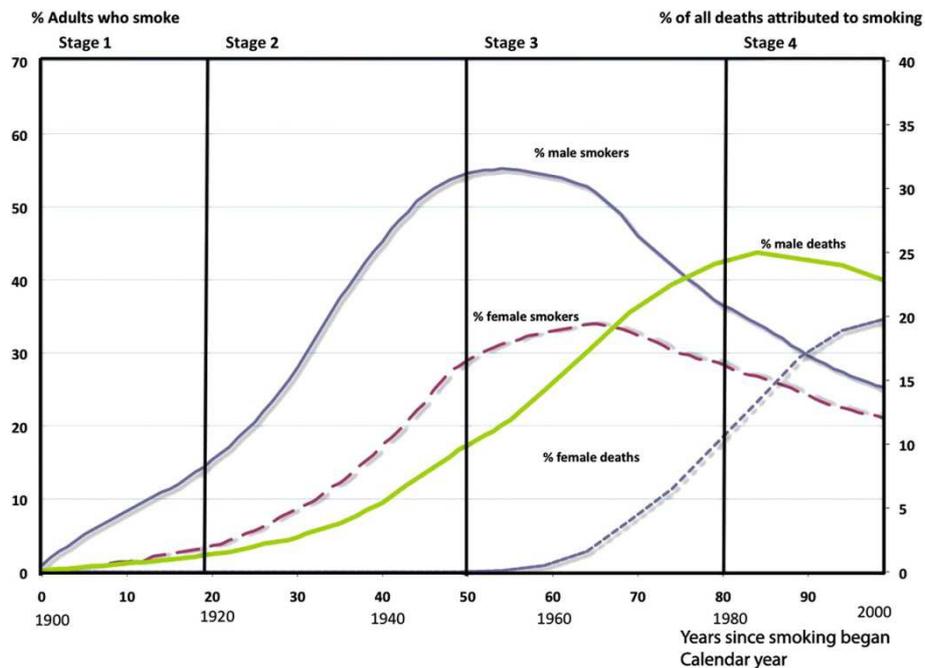
The cigarette epidemic

Proposed by Lopez et al. (1994), smoking in the developed world has commonly been described and analysed as a “cigarette epidemic”. This model aims to be able to account for the long delay between uptake of smoking and its detrimental effects on mortality that has been experienced above all in the economically developed countries. In the model (see Figure 4), the epidemic started around the previous turn of century, peaked in the late 1950s, and was waning again at the turn of the last century. The proponents typically argue that the epidemic runs through four stages, each encompassing two or three decades, with the development among women lagging behind that of men.

The first stage, roughly corresponding to the first two decades of the twentieth century, is characterised by relatively slowly increasing smoking among men and almost no smoking among women. The second stage, in about 1920–1950 is marked by rapidly increasing smoking among both men and women, but on a much lower level among women. At the end of the stage, smoking-induced mortality starts to increase among men, whereas the mortality rate among women is still virtually none. In the third stage (about 1950–1980) smoking reaches a peak and starts to decline among both genders, again with women lagging behind. At the same time smoking-attributed mortality increases drastically among men, and starts to increase among women, too. In the fourth stage (about 1980 onwards), smoking continues to decrease among both men and women. Smoking-induced mortality peaks among men and starts to decrease, whereas the mortality among women is still increasing.

Many have described Sweden today as a prototype for stage 4 of this model (e.g. National Board of Health and Welfare, 2009).

Figure 4. The original epidemic model.



From Lopez et al., 1994. Retrieved from tobaccocontrol.bmj.com on July 15, 2014.

As pointed out by Lopez et al. (1994), the model is intended as a general categorisation rather than a description of the exact development in any single country, where the specific development may also be influenced by factors such as social resources, tobacco control measures and general socio-political changes. The model has recently been updated, based on an evaluation of how well the development during the past decades has matched the predictions that could be made from the original model (Thun et al., 2012). These authors claim that the model still provides a reasonably useful description of many developed countries, but that its relevance for developing countries would need to be improved, especially as concerns women. In addition, they point to important differences in the dynamic of the epidemic between many developed countries as well (ibid.). For example, they identify a potential north-south gradient, where the course of the epidemic in the Mediterranean countries seems to lag behind that of the Nordic countries in somewhat different ways for women and men. They also maintain that in developing countries at least, the stages need to be described separately for women and men.

Official data on Swedish smoking habits

The first investigation of Swedish smoking habits was conducted in 1946 by Svenska Gallupinstitutet, which reported that about 50 per cent of all men and 9 per cent of all women were daily smokers (CAN, 2011). Since then, various aspects of the development have been followed and reported by Statistics Sweden, for example, the SNIPH, the National Board of Health and Welfare, and the CAN. While none of these public actors offers a comprehensive account of how the smoking prevalence in Sweden has developed since the mid-twentieth century, a compilation of reported data gives a fairly good overview. In 1963, then, almost half of the men and a quarter of the women were smoking (National Board of Health and Welfare [Socialstyrelsen], 1986). By 1977 the share of daily smoking women had increased to 34 per cent (Statistics Sweden, 2002), whereas the prevalence among men had gone down to 41 per cent (National Board of Health and Welfare, 1986). Thus, the decrease in smoking among men started during the 1970s, while women's decrease did not start until the late 1970s (European Commission, 2004). Thereafter there has been an overall decrease, although the decline has not been as great for women as it has for men (SNIPH, 2007; Statistics Sweden, 2007). This led to the internationally unique situation that since the mid-1990s⁹ Sweden has had more daily smoking women than men (Statistics Sweden, 2004). In 2012/13 Statistics Sweden reported that 12.4 per cent of women and 11.2 per cent of men were daily smokers. The total share of daily smokers in the Swedish population (16+ years) is estimated to be about 11.8 per cent (Statistics Sweden, 2014). Occasional smokers account for about 10 per cent of all smokers, raising the total prevalence of smoking to about 21 per cent (Public Health Authority of Sweden, 2013). Still, the share of tobacco users (cigarettes and/or snus users) among girls and boys in the ninth grade (15-year-olds) has decreased over time and was historically low in 2012 (CAN, 2012). This suggests that the declining trend may be relatively stable, as smoking habits are typically established during adolescence (World Bank, 1999).

Taken together, these data indicate that the Swedish developments fit fairly well with the four-stage model by Lopez et al. (1994) and Thun et al. (2014), although with some modifications. Among Swedish men, smoking seems to have peaked earlier and at a lower level than in most European countries and at lower level than assumed by the model. In addition, the subsequent decrease seems to have been slightly more rapid, with a smoking prevalence clearly below 20 per cent at the turn of the millennium rather

⁹ In 2012 the Public Health Agency [Folkhälsomyndigheten] reported that some 11 per cent of Swedes were daily smokers, both among women and men, while Statistic Sweden in 2012/2013 gave the figures as 11.2 per cent of daily smoking men and 12.4 of daily smoking women.

than at over 25 per cent, as described in the model by Lopez et al. Among Swedish women, daily smoking seems to have increased slightly less rapidly but for a longer period than the model assumes, with a peak at the end rather than the middle of stage 3 (in the late 1970s rather than the mid-1960s). After this peak, smoking among women in Sweden has decreased, but more slowly than among men (Statistics Sweden, 2007), and also more slowly than described by the model of Lopez et al. (1994). The specific Swedish pattern of the smoking epidemic differs not only by gender but also by class, which may have many explanations.

Gender and class

As shown, the distribution of smoking prevalence between women and men in Sweden has undergone a change over time. From being almost exclusively a male habit, smoking has become increasingly female, so much so that Swedish women now have a somewhat higher smoking prevalence than men.

Among women, the continued increase in smoking until the late 1970s may reflect increasing social and gender equality in Sweden (cf. “The context: Sweden as a welfare state”). One possible link is that women, during these years, became socially and economically independent, and to a much larger share than before entered the labour market and thereby new social circles, where (male) smoking was the norm. Both the gender pattern and the social pattern of smoking have changed. Whereas smoking used to be more common among the affluent groups in society, it shifted to be more common among the socially and economically disadvantaged social groups in Sweden (CAN, 2012). Smoking in the mid-1900s was mostly a habit for successful men, and the (rather few) women who smoked should have been independent, gainfully employed women. Nowadays, smoking is more common among individuals with a low income, a low level of education and among workers and the unemployed (SNIPH, 2011), thus mainly individuals with less affluent living conditions.

One factor that obviously has an impact on the national course of the smoking epidemic is education. A number of studies (for example, Cavelaars et al., 2000; Huisman, et al., 2005; Giske et al., 2005) indicate that smoking prevalence and health problems are inversely related to the level of education, but that these patterns also vary with gender and age. The generally high level of educational attainment in Sweden (cf. “The context: Sweden as a welfare state”), together with the strong focus on information in the Swedish smoking control efforts (cf. “Perspectives on smoking”), may partly explain the relatively low prevalence of smoking and the more rapid de-

crease in smoking, at least among men, in Sweden as compared with most European countries.

In Paper I, the influence of factors such as age, gender, education and social resources and the inclination to take up and stop smoking in contemporary Sweden is subjected to a closer analysis, which shows most of these factors to be associated with uptake of smoking, whereas smoking cessation is associated above all with age and educational level. Another factor that has evidently affected the course and shape of the Swedish smoking epidemic is the widespread use of snus.

The role of snus

When the negative health consequences of smoking began to attract attention in the late 1960s, snus became more popular. As part of an attempt to expand the consumer group, portion bags were introduced in the 1970s – snus captured in small bags, very much like teabags, which made it more tasteful and the use easier to handle (Swedish Match, 2014).

In 2013 a total of about 11 per cent of all Swedes (18 per cent of men, and 4 per cent of women) used snus daily (Public Health Agency of Sweden, 2014), making male snus use more prevalent than male smoking.

However, snus has also been claimed to play a part in smoking cessation, as a means of becoming smoke-free. Relatively recent data from Sweden has estimated that approximately 26 per cent of the Swedish men who use snus are former smokers (Public Health Agency, 2014).

Snus as part of smoking cessation

Of all successful quitters a vast majority have actually managed to become smoke-free without any smoking cessation aid (cf. “Research in smoking”), but of those who do make use of an aid, snus is the most preferred method (Ramström, 2002; Gilljam & Galanti, 2003; Ramström & Foulds, 2006; Lund et. al., 2011; Scheffels et. al., 2012). One motive for choosing snus as a cessation aid may be its ability to provide the smoker with roughly similar, satisfying, levels of nicotine as do cigarettes (Stegmayr, 2005). This may effectively counteract withdrawal syndromes and, for example, decrease perceived stress (however, as discussed in “Perspectives on smoking”, not all daily smokers are addicted to nicotine). Moreover, women (more than men) have been shown to start using snus as a means of harm reduction (Gilljam & Galanti, 2003). Large gender differences have been found (ibid.) in the use of snus at the latest quit attempt, probably reflecting the current

gender difference in the daily use of snus in Sweden. Women also seem to have managed to quit smoking to almost the same extent as men without the use of snus (European Commission, 2004), whereas findings from Norway show that women instead of snus prefer NRTs (Scheffels et al., 2012). This is consistent with results from Paper III in this dissertation.

A Randomised Placebo-Controlled Trial (RCT) tested the efficacy of snus for smoking cessation by randomising subjects as active and placebo snus sachets. Early findings indicated that snus was superior but that it showed no difference in effect size compared to those using nicotine replacement (Fagerström et al., 2012a).

Real-world studies have however found the quit rate for smokers to be positively related to the use of snus (Ramström & Foulds, 2006; Lund et al., 2011) and that the total abstinence is higher for snus than for medicinal products or, for example, professional help (Lund et al., 2010). One possible explanation should be that, as found in experimental studies, snus produces a higher maximum blood concentration in a shorter time than does nicotine chewing gum, for instance (Lunell & Curvall, 2011), and that snus incurs fewer gastrointestinal side effects than gum (Calwell et al., 2010).

Hence, the chances to quit smoking are in general higher for snus users (Stenbeck et al., 2009), which underscores the importance of snus for smoking cessation in Sweden (Furberg et al., 2008). However, using snus as a cessation aid to quit smoking may result in a continued use (Gilljam & Galanti, 2003; Lund et al., 2010; Scheffels, et al., 2012). Consistent with such findings, the analyses in Paper III showed that about 52 per cent of all the male quitters who had made use of snus as a cessation aid were still using it, while the figure was about 39 per cent for the female quitters.

Arguments for and against snus

A Swedish study has found that about one third of all men made use of snus in their attempt to become smoke-free but that a majority quit without snus, leading to the conclusion that snus is not a necessary component of smoking cessation aid on population level (Gilljam & Galanti, 2003).

Conversely, another study has found that the changes in patterns of tobacco use and health outcomes in Sweden have over time been positively affected by the use of snus – which would thereby have affected public health, too (Foulds et al., 2003). Substituting snus for cigarettes, then, might be an alternative for individual smokers, and indeed health care personnel in Norway can now recommend snus in individual cases (Norwegian Directorate of Health, 2009).

If the effect of snus in smoking cessation is more of an empirical scientific issue, the question of whether to recommend snus in smoking cessation or not is more of a political/moral question. Also, the national debate (if there is one) concerning the potential benefits of snus in reducing smoking prevalence is somewhat scattered.

Although the Swedish smoking prevalence is internationally low, the total tobacco consumption is on a par with that of other countries. About 21 per cent of the population (15 per cent of women and 27 per cent of men) used tobacco on a daily basis in 2013. In spite of this, Sweden has a very low rate of tobacco-related illness and mortality – a paradox that is probably due to the common use of snus and is often referred to as “The Swedish Experience”. This experience is commonly used as an argument to promote harm reduction as an important part of tobacco policy, and indeed it could serve as grounds for arguing that snus works as a means of harm reduction both to current smokers and to others (Cisneros Örnberg & Sohlberg, 2012). Such arguments are presented not least by the industry which wants to keep and expand the market for smokeless tobacco alternatives, but also by the government. The official Swedish standpoint is that snus should be regarded as a less harmful alternative to smoking and as a potential means to become smoke-free (Cisneros Örnberg, 2013). This health aspect, together with the market issue, is used in appeals to the EU about the export ban on snus (cf. “The development of Swedish Tobacco policy in context”).

In opposition to these proposals, public health advocates such as the SNIPH and such non-governmental organisations (NGOs) as Psychologists against Tobacco (Psykologer mot tobak) have advised against snus as a method to quit smoking. Their arguments focus on the high levels of nicotine in snus and on the allegedly unknown health consequences. The SNIPH argues that snus should not be recommended as an aid in smoking cessation, because such aids should aim at breaking the nicotine dependence, not at replacing cigarettes with another tobacco product (SNIPH, 2004). The European Commission (2008) also takes a stand against snus as a smoking cessation aid, claiming that because no controlled scientific study has yet been conducted, snus as a means to becoming smoke-free is not an evidence-based method.

Different stakeholders apparently emphasise different scientific results, and while some want to reduce smoking-related harm, others want to eradicate nicotine addiction (Cisneros Örnberg, 2013).

Snus as harm reduction

Snus delivers lower concentrations of harmful chemicals than found in other smokeless tobacco products and cigarettes (Foulds et al., 2003; Österdahl et

al., 2004). Increasing evidence from Swedish epidemiological studies on the use of snus and the risk for cancer are negative, and led in 2005 to the removal of the warning text stating that snus causes cancer (Cisneros Örnberg, 2013). Also, links to such cardiovascular diseases as myocardial infarction have largely been found negative, but not in the case of fatal infarction (Hergens et al., 2007). Moreover, in comparison with smoking, experts have perceived at least a 90 per cent reduction in the relative mortality risks associated with the use of low-nitrosamine smokeless tobacco (Levy et al., 2004). By making a clear distinction between smokeless tobacco products (STP) and tobacco products meant to be smoked, and also between STP and snus, scientific research suggests different levels of harm (Cisneros Örnberg, 2013). It does indeed seem that there is a risk continuum of tobacco products (such as the use of snus or tobacco smoking), which Lund (2012) has emphasised in a study from Norway. This leads to a conclusion that there is a need to better provide smokers with information on the relative risks of snus compared to smoking.

As Lund contends (2009), there is little reason to believe that the tobacco (snus) industry would be motivated by anything else than commercial interests. A commitment to improve public health is not likely to enter into the equation. Still, we cannot ignore the experiences from Sweden and Norway, the two countries where snus use is common. The use of snus has increased at the expense of cigarette smoking in Sweden, which also has decreasing rates of smoking-related mortality and ill health. Snus as harm reduction is a complex issue, and while this dissertation does not aim to cover all aspects, I do want to raise a major question: should snus, complemented by other means and policy interventions, really be ruled out as a way toward a society that might at least in a first step be smoke-free and not necessarily tobacco-free?

THE DEVELOPMENT OF SWEDISH TOBACCO POLICY IN CONTEXT

As shown in the previous chapter, there is an on-going debate over how society should react to tobacco use and its related harms. This chapter gives an overview over Swedish and international control policies in this area, describes how these have changed during the past century, and aims at presenting some perspectives on future development.

Even though Swedish tobacco policy seems successfully to have decreased smoking prevalence and thereby related ill health and mortality, the country has by no means acted in a vacuum. For example, the present Tobacco Act is to a great deal the outcome of regulations and prevention strategies issued by the WHO and the EU. Sweden has also traditionally had a close collaboration with the other Nordic countries, resulting in similar views on tobacco control.

The emergence of Swedish tobacco policy

Swedish tobacco prevention efforts started already at the beginning of the twentieth century with information directed to smokers (Magnusson & Nordgren, 1994), and popular movements with a temperance and religious focus helped in spreading this information. As early as 1918 an inquiry investigated the growing use of tobacco, concluding that information was the key to a healthier lifestyle. The conclusion was supported by the 1920s Prime Minister Hjalmar Branting who endorsed enlightenment over statutory prohibitions. Over the years, NGOs have called for controlling tobacco use and reducing negative health effects, while researchers, various medical organisations – including the Cancerfonden (The Swedish Cancer Society), Hjärt- & Lungfonden (The Swedish Heart & Lung Foundation), Läkare mot tobak (Doctors Against Tobacco) and The Swedish Medical Association – and such NGOs as Riksförbundet VISIR (VI Som Inte Röker/We who do not smoke) and Tobaksfakta (Information on Tobacco) as well as NGOs with a focus on youth such as A Non-Smoking Generation, have influenced the

development of a restrictive Swedish tobacco policy (Cisneros Örnberg & Sohlberg, 2012). In the course of the 1950s and 1960s, tobacco prevention became more organised: the National Smoking and Health Association was established in 1955, and the first smokers' clinic was set up a year later. The health effects of smoking were evaluated by different actors during the following years, leading to information campaigns and prevention strategies mainly directed toward children and adolescents.

It was not until the late 1960s and the 1970s that these campaigns were extended to include adults, too, as a response to demands for more comprehensive measures against smoking (ibid.).

Important events in the development of the Swedish tobacco controls are shown in Table 2.

Table 2. Tobacco control legislation in Sweden by year

Advertising in media	1975 tobacco industry compelled to accept advertising restrictions; first legislation in 1979, then tightened several times
Warning labels on cigarette package	1977
Tobacco Act into force	1993
Age limit	In 1997 legal at 18
Smoking on public transport	Banned 1993
Smoking in public indoors	Banned 1993
Smoking in workplaces	Banned 1994
Smoking in restaurants and bars	Banned 2005 except in specially designated smoking rooms
Vending machines	Allowed but must be placed in such a way that cashier can control buyers' age
Display of tobacco products in retail stores	Allowed

Source: Cisneros Örnberg & Sohlberg (2012). Table revised by Sohlberg.

Later, the National Board of Health and Welfare together with the National Swedish Board of Education called for warning texts on tobacco products and bans on tobacco advertising (Magnusson & Nordgren, 1994). This resulted in an Act in 1977 which required content declarations on tobacco packages and health warnings covering 20 per cent of the front of cigarette packs and with 16 different warnings in rotation (Haglund, 2003).

When epidemiological evidence on the negative health consequences related to smoking grew stronger during the 1980s, the Tobacco Committee, the National Board of Occupational Safety and Health, and the National Board of Health and Welfare (among others) began to prepare guidelines for smoke-free environments (SOU 1981:18).

In 1990 the National Board of Health and Welfare submitted a proposal (1992/93:185) for a comprehensive Tobacco Act, which included a ban on advertising and featured increased taxes, information and smoke-free environments.

The Swedish Tobacco Act

A comprehensive Swedish Tobacco Act (1993:581) came into force in 1993.

Today the Act contains rules on smoke-free environments, marketing and warning texts. Smoking on public transport and in public indoor places was banned in 1993 and was followed by a ban on smoking in workplaces in 1994. Smoking in restaurants and bars was banned in 2005 except in specially designated smoking rooms mainly to extend smoke-free working environments to restaurant employees, too. In 1997 an age limit of 18 was introduced for the purchase of tobacco products.

Taxation on tobacco comes under different legislation (1961:34). The law dates to the 1960s, but demands for an active price politics were not raised until the 1990s. Several tax increases have since been enacted with the view of protecting public health.

Over time the Tobacco Act has been strengthened several times in order to implement the WHO and the EU policies.

The two key actors in the international tobacco control arena are thus the WHO and the EU, both with great deal of influence on the development of tobacco policy on the national level (Cisneros Örnberg & Sohlberg, 2012).

WHO

The WHO established the Tobacco Free Initiative (TFI) in 1998 (WHO FCTC, 2009), and when the WHO Framework Convention on Tobacco Control (FCTC) entered into force in 2003 it was the first treaty ever on public health (<http://www.who.int/topics/tobacco/en/>). Today, the FCTC consists of two major parts: core provisions for demand reduction (both price and tax measures and non-price measures) and to reduce supply (such as illicit trade and age limits for purchase of tobacco products). It also covers such important areas as liability, protection of public health policies from the inter-

ests of the tobacco industry, exchange of information and international co-operation.

The FCTC argues for the importance of co-operation between different actors both on a global and a national level. The Convention is complemented by more concrete guidelines, which have been developed to facilitate the implementation process at country level. Together with financial support this makes it possible, not least for developing countries, to implement the Convention (SNIPH, 2009; WHO FCTC, 2009). Sweden signed the treaty in July 2005, one month after the EU joined the Convention. The implementation of the Convention is a political and legal commitment for its parties, either to accept the Convention as law or, as in the Swedish case, to adjust the national tobacco law in accordance with the Convention.

EU

The European Union tobacco policy has shifted from being based on economic considerations to being more restrictive on public health grounds (Duina & Kurzer, 2004). Over the years the EU has developed a more prominent role in tobacco control, and almost all major EU institutions have been involved in this process, stimulating member countries to take more restrictive measures. For other areas of tobacco control such as prevention, cessation and smoke-free environments, responsibility for providing the appropriate rules and structures lies with the individual Member States, while the EU's role is to support, complement and co-ordinate national efforts.

The Nordic countries

The Nordic welfare states have gradually developed from the mid-twentieth century onward with similar characteristics both at a political and an institutional level. The arguments have rested on the premise that universal social policies will also affect public health (Lundberg et al., 2008). Sweden, Denmark and Finland are members of the EU (Norway and Iceland are not) and are thereby obliged to act in accordance with the Convention. As the Nordic countries also share certain common linguistic, social and historical experiences, for example, there is also a tradition of long-standing co-operation, mainly channelled through the Nordic Council (set up in 1952) and the Nordic Council of Ministers (set up in 1971). As a result there are many shared views on tobacco control (Hakala & Waller, 2003).

The Nordic countries have a restrictive tobacco regulation overall, and Sweden has by no means always been a forerunner. Even though the law on

health warnings and content declarations was unique at the time, Norway and Finland introduced an age limit for the purchase of tobacco already in the mid-1970s, while the Swedish age limit at 18 years entered into force in 1997. Bans on tobacco advertising in the media were introduced early on in Norway, Finland and Iceland as well as were national Tobacco Acts (see further Cisneros Örnberg & Sohlberg, 2012, for Nordic profiles of tobacco control).

Policy and prevention in contemporary Sweden

Policy interventions have evolved with new medical findings on the negative health consequences associated with tobacco smoking. According to a World Bank report, the most effective way to reduce tobacco consumption is by raising taxes (Jha & Chaloupka, 1999), which suggests that demand management is the key to tobacco control.

In Sweden, the most important factors of tobacco use have been found to be availability, price and social acceptance. The aim with tobacco preventive efforts is thus to reduce demand and availability, influence attitudes and norms, and to provide tobacco cessation aid (Public Health Agency of Sweden, 2014). Moreover, the Government has established a comprehensive strategy to defeat the use of alcohol, drugs, doping and tobacco (ANDT; Prop. 2010/1147). The overall aim is to set goals and direction for how societal interventions should be implemented, co-ordinated and followed up. The strategy has seven long-term goals, which guide the ANDT work in its entirety. These goals include limiting the supply and availability, protection of children and young people, prevention, early intervention, care and treatment, and guidelines for co-operation with other countries within the EU and internationally (Department of Social Affairs, 2010).

Sweden's role in international tobacco policy-making

While Finland's political goal is to be a smoke-free society in 2040, Sweden aims to reduce levels of tobacco use. The national public health policy is established by the Parliament (prop. 2002/03:35; prop. 2007/08:110), and as part of the eleventh objective in this policy, four goals were set for 2014: a tobacco-free start of life, halving the number of adolescents who start smoking or using snus, halving the share of smokers among the heaviest user groups and elimination of unwilling exposure to second-hand smoke. According to a compilation of the tobacco statistics by Tobaksfakta in June 2014, none of these goals will be achieved on schedule.

This failure is probably partly down to the fact that not all actions stipulated by the WHO and the EU have been taken. Once again, Norway, Finland and Iceland have all adopted a ban on display of tobacco products in retail outlets – something that the Swedish conservative government¹⁰ was loath to do (Thörnqvist et al., 2011). The government also opposed mandatory pictorial warnings, generic and plain packaging, as well as regulation of ingredients on an EU level. Despite being stipulated by the EU, these measures have not yet been implemented. As a consequence Sweden has been criticised by national NGOs both on the EU level and during the WHO negotiations for considering the tobacco industry's profit possibilities instead.

This is where the “Swedish experience” (described in “Smoking in Sweden”) comes to the fore. The government uses the harm reduction argument – claiming that snus should be regarded as a potential way to quit smoking – and has questioned the EU's prohibition against exports of Swedish snus to the EU market in two Court cases. Sweden has therefore been criticised by both national and EU public health representatives and by national public health advocates for acting in violation of the WHO Tobacco Convention (Cisneros Örnberg & Sohlberg, 2012).

Other shortcomings have also been criticised. While epidemiological surveillance in Sweden has been found to satisfy the requirements of the WHO Convention, it has had to be supplemented with more social, economic and health-related indicators. Sweden also lacks a co-ordinated research programme in tobacco prevention, and greater effort has to be invested in behavioural and action-oriented tobacco research (SNIPH, 2009). Moreover, there is a lack of continuity in economic support, and in a comparison of tobacco policies in 30 European countries, Sweden was found to need increased funding (Joossens & Raw, 2007).

At the same time, however, the country has met some of the EU obligations in advance, such as adopting warning labels, a ban on advertising and creating smoke-free environments. Sweden also has a comprehensive approach, encompassing legislation as well as NGO activities on information, education and opinion formation and a well-developed smoking cessation support (Haglund, 2003).

Overall, Sweden's low smoking prevalence may suggest a successful tobacco control. However, these controls are oriented not only toward public health but they also have the function of “denormalising” smoking, that is, they are there to influence and change norms at a cultural level (Sæbø, 2012a). As previously mentioned, an explicit purpose with the Swedish tobacco preventive efforts is precisely to influence attitudes and norms in order to decrease the social acceptance for smoking. Findings from Norway suggest (and these may well apply to Sweden, too) that while nobody in a posi-

¹⁰ New government from September 2014.

tion of authority (within the realm of politics or health) has ever spoken out in public for stigmatisation of smokers as a public health instrument (Sæbø, 2012b), many smokers nevertheless perceive themselves as stigmatised (Scheffels & Sæbø, 2012). This may be a possible yet unintended consequence of the strict tobacco regulation (Sæbø, 2012b).

SUMMARIES OF THE ARTICLES

Paper I

This paper aims to characterise individuals that has started to smoke and individuals that quit smoking, with respect to age, sex, education, socio-economic circumstances, and family situation. Moreover, it aims to analyse to what extent these variables predicts smoking initiation and smoking cessation.

The data consists of self-reported data on personal smoking experiences from a representative sample of the Swedish population, born 1930-1994 (n=12 008), collected within the Monitor Project. The analyses include descriptive statistics as well as logistic regression models. The association between personal characteristics and smoking status was analysed by entering the former variables into logistic regression models in order to predict the odds for having ever started to smoke and for having eventually quit to become smoke-free.

The logistic regressions showed that smoking initiation has been most common among the eldest generation, indicating a decreasing trend in starting to smoke. Moreover, smoking initiation was significantly associated with being a woman, having middle to high income, a low educational level, and being single. Present occupational status indicated that unemployed and workers had higher odds of having ever started to smoke. Smoking cessation was also found to be most common among the eldest generation. Men were more likely than women to have quit smoking, like those with middle to high income, high education level, and those being married or cohabiting. Present occupational status bears no relation to smoking cessation. Over all, the study concludes that the present situation, with a low smoking prevalence over all, however concentrated to rather vulnerable groups, gives raise for the need of measures in the social-political framework.

In order to disentangle the smoking and cessation patterns during the last half century or so, the findings are discussed in relation to the social and tobacco policy developments in Sweden.

Paper II

The second paper analyses typical developmental pathways of smoking careers that end up with a smoking cessation with a person-oriented approach. By the use of a meta-theoretical model these careers were described with respect to different aspects of initiation, severity, the decision to quit smoking and the actual cessation process. The basic idea of a person-oriented approach is that the individual rather than the variable constitutes the main unit of analysis and that developmental processes are to some extent unique for each individual but that there also are similarities between individuals. While a person has an individual profile, this approach allows to group individuals with similar profiles into more or less homogenous groups and thereby enables a limited number of typical developmental pathways or careers.

In order to perform this analysis, data was used from the postal survey directed to a representative sample of former smokers in the Swedish population (n=1 683). The analyses were not performed gender specifically. Initially, the items were summarised to form four general domains (Origin, Severity, Decision and Quitting process), and by using principal component factor analyses (varimax rotation and eigenvalues>1), several indices were constructed. Separate cluster analyses (Ward's method on z-standardised data) were then conducted for each domain, and the transition of individuals between clusters was analysed by cross tabulating these cluster solutions. Each cell was also analysed to establish whether the specific configuration was more or less frequent (labelled "types" or "antitypes") than could be expected by chance in binomial tests.

The main finding was that there seems to be two sets of pathways, namely one for more severe quitters and one for more effortless quitters. Neither NRTs nor snus was found to be an overrepresented component in any of the typical pathways: both NRTs and snus were evenly used in all trajectories. This implies that NRTs should not be targeted to any special group of quitters, as it seems to help as little, or as much, for all.

Paper III

In this third paper the aim is to analyse motives, mechanisms, and underlying factors behind smoking cessation and also to examine if any gender differences could be found, and if so to which extent.

The data comes from the postal survey directed to former smokers (n=1 683) from a representative sample in the Swedish population.

Descriptive analyses (cross-tables, using chi² to assess gender differences) were performed, as were principal component factor analyses (varimax rotation and eigenvalues > 1) on several inventories. Factor scores were then compared between genders with ANOVA.

The findings suggest that women's smoking and cessation process are a complex phenomenon, which fill several functions in life rather than just nicotine reinforcement. Men, on the other hand, tend to have a more unproblematic and rational approach towards smoking and cessation. Most former smokers had quit smoking by themselves, without any help, and very few had made use of any kind of professional help but there were more women than men doing so. This also applies to the use of NRTs or snus: a majority of both women and men quit without such means but the use is apparently gendered with more women using NRTs and more men using snus when attempting to quit smoking. Since the smoking cessation process is clearly gendered, prevention strategies should strive to be gender sensitive – taking specific needs into account.

Paper IV

This fourth paper aims to explore if, to what extent, and in which sense respondents' narratives about their smoking cessation include accounts about identity change.

Subjects were recruited from a representative sample of stable former smokers who previously had answered the postal survey (n=1683) concerning their process to a smoke-free life, and in relation to this been asked if they were willing to take part in a personal interview about their smoking cessation process. For convenience reasons, 150 interviewees were randomly selected among residents in Stockholm county (n=267), and out of these 75 had agreed to take part in a personal interview. After a second request 41 subjects were still willing to participate. Out of them, 10 women and 10 men were randomly chosen, and contacted at least three times via telephone during April and May 2012. The final sample consists of 19 former smokers (10 women, 9 men), who had been smoke-free for at least the latest 12 months before the interview. The transcriptions of the semi-structured interviews were analyzed using basic Content Analysis (e.g. Morgan, 1993; White & Marsch, 2006) to test to what extent changes in smoking were related to identity changes.

In analysing these data I looked for statements that indicated identity change after smoking cessation, and if there were important differences between women's and men's descriptions. Identity was defined in a broad perspective, including statements about loss of identity, own perceptions of identity change, and also positioning as now being non-smokers.

The analyses showed that mainly women had benefited of an identity change in their smoking cessation process, and that men mostly perceived their smoking more as a habit than an addictive life-style. Moreover, there seemed to be a need, for a majority of the smoke-free subjects, to distance themselves from current smokers.

CONCLUDING REMARKS AND IMPLICATIONS

The main aim of this dissertation has been to analyse changes in the Swedish tobacco consumption since the 1950s, with special emphasis on highlighting the decrease in smoking. Smoking has previously been studied from different angles, but my starting point is that smoking is a bad habit (injurious to one's health) and is influenced by the cultural context, socio-economic and socio-demographic factors, and identity formation.

The dissertation situates itself in social science, examining changes at a societal level and how these relate to changes in smoking patterns.

While the four papers have different aims, and separately contribute to a more nuanced picture of smoking and smoking cessation in Sweden, they tell a more complete story when taken together.

Factors that today influence uptake of smoking seem to be the following: being a women, having a low education, being a worker or unemployed and unmarried/single. It is also shown that starting to smoke has been more common in the eldest generation. Cessation, on the other hand, is associated with being a man, having a high educational level, being married/cohabiting and increasing age.

The medical tradition often explains smoking in terms of addiction to nicotine and as the need of nicotine reinforcement, but the dissertation shows that individuals smoke for many different reasons (of which the degree of dependence is only one), and that the cessation process is a complex phenomenon with several different factors interacting in a long-term process, both on a personal and a structural level. There are multiple pathways to a smoke-free life.

However, gender differences were found in reasons to smoke, in reasons to quit and also in strategies to quit smoking. Smoking seemed to have filled a more important role in life for female than for male ex-smokers, both on a social level as contributing to a sense of being part of a smoking community, and on a personal level, such as preventing weight gain. Women also tend to quit smoking for aesthetic reasons and for the sake of others while men quit to improve their physique, that is, for more self-oriented reasons. In spite of the allegedly necessary link between smoking and nicotine dependence, a majority quit smoking without any professional help or other means. There is however a clear gender difference among those who made use of any ces-

sation aids. Women tended to seek professional help to a higher degree than men and to make use of NRTs, while men more often than women made use of snus.

There was also a need for an identity change, and to replace this old identity, linked and associated with smoking, with something else to remain smoke-free. This change seems to have mattered more to women though. Moreover, it was shown that these smoke-free subjects were in need of distancing themselves from current smokers.

As a whole, smoking is shown to fill several psychological, social and symbolic functions.

This dissertation contributes to a more nuanced picture of smoking and mostly smoking cessation, but it also raises thoughts and new questions:

As concerns control policy Sweden has a tradition of information, knowledge and rational choice, now coupled with regulations and bans, not least as a result of international co-operation in the EU and the WHO. The Swedish tobacco policy has somewhat changed its focus from information on the risks of smoking for the active smoker to restrictions aimed at protecting non-smokers from second-hand smoke.

As far as information and knowledge is concerned, we can probably safely assume that current smokers know the risks of smoking, although not perhaps the medical details. How should information be formulated to reach them? Maybe young people are better served by preventive information emphasising the risks? And perhaps current smokers might instead be more receptive to the benefits of being smoke-free? They could perhaps benefit from learning that many smokers are able to quit on their own but that there are also many means available to them if needed or preferred.

Even though Sweden has failed to introduce certain measures (such as pictorial warnings) stipulated by the EU, the strengthening of tobacco control in other arenas continues. As recently as mid-October this year (2014), the Public Health Agency presented the government with an investigation with the message that public outdoor places, such as entrances, playgrounds and outdoor cafes, should be smoke-free. This recommendation rests on the premise that there is no level of second-hand smoke that can be deemed harmless. Moreover, individuals (asthma sufferers, for example) are said to perceive problems and that those who work in these environments are exposed to passive smoking. According to Chapman (2007), excessive second-hand smoke policies risk branding tobacco control advocates unfairly as extremists whose agendas abandon all proportionality in the formulation of policy.

There may also be a risk that proposals like this will evoke – in the absence of evidence-based studies on the actual harm in outdoor settings, for example – a feeling of “enough is enough”, of interfering in people’s lives among smokers and non-smokers alike.

Another measure is pricing policy, which has been proven to be most effective. In comparison with Norway, for example, Sweden has relatively low prices on cigarettes. Public opinion polls also show that there is support for additional legislative reinforcements. In line with this, a natural step would perhaps be to just strengthen restrictions and raise prices, thereby downplaying the voluntariness that information implies. But would this lead to further reduction in smoking prevalence, to an increase in smoking cessations, or are the remaining current smokers resistant? A study by SIRUS on smokers' attitudes to various tobacco policy measures found that a large group of smokers was strongly opposed to most proposals. In fact, such strong resistance had never been observed in earlier analyses (Lund, 2012).

The Swedish smoking prevalence is internationally low. However, there is a remaining group of smokers for whom smoking fills various functions in addition to nicotine reinforcement. This group, already more or less marginalised, includes many low-educated women on low incomes. The denormalisation of smoking that has occurred during recent years could have the unintended consequence of making smokers feel stigmatised or even discriminated. Such feelings and experiences add to a possibly more vulnerable life situation, leading to new challenges on how to meet this group's specific needs. Will they benefit from strengthened policies, from a greater range of cessation aids and/or professional help, from the knowledge that most smokers have the capability to quit without help? And how should society respond to those who do not want to quit smoking?

The differences in relation to gender and class, as observed in this dissertation, are by no means surprising. Differences between various socio-economically groups have increased in Sweden since the 1980s (Magnusson & Nordgren, 1994). Globally, too, smoking prevalence varies by gender and socio-economic status, as do the related negative health consequences and mortality (Amos & Mackay, 2010).

The need for gender-sensitive policies in Sweden is apparent, not least because more women than men smoke, and because the opposite is true for the use of snus. Furthermore, because smoking leads to a lot of ill health and premature death, and is more prevalent in socio-economically disadvantaged groups and among women, we face a situation where social inequalities and gender leads to inequalities in health. So, policies and interventions that reach out to these groups have to be developed. The European Commission (2004) suggests that comprehensive tobacco control policies should implement measures tailored to the needs of lower socio-economic groups. However, the findings in this dissertation indicate that so many factors on both personal and structural levels interact in the smoking cessation process and that there are so many different pathways to become smoke-free that "tailored interventions" risk being nothing more than empty rhetoric. Such inequality of gender and class points in the direction of structural changes and social policies. Future research also needs to investigate why people are

smoking, and what needs smoking fulfils. A more thorough knowledge about different group's special motives for smoking would provide a better basis for a more nuanced tobacco policy.

SVENSK SAMMANFATTNING

Den här avhandlingen inom ämnet sociologi avser att analysera förändringarna i den svenska tobakskonsumtionen under de senaste 50-60 åren med särskild tonvikt på att belysa minskningen i rökning utifrån olika vinklar.

Redan 1950 fann ett flertal internationella studier (Doll & Hill, 1950; Levin, Goldstein & Gerhardt, 1950; Mills & Porter, 1950; Schrek et al., 1950; Wynder & Graham, 1950) ett samband mellan rökning och lungcancer, något som ytterligare befästes av de så kallade British Doctors' Study och Hammond Horn Study som publicerade sina resultat 1954. Vid slutet av 1950-talet, början av 1960, var den vetenskapliga bevisningen stark gällande sambandet mellan rökning och ohälsa. Sambandet mellan passiv rökning och lung cancer lät emellertid vänta på sig till början av 1980-talet då två studier (Hirayama, 1981; Trichopoulos et al., 1981) publicerade sina resultat.

Idag ses rökning som ett globalt folkhälsoproblem som skördar cirka 6 miljoner liv varje år, inklusive cirka 600 000 icke-rökare som ett resultat av passiv rökning. Världshälsoorganisationen uppskattar att denna siffra kan öka till mer än 8 miljoner runt år 2030, om inte allvarliga åtgärder sätts in. Denna utvidgning av fokus från den individuella rökaren till att inkludera även tredje part (harm to others) möjliggjorde en juridisk framväxt och under de senaste årtiondena har internationella regleringar utarbetats, främst genom Världshälsoorganisationen och den Europeiska Unionen, som också har påverkat framväxten av den nationella tobakskontrollen.

Den första rökaneundersökningen i Sverige genomfördes 1946 och visade att cirka hälften av alla män och cirka var tionde kvinna rökte dagligen. Därefter ökade andelen rökande kvinnor till 34 procent år 1977 medan mäns rökning minskat till 41 procent. Mäns rökning började alltså minska under 1970-talet medan kvinnors rökning inte började minska förrän i slutet av det decenniet. Därefter har rökningen gått ned totalt men minskningen har inte varit lika stor för kvinnor vilket har lett till att Sverige, som ett av få länder i världen, har fler dagligrökande kvinnor än män. Det är alltså inte bara en tydlig genuskillnad, det är också en social (klass) skillnad som gör sig gällande; rökning har gått från att, i mitten av 1900-talet, vara vanligast bland män i högre samhällsklasser till att nu vara vanligast bland kvinnor i socialt och ekonomiskt mer sårbara grupper.

Rökning (tobaksanvändande) är ett växande forskningsområde och allt större resurser läggs internationellt på att minska användningen och de med rökning relaterade skadorna. Dock har rök-forskningen till största delen

kommit att utföras inom folkhälsoområdet, med fokus på prevalens och sambandet mellan rökning och ohälsa, eller inom det medicinska området, där fokus ligger mer på tobaksrelaterade sjukdomar och effekten av olika farmakologiska och/eller beteendevetenskapliga behandlingar. Utöver det har också en stor del forskning om policyåtgärder och effekten av dessa bedrivits. Få studier har alltså haft sin utgångspunkt i en samhällsvetenskaplig kontext, och ännu färre har analyserat varför individer börjar röka, och än viktigare, varför de slutar att röka samt hur och varför rökmönstren på en aggregerad nivå förändras sig över tid och mellan olika grupper i befolkningen. Denna avhandling tar alltså avstamp i frågor som dessa.

Den första artikeln undersöker om och hur förändringar i rökmönstren kan förstås och förklaras i relation till Sveriges utveckling till en välfärdsstat och också i relation till socio-demografiska och socio-ekonomiska omständigheter. Den andra artikeln fokuserar på de långsiktiga vägarna till ett rökslut genom att urskilja flera, distinkta, vägar från aktiv rökare till rökslut. Den tredje artikeln analyserar genusskillnader med avseende på anledningar att röka, erfarenheter av rökning och av centrala delar i rökslutprocessen. Slutligen behandlar den fjärde artikeln frågan om rökslut kan beskrivas som en process av identitetsförändring.

Resultaten visar sammantaget att rökstart och rökslut varierar med socio-demografiska och socio-ekonomiska faktorer vilket har lett till en grupp rökare som är förhållandevis sårbara i de aspekterna. Det har också visats att rökslutprocessen är komplex, med faktorer på både personlig och strukturell nivå som samverkar i den långsiktiga processen, vilket leder till ett antal olika vägar till ett rökfritt liv. Dessutom visade analyserna på genusskillnader i anledningarna till att röka, till att sluta röka, och dessutom även i strategierna för att bli rökfri. Det tycks också som om det behövs en viss förändring i identitet, i uppfattningen av sig själv, för att förbli rökfri.

Dessa påvisade skillnader i klass och genus pekar på att strukturella och socialpolitiska förändringar kan behövas för att minska antalet rökare ytterligare.

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APPENDIX

Wording of key screening questions in the Monitor Project

1. Have you, during the past 12 months, on a regular basis used tobacco which can be smoked (cigarettes, pipe tobacco, cigars/cigarillos)?

Yes (if so, considered as daily smokers)

No

Don't know/no answer

(if No)

2. Have you ever, during at least 12 consecutive months, on a regular basis used tobacco which can be smoked?

Yes (if so considered as former smokers)

No (if so considered as never smokers)

Don't know/no answer

(if Question 1= No and Question 2=Yes)

3. What have your smoking habits been during the last 12 months?
Have you...

... not smoked at all

...smoked occasionally but not regularly

Don't know/no answer

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