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Social climate on tobacco control in an advanced tobacco control country: A population-based study in Finland

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Abstract

Aims: Finland has implemented a gradually tightening tobacco control policy for decades. Recently the objective of a tobacco-free Finland was introduced. Still, the population's acceptance of tobacco control policy has not been measured. More knowledge is needed on differences in

attitudes and factors associated with tobacco control opinions for future policy-making. **Methods:** A population-based study with quantitative analysis. Attitudes on smoking and tobacco control policy were assessed within the National FINRISK 2012 Study in Finland involving 25–74-year-old adults (N = 4905). In analyses, smoking status groups were compared. **Results:** In general, attitudes differed systematically by smoking status. Differences increased or decreased when moving from never smokers to other smoking groups. Similarities in attitudes were found particularly on youth smoking, while differences between smoking groups were notable on statements regarding smoking on balconies and availability of tobacco products. The adjusted analysis showed that smoking status was most strongly associated with attitudes on different tobacco control policy measures. Daily smokers viewed stricter tobacco control policy and workplace smoking bans more negatively than others, though they viewed societal support for quitters and sufficiency of tobacco control policy more positively compared with others. Differences were vast compared with non-smokers, but also occasional smokers differed from daily smokers. **Conclusions:** Tightening tobacco control and workplace smoking bans were supported by the Finnish adult population, but societal support for quitters to a lesser extent. Attitude change, where smokers are seen as deserving help to quit smoking, is important.

Keywords
public opinion, public policy, smoking, smoking cessation, tobacco control policy, tobacco use

The tobacco epidemic follows a well-known pattern where smoking first increases and then decreases, along with smoking-related mortality (Lopez, Collishaw, & Piha, 1994; Thun, Peto, Boreham, & Lopez, 2012). In parallel, social acceptance of smoking shifts from being widespread, to smoking becoming a "denormalised" behaviour (Hakkarainen, 2013). Denormalisation of smoking includes both the ends and means to curb the tobacco epidemic; for example, advertising bans and restricting tobacco use make smoking behaviour invisible (Sæbø & Scheffels, 2017).

Finland introduced a comprehensive Tobacco Control Act (TCA) in 1976. The act has been gradually tightened ever since. The early TCA made provision for advertising bans and sales restrictions in order to reduce initiation. In the 1990s, the protection of non-smokers justified bans on environmental tobacco smoke at workplaces, with bars and restaurants included in the mid-2000s. Finnish tobacco control policy can be considered a success: during 1979–2014, daily smoking prevalence among adults decreased from 27% to 16%, and daily exposure to second-hand smoke (SHS) among non-smokers at workplaces in 2014 was only 4% (Tobacco Statistics 2013, 2014). Currently, in the tobacco epidemic model (Thun et al., 2012), Finland appears to be in the last phase where tobacco control is widely accepted.

In all legislation, enforcement both plays an important role and affects the social climate. Policy measures can be seen either as preceding or following the norms in society (Pacheco, 2012). A population transmits its norms on policies through democratic participation, and policies mutually contribute to social norms that indicate acceptable behaviours in society (Pacheco, 2013). In Finland, as the prevalence of daily smoking decreases, the social climate favours tobacco-free actions. In 2010, Finland was the first country in the world to set the objective of its TCA as ending tobacco use in Finland by 2040 (the so-called endgame) (Patja, 2014). In 2016, the deadline was brought forward to 2030 and the goal was also re-determined to include "other harmful and toxic nicotine-containing products", such as

electronic cigarettes (Finlex, 2016). The objective of ending the use of tobacco (and nicotine) is thus a prime example of the process of denormalising smoking in today's tobacco control policy (Sæbø & Scheffels, 2017). While Finland has a successful restrictive tobacco control policy, one hindrance for an even more effective policy has been the lack of cessation services (Joossens & Raw, 2017; Levy, Blackman, Currie, Levy, & Clancy, 2012).

More detailed knowledge is needed on how the attitudes and factors associated with tobacco control opinions differ in the population, as these factors could further interact with policy-making. As Finland aims to be tobacco and nicotine free by 2030, the attitudes of the population are highly significant in success. It is also pivotal to look for areas where tobacco control policy has not been as effective as it could have been. Societal attitudes towards tobacco control among different population groups are important to examine, as tobacco control measures may affect different subpopulation groups differently. Addressing these discrepancies helps policy-makers to develop more tailored and effective health policies. In light of earlier studies, non-smokers feel more positive about regulations than smokers (Diepeveen, Ling, Suhrcke, Roland, & Marteau, 2013), but the picture is more ambiguous, for example, between socioeconomic groups (Thomson, Wilson, Collins, & Edwards, 2016). The differences in smoking between socioeconomic groups are increasing in Finland (Lahelma et al., 2016), but the differences in acceptance of tobacco control policies between these groups are unknown.

Recent studies show that stringent tobacco control policies in the Nordic countries are socially accepted. In Denmark, policy attitudes have changed since the policies were implemented (Lykke, Helbech, & Glümer, 2014), and a large proportion of citizens are ready for more stringent tobacco control policy in terms of future bans on smoking and tax increases (Lykke, Pisinger, & Glümer, 2016). In Norway, compared to daily smokers, non-smokers have more positive attitudes towards new tobacco control measures such as banning smoking in specific outdoor settings and raising the age limit for purchasing cigarettes (Lund, 2016). Finnish studies examining social acceptance of tobacco control policies have not been published.

In this study, we have examined population acceptance of Finnish tobacco control processes identified as (1) pro tobacco control, (2) sufficiency of TCA enforcement, (3) anti-smoking ban at work, and (4) societal support for quitters (see Table 1). These areas were chosen after explorative principal component analysis, which is described in the Analyses section. The pro tobacco control component describes the acceptance of strict restrictive tobacco control as well as general acceptance of smoking. The sufficiency of TCA enforcement measure describes the agreement with the enforcement of the implemented policy actions regarding tobacco availability and smoke-free places. The anti-smoking ban at work measure describes the acceptance of smoking in workplaces during working hours, and the component on societal support for quitters is used to describe acceptance of support from society in quitting smoking.

Material and methods

Data

We utilised the National FINRISK 2012 Study data (Borodulin et al., 2015) with a population-based sample of 10,000 men and women aged 25–74 years. A stratified random sample was drawn from the population register. The sample received a postal invitation to participate in a health examination together with a questionnaire. Those who took part in the health examination (59%) were given a separate post-examination questionnaire, including questions on smoking opinions, to be completed at home and returned later by mail. Altogether 4905 participants returned the post-examination questionnaire. The study protocol followed closely the WHO MONICA

Table 1. Tobacco control policy statements by smoking status, % and (n) of those who agreed[a] with the statement, tobacco control policy measures (bold) and their reliability (α).

	Never smoker	Former smoker	Recent quitter	Occasional smoker	Daily smoker	Total	p[b]
Pro tobacco control (α = 0.728)							
I like smoking[c]	2.3 (52)	4.4 (59)	11.6 (11)	27.6 (89)	62.2 (387)	12.8 (598)	< 0.001
I like the smell of tobacco[c]	3.3 (77)	7.6 (102)	18.9 (18)	15.0 (48)	31.6 (196)	9.4 (441)	< 0.001
Non-smokers may get sick as a result of inhaling tobacco smoke	90.5 (2090)	85.7 (1153)	82.1 (78)	78.3 (252)	70.8 (441)	85.5 (4014)	< 0.001
All smoking is not harmful[c]	7.5 (172)	10.9 (145)	16.8 (16)	15.3 (49)	13.7 (84)	10.0 (466)	< 0.001
Smoking on balconies should be forbidden by law	66.2 (1526)	52.2 (701)	29.5 (28)	24.4 (78)	10.8 (67)	51.3 (2400)	< 0.001
Youth smoking must be restricted	94.2 (2173)	91.9 (1236)	90.5 (86)	88.2 (285)	85.1 (526)	91.9 (4306)	< 0.001
Tobacco must be sold in fewer places	71.7 (1623)	61.2 (805)	58.1 (54)	45.0 (143)	23.2 (141)	60.1 (2766)	< 0.001
Sufficiency of enforcement of the Tobacco Control Act (α = 0.544)							
Smoking restrictions are enforced sufficiently	30.7 (705)	34.3 (462)	41.5 (39)	46.4 (150)	53.0 (325)	36.0 (1681)	< 0.001
It is difficult for minors to get tobacco products	19.6 (450)	20.8 (280)	14.7 (14)	27.5 (89)	32.3 (201)	22.1 (1034)	< 0.001
Workplaces are successfully smoke-free in Finland	67.4 (1552)	71.0 (962)	65.3 (62)	70.3 (227)	65.4 (407)	68.3 (3210)	0.004
Anti-smoking ban at work (α = 0.795)							
Teachers must be allowed to smoke during working hours	9.6 (221)	13.8 (185)	21.1 (20)	24.4 (79)	34.2 (212)	15.3 (717)	< 0.001
Healthcare personnel must be allowed to smoke during working hours	10.3 (237)	15.5 (208)	18.1 (17)	27.2 (88)	37.9 (237)	16.8 (787)	< 0.001
Smoking should not be allowed in any profession during working hours[c]	61.4 (1415)	51.0 (684)	35.1 (33)	30.6 (98)	18.1 (113)	50.1 (2343)	< 0.001
Societal support for quitters (α = 0.830)							
Society should support people who quit smoking after getting sick from smoking	36.8 (847)	41.7 (562)	45.3 (43)	39.4 (126)	57.0 (355)	41.2 (1933)	< 0.001
Society should support everyone who quits smoking	39.4 (906)	46.0 (619)	53.7 (51)	41.9 (134)	59.1 (367)	44.3 (2077)	< 0.001

[a]Including respondents who "completely agree" or "somewhat agree" with the statement. [b]P-value of Pearson chi-square test proposition by smoking status, 95% significance level. The test also includes those who disagree and those who neither agree nor disagree even though they are excluded from the table. [c]Reversed order of options (1 = completely agree, 5 = completely disagree) for the sum variable.

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protocol (WHO MONICA Project Principle Investigators, 1988) and the later recommendations of the European Health Risk Monitoring project (Tolonen, Kuulasmaa, Laatikainen, Wolf, & the European Health Risk Monitoring Project, 2002). The study protocol was approved by the Co-ordinating Ethics Committee of the Hospital District of Helsinki and Uusimaa.

Measures

Dependent variables. In the survey, tobacco control opinions were collected by means of 25 statements exploring the respondents' attitudes towards tobacco policy and smoking. The statements are presented a Supplementary Table (S1 – see supplementary material online). The original five-point Likert scale (1 = completely disagree, 2 = somewhat disagree, 3 = neither agree nor disagree, 4 = somewhat agree and 5 = completely agree) was collapsed into three categories: disagree (completely or somewhat disagree), neutral (neither agree nor disagree), and agree (completely or somewhat agree). In order to formulate the dependent variables for the regression models we used principal component analysis, which yielded four components (see the Analyses section below).

Independent variables. Smoking status was the main explanatory variable, with six classes: never smoker (49%), former smoker (quit over 6 months ago) (28%), recent quitter (quit 1–6 months ago) (2%), occasional smoker (7%), daily smoker (13%), and other (undefined) (1%). The index was collapsed into five classes; the "other" category was dropped as missing data ($n = 49$). In this article, the term "non-smoker" is used to describe never smokers, former smokers, and recent quitters, while the term "smoker" describes occasional and daily smokers at the time of the survey.

Age was used as a three-class variable (25–44, 45–64, 65–74 years). Education was self-reported as total years of schooling and was further divided into three groups (low, middle, high) by each birth cohort to take into account

the higher level of education among the younger birth cohorts of the population. Marital status included six categories: married, cohabiting, single, separated or divorced, widowed, and registered partnership. These were reduced to a three-class variable: those living in a partnership (married, cohabiting, registered partnership), those not living in a partnership (divorced or separated, single), and widowed. Exposure to SHS was measured with three continuous (hours per day) variables: daily exposure to SHS at the workplace, daily exposure to SHS at home, and daily exposure to SHS in other places. One dichotomised variable was generated: not exposed/exposed to SHS at least one hour per day. Alcohol consumption was assessed as self-reported consumption of alcohol (grams) during the preceding week (range [0, 1200]). Given the highly skewed distribution of the variable, a classified variable was used: no use (0 grams), moderate use (men < 252 grams, women < 168 grams), and risk use (men $\geq$ 252 grams, women $\geq$ 168 grams). Income was assessed as household income (EUR) per year and was used as a proxy for economic situation. Household income by a consumption unit was calculated by dividing the yearly gross household income by the size of the family; with each subsequent adult weighted by 0.5 and dependent children by 0.3.

Analyses

Principal component analysis, Pearson's chi-square test, and multinomial logistic regression were used. The confidence level was set at 95%. The software used was SPSS version 24.0. We conducted principal component analysis to compress any possible underlying components for tobacco policy views. After the preliminary interpretation we were left with 23 statements. Oblique rotation (Promax) was chosen, as the components might be related to each other and it gave the best interpretative solution. We excluded some statements based on the reliability analysis, leaving 15 statements comprising four components for further analysis (see

supplementary file S2 online for additional information on conducted principal component analysis). The four components were named as (1) pro tobacco control, (2) sufficiency of TCA enforcement, (3) Anti-smoking ban at work, and (4) societal support for quitters (see Table 1 for the details – reliability and individual statements comprising each component). The reliability of the components was assessed using Cronbach's alpha; it was acceptable for three variables ($\alpha > 0.7$). For the component on sufficiency of TCA enforcement, the reliability was less than adequate ($\alpha = 0.544$), but it was nevertheless included in further analysis because of the content-related interest that the measure provided.

For the regression models, four dependent variables were constructed based on the components. First, simple sum scores were calculated for these components. Each sum variable was then categorised into three quantiles (high, neutral, low) by the values of the sum scores. These classified variables were the dependent variables in the multinomial logistic regression models (see Tables 2 and 3). A multinomial regression model is an appropriate analysis tool when the outcome variable consists of more than two categories of a non-continuous variable. Results of the regression analyses are presented in Tables 2 and 3, where the main focus is on the association between smoking status and tobacco control policy measure. Multiple adjusted associations (adjusted odds ratios and their 95% confidence intervals) are presented, allowing us to examine the association between the tobacco control measure and the background factor when the effects of all the other background variables are simultaneously taken into account.

Because age and gender may moderate the association of smoking status with tobacco control opinions, we tested the interactions (age*smoking status and gender*smoking status). Only the interaction between age and smoking status on the response to societal support for quitters was statistically significant ($p = 0.015$). However, we present the model with age as a three-class covariate, as the results of

the different age-based models were similar to this model.

Results

Individual statements

Attitudes towards statements on the pro tobacco control measure followed a linear trend, either increasing or decreasing when moving from never smokers to other smoking status categories (Table 1). Former smokers were closer to never smokers than recent quitters in their attitudes, and recent quitters were more similar to smokers. Similarities in attitudes by smoking status were observed on the harmfulness of smoking and SHS, while attitudes on youth smoking especially unified respondents. Differences arose on statements related to smoking on balconies and the availability of tobacco products.

A minority of the respondents agreed that smoking restrictions are enforced sufficiently (Table 1); daily smokers being the most positive. More smokers thought it is difficult for minors to obtain tobacco products compared with non-smokers, but still most respondents thought that obtaining tobacco products is not difficult. The majority of respondents in all smoking status groups thought that workplaces are successfully tobacco free in Finland.

Never smokers were the most supportive and daily smokers were the least supportive of workplace smoking bans (Table 1). Smoking by healthcare personnel or teachers during working hours was not supported.

Less than half of respondents agreed that society should support quitters (Table 1). Never smokers expressed the least approval for society's support for quitters. Occasional smokers were closer to never smokers than daily smokers in their opinion on this issue.

Associations of smoking status with tobacco control policy measures

When all covariates and confounding variables were adjusted for, all other smoking status

Table 2. Associations of smoking status, sociodemographic variables, and exposure to second-hand smoke with support for tobacco control[a] and sufficiency of enforcement of the Tobacco Control Act,[b] adjusted odds ratios (AOR), and their 95% confidence interval (95% CI).

	Panel A					Panel B				
	Support for tobacco control[d]					Sufficiency of enforcement of the Tobacco Control Act[d]				
		Neutral vs high support		Low vs high support			Neutral vs sufficient		Insufficient vs sufficient	
Variables	% (n)[c]	AOR	95% CI	AOR	95% CI	% (n)[c]	AOR	95% CI	AOR	95% CI
Smoking status										
Never smoker	49.1 (2321)	0.11***	0.05–0.25	0.00***	0.00–0.01	49.1 (2318)	1.54***	1.22–1.94	2.73***	2.17–3.45
Former smoker	28.8 (1359)	0.15***	0.07–0.33	0.01***	0.01–0.02	28.8 (1359)	1.58***	1.23–2.02	2.35***	1.84–3.00
Recent quitter	2.0 (95)	0.23**	0.08–0.62	0.04***	0.02–0.10	2.0 (95)	1.46	0.83–2.57	2.28**	1.34–3.89
Occasional smoker	6.9 (324)	0.48	0.19–1.22	0.13***	0.05–0.30	6.9 (324)	1.30	0.93–1.82	1.44*	1.02–2.02
Daily smoker	13.3 (627)	Ref		Ref		13.3 (626)	Ref		Ref	
Age										
25–44 years	31.2 (1493)	0.95	0.77–1.16	1.40**	1.09–1.79	31.3 (1493)	1.34**	1.08–1.67	1.34**	1.10–1.63
45–64 years	43.4 (2075)	0.86	0.72–1.04	0.87	0.69–1.10	43.4 (2074)	1.11	0.91–1.36	1.11	0.92–1.33
65–74 years	25.4 (1213)	Ref		Ref		25.3 (1209)	Ref		Ref	
Gender										
Men	45.5 (2177)	1.24**	1.07–1.44	1.87***	1.56–2.25	45.5 (2175)	1.01	0.86–1.18	0.90	0.78–1.05
Women	54.5 (2604)	Ref		Ref		54.5 (2601)	Ref		Ref	
Education										
Low	32.8 (1548)	0.95	0.79–1.15	1.02	0.81–1.29	32.8 (1547)	1.11	0.91–1.35	1.20	1.00–1.44
Middle	33.0 (1557)	0.90	0.76–1.08	0.92	0.74–1.15	33.0 (1556)	1.16	0.96–1.40	1.15	0.97–1.38
High	34.2 (1615)	Ref		Ref		34.2 (1613)	Ref		Ref	
Marital status										
Widowed	3.4 (160)	1.40	0.93–2.11	1.45	0.85–2.48	3.4 (160)	1.26	0.80–1.98	1.02	0.67–1.55
Separated, divorced, or single	23.2 (1109)	1.06	0.88–1.27	1.35**	1.09–1.68	23.2 (1106)	1.10	0.92–1.32	0.79**	0.66–0.94
Married, registered partnership, or cohabiting	73.4 (3505)	Ref		Ref		73.5 (3503)	Ref		Ref	
Exposure to second-hand smoke										
Exposed to second-hand smoke at least 1 h/day	4.3 (197)	0.85	0.56–1.29	1.32	0.84–2.07	4.3 (197)	1.04	0.68–1.58	1.85**	1.29–2.66
Not exposed to second-hand smoke	95.7 (4418)	Ref		Ref		95.7 (4416)	Ref		Ref	
Nagelkerke pseudo R^d	0.360					0.046				
N^d	4477					4473				

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

a Distribution of dependent variable: low support 31.7% (n = 1421), neutral 35.5% (n = 1588), high support 32.8% (n = 1468). b Distribution of dependent variable: insufficient enforcement 40.4% (n = 1805), neutral 28.2% (n = 1262), sufficient enforcement 31.4% (n = 1406). c From the univariate associations (not shown on the table). d Full model (adjusted odds ratios): adjusted for smoking status, age, gender, education, marital status, exposure to second-hand smoke + alcohol use, income (not shown).

Table 3. Association of smoking status and sociodemographic variables with support for workplace smoking bans[a] and societal support for quitters,[b] adjusted odds ratios (AOR), and their 95% confidence interval (95% CI).

	Panel A					Panel B				
		Support for workplace bans[d]					Societal support for quitters[d]			
		Neutral vs high support		Low vs high support			Neutral vs high support		Low vs high support	
Variables	% (n)[c]	AOR	95% CI	AOR	95% CI	% (n)[c]	AOR	95% CI	AOR	95% CI
Smoking status										
Never smoker	49.1 (2315)	0.24***	0.16–0.35	0.05***	0.04–0.08	49.1 (2311)	2.16***	1.71–2.73	3.36***	2.64–4.27
Former smoker	28.8 (1356)	0.32***	0.21–0.47	0.10***	0.07–0.15	28.8 (1355)	1.64***	1.28–2.10	2.21***	1.72–2.84
Recent quitter	2.0 (95)	0.42*	0.21–0.87	0.17***	0.08–0.33	2.0 (95)	1.40	0.84–2.36	1.29	0.74–2.26
Occasional smoker	6.9 (324)	0.50*	0.30–0.85	0.25***	0.15–0.41	6.9 (323)	1.94***	1.38–2.71	2.00***	1.41–2.83
Daily smoker	13.3 (626)	Ref		Ref		13.3 (624)	Ref		Ref	
Age										
25–44 years	31.3 (1491)	1.57***	1.27–1.94	5.06***	4.00–6.39	31.3 (1489)	1.23	1.00–1.51	1.25*	1.02–1.53
45–64 years	43.4 (2069)	1.01	0.84–1.21	1.75***	1.42–2.17	43.4 (2069)	1.03	0.85–1.25	1.06	0.88–1.28
65–74 years	25.4 (1211)	Ref		Ref		25.3 (1204)	Ref		Ref	
Gender										
Men	45.5 (2173)	1.26**	1.07–1.47	1.82***	1.54–2.15	45.6 (2172)	1.02	0.87–1.19	1.22**	1.05–1.42
Women	54.4 (2598)	Ref		Ref		54.4 (2590)	Ref		Ref	
Education										
Low	32.8 (1544)	1.01	0.83–1.22	0.77*	0.63–0.95	32.7 (1539)	1.06	0.88–1.28	1.20	1.00–1.44
Middle	33.0 (1554)	0.89	0.74–1.07	0.88	0.72–1.06	33.0 (1551)	1.01	0.84–1.21	1.18	0.99–1.41
High	34.2 (1612)	Ref		Ref		34.3 (1621)	Ref		Ref	
Marital status										
Widowed	3.4 (160)	1.07	0.71–1.61	1.42	0.88–2.28	3.3 (159)	0.75	0.49–1.15	0.74	0.49–1.12
Separated, divorced, or single	23.2 (1106)	1.05	0.87–1.27	1.39**	1.14–1.69	23.2 (1104)	0.88	0.74–1.05	0.80*	0.67–0.95
Married, registered partnership, or cohabiting	73.4 (3498)	Ref		Ref		73.4 (3492)	Ref		Ref	
Exposure to second-hand smoke										
Exposed to second-hand smoke at least 1 h/day	4.3 (197)	1.06	0.71–1.57	0.93	0.59–1.26	4.3 (197)	1.36	0.95–1.94	0.99	0.68–1.44
Not exposed to second-hand smoke	95.7 (4408)	Ref		Ref		95.7 (4402)	Ref		Ref	
Nagelkerke pseudo R[d]	0.209					0.047				
N[d]	4467					4462				

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.
[a]Distribution of dependent variable: low support 36.4% ($n = 1628$), neutral 33.2% ($n = 1485$), high support 30.3% ($n = 1354$). [b]Distribution of dependent variable: low support 34.8% ($n = 1554$), neutral 29.6% ($n = 1319$), high support 35.6% ($n = 1589$). [c]From the univariate associations (not shown on the table). [d]Full model (adjusted odds ratios): adjusted for smoking status, age, gender, education, marital status, exposure to second-hand smoke + alcohol use, income (not shown).

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groups supported stricter tobacco control compared with daily smokers (Table 2, panel A). Younger respondents and especially men supported less strict tobacco control policy compared with women and older respondents. Exposure to SHS was not associated with the measure. All other smoking status groups were more dissatisfied with the enforcement of the TCA compared with daily smokers (Table 2, panel B). Dissatisfaction with the implementation of the TCA was associated with ages 25–44 years and being exposed to SHS. Some of these associations were observable only in the insufficient versus sufficient model.

Non-smokers and occasional smokers viewed workplace bans more positively than daily smokers (Table 3, panel A). Lower educational level was associated with higher levels of support of workplace bans compared with higher education, but only in the low versus high support model. Recent quitters did not differ from daily smokers in their attitudes towards societal support for quitters (Table 3, panel B). All other groups according to smoking status had a more negative attitude towards support. Only in the low versus high support model did men and the youngest respondents view societal support for quitters more negatively compared with women and the oldest respondents, respectively.

Discussion

Our results show that, according to individual statements, the Finnish adult population is willing to restrict the availability and the overall position of tobacco in society. This confirms the status of smoking as a denormalised behaviour (e.g., Hakkarainen, 2013), which is especially observable among non-smokers but to some extent also among smokers. Stricter tobacco control and workplace smoking bans were supported, but societal support for quitters to a lesser extent. Implementation of the TCA was seen as insufficient. A more holistic approach revealed that smoking status, as well as

demographics, had independent associations with attitudes towards tobacco control measures.

Sæbø and Scheffels (2017) highlight three dimensions in the process of denormalisation of smoking: (un)acceptability, (in)visibility and, phasing out/maintaining the behaviour. As noted, smoking has continually declined for several years in Finland (Tobacco Statistics 2013, 2014), which supports the phasing out aspect. Our results emphasise that the level of acceptability of smoking in the Finnish adult population is low. Most of the population have positive attitudes towards strict tobacco control policy, even though there is some variation between different population groups, such as men and women. Smoking status groups also differed in their opinions on tobacco control, with never smokers and daily smokers being at the extremes, as shown before (Lykke, Helbech, & Glümer, 2014). One example of this social gradient in the level of acceptance of smoking was the proposition considering smoking on balconies. A difference in attitudes on this issue is understandable, as the prohibition of smoking on balconies touches the private life sphere of smokers more than other tobacco control actions do. If such tobacco control policy measures are implemented, the attitudes of the population about tobacco control policies could be even more polarised than found in this study. Following this, future policy-making, which relies on the wide acceptance of the policies by population, could become more difficult. It must be noted that non-smokers form a majority of the population and laws need to be aimed at their protection. Smokers are still shown to adapt to and comply with smoke-free laws, which increases approval for smoke-free legislation (Borland et al., 2006; Heloma & Jaakkola, 2003; Hyland et al., 2009; Lykke et al., 2014).

Our results show that TCA enforcement was seen as successful in workplaces. This is in line with the notion that only 4% of non-smokers are exposed to SHS in workplaces (Tobacco Statistics 2013, 2014). This could be associated with the invisibility dimension

of the denormalisation process; smoking is not largely seen in workplaces. The majority of the population also seem to be supportive of better enforcement of the TCA outside workplaces: enforcement of smoking restrictions was seen as insufficient and availability of tobacco products for minors was assessed as easy. Despite the popular desire to protect minors from tobacco-related harm, the current means are felt to be inadequate or unsuccessful. This notion, with the result that only a third of respondents viewed that smoking restrictions were enforced successfully, indicates a possible area for improvement in Finnish tobacco control policy. The strong approval rates for tobacco control legislation found also among smokers might help future tobacco control policies to better capture the norms already accepted in society (Pacheco, 2012). For instance, tightened sales restrictions for minors, in contrast to restricting smoking behaviour itself, could be expected to gain acceptance both among non-smokers and smokers in light of our results. There seems to be room for more denormalisation of smoking in society regarding the invisibility and unacceptability of tobacco, as the majority of the population consider that tobacco should be sold in fewer places and that teachers and healthcare personnel must not be allowed to smoke during working hours.

Protecting vulnerable groups from smoking has been considered one of the strongest pillars of Finnish tobacco control policy, but work remains to be done on providing cessation support (Joossens & Raw, 2017; Levy et al., 2012). Better implementation of tobacco control policy for smokers could mean societal practices to support quitting. Finnish tobacco control policy is based on restrictions, but in the light of the review by Joossens and Raw (2017) improvement is needed in the provision of evidence-based and accessible cessation services. Our findings reveal one possible explanation for downplaying the role of cessation support in health policy: both non-smokers and smokers have rather negative attitudes towards societal

support for stopping smoking (see Table 1). Smoking is perhaps seen as a personal responsibility (Rise, Aarø, Halkjelsvik, & Kovac, 2014), and its consequences (for example healthcare costs) are to be placed on individuals rather than on "innocent" groups. Even though it is impossible to know exactly what the respondents are referring to when they think about "society" (healthcare professionals, the healthcare system, etc.), the overall picture is that most of the population do not seem to view smokers as needing or deserving help in quitting smoking provided by society. This is surprising given the observation that even exposure to SHS is viewed to be harmful (see Table 1). Empowering smokers to seek and participate in treatment would be beneficial, because supported quitting is more efficacious than unaided quitting (Stead et al., 2013). In this, the social gradient in smoking cessation needs to be taken into account: those in lower socioeconomic groups are less likely to quit smoking than those in higher socioeconomic groups (Bosdriesz, Willemsen, Stronks, & Kunst, 2015). Smokers with a lower socioeconomic position may also be more nicotine dependent than smokers with a higher socioeconomic position (Pennanen et al., 2014). To promote the development and availability of cessation services on political agendas, it would be important to stress the cost-effectiveness of cessation support (see Cadier, Durand-Zaleski, Thomas, & Chevreul, 2016).

Earlier studies suggest that the association between education and tobacco control attitudes is somewhat ambiguous (Lykke et al., 2016; Thomson et al., 2016). We found only a few differences between educational groups on tobacco control attitudes, which implies that socioeconomic status may not be a strong predictor of attitudes towards tobacco control policies among the Finnish adult population in the 2000s. Notably, persons with lower levels of education supported workplace smoking bans to a greater extent than did persons with higher education levels. Educational differences may stem from different workplace environments, as

persons with lower levels of education may be exposed to SHS more than others (King, Homa, Dube, & Babb, 2014).

Our study has some limitations. The reliability of the component sufficiency of TCA enforcement was less than adequate, and so caution is needed when interpreting these results. In surveys, current smoking predicts non-responsiveness, while a diminishing response rate lowers the observed smoking prevalence (Kopra, Härkänen, Tolonen, & Karvanen, 2015; Rönmark et al., 2009). As Kopra et al. (2015) point out on the basis of FINRISK Study data, some selection bias is probable in our study as well. If more daily smokers had participated in this research, the differences between smoking status groups would likely be more pronounced. In terms of validity, we ran the analyses of all four regression models with linear regression, binary logistic regression, and ordinal regression. The results of these further models were similar with presented results, indicating adequate validity in the regression models. Moreover, our data were randomly sampled from the Finnish adult population including different population groups.

Conclusions

In Finland, social tolerance of smoking is low, and attitudes towards smokers and towards societal support for smoking cessation are negative. In order to reach the goal of a tobacco- and nicotine-free Finland by 2030, in addition to strong policies and primary prevention, further development of effective cessation services, currently criticised in Finland, is needed. Attitude change, where smokers are seen as deserving help to quit smoking, is important.

Declaration of conflicting interests

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Supplementary material

The supplementary material is available online with the article.

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