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Assessing the profile of support for potential tobacco control policies targeting availability in Great Britain: a cross-sectional population survey

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ABSTRACT

Aim To examine the level of support for tobacco availability policies across Great Britain (GB) and associations between support for policy and sociodemographic, smoking and quitting characteristics.

Methods A cross-sectional representative survey (the Smoking Toolkit Study) of adults in GB (n=2197) during September 2021. Logistic regressions estimated the associations between support for each policy and sociodemographic and smoking characteristics.

Findings There was majority support for requiring retailers to have a license which can be removed if they sell to those under-age (89.6%) and for restrictions on the sale of cigarettes and tobacco near schools (69.9%). More supported than opposed raising the legal age of sale of cigarettes and tobacco to 21 (49.2% supported; 30.7% opposed; 20.1% unsure) and reducing the number of retailers selling tobacco in neighbourhoods with a high density of tobacco retailers (46.5% supported; 23.3% opposed; 30.2% unsure). More opposed than supported a ban on the sale of cigarettes and tobacco to everyone born after a certain year from 2030 onward (a 'tobacco-free generation') (41.3% opposed; 34.5% supported; 24.2% unsure). Age was positively associated with support for raising the age of sale and inversely associated with requiring tobacco retailer licenses. Women were more likely to support raising the age of sale and reducing the number of retailers.

Conclusions Requiring tobacco retailer licensing and restrictions on sales near schools received majority support. Other tobacco availability policies received substantial support despite considerable opposition.

INTRODUCTION

In Great Britain (GB), much of health and social care policy is devolved such that the governments of Scotland and Wales have powers to legislate independently of the UK government.[1] National governments are considering or have already outlined an aim to reduce smoking prevalence to less than 5% within the next 10–15 years.[2–5] Public support or opposition to proposed tobacco control policies, and the characteristics of support/opposition, can inform and influence the likelihood of implementation of these policies by devolved governments.[6]

Potential policy options to reduce smoking prevalence to less than 5% include those that further affect the price, promotion and retail availability of tobacco, with the latter receiving comparatively little policy attention. One policy option is to

WHAT IS ALREADY KNOWN ON THIS TOPIC
⇒ There is little evidence on the level and characteristics of public support in Great Britain for policies targeting tobacco availability.

WHAT THIS STUDY ADDS
⇒ There was strong support for policies on retailer licensing and restricting the sale of cigarettes/tobacco near schools. There was greater support for than against raising the legal age of sale to 21 and for reducing the number of retailers selling tobacco in neighbourhoods with a high density of tobacco retailers.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY
⇒ Public support or opposition to tobacco control policies is subject to change and impacts the likelihood of implementation. This study has highlighted policies where support can be consolidated or improved through evidence-based communication and advocacy.

gradually phase out the legal sale of smoked tobacco products as the population ages by making it illegal to sell tobacco to anyone born after a certain year. A 'tobacco free generation' policy is included among plans by the New Zealand Ministry of Health.[7] In effect, the policy will gradually phase out the legal sale of smoked tobacco products as the population ages by making it illegal to sell tobacco to anyone born after a certain year. The policy was proposed in the context of broad public support for phasing out tobacco in New Zealand.[8] Other legislatures, such as Tasmania, have debated similar bills but they have as yet not been passed into law.[9] In recent decades smoking rates have consistently declined across GB[10] during a period in which several tobacco control policies were implemented (eg, tobacco retail display bans, tax increases, ban on smoking in cars with children, standardised packaging and minimum pack size laws).[11] Any accompanied changes in anti-smoking norms among all adults[12] and smokers[13 14] may have influenced the level of support towards any potential tobacco-free generation policy.

Proposals for raising the legal age of sale of cigarette and tobacco to 21 have received support from a majority of adults in the USA.[15] In 2021, the All Party Parliamentary Group on Smoking and Health, consisting of MPs and peers from parties

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and constituencies across GB, recommended Tobacco 21 as a policy for consultation in England.[16] This was supported by modelling suggesting that the policy would result in 77 000 fewer smokers taking up smoking up to 2030.[16 17] Recent surveys in England suggest the policy currently appears to have the support of the majority of adults in England (~65%), Canada (70.8%), Australia (65.1%) and the USA (62.2%).[18 19] There are currently no data on the level of support among adults in Scotland or Wales.

In line with recommended supply side measures in the FCTC Protocol to Eliminate Illicit Trade in Tobacco Products,[20] retailers across England and Scotland are currently required to register and obtain an ID to sell tobacco products (in Scotland, but not the rest of the UK, to sell vaping products retailers must be included in the register of tobacco retailers).[21] In the context of this existing retailer registration, the UK government consulted on the licensing of participants in the tobacco supply chain (including retailers) to tackle illicit trade in 2017. Following stakeholder responses from Scotland, Wales and England, the government concluded that there was little rationale for an additional tobacco supply-chain licensing system.[22] However, the policy for consultation was framed specifically around reducing illicit trade. Public support for an additional licensing system that could penalise retailers for under-age sale may encourage government consideration. Where implemented in the USA, evidence suggests that licensing may result in an immediate reduction in the number of retailers selling tobacco, increase compliance with the regulations in governing the sale of tobacco products and reduce smoking rates among youth.[23 24]

Specific policies directly restricting the number and/or density of tobacco retailers in communities with a high pre-existing density,[25] or near schools are also on the policy agenda in the UK.[26] Supported by findings from a recent review,[27] simulations in Scotland have suggested that prohibiting tobacco sales within 300 m of child spaces would reduce both national retailer numbers and outlet density, and reduce inequalities in density.[28] Yet, as with other novel policy options, data on the level and characteristics of public support in Great Britain are lacking.

The sociodemographic, smoking and quitting behaviours of who lends support have relevance for future policy. For instance, understanding support by socioeconomic position is important given that existing socioeconomic differences in smoking prevalence mean that policies would apply impact certain groups more than others.[29] Similarly, although policies that restrict access to tobacco products are more likely to be supported by non-smokers than current smokers,[30] there may be differential support among smokers themselves depending on their motivation to quit.

Differences in support for tobacco availability policies between GB nations will be relevant for the implementation and success of policies towards reducing smoking rates within each nation. Using a representative sample of adults from Scotland, Wales and England,[31] we aimed to answer the following research questions:

Among all adults:
1. What is the level of support for novel tobacco availability policies in GB, and in Scotland, Wales and England respectively?
2. What sociodemographic and smoking status characteristics are associated with support for each policy i) overall and ii) within each nation?

Among past-year smokers:
1. What smoking and quitting characteristics are associated with support for each policy in GB?

MATERIALS AND METHODS

Sample and recruitment

Data were drawn from the Smoking Toolkit Study (STS, a cross-sectional survey of a representative sample of adults (≥18 years) in Scotland, Wales and England) in September 2021.[31]

The STS uses a hybrid of random location and quota sampling to select a new sample of approximately 2400 adults each month (~1800 in England, ~350 in Scotland and ~250 in Wales). Telephone interviews are performed with one household member until quotas based on factors influencing the probability of being at home (eg, gender, age, working status) are fulfilled.

We used survey weighting to match descriptive data to the Great Britain sociodemographic population profile on age, social grade, region, tenure, ethnicity and working status within sex.[31] More detailed methods on sampling and data collection are available elsewhere.[31]

Measures

Support for novel tobacco availability policies

Policy ideas were selected following consultation and iterative review with academic, government, non-government and advocacy stakeholders from different jurisdictions associated with the Shaping public health policies to reduce inequalities and harm (SPECTRUM) consortium (www.spectrum.ac.uk). First, a version of the questions was sent out to each stakeholder to review and comment. Once received, the survey items were discussed by all coauthors and wording refined before re-sharing with stakeholders for approval.

Survey respondents were asked to indicate whether they would support the following statements (response options: Strongly support/Tend to support/No opinion either way/Tend to oppose/Strongly oppose/Unsure or don't know):
1. Ban the sale of cigarettes and tobacco products to everyone born after a certain year from 2030 onward.
2. Raising the legal age of sale of cigarettes and tobacco from 18 to 21
3. Requiring anyone selling tobacco to have a license which can be removed if they sell to those under-age
4. Reducing the number of retailers selling cigarettes and tobacco in neighbourhoods with a high density of tobacco retailers.
5. Restricting the sale of cigarettes and tobacco in close proximity to schools.

For prevalence estimates, responses of "strongly support" or "tend to support" are presented as 'Yes', responses of "Tend to oppose" or "Strongly oppose" are presented as 'No', and responses of "No opinion either way" or "Don't know/unsure" are presented as 'No opinion/unsure'.

For regression models, responses under 'No' and 'Not sure' were collapsed into 'Do not support' to create a dichotomous outcome variable.

Nation in GB

GB data were split into Scotland, Wales and England using government office region classifications.

Sociodemographic characteristics

The sociodemographic characteristics sex (categorised as women vs other (including men or 'in another way')), age (continuous variable) and social grade (ABC1: higher and intermediate managerial, administrative and professional, supervisory, clerical and junior managerial, administrative and professional; C2DE: skilled manual workers, semi-skilled and unskilled manual

workers and state pensioners, casual and lowest-grade workers, unemployed with state benefits) were included.

Whether or not respondents have children at home was derived from a question regarding household status. Responses were dichotomised into 'Yes' or 'No' indicating the presence or absence of children at home.

Using local authority code data, respondents were classified according to whether they live in rural, suburban, urban or metropolitan area. For ease of interpretation, suburban, urban and metropolitan were collapsed into 'urban'.

Smoking status

Respondents indicating they smoked cigarettes daily or non-daily were classified as cigarette smokers. Those indicating they had stopped smoking or had never smoked were classified as ex-smokers and never smokers, respectively. Those who indicate that they do not smoke cigarettes but do smoke tobacco of some kind (N=33) were excluded from the analysis because they do not include measures that assess dependence in cigarette smokers.

Cigarette dependence

Cigarette dependence was measured using a measure of strength of urges to smoke (SUTS).[32] SUTS has been found to be a useful measure of cigarette dependence.[32]

The heaviness of smoking index (HSI)[33] was used as an alternate measure of dependence in a sensitivity analysis.[34]

Motivation to stop smoking

Motivation to stop smoking was measured using the Motivation To Stop Scale (MTSS).[35] The MTSS is single-item measure consisting of seven response options reflecting increasing motivation to quit. Responses were collapsed into two variables reflecting high (6–7) versus low (1–5) motivation to stop smoking to allow easier interpretation.[36]

Past-year quit attempt

Quit attempts in the past year were measured among past-year smokers using the question "How many serious attempts to stop smoking have you made in the last 12 months?" We distinguished those who had not attempted to quit in the last year versus those who made one or more attempts.

Analysis

Respondents with missing data on any of the variables of interest were excluded from the analyses (less than 5% of responses). Characteristics of the sample and levels of support overall and within each GB nation are presented using weighted descriptive statistics.

Weighted prevalence data on support for each policy option are presented for GB overall, and for descriptive comparisons between Scotland, Wales and England.

All variables were included in multivariable logistic regression models with the whole sample to evaluate which, if any, of the assessed sociodemographic and smoking status variables are independently associated with favouring each tobacco availability policy option, respectively. Models were constructed for both the overall Great Britain sample and also stratified by nation to provide within country estimates.

Similar multivariable logistic regression models were constructed with the sample restricted to past-year smokers to evaluate which, if any, of the smoking and quitting characteristics (past-year quit attempts, motivation to stop, SUTS) are associated

with favouring each tobacco availability policy option, respectively. Due to the reduced sample size, models were constructed for the overall Great Britain sample only. We conducted sensitivity analyses using cigarette dependence measured using HSI instead of SUTS to explore whether a different validated measure of cigarette dependence impacted the findings, given that HSI is measured using different constructs (cigarettes per day and first cigarette after waking) to SUTS.

Analyses were pre-registered on the open science framework (https://osf.io/mtwxe) and conducted using R V.4.0.3.

Unregistered changes to analysis plan

Sparse data precluded stratified nation analyses when selecting the past-year smoker samples. Analyses were therefore only conducted using the overall Great Britain sample. An additional sensitivity analysis was run excluding individuals reporting "Don't know/unsure" (but not those expressing 'no opinion either way') in response to each respective policy support question to explore the effect that excluding these individuals from the models (on the assumption that they may not have understood the policy) would impact the findings (online supplemental material table S1).

Following peer review, we have included an extra sensitivity analysis assessing the associations between support for policy and length of abstinence among ex-smokers (online supplemental material table S2), and a breakdown showing the raw responses to each policy item (online supplemental material table S3).

RESULTS

A total of 2197 adults completed the survey in September 2021. Weighted sample characteristics for the overall sample are provided in table 1. Compared with England, Scotland and Wales samples had higher percentages of respondents from rural areas.

Great Britain

In GB, there was majority support for requiring retailers to have a license which can be removed if they sell to those under-age, and for restrictions on the sale of cigarettes and tobacco in close proximity to schools (89.6% and 69.9%, respectively) (figure 1). There was near majority support for raising the legal age of sale of cigarettes and tobacco to 21 (49.2%), and for reducing the number of retailers selling cigarettes and tobacco in neighbourhoods with a high density of tobacco retailers (46.5%). Participants most commonly opposed a ban on the sale of cigarettes (41.3%) and tobacco products to everyone born after a certain year from 2030 onward (henceforth referred to as a 'tobacco-free generation'), although 1 in 3 (34.5%) expressed support for this move.

Results for independent associations between support for proposed tobacco availability policies and selected sociodemographic and smoking status characteristics are shown in table 2. Age was positively associated with support for raising the age of sale to 21 (OR 1.06, 95% CI 1.01 to 1.12; p<0.05) and inversely associated with support for requiring tobacco retailer licenses (OR 0.86, 95% CI 0.79 to 0.94; p<0.001). Women were more likely to support raising the age of sale to 21 (OR 1.25, 95% CI 1.05 to 1.49; p<0.05) and reducing the number of retailers in high-density retailer neighbourhoods (OR 1.34, 95% CI 1.12 to 1.60; p<0.001). Compared with never smokers, current smokers were less likely to support any of the proposed availability policies, and ex-smokers were less likely to support a tobacco ban on the sale of cigarettes and tobacco products to everyone

Table 1 Characteristics of sample (weighted data)

Characteristic	Great Britain (N = 2013*)	England, N=1735*	Wales, N=95*	Scotland, N=183*	P value[2]
Age					0.4
18–24	11% (219)	11% (199)	7% (7)	7% (13)	
25–34	17% (350)	18% (304)	17% (16)	17% (30)	
35–44	16% (312)	15% (265)	18% (17)	16% (30)	
45–54	17% (333)	16% (285)	19% (18)	17% (30)	
55–64	16% (321)	16% (280)	10% (10)	17% (31)	
65+	24% (475)	23% (400)	28% (27)	27% (48)	
Unknown	3	3	0	0	
Sex					0.8
Other	50% (997)	50% (863)	47% (45)	49% (89)	
Women	50% (1016)	50% (872)	53% (50)	51% (94)	
Social grade					0.5
ABC1	55% (1061)	56% (919)	54% (50)	51% (92)	
C2DE	45% (865)	44% (736)	46% (42)	49% (87)	
Unknown	87	80	3	3	
Urban/rural					<0.001
Urban	78% (1577)	81% (1410)	60% (57)	60% (110)	
Rural	22% (436)	19% (325)	40% (38)	40% (73)	
Children in household	28% (568)	28% (490)	32% (30)	26% (48)	0.6
Smoking status					0.6
Never	58% (1,160)	57% (993)	65% (62)	58% (106)	
Stopped >1 year ago	25% (507)	26% (444)	23% (22)	23% (42)	
Stopped in past year	2% (47)	2% (42)	1% (1)	2% (4)	
Smoker	15% (291)	14% (451)	12% (11)	16% (30)	
Unknown	7	6	0	1	
Past-year smoker	17% (339)	17% (293)	12% (12)	19% (34)	0.3
Quit attempt in past year	43% (141)	44% (125)	13% (1)	44% (15)	0.06

*GB unweighted n=2197; England unweighted n=1653; Wales unweighted n=183; Scotland unweighted n=361.

born after a certain year, and restricting sales near schools. A sensitivity analysis excluding those reporting "Don't know/ unsure" in response to the policy support question conformed to the main analysis (online supplemental material table S1). The majority of responses collapsed into the "No opinion/unsure" category of responses were those who indicated that they had "no opinion either way" (online supplemental material table S3). Only ~1%–4% (depending on the policy) of respondents indicated they were unsure or did not know whether they supported or opposed the proposed policies.

Scotland

The levels of support for tobacco availability policies in Scotland were broadly similar to the GB sample with the exception that there was a similar level of support and opposition to the tobacco-free generation proposal (37.8% supported vs 37.6% opposed) (figure 1).

There was no clear evidence for independent associations between sociodemographic characteristics and support for policies in Scotland (table 3). Smokers were significantly less likely to support the tobacco-free generation proposal (OR 0.38, 95% CI 0.18 to 0.77; p<0.05), reducing tobacco retailer density (OR 0.23, 95% CI 0.11 to 0.46; p<0.001) and restricting the sale of tobacco near schools (OR 0.33, 95% CI 0.18 to 0.63; p<0.012).

Wales

The profile of support for tobacco availability policies in Wales was broadly similar to GB with the exception that there was a similar level of support and opposition for raising the legal

age of sale of cigarettes and tobacco to 21 (41.8% supported vs 40.0% opposed) (figure 1).

There was little evidence for independent associations between sociodemographic characteristics and support for policies in Wales, with the exception of lower odds of support for tobacco retailer licenses (OR 0.22, 95% CI 0.06 to 0.773; p<0.05) and restricting sales near schools (OR 0.48, 95% CI 0.23 to 0.98; p<0.05) among those from social grade C2DE (table 3). Smokers were also significantly less likely to support the tobacco-free generation proposal (OR 0.27, 95% CI 0.07 to 0.83; p<0.05).

England

The majority of respondents (N=1653) in the survey were from England, which meant that the levels of support for tobacco availability policies largely reflected the weighted GB sample (figure 1).

In England, age was positively associated with support for raising the age of sale to 21 (OR 1.01, 95% CI 1.00 to 1.01; p<0.05) and inversely associated with support for requiring tobacco retailer licenses (OR 0.98, 95% CI 0.97 to 0.99; p<0.001) (table 3). Women were more likely to support raising the age of sale to 21 (OR 1.26, 95% CI 1.03 to 1.54; p<0.05), requiring tobacco retailer licenses (OR 1.54, 95% CI 1.10 to 2.17; p<0.05) and reducing the number of retailers in high-density retailer neighbourhoods (OR 1.44, 95% CI 1.18 to 1.77; p<0.001). Compared with never smokers, both current smokers and ex-smokers were less likely to support the tobacco-free generation proposal, or the restriction of sales near schools.

Figure 1 Prevalence of support for tobacco availability policies in Great Britain (GB), Scotland, Wales and England (weighted data[a]). [a]GB unweighted n=2197; Scotland unweighted n=361; Wales unweighted n=183; England unweighted n=1653; unique weights for GB, Scotland, Wales and England respectively.

Current smokers alone were less likely to support all other proposed tobacco availability policies.

Smoking and quitting characteristics

In GB, compared with past-year smokers with low/moderate motivation to stop smoking, those with high motivation to stop had higher odds of supporting the tobacco-free generation proposal (OR 3.45, 95% CI 1.68 to 7.14; $p<0.001$) and reducing the density of tobacco retailers (OR 2.60, 95% CI 1.29 to 5.27; $p<0.01$) (online supplemental material table S4). There were no apparent associations between support for policies and past-year quit attempts or strength of urges to smoke nor with the HSI in the sensitivity analysis. The one exception was that those with HSI indicative of higher levels of dependence were less likely to support requiring licenses for tobacco retailers (OR 0.36, 95% CI 0.16 to 0.83; $p<0.05$) (online supplemental material table S5). In a sensitivity analysis assessing support for each policy among ex-smokers according to their length of abstinence in years, associations were weak or non-apparent with one exception; length of abstinence was associated with greater support for the policy to reduce the number of tobacco retailers (OR 1.23, 95% CI 1.06 to 1.43; $p<0.05$) (online supplemental material table S2).

DISCUSSION
Ban the sale of cigarettes and tobacco products to everyone born after a certain year from 2030 onward (tobacco-free generation)

The tobacco-free generation policy received greater opposition (41.3%) than support (34.5%) from adults in GB, except in Scotland where there were similar levels of opposition and support. However, our data suggest that there is a considerable minority (24.2%) of adults across GB who are unsure whether they support or oppose the ban. Contested arguments against this policy centre around it being a restriction on individual autonomy, would foster an unregulated black market and penalise the most disadvantaged groups in society where there are higher smoking rates.[9 37] In contrast, proponents argue that a tobacco-free generation policy respects the individual autonomy of smokers who wish to quit or wish they had never started[35 38] and that the restriction applies to future generations of smokers only, since older adults who were smokers before its enactment would still be able to buy cigarettes. Furthermore, there are substantial well-being gains to be had by preventing the inequalities in suffering and premature death that smoking causes.[29 39] The New Zealand (NZ) government has recently announced its intention to enact such a policy, which will apply to anyone born after the year 2008.[40] Importantly, other nicotine products

Table 2 Independent associations (unweighted) between support for tobacco availability policies and sociodemographic and smoking status characteristics in Great Britain

Variable	Tobacco-free generation			Tobacco 21			Retail license			Reducing retailers			Restricting sale near schools		
	% Support	OR	95% CI	% Support	OR	95% CI	% Support	OR	95% CI	% Support	OR	95% CI†	% Support	OR	95% CI
Age (10-year increments)		1.01	0.96 to 1.07		1.06*	1.01 to 1.12		0.86†	0.79 to 0.94		0.99	0.94 to 1.05		0.99	0.93 to 1.05
Sex															
Other	34%	—	—	47%	—	—	88%	—	—	44%	—	—	68%	—	—
Women	34%	0.95	0.79 to 1.14	53%	1.25*	1.05 to 1.49	91%	1.25	0.94 to 1.67	51%	1.34†	1.12 to 1.60	72%	1.17	0.96 to 1.41
Social grade															
ABC1	34%	—	—	49%	—	—	91%	—	—	49%	—	—	72%	—	—
C2DE	36%	1.21	1.00 to 1.47	51%	1.09	0.91 to 1.31	87%	0.79	0.59 to 1.07	45%	0.95	0.79 to 1.14	67%	0.87	0.71 to 1.06
Children in household															
No	33%	—	—	51%	—	—	89%	—	—	47%	—	—	69%	—	—
Yes	37%	1.21	0.97 to 1.51	49%	1.02	0.83 to 1.26	91%	0.97	0.67 to 1.41	49%	1.04	0.84 to 1.29	72%	1.11	0.87 to 1.40
Urban/rural															
Urban	34%	—	—	49%	—	—	90%	—	—	47%	—	—	69%	—	—
Rural	35%	1.04	0.84 to 1.28	53%	1.12	0.91 to 1.38	89%	1.00	0.72 to 1.40	49%	1.10	0.89 to 1.35	71%	1.06	0.85 to 1.33
Smoking status															
Never smoker	39%	—	—	52%	—	—	91%	—	—	52%	—	—	74%	—	—
Ex-smoker	32%	0.74*	0.60 to 0.92	49%	0.87	0.71 to 1.06	90%	0.93	0.67 to 1.31	48%	0.84	0.69 to 1.03	69%	0.76*	0.61 to 0.95
Smoker	21%	0.42†	0.31 to 0.57	43%	0.70*	0.53 to 0.91	84%	0.51*	0.35 to 0.77	27%	0.31†	0.23 to 0.42	52%	0.38†	0.29 to 0.50

N = 2045.
*P value less than 0.05.
†P value less than 0.001.

Table 3 Independent associations (unweighted) between support for tobacco availability policies and sociodemographic and smoking status characteristics in Scotland, Wales and England

Variable	Tobacco-free generation			Tobacco 21			Retail license			Reducing retailers			Restricting sale near schools		
	% support	OR	95% CI	% support	OR	95% CI	% support	OR	95% CI	% support	OR	95% CI	% support	OR	95% CI
Age (10-year increments)															
Scotland		1.04	0.91 to 1.19		0.96	0.84 to 1.09		0.84	0.68 to 1.02		0.96	0.84 to 1.09		0.98	0.85 to 1.12
Wales		1.01	0.82 to 1.25		1.05	0.86 to 1.29		1.25	0.84 to 1.88		1.01	0.83 to 1.23		1.23	0.98 to 1.55
England		1.01	0.94 to 1.07		1.08*	1.02 to 1.15		0.83†	0.74 to 0.92		1.00	0.94 to 1.06		0.97	0.91 to 1.04
Sex: Women (ref Other)															
Scotland	36%	1.13	0.71 to 1.79	55%	1.28	0.83 to 1.98	87%	0.68	0.34 to 1.34	50%	1.16	0.74 to 1.80	68%	1.01	0.63 to 1.62
Wales	32%	0.69	0.35 to 1.32	52%	0.97	0.51 to 1.82	89%	0.49	0.14 to 1.61	47%	0.96	0.51 to 1.78	74%	0.95	0.46 to 1.98
England	34%	0.95	0.77 to 1.18	53%	1.26*	1.03 to 1.54	92%	1.54*	1.10 to 2.17	51%	1.44†	1.18 to 1.77	72%	1.23	0.99 to 1.54
Social grade: C2DE (ref ABC1)															
Scotland:	38%	1.46	0.89 to 2.40	49%	0.94	0.59 to 1.50	84%	0.63	0.31 to 1.29	47%	1.13	0.70 to 1.83	65%	1.06	0.64 to 1.76
Wales	37%	1.19	0.62 to 2.30	51%	0.98	0.52 to 1.84	86%	0.22*	0.06 to 0.73	43%	0.68	0.36 to 1.26	66%	0.48*	0.23 to 0.98
England	35%	1.17	0.93 to 1.46	52%	1.15	0.93 to 1.42	88%	0.95	0.67 to 1.35	45%	0.95	0.76 to 1.18	67%	0.89	0.71 to 1.13
Children in household: Yes (ref No)															
Scotland	38%	1.41	0.80 to 2.47	55%	1.07	0.63 to 1.82	96%	2.68	0.95 to 9.61	54%	1.34	0.78 to 2.33	74%	1.56	0.87 to 2.88
Wales	36%	0.95	0.41 to 2.21	40%	0.54	0.24 to 1.20	84%	0.47	0.12 to 1.75	48%	0.96	0.43 to 2.13	68%	1.08	0.45 to 2.64
England	37%	1.20	0.93 to 1.54	49%	1.09	0.85 to 1.38	91%	0.89	0.59 to 1.38	48%	1.01	0.79 to 1.29	72%	1.05	0.80 to 1.38
Urban/rural: Rural (ref Rural)															
Scotland	38%	1.15	0.72 to 1.83	52%	0.92	0.59 to 1.43	88%	0.93	0.47 to 1.85	51%	0.98	0.63 to 1.54	73%	1.33	0.82 to 2.16
Wales	36%	1.10	0.57 to 2.13	55%	1.17	0.62 to 2.20	95%	1.62	0.48 to 6.48	48%	0.98	0.52 to 1.84	78%	1.30	0.63 to 2.77
England	34%	0.96	0.73 to 1.27	53%	1.17	0.90 to 1.52	88%	0.92	0.61 to 1.41	48%	1.10	0.85 to 1.44	68%	0.93	0.70 to 1.24
Smoking status (ref Never smoker)															
Scotland: Ex-smoker	40%	1.08	0.62 to 1.86	49%	0.86	0.51 to 1.46	84%	0.68	0.31 to 1.52	54%	1.06	0.62 to 1.81	67%	0.73	0.41 to 1.31
Scotland: Smoker	20%	0.38*	0.18 to 0.77	48%	0.75	0.40 to 1.37	87%	0.67	0.27 to 1.79	25%	0.23*	0.11 to 0.46	50%	0.33†	0.18 to 0.63
Wales: Ex-smoker	27%	0.48	0.22 to 1.03	48%	0.75	0.36 to 1.52	88%	0.33	0.08 to 1.25	38%	0.63	0.31 to 1.27	69%	0.70	0.30 to 1.62
Wales: Smoker	19%	0.27*	0.07 to 0.83	33%	0.37	0.13 to 1.02	86%	0.29	0.06 to 1.62	38%	0.53	0.19 to 1.41	57%	0.42	0.15 to 1.21
England: Ex-smoker	31%	0.72*	0.56 to 0.92	49%	0.89	0.70 to 1.12	91%	1.11	0.75 to 1.66	47%	0.84	0.67 to 1.06	52%	0.77*	0.59 to 0.99
England: Smoker	22%	0.44†	0.30 to 0.62	43%	0.72*	0.53 to 0.99	83%	0.47†	0.30 to 0.75	26%	0.31*	0.22 to 0.44	25%	0.38†	0.27 to 0.52

Scotland N=346. Wales N=172. Scotland N=1572.
*P value less than 0.05.
†P value less than 0.001.

such as e-cigarettes/vapes will not be restricted under the policy, with the NZ Ministry of Health intending to balance the benefits of supporting a switch from smoked tobacco to less harmful e-cigarette use with preventing uptake among young people.[40] Evidence on the consequences of the tobacco-free generation will inform the ongoing debate in GB and elsewhere. Indeed, a tobacco-free generation proposal has recently been included as a 'critical recommendation' in a UK government commissioned report into policies needed to achieve the goal of <5% smoking prevalence by 2030.[41] Despite this recommendation, a tobacco-free generation law may face political barriers in the UK, as was the case in the recent failed bill in Tasmania.[9]

While some respondents may have misunderstood the wording of the proposed policy items, of those we collapsed into the category of "No opinion/unsure" those reporting "I don't know/unsure" were are considerable minority compared with the majority of "No opinion either way". This suggests that newer policies which have not yet received much public discussion reveal a large section of public who may be open to changing their view following public consultation and debate. Nonetheless, further qualitative work is needed (such as through citizen juries[42]) to provide a more nuanced understanding of public views on these policies.

Raising the legal age of sale of cigarettes/tobacco from 18 to 21

Similar to ASH UK and ITC project findings,[18][19] the 'Tobacco 21' policy was more likely to be supported than opposed, receiving support from just under half of adults in GB. Similar patterns of support have been reported in the Netherlands[43] and Germany.[44] Opposition to raising the age of sale may reflect uncertainty about the exact nature of the policy amid fears that it may criminalise under-age smokers who purchase cigarettes. If this were true, it would disproportionately and inequitably impact younger people from lower income communities who are more likely to smoke compared with more advantaged groups. However, the proposed 'Tobacco 21' policy would penalise to target those who sell, rather than purchase, cigarettes. Enforcement would therefore strictly apply to retailers who would face penalties including fines and the removal of their license to sell if found to be selling to those underage.[44]

In GB and within England, age was positively associated with support for raising the age of sale. This likely reflects the fact that the older individuals may not perceive the policy to be personally restrictive. Women were also more likely to support the age of sale policy. This may reflect gendered differences in attitudes towards government public health policy. Some US studies have indicated that women are more likely than men to support interventionist/social government policy[45][46] and engage in and promote health-seeking behaviour.[47]

Although actively under consideration by the UK government,[16] it is possible that enactment of 'Tobacco 21' will affect England and Wales, but not Scotland due to devolved decision-making. Partial implementation across GB would, due to interconnections across the devolved nations, likely undermine compliance and subsequent policy effectiveness. The rationale for the policy is to limit the direct access to those who are currently legally permitted to purchase cigarettes, but also to limit access for younger smokers via proxy buyers between 18 and 20.[43] Where implemented in the USA, these methods have indicated that the policy has yielded substantive reductions in smoking prevalence among individuals 18–20 years old living in affected areas.[43][48–50]

Requiring anyone selling tobacco to have a license which can be removed if they sell to those under-age

A requirement for retailers to obtain a license to sell tobacco was strongly supported, with ~5% opposition. Those in opposition were more likely to be younger. To sell tobacco, retailers in Scotland and England are currently only required to register with the government (and where applicable the Scottish Government's national register).[51][52] A licensing scheme would require retailers to provide information for authorities to determine whether they are permitted to sell tobacco and revoke a license if products were sold to those under-age. This increased oversight is intended to reduce youth smoking prevalence by preventing illegal sales to minors,[23] which has been reported in different local contexts despite existing enforcement.[53][54] While licensing has been considered in the UK, there are concerns that local authorities and retailers would experience unnecessary financial and administrative burden.[53] Nonetheless, our findings indicate strong majority public support for licensing, which may influence further consideration by policymakers.

Reducing the number of retailers selling cigarettes and tobacco in neighbourhoods with a high density of tobacco retailers

A near majority of adults supported a policy to reduce the number of retailers selling tobacco in retailer-dense neighbourhoods. Studies in NZ and the USA indicate that a similar percentage of adults support retail reduction policies.[55][56] Retailer reduction policies can involve imposing a minimum distance between retailers, limiting the types of retailers that can sell tobacco and/or capping the number of retailers in a specified geographical area or per population.[57] A recent review highlighted for the effectiveness of policies broadly focused on reducing retailer density. This was largely based on evaluations of policies specifically targeted to retailer type and distancing rather than number reduction policies.[27] Moreover, although simulation studies suggest boosted reductions in smoking,[27][28] there are currently no published evaluations of the impact on smoking prevalence.[27] Nonetheless, research in Scotland using a measure of outlet density found that residents of high outlet density areas were more likely to smoke and less likely to be an ex-smoker compared with those from lowest outlet density areas.[58] Considering related evidence that the most deprived neighbourhoods in Scotland have the highest density of retailers,[25] addressing retailer density may help attenuate the persistent socioeconomic inequalities in smoking and smoking cessation by lessening exposure and access to cigarettes.[28][58]

Restricting the sale of cigarettes and tobacco in close proximity to schools

Over two-thirds of adults in GB supported a policy restricting tobacco sales near schools. This conforms to results from surveys in NZ.[56] Rationale for the policy follows concern that exposure outside schools increases the likelihood of youth smoking uptake.[59] However, there is mixed evidence on the relationship between tobacco retailer density and proximity around schools and smoking among students. Evidence from systematic reviews, and from research in Scotland specifically, suggests that close proximity and retail density around home, but not school, environments is associated with youth smoking.[59–62] This suggests that any potential benefits of restricting sales near schools may be diminished by exposure to other retail environments that young people experience each day.

Support for policies according to smoking and quitting characteristics

Smokers were less likely to support any of the proposed tobacco availability policies compared with those who have never smoked. Although most smokers express some motivation to quit,[35][38] they do not uniformly support government policy to restrict access to cigarettes. Furthermore, as our results show, many ex-smokers who managed to quit successfully may not see the need for stronger regulation. However, evidence from several countries highlights that there is often considerable, if not majority, support for tobacco control policies even among smokers.[37] This is reflected in our findings of differences in support for some policies according to level of motivation to stop smoking. For instance, those expressing high motivation to quit smoking were more likely to support a ban on tobacco and reducing retailer density. In this context, tobacco control policy can be compatible with individual autonomy. For these individuals, despite their motivation to quit smoking, the ease of access to cigarettes and the nature of cigarette addiction may undermine their potential to make a quit attempt.[58] This is reflected in the absence of any associations between making a quit attempt and each respective policy. By reducing availability, more smokers may be encouraged to attempt to quit, which would likely boost overall cessation rates at the population level.

Importantly, tobacco availability interventions that are estimated to reduce the overall prevalence of smoking may concurrently increase health inequalities if they lead to comparably higher rates of reduction among more advantaged compared with disadvantaged groups.[28] It remains important to estimate the equity impact of policies before and following implementation and to target support for smoking cessation and prevention in priority communities with higher levels of smoking prevalence.

Limitations and future considerations

This study has limitations. First, the use of cross-sectional observational data and potentially unmeasured covariates limits our ability to infer causality between included variables and support for policies. Second, the sample sizes for Scotland and Wales analyses may be underpowered. Third, data on support for tobacco availability were collected during one survey wave, and if further data were collected, the results may change. This will be monitored going forward. Moreover, as with smoke-free laws, policy support and norms can often increase in favour of the policy following implementation.[63] Should any of the included tobacco availability policies be implemented, future research should explore public support following implementation to understand whether evidence and experience as to their effectiveness influences public perceptions of new legislation. In this context, further research could assess whether or not perceptions towards different policies depend on the underlying political ideology of individuals, and the real or perceived effectiveness of each policy for reducing smoking prevalence. Indeed, there is evidence that framing a policy in terms of effectiveness can shift opinion.[64]

Other policies to drastically reduce retail availability (that we did not cover) have been considered in NZ, for instance, to only allow the sale of tobacco products in specific outlets (such as pharmacies, where smokers can also be targeted with smoking cessation advice) and/or to restrict the sale in convenience stores that young people visit frequently.[27] Although perceived by smokers to be effective at preventing initiation and boosting smoking cessation,[65] these approaches have been considered politically unviable in the context of other tobacco control policies[66] and disproportionately affecting the business model of smaller retailers.[67] As with the tobacco-free generation policy, evidence as to the effectiveness and feasibility of these policies in NZ will inform debate in other countries.

CONCLUSIONS

Our findings using a representative population survey of adults in GB indicate that policies to restrict tobacco retail near schools, and for tobacco retailer licenses, would receive strong majority from the public if legislated. Raising the age of sale to 21 and reducing the number of tobacco retailers received greater support than opposition, while the opposite was true for the tobacco-free generation policy. However, given that a substantial proportion of respondents report having no opinion either way on these policies, there is potential to encourage public support through clearer communication and advocacy for the evidence and benefits of these policies.[64] Moreover, support for tobacco availability policy may grow, and opposition diminish, as future generations grow up without cigarettes.

Original research

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