



Short Communication

Brazilian smokers are ready for the ban on flavour additives in tobacco to be implemented

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ABSTRACT

Brazil became the first country to approve a national policy to ban all flavour additives in all tobacco leaf products in 2012. However, as of February 2022, the policy remained to be implemented. Cross-sectional data come from the International Tobacco Control (ITC) Brazil Wave 3 Survey among adult smokers ($N = 1216$) in 2016–2017. The majority of smokers supported a ban on menthol (56.0%; 95%CI: 51.7–60.2%) and a ban on all additives (61.7%; 57.5–65.8%), with no significant differences across sociodemographic groups in adjusted logistic regression models. More than half of menthol smokers reported they would either quit or reduce the amount they smoked if menthol cigarettes were banned. Findings suggest that there is support for Brazil's ban on flavour additives, which is a determinant of successful policy implemented. Continued delays will postpone an important measure with demonstrated public health gains.

1. Introduction

Flavours in tobacco products increase their attractiveness and appeal (Report of the Working Group on Tobacco Additives Rio de Janeiro, Brazil, 2014). Following the WHO Framework Convention on Tobacco Control (World Health Organization, 2022), Brazil became the first country to approve a national policy to ban all flavour additives in all tobacco leaf products in 2012 (Erinoso et al., 2020; No Agência Nacional De Vigilância Sanitária (ANVISA – National Health Surveillance Agency), 2022). However, the tobacco industry interfered with the implementation of the ban through litigation, front groups, and lobbying (Oliveira da Silva et al., 2019). In 2018, Brazil's Supreme Federal Court upheld the ban in response to tobacco industry challenge; however, the tied ruling (5–5) did not pre-empt cases filed in the lower courts (Oliveira da Silva et al., 2019). As of February 2022, the additive ban remained to be implemented. Moreover, the number of industry-registered flavoured tobacco products tripled between 2012 and 2021 (Sónora et al., 2022), with menthol (non-capsule) and flavour capsule

cigarettes making up 6.7% of the overall cigarette market share in Brazil in 2020 (Euromonitor International, 2022). Unsurprisingly, smoking rates in Brazil have not declined in recent years among youth aged 13–17 (6.6% in 2015 vs. 6.8% in 2019) and young adults aged 18–24 (10.5% in 2013 vs. 10.6% in 2019) (Szklo, 2019). This study among smokers in Brazil examined anticipated behaviours in response to a menthol ban and support for banning menthol and all additives including flavours.

2. Methods

Cross-sectional data come from the International Tobacco Control (ITC) Brazil Wave 3 Survey (September 2016–March 2017), among a representative sample of 1216 adult smokers aged 18+ from Rio de Janeiro, São Paulo, and Porto Alegre. Further details on the methodology can be found elsewhere (ITC Project, 2018). Bivariate and multiple logistic regression analyses on weighted data were performed in Stata.

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Table 1Factors associated with supporting a ban on menthol and a ban on all additives among smokers in the 2016–2017 ITC Brazil Wave 3 Survey, weighted ($N = 1216$).

	Support a ban on menthol ¹				Support a ban on all additives ¹			
	n	%	aOR†	95% CI	n	%	aOR†	95% CI
Overall	649	56.0			746	61.7		
City								
Rio De Janeiro	238	60.4	1.00		247	61.3	1.00	
São Paulo	219	54.8	0.79	(0.54, 1.16)	255	62.2	1.02	(0.69, 1.51)
Porto Alegre	192	47.8	0.68	(0.45, 1.02)	244	59.4	1.05	(0.69, 1.59)
Gender								
Female	316	54.6	1.00		385	65.6	1.00	
Male	333	57.3	1.29	(0.93, 1.80)	361	58.2	0.86	(0.62, 1.21)
Age group (years)								
18–24	16	58.4	1.00		14	52.8	1.00	
25–39	100	51.0	0.47	(0.15, 1.46)	112	57.6	0.89	(0.33, 2.40)
40–54	206	63.1	0.80	(0.26, 2.44)	221	66.8	1.44	(0.54, 3.82)
55+	327	52.8	0.54	(0.18, 1.60)	399	61.8	1.16	(0.45, 3.01)
Household income								
Low (<3 MW)	282	57.2	1.00		332	63.4	1.00	
Moderate (3–9 MW)	254	56.5	1.06	(0.73, 1.53)	287	62.8	1.11	(0.77, 1.61)
High (10+ MW)	62	49.3	0.91	(0.52, 1.58)	67	51.8	0.85	(0.45, 1.58)
Not stated	51	53.5	0.80	(0.43, 1.46)	60	56.7	0.92	(0.50, 1.71)
Smoking frequency								
Non-daily	34	49.4	1.00		42	63.4	1.00	
Daily	615	56.5	1.64	(0.88, 3.06)	704	61.6	1.02	(0.55, 1.88)
Flavour of usual brand								
Non-flavour/ no usual brand	623	58.3	1.00		711	64.0	1.00	
Menthol	12	21.3	0.18	(0.08, 0.43) ***	20	30.5	0.24	(0.12, 0.49) ***
Other flavour/ non-menthol capsule	14	41.6	0.49	(0.18, 1.33)	15	41.9	0.36	(0.13, 1.02)
Menthol cigarettes less harmful²								
Neither agree nor disagree	25	53.6	1.00					
Strongly agree/agree	65	53.8	0.60	(0.25, 1.46)				
Strongly disagree/ disagree	438	58.4	0.61	(0.28, 1.33)				
Don't know	120	48.2	0.42	(0.18, 0.97) *				
Additive-free cigarettes less harmful³								
No					264	58.0	1.00	
Yes					356	68.2	1.72	(1.18, 2.50) **
Don't know					126	53.8	0.63	(0.40, 0.98) *

† All models were adjusted for sociodemographic variables (city, sex, age, income), smoking behaviours (frequency, usual brand flavour), and perceptions of relative harmfulness (menthol or additive-free, respectively).

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

95% CI = 95% confidence interval; aOR = Adjusted odds ratio; MW = minimum wage (One MW is the lowest legal remuneration due and paid by the employer to employees for a normal month of service in Brazil).

¹ Would you support or oppose a law that... banned all additives, including flavours, from cigarettes and tobacco? Banned the use of menthol in cigarettes?: Yes = strongly support/support); comparison group = against/strongly against or don't know.

² Please tell me whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with each of the following statement: Menthol cigarettes are less harmful than regular cigarettes?

³ Are additive-free cigarettes (that is, those with nothing added to the tobacco by the cigarette manufacturer, including no flavourings) less harmful than cigarettes with additives?

3. Results

4.8% (95% CI: 3.2–7.2%) of smokers reported that their usual cigarette brand was menthol and 2.7% (1.5–4.7%) reported a non-menthol flavour/capsule (Supplementary Table 1). 10.5% (8.2–13.3%) of smokers incorrectly believed that menthol cigarettes are less harmful than regular cigarettes and 43.7% (39.5–47.9%) reported that additive-free cigarettes are less harmful than cigarettes with additives. Among menthol smokers ($N = 62$) who were asked what they would do if menthol cigarettes were banned, 31.2% (15.0–54.0%) reported they would quit smoking entirely, 22.9% (8.0–50.3%) would reduce the amount they smoked, 21.1% (9.3–41.0%) would switch to a non-menthol brand, and 16.8% (6.6–36.6%) would find a way to get menthol cigarettes. 8% of respondents replied they would 'do something else' or 'didn't know'. 56.0% (51.7–60.2%) of smokers supported a ban on menthol and 61.7% (57.5–65.8%) supported a ban on all additives (Supplementary Table 2). Menthol smokers were less likely to support a ban on menthol (aOR = 0.18, 95% CI: 0.08–0.43) and on all additives (aOR = 0.24, 0.12–0.49). Those who reported that additive-free cigarettes are less harmful were more likely to support a ban on additives (aOR = 1.72, 1.18–2.50). There were no significant differences in policy

support across city, sex, age, household income, and smoking frequency. (Table 1).

4. Discussion and conclusions

This study found strong support for both a ban on menthol and all additives among Brazilian smokers across all sociodemographic groups. Overall support for a ban on additives was slightly higher than for a ban on menthol. While not statistically different, this discrepancy may be due to how survey questions were ordered or phrased, even though additives were specifically detailed to include flavourings. Because public support is a determinant for stronger tobacco control legislation, findings suggest that implementation of Brazil's ban on flavour additives could be successful (Lidón-Moyano et al., 2018). More than half of menthol smokers reported they would quit or reduce the amount they smoked if menthol cigarettes were banned, which is a considerably more favourable response than in other countries. For example, in ITC surveys across 6 European countries, a third of menthol smokers reported that if menthol cigarettes were banned, they would quit or reduce their smoking (Zatoński et al., 2018). However, country-level contextual factors may explain this difference, and our analysis is limited by the

small sample of menthol smokers. Although it is unclear whether self-predictions are a valid predictor of behavioural responses to implemented policies, it is clear that further delaying implementation of the Brazil flavour additives ban will continue to postpone an important measure that has been demonstrated to significantly increase cessation among menthol smokers (Cadham et al., 2020; Chung-Hall et al., 2021) and would remove an additive known to increase progression to regular smoking among youth and young adults (Nonnemaker et al., 2013; Villanti et al., 2019). Implementation of the additive ban in a country with over 20 million adult smokers (Brazilian Institute of Geography and Statistics, 2020) would not only lead to substantial public health gains in Brazil itself, but possibly to other countries following suit, particularly in Latin America, which has some of the highest market shares for flavoured tobacco products globally (Sónora et al., 2022; Euromonitor International, 2022), or in other low- and middle-income countries, where data is lacking on the anticipated or actual impact of a flavour ban (Cadham et al., 2020).

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Ethics

The survey protocols and all materials, including the survey questionnaires, were cleared for ethics by the Office of Research Ethics, University of Waterloo, Canada (ORE# 21456/30826); National Cancer Institute of Brazil (INCA) International Review Board, Brazil (IRB 99/08). All participants provided consent to participate.

Data availability statement

In each country participating in the international Tobacco Control Policy Evaluation (ITC) Project, the data are jointly owned by the lead researcher(s) in that country and the ITC Project at the University of Waterloo. Data from the ITC Project are available to approved researchers 2 years after the date of issuance of cleaned data sets by the ITC Data Management Centre. Researchers interested in using ITC data are required to apply for approval by submitting an International Tobacco Control Data Repository (ITCDR) request application and subsequently to sign an ITCDR Data Usage Agreement. The criteria for data usage approval and the contents of the Data Usage Agreement are described online (<http://www.itcproject.org>).

Declaration of interests

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests:

GTF has served as an expert witness or a consultant for governments defending their country's policies or regulations in litigation and served as a member of the Brazil Health Regulatory Agency (ANVISA) 2014 Working Group on Tobacco Additives. All other authors declare no conflicts of interest.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.ypmed.2022.107074>.

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