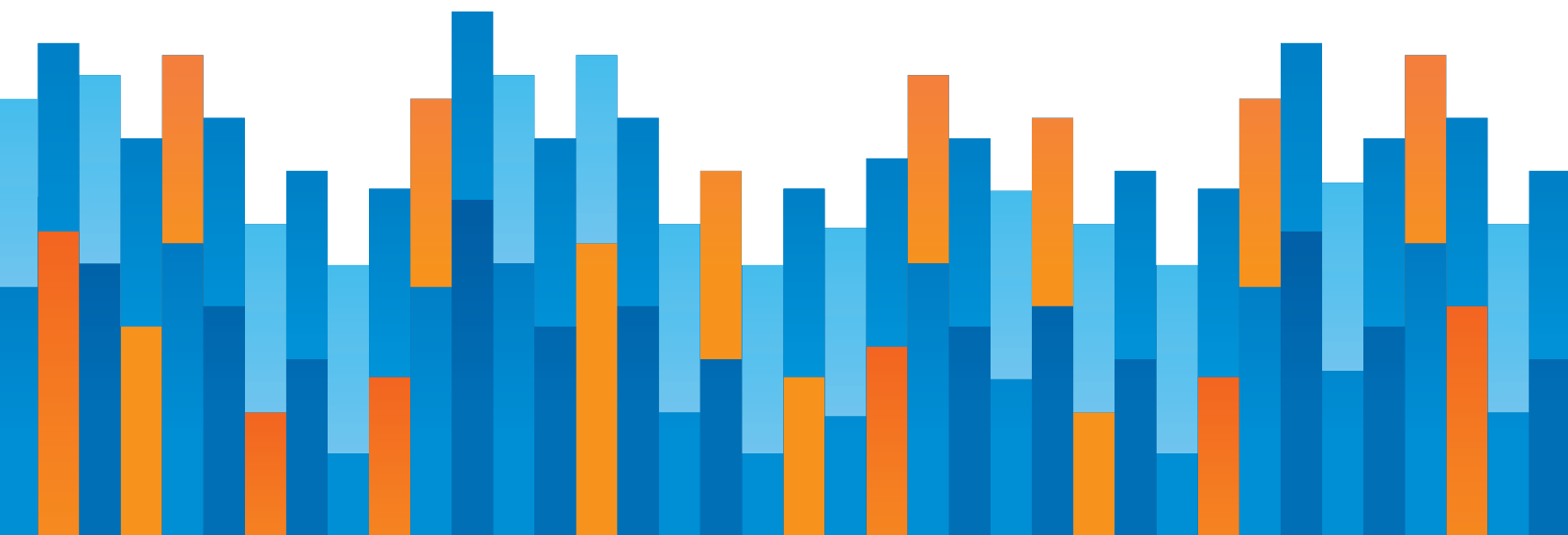




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DOES MENTHOL CIGARETTE DISTRIBUTION AFFECT CHILD OR ADULT CIGARETTE USE?

by Guy Bentley and Jacob James Rich
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EXECUTIVE SUMMARY

The Family Smoking Prevention and Tobacco Control Act (TCA) of 2009 outlawed the manufacture, distribution, and sale of cigarettes with “characterizing flavors,” assuming that these candy and fruit flavors disproportionately appeal to minors, facilitating smoking initiation and dependence. As a result of the TCA, regulating tobacco products was, for the first time, put under the purview of the Food and Drug Administration (FDA).

Partly the result of an extraordinary alliance between Philip Morris and the Campaign for Tobacco-Free Kids, the TCA erected enormous regulatory barriers to the introduction of new tobacco products. Banning the flavors sold by Philip Morris’ competitors and exempting menthol cigarettes mainly appeased Philip Morris, which was the only tobacco company in favor of the bill.

Tobacco control activists viewed the exemption of menthol as a missed opportunity and have long sought to convince the FDA to ban menthol cigarettes outright. Section 907 of the TCA authorizes the FDA to establish a product standard requiring tobacco manufacturers to eliminate menthol from their products if it is “appropriate for the protection of public health.” To meet this criteria, the FDA must consider:

- (1) the risks and benefits to the population as a whole, including users and non-users of tobacco products;
- (2) the increased or decreased likelihood that existing users of tobacco products will stop using such products; and

(3) the increased or decreased likelihood that those who do not use tobacco products will start using such products.

To answer these considerations, the Tobacco Products Scientific Advisory Committee (TPSAC) was charged with reviewing the scientific evidence regarding menthol and recommending future regulation to the FDA.

In 2011, the TPSAC published its review of menthol cigarettes, concluding they have a negative effect on public health. A separate review by the FDA published in 2013 found: “Menthol in cigarettes is likely associated with increased initiation and progression to regular use of cigarette smoking.” These principal claims against menthol, as opposed to non-menthol, cigarettes constitute why they are considered a unique threat to public health. On November 15, 2018, the FDA announced it would pursue a ban on the sale of menthol cigarettes.

While the share of the cigarette market occupied by menthol has grown over time, total cigarette smoking has dropped sharply in both the adult and youth populations, for both regular and menthol cigarettes. In particular, youth menthol smoking has declined to a point of being less popular than non-menthol smoking. If current trends continue, the total percentage of youth smoking menthol cigarettes will be at or near zero within the next few years.

Nevertheless, allegations made against menthol should be considered and reviewed to see if critics’ claims are borne out in the real world. If the strength of the association between menthol cigarettes and increased youth initiation is as strong as tobacco control activists suggest, there should be signs of it in the national data.

Employing National Survey on Drug Use and Health (NSDUH) data from the Substance Abuse and Mental Health Services Administration (SAMHSA) and industry distribution figures provided by R.J. Reynolds, Reason Foundation examined whether there was a strong positive relationship between the distribution of menthol cigarettes and youth cigarette smoking. The data covered all 50 states and Washington, D.C. for years 2008-2018.

The resulting analysis found:

- States with more menthol cigarette consumption relative to all cigarettes have lower rates of child smoking.
- States with higher cigarette distribution levels per capita of all types have higher rates of both adult and child smoking.
- In general, the metric analyses show consistent nonpredictive relationships between relative menthol cigarette consumption rates and use of any age group.
- The only predictive relationship is between adult and child smoking rates, and since we do not expect children to cause their parents to smoke, we conclude states with higher rates of adult use cause higher rates of youth use.

The data demonstrate that menthol cigarette distribution does not increase youth smoking initiation any more than regular cigarette distribution. This study concludes that menthol cigarette availability does not pose a greater threat to public health than regular cigarette availability.

From these findings, we can infer, in concurrence with the public health literature, that the best way to lower the youth smoking rate is to lower the adult smoking rate.

Any consideration of menthol prohibition should be made in the context of rapidly falling youth cigarette use, the lack of association between menthol use rates in states and youth smoking, and the costs of prohibition.

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PART 1

INTRODUCTION

The Family Smoking Prevention and Tobacco Control Act (TCA) of 2009 outlawed the manufacture, distribution, and sale of cigarettes with “characterizing flavors,” typically fruit and candy flavors. Overtly, the ban was based on the assumption that these flavors disproportionately appeal to minors, facilitating smoking initiation and dependence. As a result of the TCA, regulating tobacco products was, for the first time, put under the purview of the Food and Drug Administration (FDA).

“

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Partly the result of an extraordinary alliance between Philip Morris and the Campaign for Tobacco-Free Kids, the TCA erected enormous regulatory barriers to the introduction of new tobacco products.¹ TCA's consequent ban on all non-tobacco flavors sold by Philip Morris' competitors earned the act the nickname the *Marlboro Monopoly Act*. Accordingly, the flavor ban exempted menthol cigarettes mainly to appease Philip Morris, which was the only tobacco company in favor of the bill. Supporters of the TCA also wanted to avoid accusations of singling out adult African American smokers, who disproportionately use menthol,² as the primary target of prohibition.



Section 907 of the TCA authorized the FDA to establish a product standard requiring tobacco manufacturers to eliminate menthol from their products.



Tobacco control activists viewed the exemption of menthol as a missed opportunity and have long sought to convince the FDA to ban menthol cigarettes outright. Section 907 of the TCA authorized the FDA to establish a product standard requiring tobacco manufacturers to eliminate menthol from their products. The TCA stipulates that the FDA may establish this standard if it is “appropriate for the protection of public health.” To meet this criteria, the FDA must consider:

- (1) the risks and benefits to the population as a whole, including users and non-users of tobacco products;
- (2) the increased or decreased likelihood that existing users of tobacco products will stop using such products; and
- (3) the increased or decreased likelihood that those who do not use tobacco products will start using such products.

¹ Smalera, Paul. “Cool, Refreshing Legislation for Philip Morris.” *Slate*. June 8, 2009. <https://web.archive.org/web/20090616131337/http://www.thebigmoney.com/articles/judgments/2009/06/08/cool-refreshing-legislation-philip-morris?page=full>

² “Tobacco Use Among U.S. Racial/Ethnic Minority Groups.” Centers for Disease Control and Prevention. 1998. https://www.cdc.gov/tobacco/data_statistics/sgr/1998/complete_report/index.htm

To answer these considerations, the Tobacco Products Scientific Advisory Committee (TPSAC) was charged with reviewing the scientific evidence around menthol and recommending future regulation to the FDA.

In 2011, the TPSAC published its review of menthol cigarettes, concluding they have a negative effect on public health.³ A separate review by the FDA published in 2013 found: “Menthol in cigarettes is likely associated with increased initiation and progression to regular use of cigarette smoking.”⁴ These principal claims against menthol, as opposed to non-menthol, cigarettes constitute why they are considered a unique threat to public health.

On November 15, 2018, the FDA relented and announced it would pursue a ban on the sale of menthol cigarettes. “I believe these menthol-flavored products represent one of the most common and pernicious routes by which kids initiate on combustible cigarettes,” said former FDA Commissioner Scott Gottlieb.⁵



While the share of the cigarette market occupied by menthol has grown over time, total cigarette smoking has dropped sharply in both the adult and youth populations, for both regular and menthol cigarettes.



³ Smalera. “Cool, Refreshing Legislation for Philip Morris.”

⁴ Administration. “Preliminary Scientific Evaluation of the Possible Public Health Effects of Menthol versus Nonmenthol Cigarettes.” Center for Tobacco Products. Food and Drug Administration. July 23, 2013. <https://www.fda.gov/media/86497/download>

⁵ “FDA Unveils New Steps to Protect Youth by Preventing Access to Flavored Tobacco Products, Announces Plans to Ban Menthol in Cigarettes and Cigars.” Center for Tobacco Products. Food and Drug Administration. November 15, 2018. <https://www.fda.gov/tobacco-products/ctp-newsroom/fda-unveils-new-steps-protect-youth-preventing-access-flavored-tobacco-products-announces-plans-ban>

While the share of the cigarette market occupied by menthol has grown over time, total cigarette smoking has dropped sharply in both the adult and youth populations, for both regular and menthol cigarettes. In 2004, 4.9% of youth aged 12-17 smoked menthol cigarettes. By 2014, it was 2.5%. However, the decline was even greater for non-menthol cigarettes, falling from 6.3% to 2.2%.⁶ According to an analysis of the National Youth Tobacco Survey (NYTS) data conducted by the FDA and the Centers for Disease Control and Prevention (CDC) for years 2014-2018, the percentage of high school smokers using menthol cigarettes fell from 54.5% to 46.1%.⁷

As menthol cigarettes are no more dangerous than non-menthol cigarettes,⁸ it's unclear why the shift in the proportion of the cigarette market occupied by menthol represents a unique and pressing public health threat, especially as youth menthol smoking has declined to a point of being less popular than non-menthol smoking. If current trends continue, the total percentage of youth smoking menthol cigarettes will be at or near zero within the next few years. Moreover, hundreds of additives are still permitted in the production of tobacco and menthol cigarettes.⁹



If current trends continue, the total percentage of youth smoking menthol cigarettes will be at or near zero within the next few years.



⁶ Villanti, Andrea, P.D. Mowery, Cristine Delnevo, Raymond Niaura, David Abrams and Gary Giovino. "Changes in the prevalence and correlates of menthol cigarette use in the USA, 2004-2014." *Tobacco Control*. Volume 25, Suppl 2. November 25, 2016. <https://www.ncbi.nlm.nih.gov/pubmed/27729565>

⁷ Cullen, K.A., S.T. Liu, J.K. Bernat, et al. "Flavored Tobacco Product Use Among Middle and High School Students – United States, 2014–2018." CDC: Morbidity and Mortality Weekly Report. October 4, 2019. <https://www.cdc.gov/mmwr/volumes/68/wr/mm6839a2.htm>

⁸ Rostron, Brian, Ph.D. "Lung Cancer Mortality Risk for U.S. Menthol Cigarette Smokers." *Nicotine and Tobacco Research*. Volume 14, Issue 10. October 2012. <https://academic.oup.com/ntr/article/14/10/1140/1749051#25909592>

⁹ "Family Smoking Prevention and Tobacco Control Act - An Overview." Food and Drug Administration. January 17, 2018. <https://www.fda.gov/tobacco-products/rules-regulations-and-guidance/family-smoking-prevention-and-tobacco-control-act-overview>

Nevertheless, allegations made against menthol should be considered and reviewed to see if critics' claims are borne out in the real world. If the strength of the association between menthol cigarettes and increased youth initiation is as strong as tobacco control activists suggest, there should be signs of it in the national data.



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PART 2

FINDINGS

Employing National Survey on Drug Use and Health (NSDUH) data from the Substance Abuse and Mental Health Services Administration (SAMHSA) and industry distribution figures provided by R.J. Reynolds, Reason Foundation examined whether there was a strong positive relationship between the distribution of menthol cigarettes and youth cigarette smoking. The data covered all 50 states and Washington, D.C. for years 2008–2018.

The resulting analysis found:

- States with more menthol cigarette consumption relative to all cigarettes have lower rates of child smoking on average.
- States with higher cigarette distribution levels per capita of all types of cigarettes have higher rates of both adult and child smoking on average.
- The only predictive relationship is between adult and child smoking rates, and since we do not expect children to cause their parents to smoke, we conclude a causal relationship between states with higher rates of adult use causing higher rates of youth use.

From these findings, we can infer, in concurrence with the public health literature, that the best way to lower the youth smoking rate is to lower the adult smoking rate.

Youth smoking rates have been declining consistently, and there's no reason to expect this trend should not continue over the long-term. Prohibition of menthol cigarettes, however,

presents an array of problems for both adult users and non-users. Any consideration of menthol prohibition should be made in the context of rapidly falling youth cigarette use, the lack of association between menthol use rates and youth smoking rates in states, and the costs of prohibition.



From these findings, we can infer, in concurrence with the public health literature, that the best way to lower the youth smoking rate is to lower the adult smoking rate.



PART 3

ANALYSIS

This study employs National Survey on Drug Use and Health (NSDUH) data from the Substance Abuse and Mental Health Services Administration (SAMHSA) and industry distribution figures provided by R. J. Reynolds Tobacco Company. Our panel model dataset is complete for all 50 states and Washington, D.C. for years 2008–2018, and evaluates:

- (1) the number of packs of menthol and nonmenthol cigarettes distributed per capita,
- (2) the percent of cigarettes distributed that are menthol, and
- (3) the smoking rates for ages 12-17, 18 and older, and 12 and older.

With these data we use standard descriptive statistics and metric techniques to analyze the relationship between the distribution of various types of cigarettes and use among different age groups in the population.

Correlation coefficients among the variables are published in Table 1. The correlation coefficient between cigarettes distributed per capita ages 12 and above and cigarette past-month use ages 12 and above is .7143, signaling a proxy-level relationship. This suggests that the surveys measuring use reflect market patterns and likely lack an exact 1-to-1 relationship due to the variance in how many cigarettes are consumed on average during any given amount of time among cigarette smokers nationwide.

TABLE 1: VARIABLE CORRELATION COEFFICIENTS

	Percent packs menthol	Total packs	Total menthol packs	Packs per capita 12 and older	Menthol packs per capita 12 and older	Cigarette use past month 12 and older	Cigarette use past month 12 to 17	Cigarette use past month 18 and older
Percent packs menthol	1							
Total packs	0.1522	1						
Total menthol packs	0.362	0.939	1					
Packs per capita 12 and older	-0.2092	0.0723	0.0318	1				
Menthol packs per capita 12 and older	0.5236	0.2331	0.3659	0.6629	1			
Cigarette use past month 12 and older	-0.1918	0.0698	0.0206	0.7143	0.4383	1		
Cigarette use past month 12 to 17	-0.3595	0.0223	-0.0631	0.5717	0.1941	0.7552	1	
Cigarette use past month 18 and up	-0.2905	0.0237	-0.0443	0.5972	0.2716	0.8451	0.9195	1

Table 2 reports the average number of packs of cigarettes consumed per year for smokers age 12 and older. By dividing the total number of cigarette packs sold by the number of smokers for each year, measured by multiplying NSDUH smoking estimates for individuals reporting they have smoked at least once a month by the Census Bureau population estimates for that age group, we estimate the number of cigarette packs regular, menthol, and all smokers consume each year. All cigarette distributions are reported for the period 2008–2018, while flavor preference estimates for adolescents, young adults, and adults are only available for the averaged periods 2008–2010 and 2012–2014.⁷ According to these methods, the most recent data suggest menthol smokers consume 48% fewer cigarettes than regular smokers.

TABLE 2: AVERAGE NUMBER OF CIGARETTE PACKS SMOKED PER YEAR BY SMOKERS

Year	Number of packs smoked for all smokers	Number of packs smoked for menthol smokers	Number of packs smoked for regular smokers
2018	229.8868629		
2017	227.3571053		
2016	230.0201971		
2015	230.0211987		
2014	218.421879	190.22	364.98
2013	220.8986909	(190.22)	(364.98)
2012	230.6120335	(190.22)	(364.98)
2011	239.5760509		
2010	236.4837204	220.21	374.12
2009	243.6487656	(220.21)	(374.12)
2008	263.674053	(220.21)	(374.12)

The regression section employs an elementary robustness analysis, utilizing two different specifications: ordinary least squares (OLS) with no controls and an OLS panel analysis with fixed effects (γ_i), time effects (λ_t), and state linear time trends ($\delta_i T$). The panel model dummy variables account for unobserved factors that remain constant among states, vary over time equally in all states, and change uniquely in each state. If the variable passes the robustness tests, signaled by overly consistent results in both models, the panel model coefficients constitute a predictive effect. The panel model clusters standard errors by state and all observations are weighted by the square root of the state population. Variables in the panel model are in their natural log form and their coefficients are elasticities. The below equation represents the relationship between smoking (s_{it}) and cigarette distribution (d_{it}):

$$s_{it} = \beta_0 + \beta_d d_{it} + \lambda_t + \gamma_i + \delta_i T + \epsilon_{it}$$

Table 3 reports the coefficients (β_d) from the OLS and panel specifications. Relationships of interests include adult and child past-month cigarette use as a function of percent of

cigarettes distributed that are menthol, and separately, packs of menthol and all cigarettes distributed per capita (population age 12 and older). We also evaluate the relationship between child and adult smoking rates. (Table 4 reports coefficients from the same analysis without weighting by state population.)¹⁰

TABLE 3: REGRESSION ANALYSIS RESULTS

Model	Dependent Variable	Independent Variable	Coefficient	Standard Error	t-statistic	p-value	Confidence Interval	Low	High
OLS	Child monthly smoking	Percent Distribution Menthol	-0.3444549	0.1169254	-2.95	0.005	-0.5793064	-	0.1096034
Panel Model	Child monthly smoking	Percent Distribution Menthol	-0.1055356	0.3721016	-0.28	0.778	-0.8529236	0.6418524	
OLS	Adult monthly smoking	Percent Distribution Menthol	1.28E-06	0.0932321	0	1	-0.187261	0.1872635	
Panel Model	Adult monthly smoking	Percent Distribution Menthol	-0.0745171	0.2631807	-0.28	0.778	-0.603131	0.4540969	
OLS	Child monthly smoking	Cigarette packs per capita	0.6756628	0.0763012	8.86	0	0.5224073	0.8289182	
Panel Model	Child monthly smoking	Cigarette packs per capita	0.1850392	0.214293	0.86	0.392	-0.2453809	0.6154593	
OLS	Adult monthly smoking	Cigarette packs per capita	0.3436368	0.0597735	5.75	0	0.2235782	0.4636954	
Panel Model	Adult monthly smoking	Cigarette packs per capita	-0.1015625	0.0817487	-1.24	0.22	-0.2657597	0.0626347	
OLS	Child monthly smoking	Menthol cigarette packs per capita	0.3649267	0.0530012	6.89	0	0.2584707	0.4713828	
Panel Model	Child monthly smoking	Menthol cigarette packs per capita	0.1301156	0.187312	0.69	0.49	-0.2461117	0.5063428	

¹⁰ Angrist, Joshua and Jörn-Steffn Pischke. "Mostly Harmless Econometrics: An Empiricist's Companion." Princeton University Press. 2008.

Model	Dependent Variable	Independent Variable	Coefficient	Standard Error	t-statistic	p-value	Confidence Interval	Low	High
OLS	Adult monthly smoking	Menthol cigarette packs per capita	0.2364217	0.038494	6.14	0	0.1591041	0.3137392	
Panel Model	Adult monthly smoking	Menthol cigarette packs per capita	-0.0825453	0.0735634	-1.12	0.267	-0.2303018	0.0652111	
OLS	Child monthly smoking	Adult monthly smoking	2.040866	0.1641012	12.44	0	1.711259	2.370473	
Panel Model	Child monthly smoking	Adult monthly smoking	0.4436217	0.1166189	3.8	0	0.2093857	0.6778577	

In general, OLS reports average relationships that describe typical states, without confirming causal relationships. States with higher menthol distribution relative to all cigarettes have lower rates of child past-month cigarette use, while states with higher distribution per capita of either type of cigarette have higher rates of use for both children and adults. States that experience a 1% increase in adult smoking on average have a 2% higher rate of child smoking. This observation is consistent with the literature¹¹ that finds 25% of children with parents who smoke cigarettes eventually initiate smoking themselves, as oppose to 8% of children from stable nonsmokers.

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When controlling for unobserved factors in the panel model, we notice most of the relationships lose their significance signaled by the p-value. Many coefficient signs also switch, but should only be considered if the estimate remains significant. Among the distribution data, there are no significant relationships between smoking rates and either menthol or all cigarettes distributed per capita. Therefore, changes in the distribution of

¹¹ Vuolo, Mike and Jeremy Staff. “Parent and Child Cigarette Use: A Longitudinal, Multigenerational Study.” *Pediatrics*. 2013 Sep; 132(3): e568–e577.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3876755/>

cigarettes per capita do not predict consistent changes in the percent of the population that smokes at the state level, likely due to the variance of how many packs each adult smokes throughout the country.

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The only association that is robust enough to claim a causal relationship is between child smoking rates and adult smoking rates.

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The only association that is robust enough to claim a causal relationship is between child smoking rates and adult smoking rates. After controlling for unobserved factors, a 1% decrease in adult smoking causes a 0.443% decrease in child smoking. We do not expect reverse causality to explain this relationship, since it is not likely that children will influence their parents to smoke. The relationship is significant above the 99.9% confidence level, which is reasonable given the strong correlation coefficient of .9195 between adult and youth smoking rates. This finding indicates that one of the best ways to reduce child smoking rates is to help their parents quit.

TABLE 4: REGRESSION ANALYSIS RESULTS WITHOUT POPULATION WEIGHTS

Model	Dependent Variable	Independent Variable	Coefficient	Standard Error	t-statistic	p-value	Confidence Interval	CI Low	CI High
OLS	Child monthly smoking	Percent Distribution Menthol	-0.4314473	0.0521607	-8.27	0	-0.536215	-0.3266795	
Panel Model	Child monthly smoking	Percent Distribution Menthol	-0.1879031	0.4430325	-0.42	0.673	-1.07776	0.7019538	
OLS	Adult monthly smoking	Percent Distribution Menthol	-0.0751051	0.0443327	-1.69	0.096	-0.16415	0.0139397	
Panel Model	Adult monthly smoking	Percent Distribution Menthol	0.1828217	0.1969446	0.93	0.358	-0.2127532	0.5783966	

Model	Dependent Variable	Independent Variable	Coefficient	Standard Error	t-statistic	p-value	Confidence Interval	Low	High
OLS	Child monthly smoking	Cigarette packs per capita	0.628883	0.0494188	12.73	0	0.5296225	0.7281435	
Panel Model	Child monthly smoking	Cigarette packs per capita	-0.1407338	0.1373239	-1.02	0.31	-0.416557	0.1350894	
OLS	Adult monthly smoking	Cigarette packs per capita	0.2962698	0.0434179	6.82	0	0.2090624	0.3834773	
Panel Model	Adult monthly smoking	Cigarette packs per capita	0.0113446	0.0842611	0.13	0.893	-0.1578989	0.180588	
OLS	Child monthly smoking	Menthol cigarette packs per capita	0.200019	0.0596753	3.35	0.002	0.0801577	0.3198804	
Panel Model	Child monthly smoking	Menthol cigarette packs per capita	-0.1340615	0.1135491	-1.18	0.243	-0.3621315	0.0940086	
OLS	Adult monthly smoking	Menthol cigarette packs per capita	0.1661152	0.0339061	4.9	0	0.0980127	0.2342176	
Panel Model	Adult monthly smoking	Menthol cigarette packs per capita	0.0294075	0.0820675	0.36	0.722	-0.1354299	0.1942448	
OLS	Child monthly smoking	Adult monthly smoking	1.950761	0.1357233	14.37	0	1.678152	2.223369	
Panel Model	Child monthly smoking	Adult monthly smoking	0.4521687	0.1061483	4.26	0	0.2389635	0.6653739	

PART 4

CONCLUSION

The data demonstrate that menthol cigarette distribution does not increase youth smoking initiation any more than regular cigarette distribution. Areas with higher rates of menthol cigarette consumption relative to the entire cigarette market have lower rates of smoking for both adults and youth. Additionally, while menthol cigarette distribution and popularity relative to the entire cigarette market increased during the study period, child use of menthol cigarettes relative to regular cigarettes fell. Since increasing or decreasing the percentage of the cigarette market that is menthol does not predict any changes in smoking rates, we attribute the average relationship between higher menthol use and lower child smoking rates to a spurious correlation based on consumer preferences in each state. From these observations, we conclude that menthol cigarette availability does not pose a greater threat to public health than regular cigarette availability. Accordingly, this study concludes that the most effective way to reduce youth smoking and overall smoking initiation is to reduce the adult smoking rate.

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PART 5

DISCUSSION

Since supply restrictions do increase costs to consumers, menthol cigarette prohibition would likely have some impact on smoking rates. However, the decrease in youth smoking from such a ban would be mostly influenced by the number of adults who choose to quit smoking after losing access to their preferred product—not because menthol cigarettes are relatively more attractive to children. A possible consequence of menthol prohibition would be the creation of a black market for menthol cigarettes. Many menthol smokers would switch to non-menthol cigarettes, especially in the absence of mint or menthol alternatives in the form of e-cigarettes or smokeless tobacco, therefore conferring no health benefit.

Regular cigarettes pose a greater threat to public health than menthol simply because they are preferred by both adult and youth smokers. Menthol cigarette smokers also tend to consume about half as many cigarettes as regular smokers in any given year. This means that targeting the number of menthol smokers will not be as effective at combatting smoking-related illnesses as reducing the number of all cigarette smokers.

Because the TCA does not allow for a ban on regular cigarettes, the FDA should promote adult smoking cessation and approve products that are safer alternatives to smoking. Any regulation on the appeal or availability of nicotine products that are substitutes for cigarettes will result in fewer adults quitting smoking and, consequently, motivate more youth to initiate cigarette smoking themselves. To continue the current trends of decreasing adult and youth smoking, the FDA needs to acknowledge the role of safer smoking alternatives as well as already approved cessation methods.

ABOUT THE AUTHORS

Guy Bentley Guy Bentley is director of consumer freedom at Reason Foundation, a nonprofit think tank advancing free minds and free markets. Bentley's research focuses on the taxation and regulation of nicotine, tobacco, alcohol, and food. Before joining Reason Foundation, Bentley served as a reporter in London and Washington D.C. Bentley's work has been featured in *The Washington Post*, *USA Today*, *Forbes*, *Time*, *Business Insider*, *The Daily Beast*, *The New York Post*, and other publications in the U.S. and U.K. Bentley graduated with a bachelor's degree in politics and international relations from the University of Nottingham and is based in Washington D.C.

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