MICHIGAN BRFSS SURVEILLANCE BRIEF

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Menthol Flavor Use among Michigan Smokers, 2023

Using data from the 2023 Michigan Behavioral Risk Factor Survey (MiBRFS), this surveillance brief examines the prevalence of menthol use by sociodemographic characteristics among Michigan adults. Additionally, this brief compared the prevalence of health outcomes by menthol use status.

Key Findings

- 1 in 3 Michigan smokers use menthol cigarettes.
- 81.9% Black, non-Hispanic smokers reported using menthol cigarettes compared to 24.9% white, non-Hispanic smokers.
- Obesity was more commonly reported among menthol users (44.2%) than non-menthol users (28.7%).

Background

Tobacco use remains a leading cause of preventable death worldwide.[1] In the United States, flavored tobacco products have been increasingly popular, particularly among youth and young adults.[2] Menthol is a chemical compound that is extracted from peppermint or corn mint plants or created synthetically.[3] It makes cigarettes easier to smoke and harder to quit.[3] Current law prohibits the use of characterizing flavorings in cigarettes, except for menthol.[4] Menthol flavor use among smokers has become a pressing public health concern in recent years. In Michigan, where tobacco use rates remain higher than the national average, understanding the prevalence and patterns of menthol flavor use is crucial for developing effective tobacco control strategies.

This brief aims to explore the use of menthol flavor among Michigan smokers, examining the demographics, motivations and health implications associated with menthol flavor use. By shedding light on this critical issue, we hope to inform policymakers, public health practitioners and researchers working to reduce tobacco-related disparities and promote healthier communities in Michigan.

What is the Michigan Behavioral Risk Factor Surveillance System (MiBRFSS)?

The MiBRFSS comprises annual, statewide telephone surveys of Michigan adults aged 18 years and older and is part of the national BRFSS coordinated by the Centers for Disease Control and Prevention (CDC). The MiBRFSS follows the CDC BRFSS protocol and uses the standardized English core questionnaire that focuses on various health behaviors, medical conditions and preventive health care practices related to the leading causes of mortality, morbidity and disability. Landline and cell phone interviews are conducted across each calendar year.
Data are weighted to adjust for the probabilities of selection and a raking weighting factor is used to adjust for the distribution of the Michigan adult population based on eight demographic variables. All analyses are performed using SAS-callable SUDAAN® to account for the complex sampling design.

Methods

The Michigan Behavioral Risk Factor Surveillance System (MiBRFSS) is a telephone-based health survey of adult Michigan residents that provides statewide prevalence of chronic health conditions, health-related behaviors, medical conditions, and preventive health care practices. The MiBRFSS provides cross-sectional data and a temporal relationship cannot be established. To improve the generalizability of the data, making it possible to draw conclusions about the health of

Michiganders, the CDC weighted survey data using iterative proportional fitting, also known as raking, to account for demographic differences between the survey sample and Michigan's population.

The 2023 MiBRFS survey included a question assessing menthol use among smokers. Menthol use was defined as a "yes" response to the question: "Currently, when you smoke cigarettes, do you usually smoke menthol cigarettes?". Non-menthol use was measured as a "No" response to the question.

The prevalence of menthol use among Michigan smokers was assessed by age, gender, race/ethnicity, education, household income, disability status, and if an individual identifies within the LGBTQ+ community. These demographics variables were self-reported survey responses. In addition, the prevalence of health outcomes among menthol users were compared to those among non-menthol users. All analyses accounted for the complex sample design.

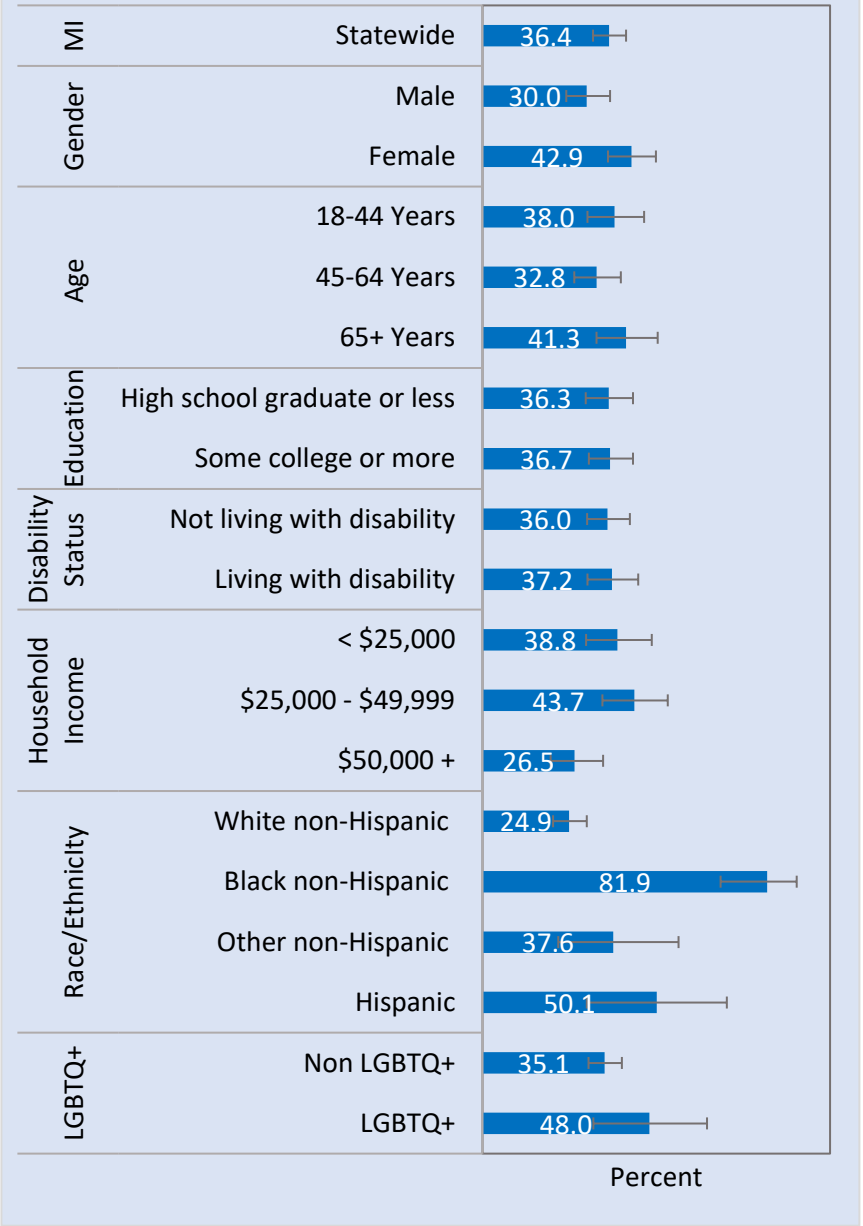
Results

Prevalence of Menthol Use

Based on 2023 MiBRFS data, an estimated 13.6% of Michigan adults reported that they currently smoke cigarettes on a regular basis (95% confidence interval (CI): 12.6% - 14.7%). 36.4% of Michigan smokers reported using menthol cigarettes (95% CI: 31.8% - 41.3%). Figure 1 compares menthol use by demographics. The prevalence of menthol use among Michigan smokers did not differ significantly by age, gender, education, household income, disability status and identifying within the LGBTQ+ community.

- Black, non-Hispanic smokers were significantly more likely to smoke menthol cigarettes (81.9%) than white, non-Hispanic smokers (24.9%).
- Those smokers who identified as LGBTQ+ had a higher rate of using menthol cigarettes (48%) than their heterosexual counterparts (35.1%).
- About 42.9% female smokers reported using menthol cigarettes, a non-significant difference from male smokers (30%).
- Smokers aged over 65 years old were more likely to use menthol cigarettes (41.3%) than younger smokers (32.8% for 45-64 years; 38.0% for 18-44 years).
- Households with annual incomes of between $25,000 and $50,000 were more likely to smoke menthol cigarettes (43.7%) than those with incomes less than $25,000 (38.8%) and those with incomes above $50,000 (26.5%).
- Smokers living with a disability were more likely to use menthol cigarettes (37.2%) than those without disability (36.0%).

Figure 1. Prevalence of Menthol Use by Demographics among Michigan Smokers, Michigan BRFS 2023



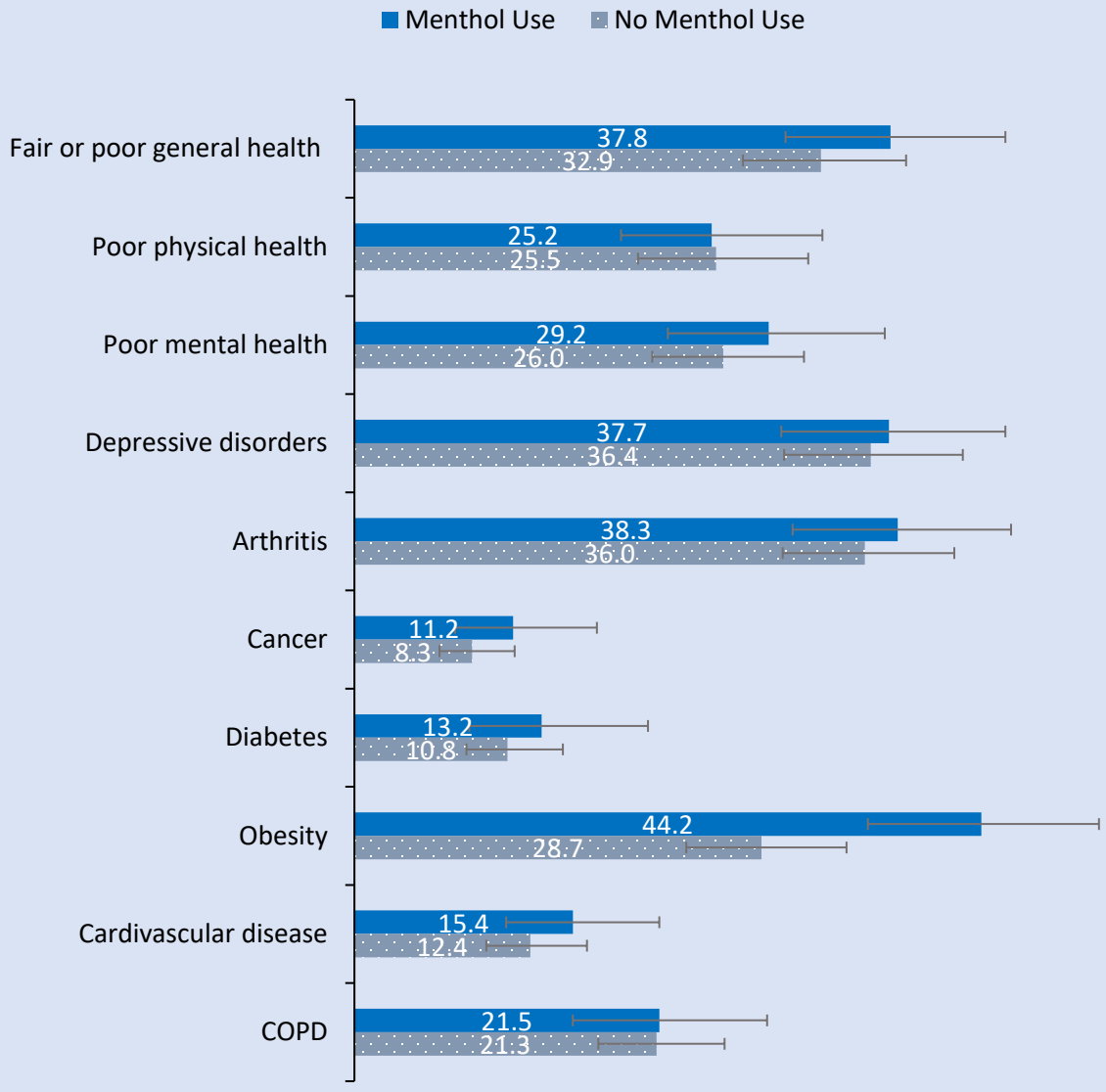
(Error bars represent 95% confidence intervals)

Prevalence of Health Outcomes by Menthol Use

Figure 2 shows the prevalence of health outcomes among menthol users compared to non-menthol users in Michigan in 2023.

- Overall, these results indicate non-significant differences by menthol use status for general health, physical health, mental health, depressive disorders, arthritis, cancer, diabetes, cardiovascular disease, and chronic obstructive pulmonary disease (COPD).
- The prevalence of obesity was significantly higher among menthol users (44.2%) than non-menthol users (28.7%).
- Compared to smokers who did not use menthol cigarettes, menthol users were more likely to report fair or poor general health (37.8% vs 32.9%), poor mental health (29.2% vs 26%), depressive disorder (37.7% vs 36.4%), arthritis (38.3% vs 36%), cancer (11.2% vs 8.3%), diabetes (13.2% vs 10.8), and cardiovascular disease (15.4% vs 12.4%). However, none of these differences were statistically significant.

Figure 2. Prevalence of Health Outcomes by Menthol Use among Michigan Smokers, Michigan BRFS 2023



Discussions

Giovino et al[5] found that menthol cigarette smoking is more prevalent among female smokers, racial and ethnic minorities, and sexual minorities. This is very similar to what we found in Michigan using the 2023 MiBRFSS data. Black, non-Hispanic smokers were more likely to smoke menthol cigarettes than white, non-Hispanic smokers. They also found that menthol cigarettes are slowing the reductions in overall cigarette smoking rates. From 2005 to 2015, the decline in cigarette consumption was greater for non-menthol cigarettes than menthol cigarettes.[5,6]

We also found that those who smoke menthol cigarettes have obesity rates significantly higher than non-menthol smokers. This relationship has been observed in other studies; one of those studies found after controlling for sociodemographic factors, menthol smokers were more than three times as likely as non-menthol smokers to be obese.[7] Menthol cigarettes offer no health benefit to smokers and, in fact, are easier to start smoking and more difficult to quit than regular cigarettes. Menthol cigarettes were responsible for 10.1 million extra smokers, 3 million life years lost and 378,000 premature deaths between 1980 and 2018, according to a 2021 study published in Tobacco Control.[8]

Recommendations

The demographic disparities in menthol flavor use underscore the need for culturally tailored tobacco use treatment programs. Targeted marketing restrictions may be effective in reducing menthol flavor use among Black non-Hispanic smokers. Menthol flavor bans or restrictions may be an effective strategy for reducing tobacco-related disparities and promoting healthier communities.

References

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