

# Poor life satisfaction is associated with higher sugar-sweetened beverage consumption in US adults:

## Analysis of the 2022 National Health Interview Survey

Sriharsha Sripadrao<sup>1</sup>; Mikhil Patel<sup>1</sup>; Vishva Natarajan<sup>2</sup>; Biplab Kumar Datta<sup>3,4</sup>

<sup>1</sup> Medical College of Georgia, Augusta, Georgia

<sup>2</sup> Geisel School of Medicine at Dartmouth, Hanover, New Hampshire

<sup>3</sup> Institute of Public and Preventive Health, Augusta University, Augusta, Georgia

<sup>4</sup> Department of Health Management, Economics and Policy, Augusta University, Augusta, Georgia.

### INTRODUCTION

Sugar-sweetened beverages (SSBs) are a major contributor to the global burden of non-communicable diseases (NCDs), including obesity, type 2 diabetes, and cardiovascular disease (Malik et al., 2010; Hu, 2013). While public health efforts have sought to curb consumption, SSB intake remains high worldwide, particularly in low- and middle-income countries (LMICs), where urbanization and globalization have led to shifts in dietary patterns (Popkin & Reardon, 2018). Recent data suggest that SSB consumption is increasing in regions such as Latin America, South Asia, and sub-Saharan Africa, exacerbating health disparities (Singh et al., 2015).

Life satisfaction (LS), a key determinant of mental and emotional well-being, has been linked to various health behaviors, including tobacco and alcohol use (Strine et al., 2008; Lew et al., 2019). However, its role in dietary choices, particularly SSB consumption, remains underexplored. Emerging evidence suggests that individuals with lower LS may turn to SSBs as a coping mechanism for stress, social isolation, or economic hardship (Campos-Ramírez et al., 2023; Henriksen et al., 2014). In LMICs, where social determinants of health such as poverty, food insecurity, and limited healthcare access disproportionately affect mental health, these relationships may be even more pronounced (Van Ansem et al., 2014; Mendy, 2017).

This study examines the association between LS and SSB consumption using data from the 2022 National Health Interview Survey (NHIS), a representative sample of U.S. adults. Given that the U.S. has one of the highest per capita SSB consumption rates globally (Chevinsky et al., 2021), findings from this study may provide insights applicable to other regions experiencing rising SSB intake. We hypothesize that lower LS will be associated with higher SSB consumption, particularly soda. Understanding the interplay between psychosocial factors and dietary choices may inform global health policies aimed at reducing NCD risk through holistic, multi-sectoral interventions.

### METHODS

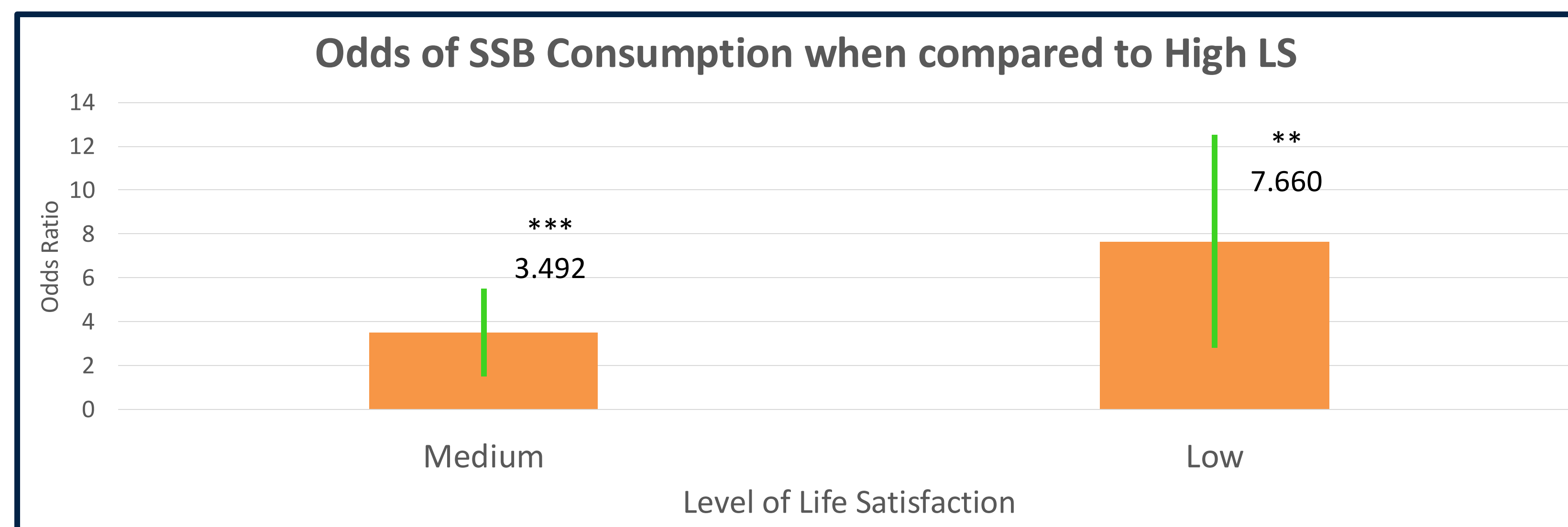
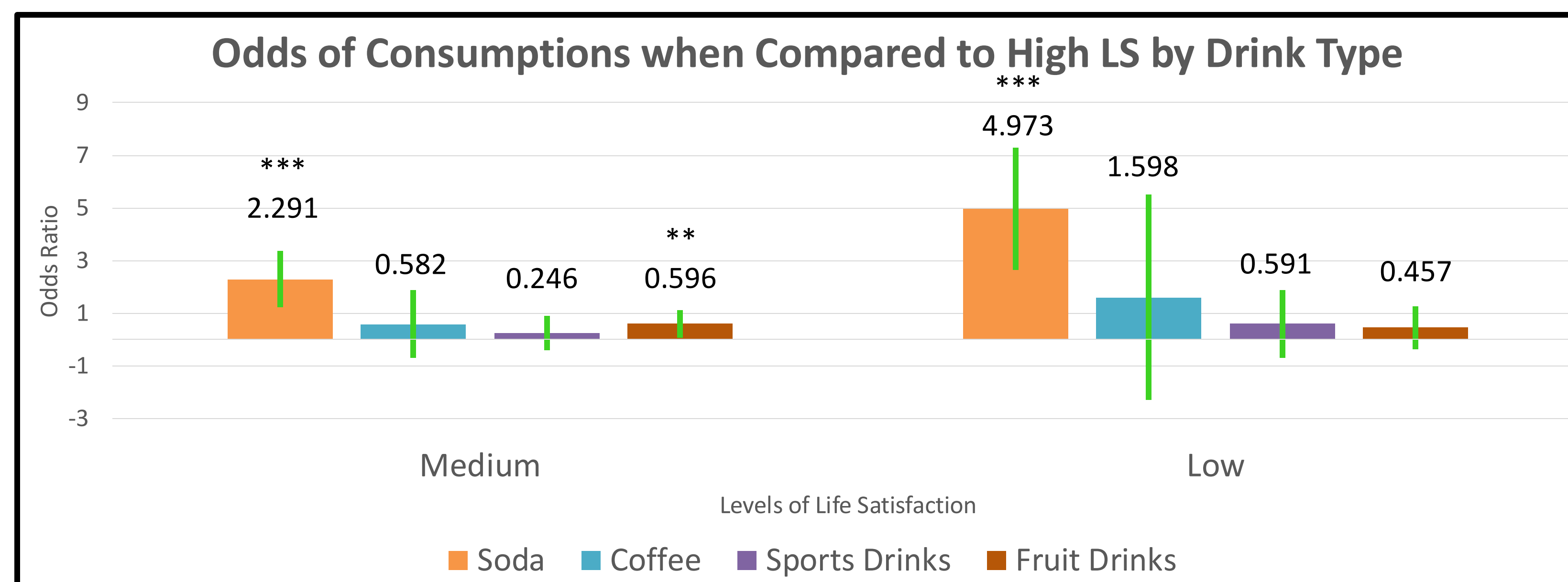
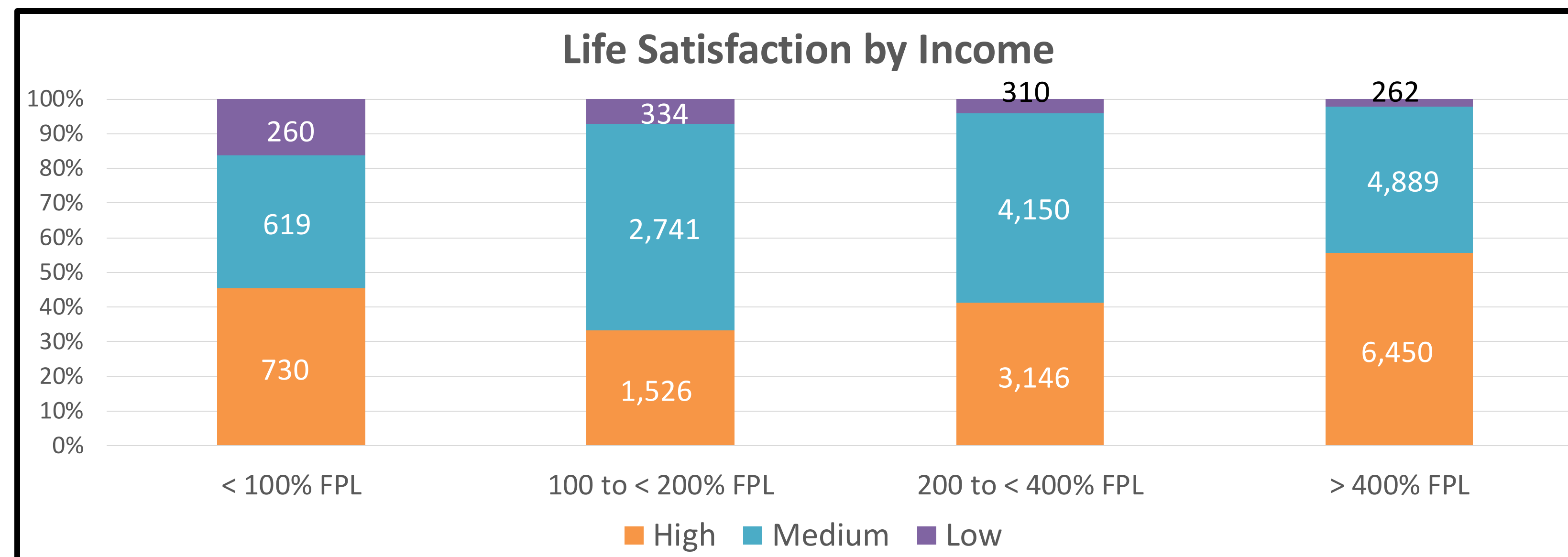
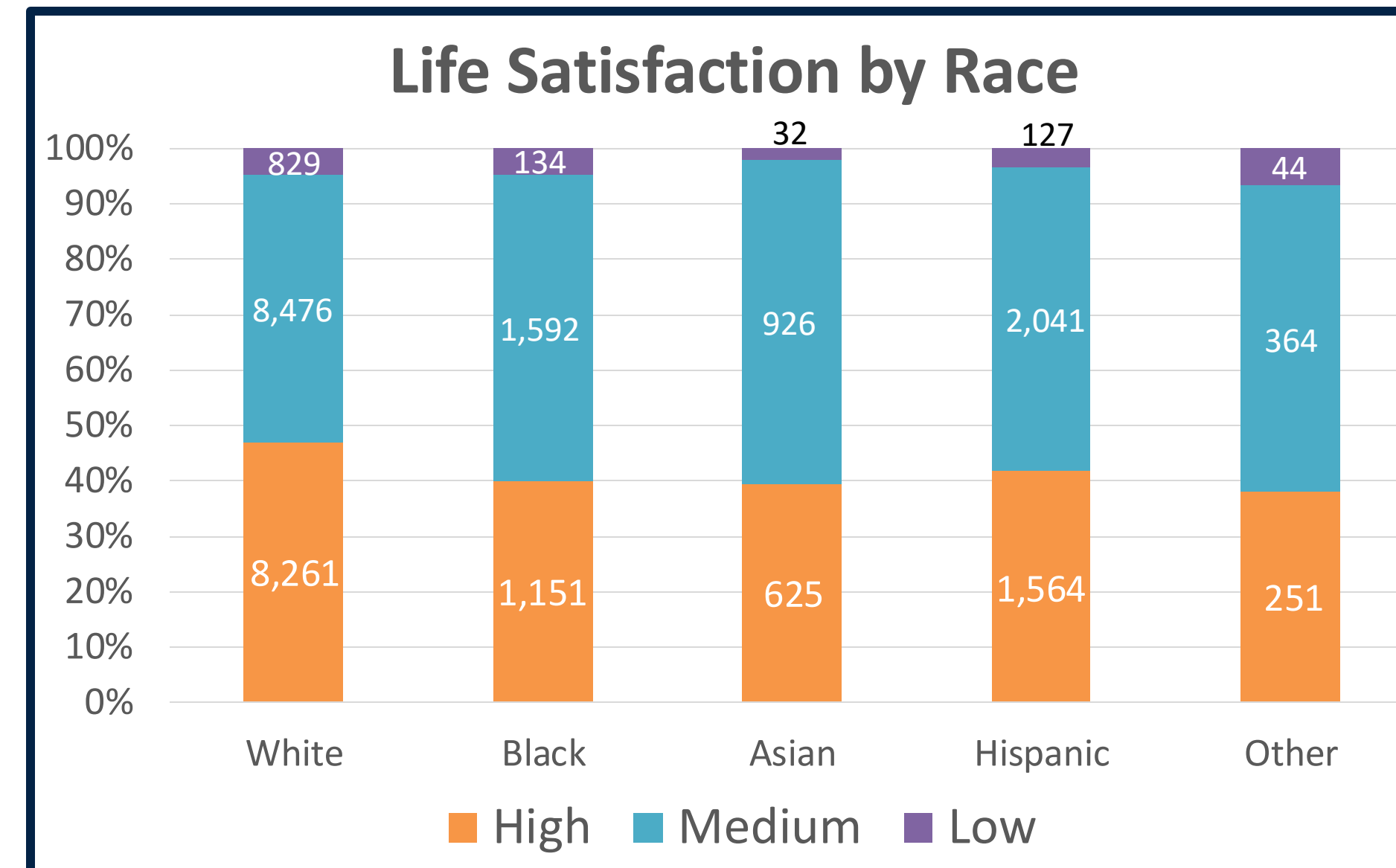
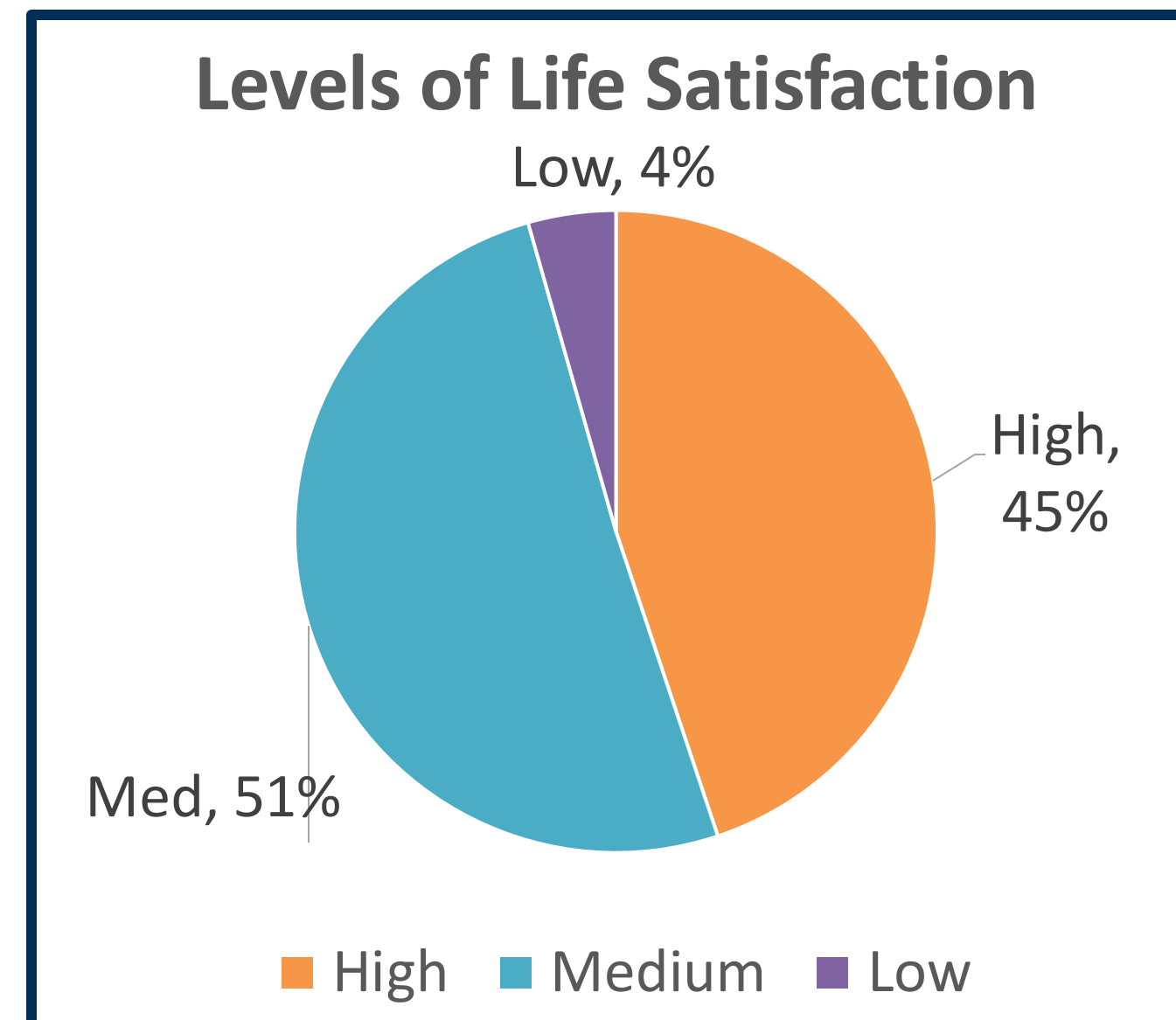
This study utilized data from 26,417 adults aged 18 and older, drawn from the 2022 NHIS. The NHIS is a cross-sectional household interview survey representative of the U.S. civilian, non-institutionalized population, with interviews conducted both in person and via phone. The response rate for sample adult interviews was 47.7%.

LS, the primary exposure variable, was categorized into three levels of satisfaction: high ("very satisfied"), medium ("satisfied"), and low ("dissatisfied" or "very dissatisfied"). SSB consumption was the main outcome, measured as the monthly frequency of SSBs, including soda, coffee/tea with added sugar, sports/energy drinks, and fruit drinks.

A two-part statistical model was used to analyze the data, a logistic regression, to estimate the probability of consuming any SSBs, and a generalized linear, to estimate the frequency of monthly SSB consumption.

The models were adjusted for several covariates, including age, sex, race/ethnicity, urban/rural residence, educational attainment, family income, diabetes status, and geographic region. We utilized average marginal effects to assess the differences in SSB consumption across LS categories.

### RESULTS



### CONCLUSIONS

This study found a strong association between LS and SSB consumption. Individuals with low LS consumed 7.7 more SSB units per month, while those with medium LS consumed 3.5 more units compared to those with high LS. The relationship was particularly strong for soda consumption, with low LS adults consuming 5 more units of soda per month.

The findings support previous research linking low LS to risky behaviors such as tobacco and alcohol use (Strine et al., 2008), extending it to dietary habits. Individuals with lower LS may consume sugary beverages as a coping mechanism for stress or loneliness (Campos-Ramírez et al., 2023; Henriksen et al., 2014).

Additionally, socioeconomic factors like low education and income may amplify the effects of low LS on SSB consumption (Van Ansem et al., 2014; Mendy, 2017). Public health efforts should target both availability of healthier alternatives and the psychosocial and socioeconomic factors that drive unhealthy consumption.

### GLOBAL HEALTH IMPLICATIONS

The findings of this study suggest that LS is an important psychosocial factor influencing dietary behaviors, particularly SSB consumption. This has significant global health implications, as SSB intake continues to rise in LMICs, where the burden of NCDs is increasing (Singh et al., 2015; Popkin & Reardon, 2018). In many regions, aggressive marketing, urbanization, and economic transitions have led to greater accessibility and affordability of SSBs, particularly among vulnerable populations (Basu et al., 2013). Interventions aimed at reducing SSB consumption must consider not only fiscal policies, such as taxation, but also the role of mental health and psychosocial stressors in shaping dietary choices (WHO, 2017).

Future research should explore these associations in LMICs, where unique social, economic, and cultural factors may influence the relationship between LS and SSB consumption. Conducting similar studies in LMICs would provide critical insights into how psychosocial determinants impact dietary behaviors in different contexts and inform tailored public health interventions. Integrating mental health screening and psychosocial support into primary healthcare systems, particularly in LMICs, may help mitigate the behavioral drivers of poor nutrition (Lund et al., 2010). Additionally, international collaborations should focus on policies that regulate SSB marketing, improve access to healthier alternatives, and incorporate LS considerations into NCD prevention strategies. Recognizing the interplay between mental well-being and dietary behaviors may provide a more holistic approach to tackling the global rise in obesity and metabolic diseases (Allen et al., 2017).

### CITATIONS



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