Disparities in Food Insecurity During the Coronavirus Disease 2019 Pandemic

Zhongqi Fan,[1] Kimberly Nguyen,[2] Naglaa El-Abbadi,[2] Ryan Simpson,[2] Bingjie Zhou,[2] Gail Rogers,[2] Kenneth Chui,[2] and Elena Naumova[2]

[1]The Gerald J. And Dorothy R. Friedman School of Nutrition Science And Policy at Tufts University and [2]Tufts University

Objectives: The prevalence and severity of food insecurity exists disproportionately among different population groups in the United States, with the potential to exacerbate health disparities among at-risk communities. Overall food insecurity has increased during the COVID-19 pandemic, but whether this additional burden is experienced differentially among certain population groups requires further study. This study seeks to investigate the association between food insecurity and socioeconomic factors among the US population during the COVID-19 pandemic, comparing rate of food insecurity by age, gender, and racial groups to identify vulnerable populations.

Methods: Data from the 2020–21 US Census Bureau's Household Pulse Survey were used, from 06-January 2021 to 05-July 2021 (N = 884,695). The data were combined to increase the sample size and statistical power. Complex survey design was applied to represent the US population. The outcome of being food insecure was defined as "Sometimes/always don't have enough food to eat," and a logistic regression model was fitted to show the association with sociodemographic factors. Proportion of participants reporting food insecurity were examined by age, gender, and racial group to identify the intersection of demographic factors with the highest food insecurity rate.

Results: We found that compared to males, females had higher likelihood of being food insecure (OR = 1.25, 95%CI:1.21,1.29); compared to 65+ years, people aged 25–39 years were more food insecure (OR = 3.3, 95%CI: 3.06,3.56); compared to white, the non-Hispanic black (NHB) shows an elevated likelihood of food insecurity (OR = 2.18, 95%CI: 2.1,2.27). We also found that the probability of food insecurity increases with more children in the household and decreases with higher education level. Among all job types, people who are self-employed had lowest likelihood of being food insecure. Loss of job was strongly associated with food insecurity (OR = 3.21, 95%CI: 3.10,3.31). The most vulnerable group was NHB, 25–39 years old, male, with a 24.8% (N = 3,857) rate of food insecurity.

Conclusions: This analysis shows national food insecurity disparities among demographic and socioeconomic factors during the COVID-19 pandemic. Future research aims to examine how the additional burden from COVID-19 was managed by communities identified as most at-risk.

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