

Background

Most Americans have poor nutrition and unhealthy eating habits, which can lead to becoming overweight or obese.¹

Top food delivery apps have seen a \$3 billion increase in revenue since the start of quarantine due to COVID-19.³

There is a positive association between the frequency of eating outside the home and having a high BMI.²

Limited research on the effect of ordering from Online Food Delivery apps on eating habits.

No research has been done on how using Online Food Delivery apps affects unhealthy eating habits, specifically since the COVID-19 pandemic.

Objective

To determine the association between the use of Online Food Delivery (OFD) apps and unhealthy eating habits among college students and staff since the start of the COVID-19 pandemic.

Methods

A cross-sectional online survey was distributed via email and posts on social media pages. The survey was 17 questions long and was open for approximately three weeks.

Questions about participants frequency use of OFD apps both prior to and during COVID-19 as well as their current living situation were asked to measure our exposure variable, usage of OFD apps.

Questions regarding knowledge of an adherence to dietary guidelines as well as perceptions of "healthiness" of their order were asked to measure our outcome, unhealthy eating habits.

There were 88 participants in our study which identity was kept anonymous.

Results (N=88)

Demographic Characteristics

Gender	Female: 77.3%
	Male: 21.6 %
	Non-binary: 1.1%
Age	<18: 1.1%
	18-24: 65.9%
	25-30: 14.8%
	31-40: 5.7%
	41+: 12.5%
Race	White: 42%
	Black or African American: 3.4%
	Asian: 22.7%
	Other: 29.5%
Hispanic	Yes: 34.1%
	No: 63.6%

Table 1: Demographic Information

Use Online Food Delivery (OFD) Apps

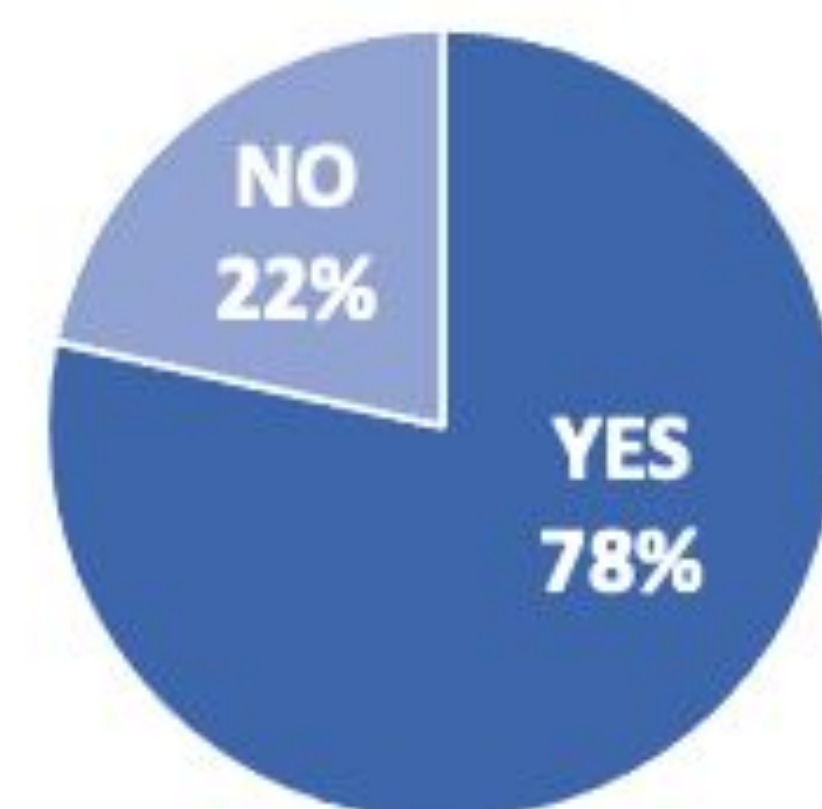


Figure 1: Participants who use Online Food Delivery (OFD) apps

- **Bivariate Comparison Results:** A chi squared test shows the association between the usage of Online Food Delivery (OFD) apps and perceived healthiness of food order is statistically significant (p-value <0.05).

Survey Results

- 97.1% of respondents believe that since the start of the COVID-19 pandemic, **people use online food delivery apps more often**
- 78.3% of respondents believe that people's eating habits have become **less healthy since the start of the pandemic**

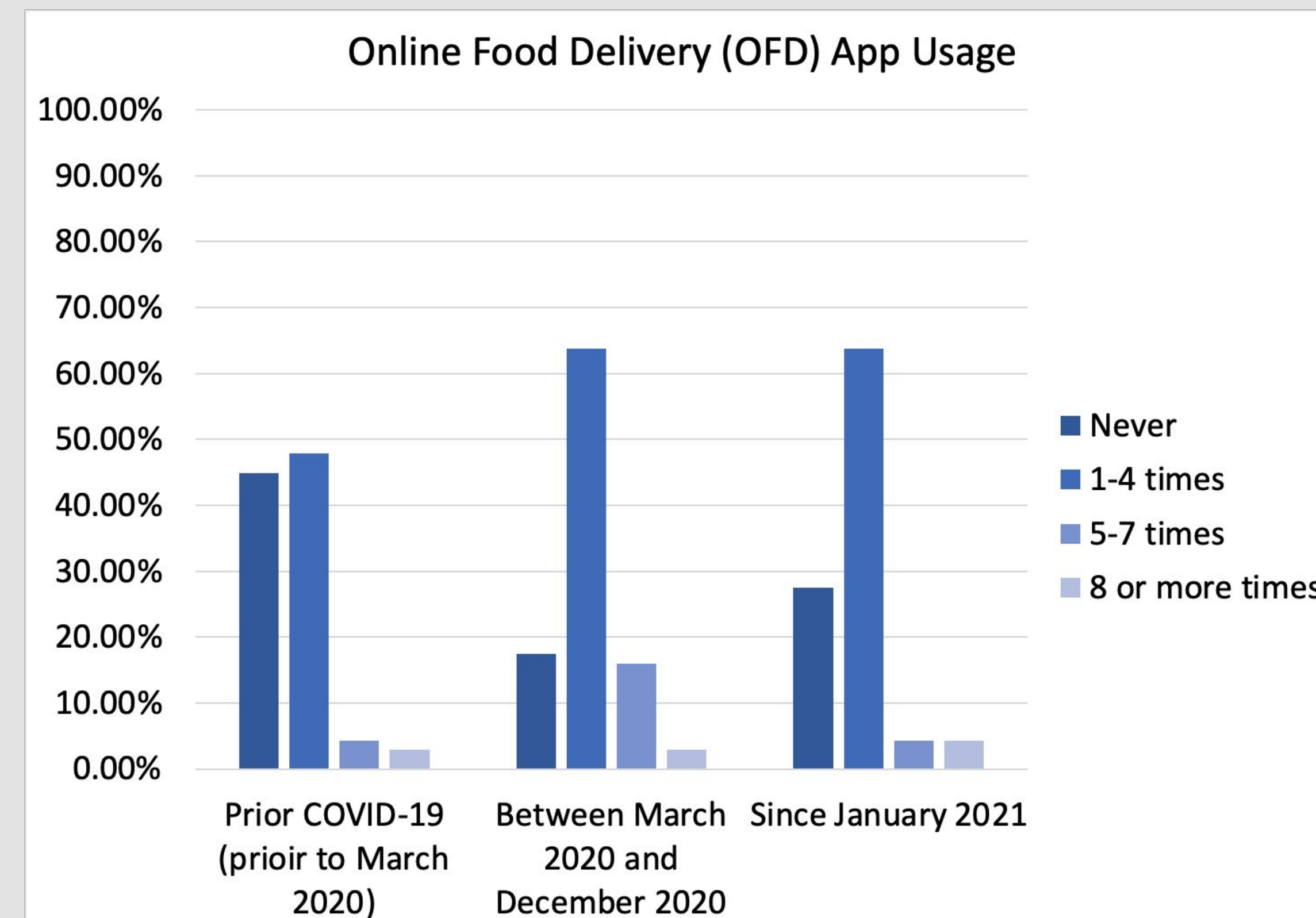


Figure 2: OFD apps usage

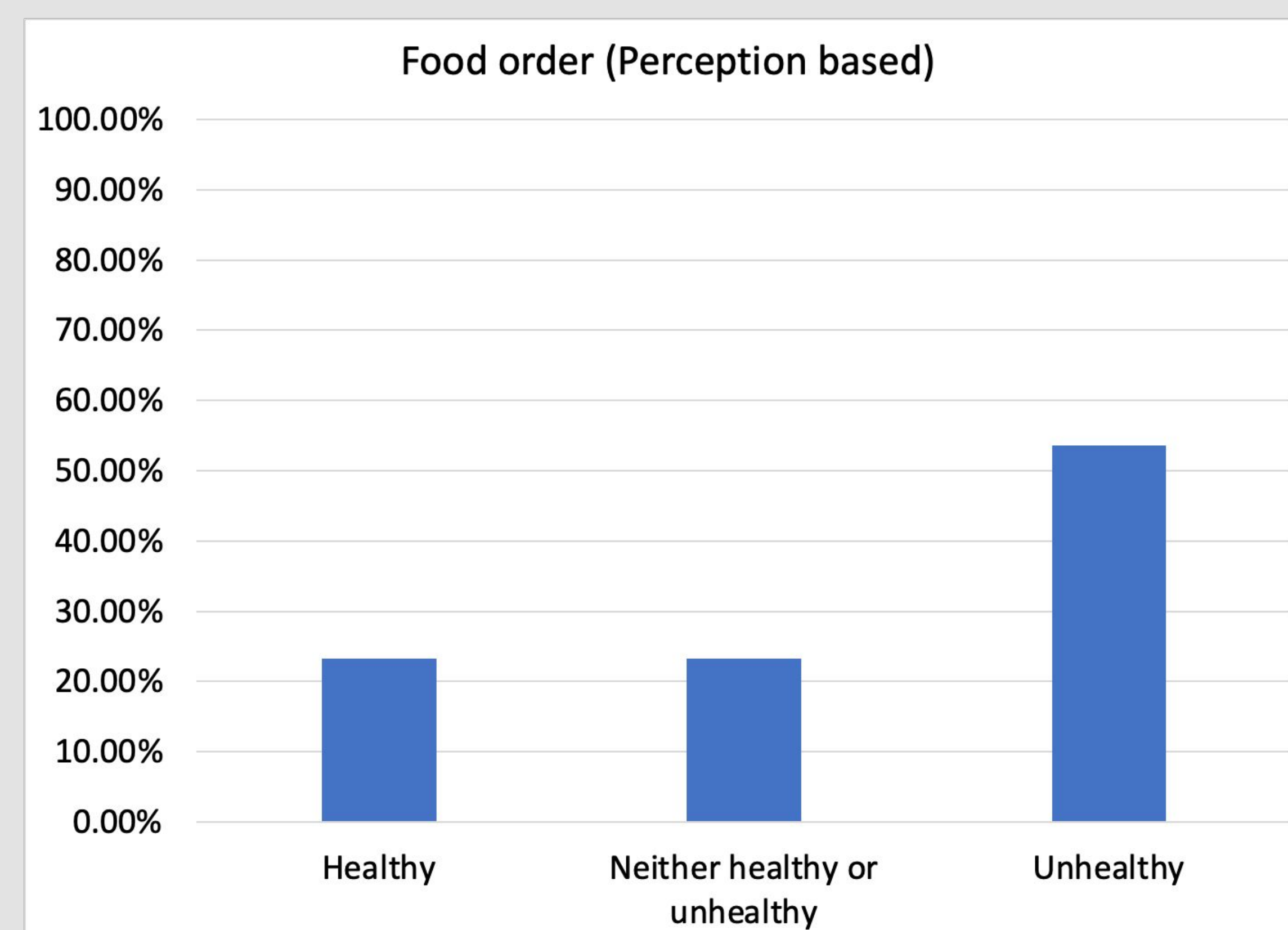


Figure 3: Perception of Food order

Conclusion

- During the Pandemic there was an increase in the use of OFD apps
- Over 50% of participants believed that food orders placed through OFD are unhealthy compared to 20% who believed it was healthy.
- There was an association between an increase in OFD apps usage and unhealthy eating habits. P-value statistically significant (<0.05).
- Further studies should be conducted in order to determine associations between BMI and OFD usage as well as its implications.

Policy Implications

- To increase education of healthy meal options at restaurants, OFD apps should be required to specifically mark meal options that follow the Dietary Guidelines for Americans.
- OFD apps should require users to acknowledge the guidelines the first time they use the app.

Acknowledgements

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References

- ¹Centers for Disease Control and Prevention. (2021, January 11). *Poor Nutrition*. CDC. <https://www.cdc.gov/chronicdisease/resources/publications/factsheets/nutrition.htm>
- ²Stephens, J., Miller, H., & Militello, L. (2020). Food Delivery Apps and the Negative Health Impacts for Americans. *Frontiers in Nutrition*, 7(14). doi: 10.3389/fnut.2020.00014.
- ³Sumagaysay, L. (2020, November 25). *The pandemic has more than doubles food delivery apps' business. Now what?* Market Watch. <https://www.marketwatch.com/story/the-pandemic-has-more-than-doubled-americans-use-of-food-delivery-apps-but-that-doesnt-mean-the-companies-are-making-money-11606340169>