The Association between Weight Perception and Weight Loss among Adolescents with and without High Screen Times during the COVID-19 Pandemic

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Introduction

- Adolescents' screen time and weight-related behaviors become major public health concerns during the COVID-19 pandemic, with research showing increases in disordered eating, weight concerns, and media use during lockdown periods.
- Prior studies consistently link higher screen time—especially social media use—to greater body dissatisfaction and weight-related concerns, though most evidence is correlational and relies on retrospective self-reports.
- A key gap in literature is whether screen time simply exposes adolescents to harmful content or whether it signals increased vulnerability to weight concerns independent of perceived weight.
- This study examines (1) the relationship between weight perception and weight-change behaviors and (2) whether this relationship differs between adolescents with high vs. low screen time. Additional variables such as sex, mental health, and exercise were added to explore more potential influences.

Methods

Sample

- Adolescents (age 14 to 18) who reported trying to lose or gain weight (N = 5089). 54% female; 37% reported they were content with their weight; 47% reported spending 5 or more hours on screen time per day.
- The 2021 Adolescent Behaviors and Experiences Survey (ABES) is a nationally representative, web-based survey of U.S. high school students (grades 9-12) during COVID-19.

Measures

- Weight Perception: Self-reported weight categorized as content ("about the right weight") vs. discontent (all other categories).
- Weight-change behavior: Whether participants were trying to lose weight (vs. not trying to lose weight.
- Screen time: Daily recreational screen use categorized as low vs. high (3+ hours/day).

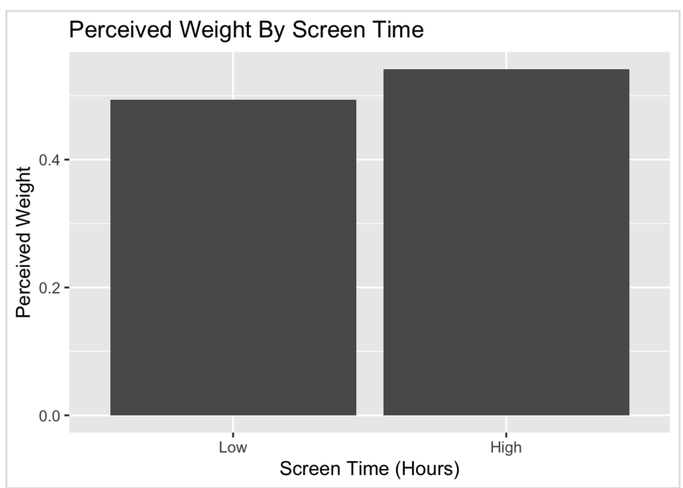
Research Questions

- Is weight perception (content vs. discontent) associated with attempts to lose weight?
- Is higher screen time associated with greater likelihood of trying to lose weight?
- Does screen time moderate the relationship between weight perception and weight-change behavior?

Results

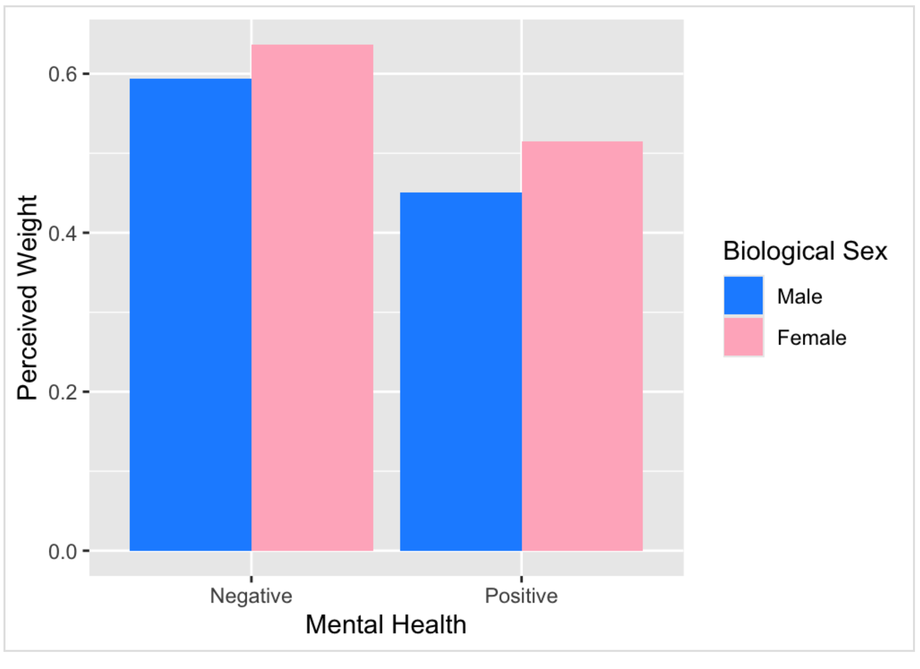
Weight perception is more strongly associated with weight-loss behavior than screen time, with adolescents discontent about their weight showing a higher likelihood of attempting weight loss.

Adolescents who were discontent with their weight were more likely to attempt weight loss. $\chi^2(1) = 36.06$, $p < 0.001$.



Adolescents with higher screen time were slightly more discontent with their weight compared to those with lower screen time. $\chi^2(1) = 8.13$, $p = 0.004$

Adolescents reporting negative mental health show higher levels of weight dissatisfaction, with females consistently reporting greater dissatisfaction than males. When measuring perceived weight alongside different variables, a positive mental health resulted in the most significant difference in being content with one's weight.



Discussion

- Findings support prior research showing a strong link between between weight dissatisfaction and attempts to change weight, reinforcing that perception—not just actual weight—plays a central role in adolescent behavior.
- Higher screen time was associated with slightly greater weight dissatisfaction and increased attempts to lose weight, suggesting that screen exposure may contribute to weight-related concerns.
- However, the relatively small differences in weight perception across screen time groups indicate that screen time may act more as a risk factor rather than a primary cause of dissatisfaction.
- Additional factors such as exercise and mental health showed meaningful associations, with lower physical activity and poorer mental health linked to greater weight dissatisfaction, highlighting the importance of broader contextual influences.
- The entire population, including the chosen sample, showed high rates of screen time, likely due to the circumstances of the pandemic.
- These findings suggest that adolescents discontent with their weight, and potentially also with a high screen-time, may be an important target for interventions focused on media literacy, healthy body image, and behavioral coping strategies, while future research should further incorporate more variables and longitudinal effects.

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