

Associations Between Emotions and Hunger-Fullness Levels Across Types of Meal Logs During Treatment



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Introduction

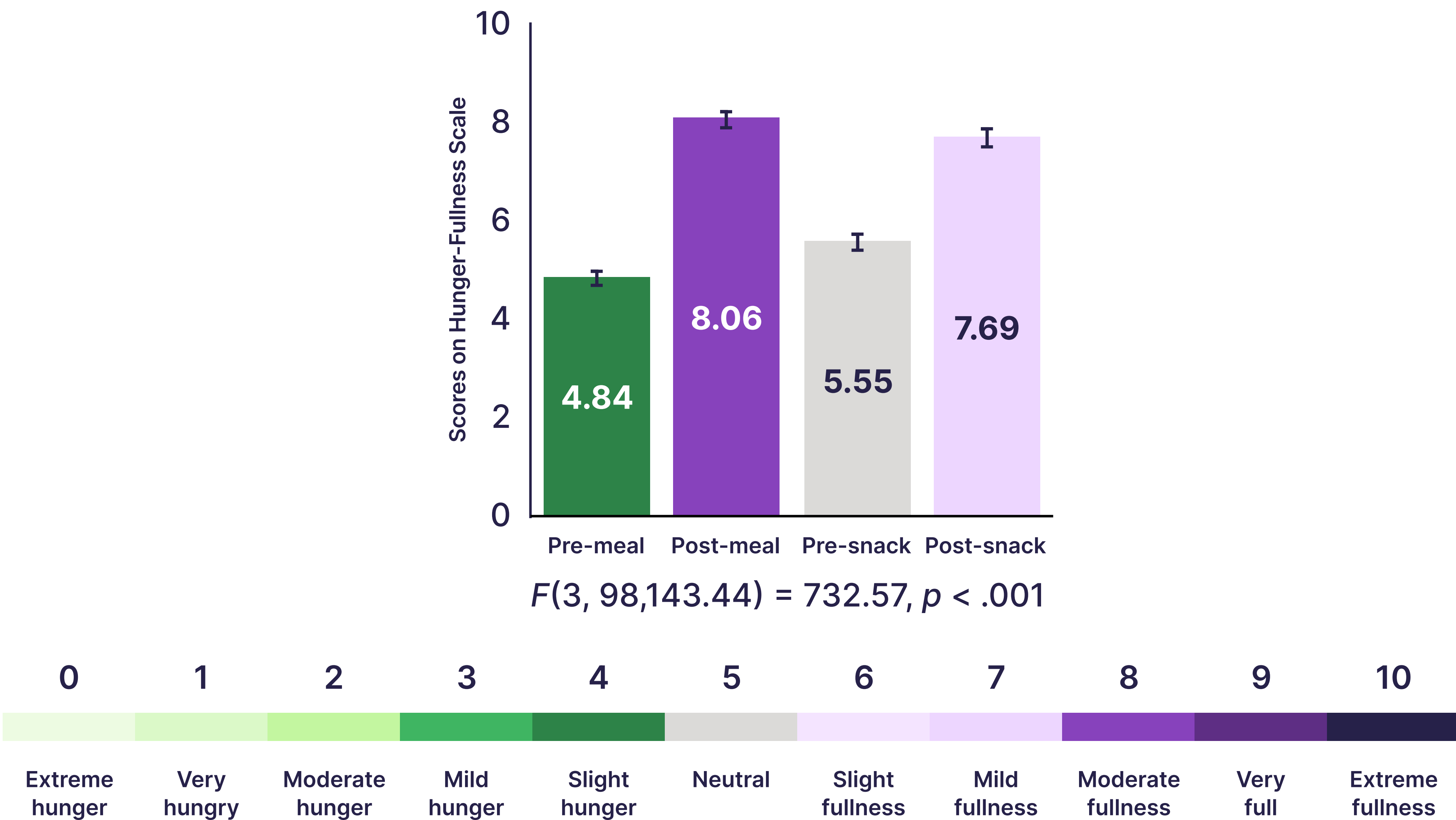
As a core component of several evidence-based approaches, meal self-monitoring is a widespread practice in eating disorder (ED) treatment, increasingly facilitated by mobile apps with logging features.¹ While logs vary, they often prompt patients to report on two important aspects of intuitive eating²: identifying emotional states and recognizing hunger-fullness levels.³ Prior research links both factors to disordered eating behaviors⁴⁻⁷ and shows that intuitive eating interventions emphasizing these skills yield reductions in ED symptoms.^{8,9} Despite their potential as treatment targets, there is limited research on how these variables relate within meal monitoring logs in real-world clinical settings. Thus, this study examines associations between hunger-fullness ratings and reported emotions across types of meal logs in a remote ED treatment program.

Methods

Participants in this retrospective study were 482 patients (mean age = 28.17), most of whom identified as White (89.0%), cisgender women (87.1%). Self-reported hunger-fullness ratings (0-10 scale) and endorsements (yes/no) of specific emotions (e.g., joy, stress) were extracted from 104,623 pre- and post-meal and snack logs completed via a mobile app as part of routine clinical practice.

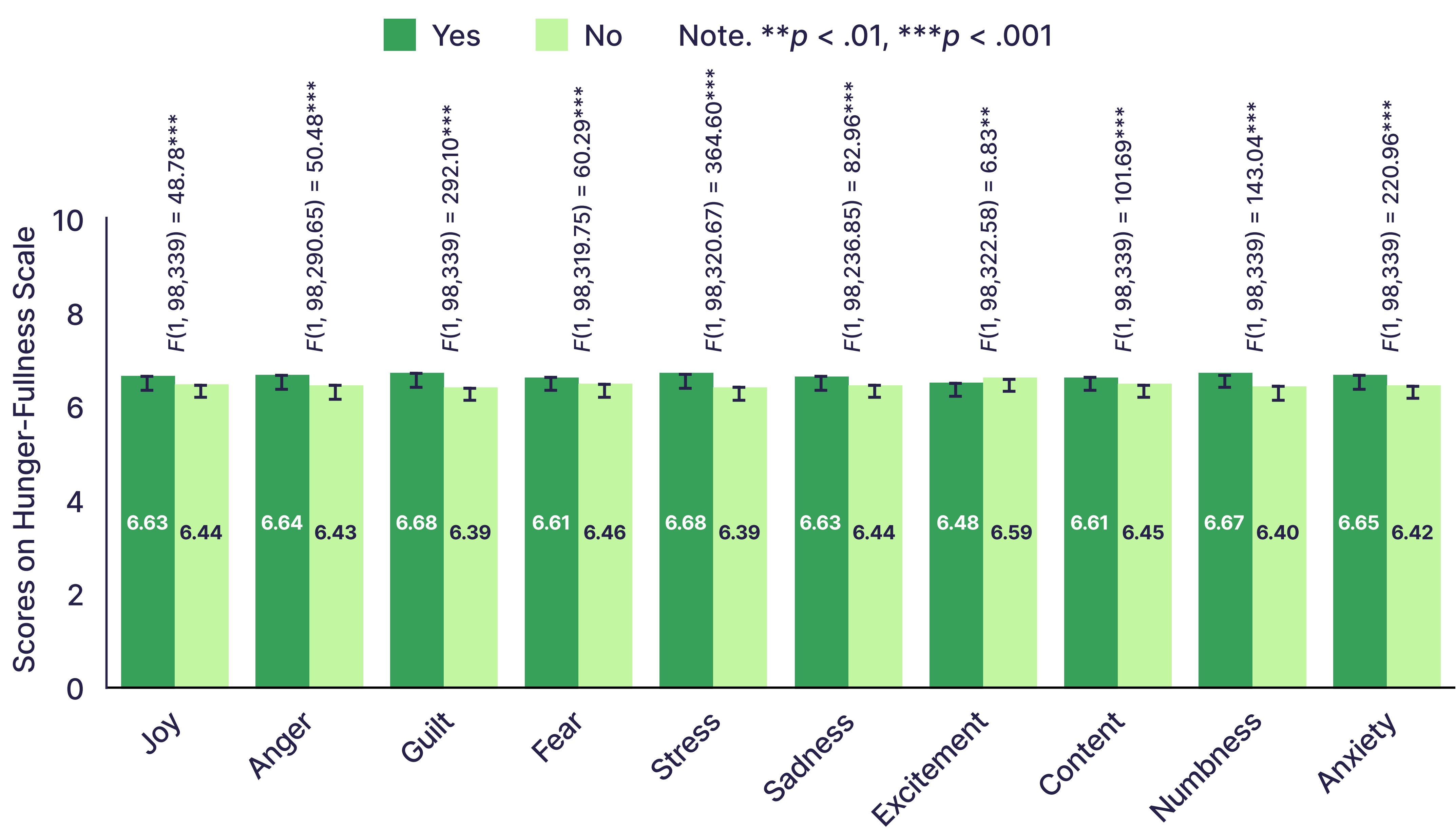
Results

A linear mixed-effects model revealed significant differences between all log types on hunger-fullness ratings as follows: pre-meal = slight hunger, pre-snack = neutral, post-snack = mild fullness, and post-meal = moderate fullness.

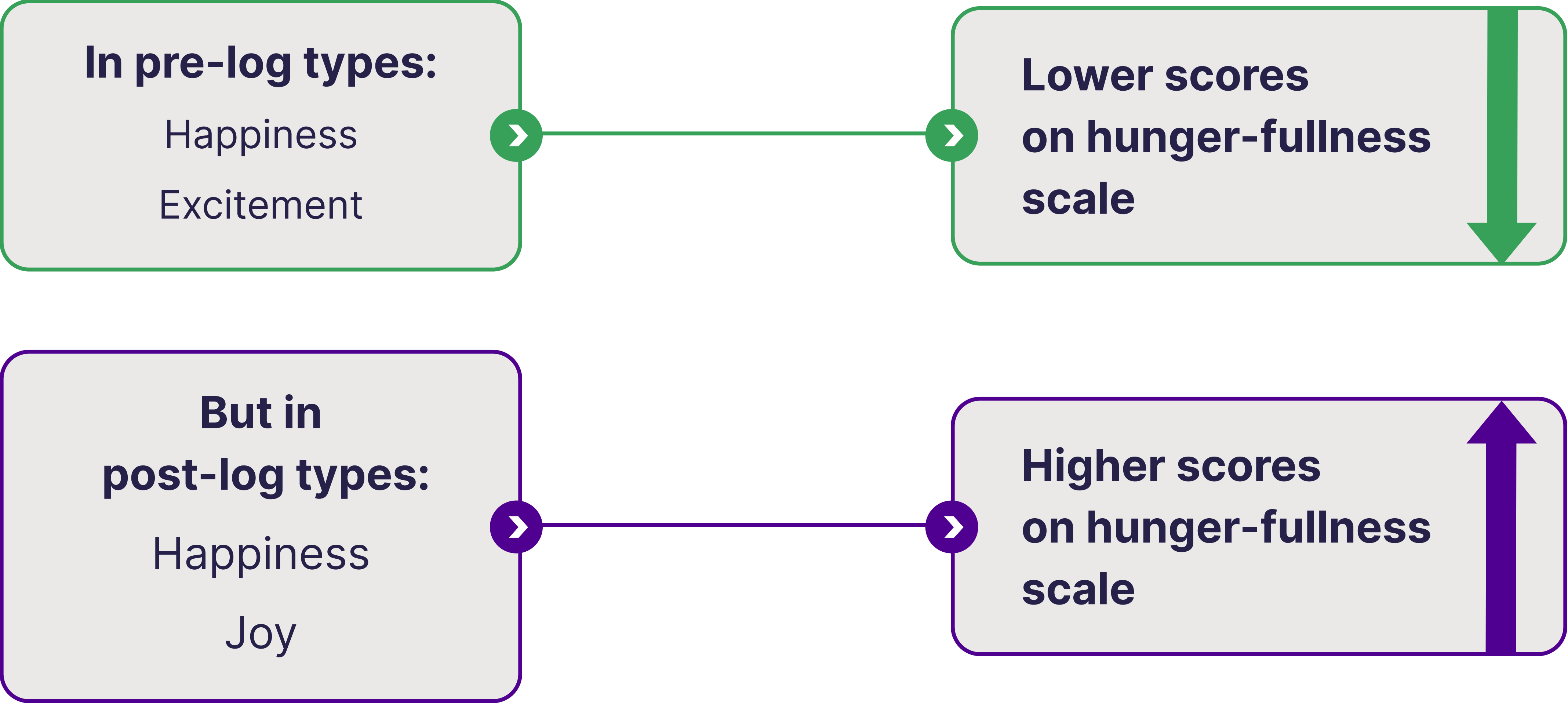


Results (continued)

Main effects for all emotions on hunger-fullness ratings were significant except for loneliness, shame, and happiness. Endorsing all of the remaining emotions was associated with reporting higher hunger-fullness scores compared to when that emotion wasn't endorsed, except for excitement, whereby patients who endorsed feeling excited reported lower hunger-fullness scores.

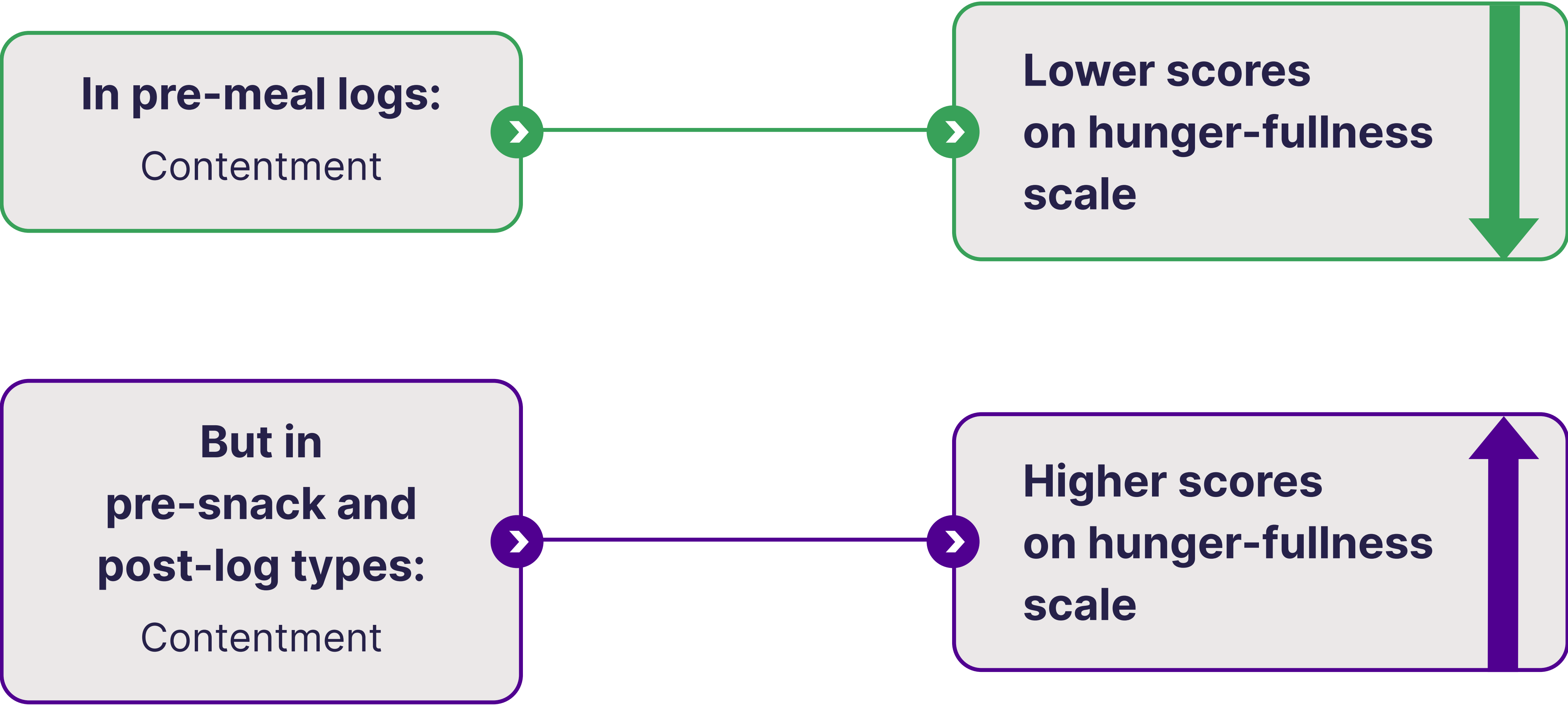


Significant interactions indicated that for the majority of emotions, associations with hunger-fullness depended on the type of log. Starting with some of the positively valenced emotions, presence of happiness and excitement was associated with lower scores on the hunger-fullness scale for pre-log types, including both meal and snacks. However, presence of happiness and joy were associated with higher scores for post-logs.

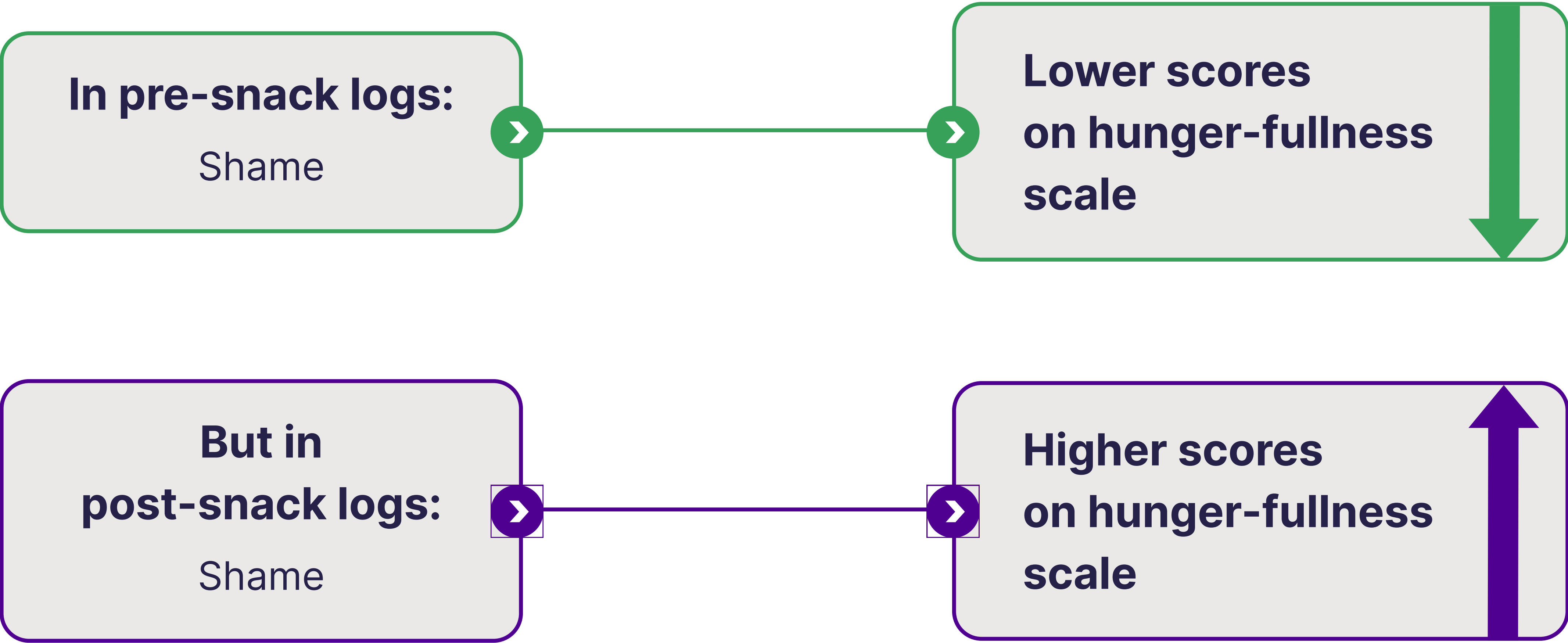


Results (continued)

Interestingly, presence of contentment was associated with lower scores on the hunger-fullness scale in pre-meal logs but higher scores in pre-snack logs. Additionally, presence of contentment was associated with higher scores for post meal and snack logs.

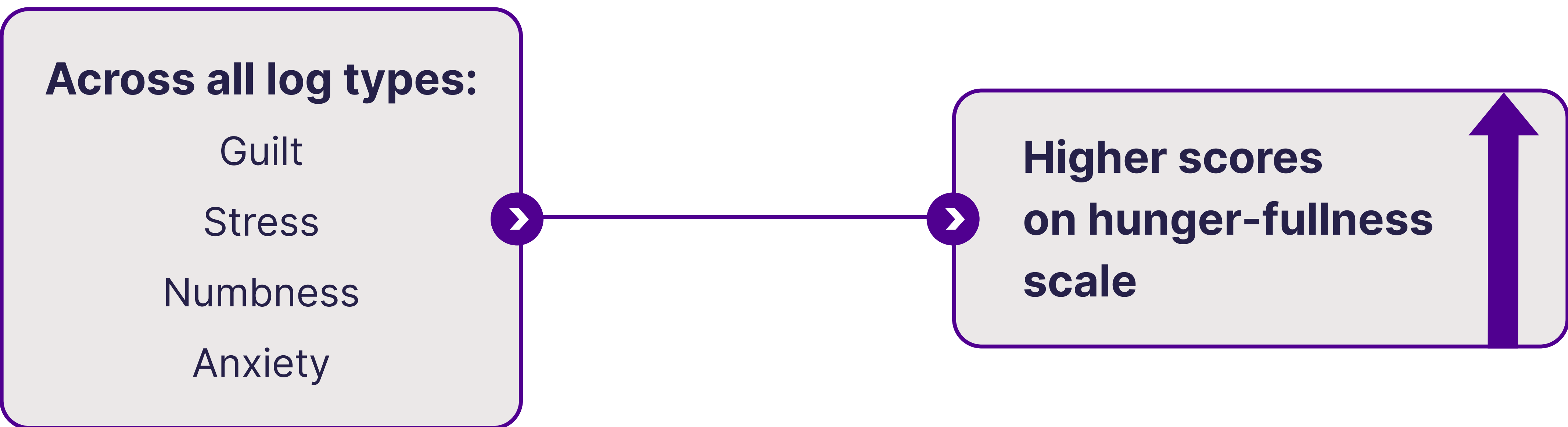


Presence of shame was associated with lower scores on the hunger-fullness scale pre-snack but higher scores post-snack.

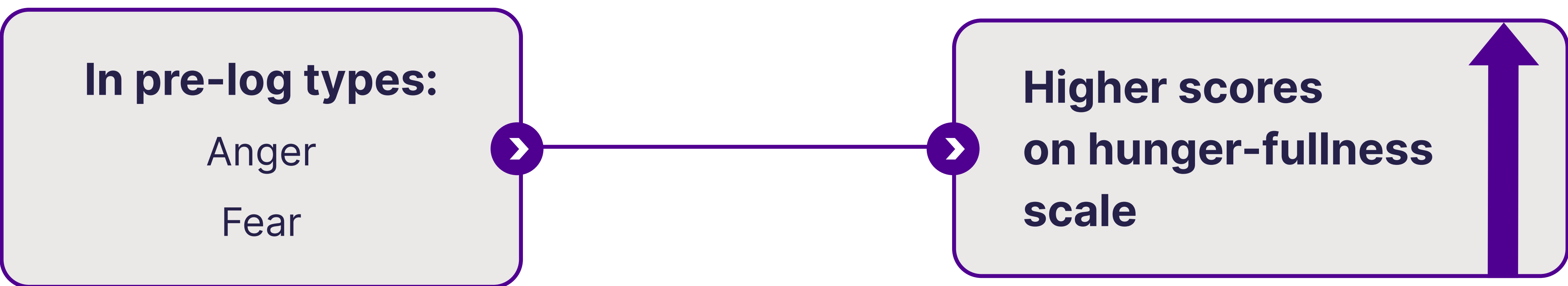


Results (continued)

Across all log types, presence of guilt, stress, numbness, and anxiety were associated with higher scores on the hunger-fullness scale.



Finally, presence of anger and fear were associated with higher scores on the hunger-fullness scale for both pre meal and snack logs.



Discussion

These results suggest that the relationship between specific emotions and hunger-fullness ratings in meal monitoring depends on the timing and eating occasion. Future research should investigate the directionality and meaning of these associations, explore predictive relationships between pre-meal/snack states (i.e., physiological, emotional) and post-meal/snack outcomes (e.g., meal completion, ED behaviors), and consider how these relationships evolve throughout the course of treatment.

References

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