



Moderators of Post-Binge Negative Affect

Kyle De Young, PhD¹, Jason Lavender, PhD², Stephen Wonderlich, PhD²,
Ross Crosby, PhD², Scott Engel, PhD², James Mitchell, MD²,
Scott Crow, MD³, Carol Peterson, PhD³, & Daniel Le Grange, PhD⁴



¹University of North Dakota, Department of Psychology

²Neuropsychiatric Research Institute; University of North Dakota School of Medicine and Health Sciences

³University of Minnesota, Department of Psychiatry

⁴The University of Chicago, Department of Psychiatry

INTRODUCTION

Research suggests that negative affect (NA) is a common antecedent of binge eating, although findings regarding post-binge changes in affect have been mixed, calling into question models of binge eating that posit negative reinforcement functions.

PURPOSE

To identify person- and situation-level variables that might influence the function of binge eating, this study examined immediate (within 1 hour) changes in post-binge NA and tested whether these changes were moderated by eating disorder diagnosis and the presence of self-induced vomiting (SIV).

METHODS

Participants

47 women with full or sub-threshold anorexia nervosa (AN) and 121 with bulimia nervosa (BN)

Measures

Participants completed portions of the Positive and Negative Affect Schedule (PANAS), including broad negative affect and the specific facet of guilt. Participants also reported the occurrence of various eating disorder behaviors, including binge eating and SIV.

Procedure

Participants completed a 2-week ecological momentary assessment protocol, providing multiple daily ratings of NA and guilt and recording episodes of binge eating and SIV.

Data Analysis

Only ratings made within 1-hour following a binge eating episode were included. The relationships between diagnosis (AN vs. BN) and SIV (tendency to be present vs. absent) and NA and guilt were tested using linear mixed effects modeling.

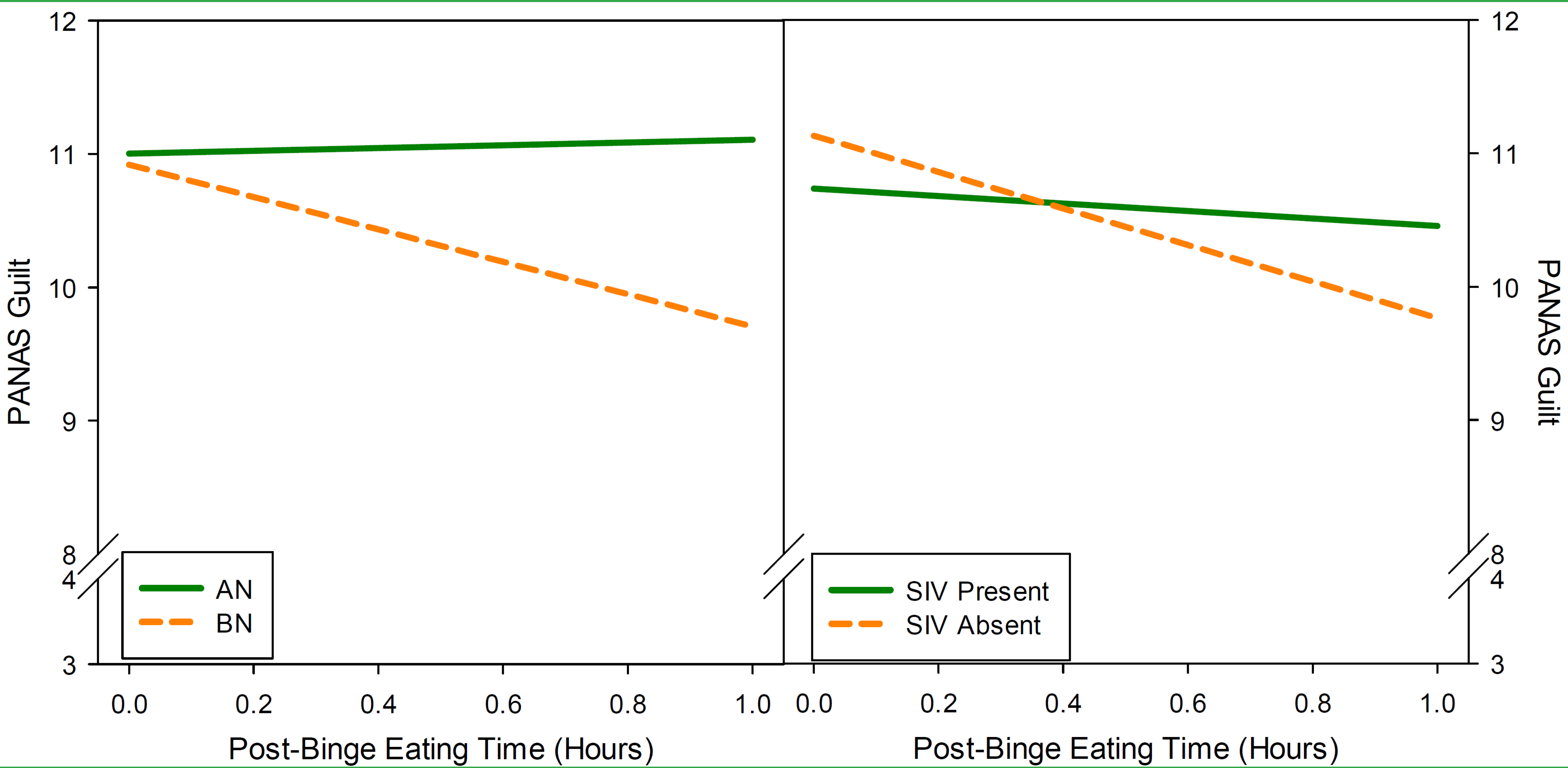
RESULTS

Although overall NA decreased during the first post-binge hour, this decrease was not moderated by diagnosis or the presence of SIV. Guilt also decreased during the first post-binge hour, but this change was moderated by both diagnosis and SIV. Specifically, guilt decreased in BN whereas it did not in AN, and the tendency to engage in SIV was related to an *increase* in guilt, whereas the tendency not to engage in SIV was associated with a *decrease*.

Linear Mixed Model Results of PANAS Negative Affect and Guilt

| Parameter | Negative Affect | | | | | | Guilt | | | | |
|------------|-----------------|------|-------|---------|-----------------|--|----------|------|-------|---------|-----------------|
| | Estimate | SE | t | df | p | | Estimate | SE | t | df | p |
| Intercept | 25.63 | 0.64 | 40.23 | 237.03 | <.001 | | 10.94 | 0.26 | 41.84 | 247.64 | <.001 |
| Time | -2.27 | 0.58 | -3.90 | 1165.54 | <.001 | | -0.84 | 0.25 | -3.32 | 1192.71 | <.001 |
| SIV | -0.58 | 0.61 | -0.96 | 1086.18 | .340 | | -0.40 | 0.27 | -1.48 | 1122.36 | .138 |
| Dx | -1.89 | 1.43 | -1.33 | 241.40 | .186 | | -0.08 | 0.59 | -0.14 | 252.80 | .888 |
| Time x SIV | 1.30 | 1.11 | 1.17 | 1090.20 | .242 | | 1.09 | 0.49 | 2.23 | 1122.98 | .026 |
| Time x Dx | -2.47 | 1.29 | -1.92 | 1116.99 | .056 | | -1.32 | 0.56 | -2.33 | 1157.11 | .020 |
| SIV x Dx | 0.87 | 0.73 | 1.20 | 987.97 | .231 | | 0.37 | 0.32 | 1.14 | 1029.44 | .253 |

Note. SIV = self-induced vomiting (coded 0 for absent and 1 for present); Dx = diagnosis (coded 0 for anorexia nervosa and 1 for bulimia nervosa); significance evaluated at a p-value of .05, represented by bolded type.



CONCLUSIONS

These results indicate that both diagnosis and SIV are related to post-binge eating guilt trajectories and suggest that examining moderators and specific facets of NA may be useful for elucidating the functions of binge eating. Guilt, as a specific facet of NA, may be of particular relevance to understanding the emotional experience of binge eating.

ACKNOWLEDGMENTS

This research was supported by the following sources: R01 MH059674; T32 MH082761