AFFECTIVE DYNAMICS ACROSS EATING DISORDER DIAGNOSES

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Affect Regulation Model

Lack of Adaptive Emotion Regulation Strategies

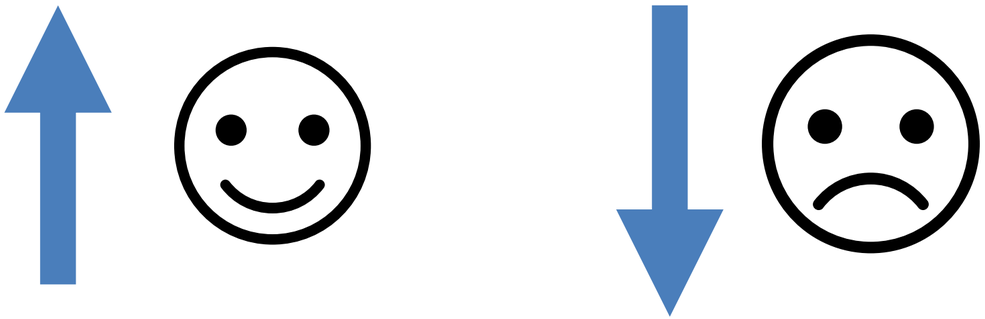
Uncomfortable Affective State → Disordered Eating Behaviour

- Individuals with EDs experience more **negative affect** (NA) and **emotion dysregulation**
- NA increases before binge eating and decreases in the hours following for individuals with various ED presentations

Brockmeyer et al., 2014; Culbert et al., 2015; Haedt-Matt et al., 2011; Wonderlich et al., 2022

The Role of Positive Affect (PA)

- Preliminary evidence suggests that PA functions to regulate certain ED behaviours (e.g., restriction, exercise)
    - In anorexia nervosa (AN): restrictive eating associated with **higher** PA
    - In women with AN and bulimia nervosa (BN): skipping a meal predicted **more** PA
    - Momentary research: PA **increases** right after exercising

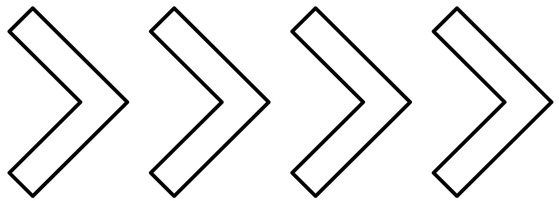


Disordered Eating Behaviour

Biçaker et al., 2024, Engel et al., 2013; Fitzsimmons-Craft et al., 2015

Affective Dynamics

- **Intensity:** mean levels of affect
- **Instability (lability):** fluctuations in affective intensity over time
- **Inertia:** predictability in affect intensity from moment to moment
- **Differentiation:** an individual's ability to differentiate between distinctive affective states

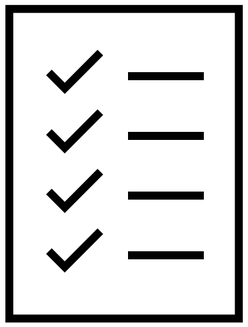


Berner et al., 2017; Selby et al., 2012; Trull et al., 2015

The Current Study: Aims and Hypotheses

- **Aim 1:** Compare NA and PA dynamics between different ED diagnostic groups and non-ED controls
    - **Hypothesis:** Individuals with EDs will differ from non-ED controls

- **Aim 2:** Examine how NA and PA dynamics predict the occurrence of specific ED symptoms
    - **Hypothesis:** NA dynamics will be more likely to predict binge eating and purging; PA dynamics will be more likely to predict restriction and exercise

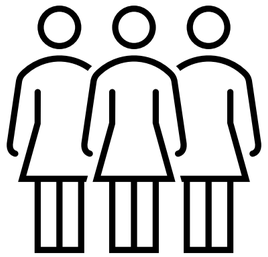


Participants

- 261 individuals who identified as women (210 with EDs, 51 non-ED controls)

- ED Diagnoses:
    - anorexia nervosa restricting type (AN-R; n = 51)
    - anorexia nervosa binge eating/purging type (AN-BP; n = 35)
    - bulimia nervosa (BN; n = 69)
    - binge eating disorder (BED; n = 25)
    - avoidant/restrictive food intake disorder (ARFID; n = 30)

- Average age: 28.89, *SD* = 8.52; average BMI: 24.80, *SD* = 8.98, 69.9% White



Procedures

- 14-day period of ecological momentary assessment (EMA)

<u>Signal-Contingent Surveys:</u>

5 semi-random prompts daily

- Purging
- Maladaptive exercise since the last prompt
- Affect (PANAS-X)

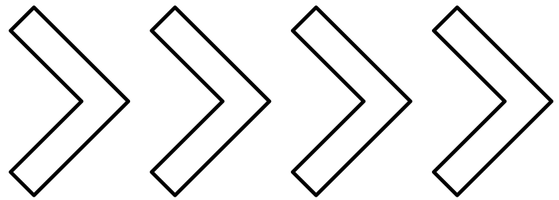
<u>Event-Contingent Surveys:</u>

Completed after each meal or snack

- Binge Eating
- Restriction

Analyses

- **Intensity:** average of the corresponding PANAS-X items at that timepoint
- **Instability (lability):** mean successive squared differences (MSSDs) of affect ratings
- **Inertia:** generalized estimating equation model
- **Differentiation:** intraclass correlation coefficients (ICCs) of affect ratings

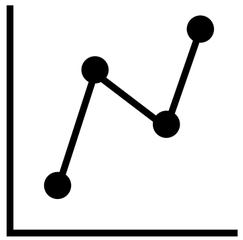


Jahng et al., 2008; Kashdan et al., 2010; Kuppens et al., 2010

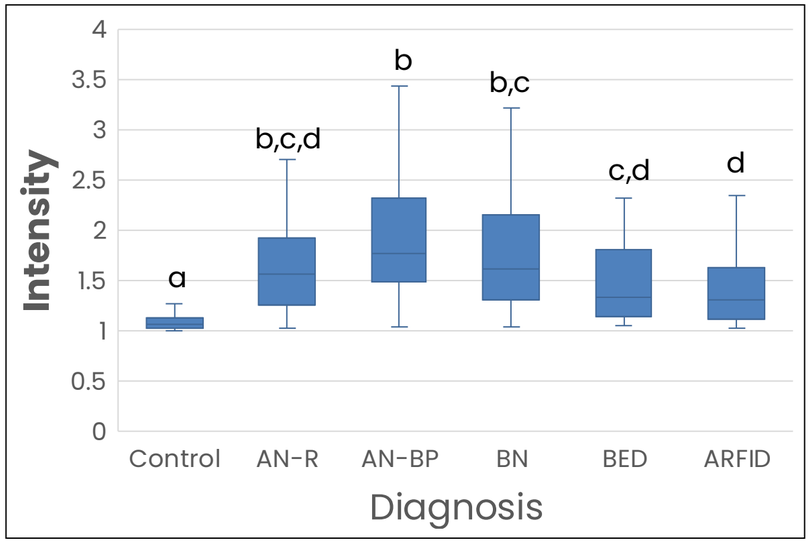
Analyses

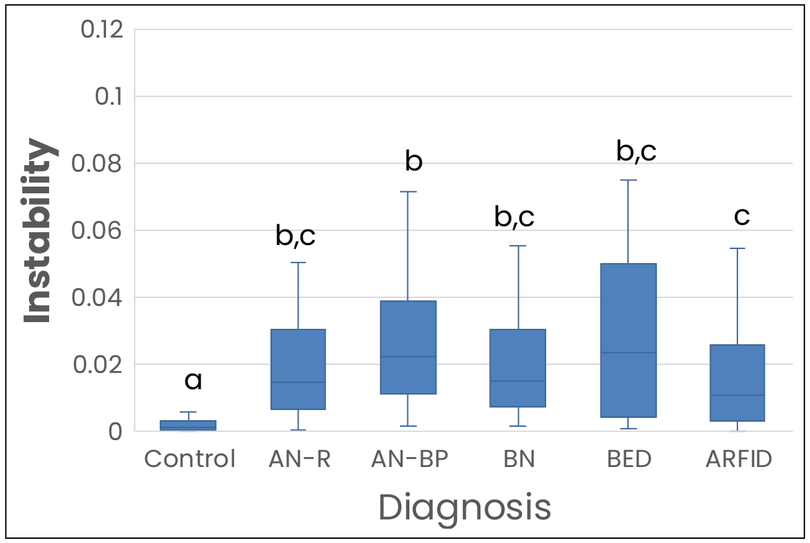
- **Aim 1:** Welch's ANOVAs to examine difference between ED diagnoses on average levels of affective dynamics across the 14-day period
    - Post-hoc comparisons when appropriate

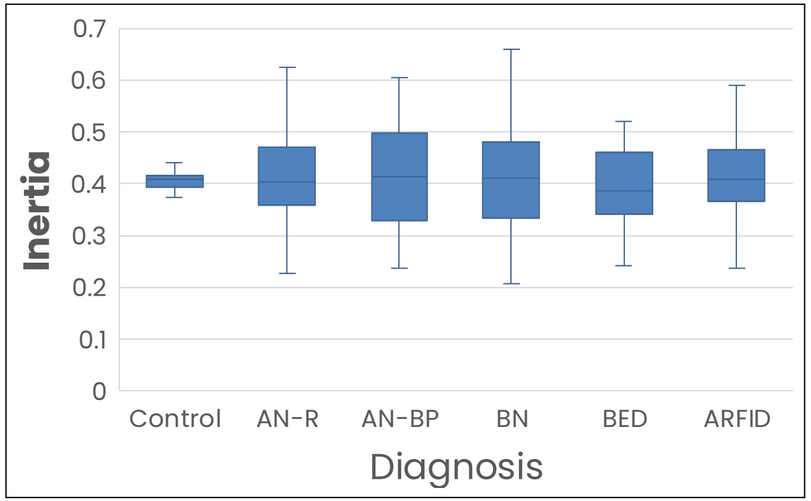
- **Aim 2:** Generalized linear mixed models with a log link to account for binary outcomes
    - Control variables: time between surveys, affect intensity (for instability, inertia, and differentiation)
    - Momentary data nested within participants

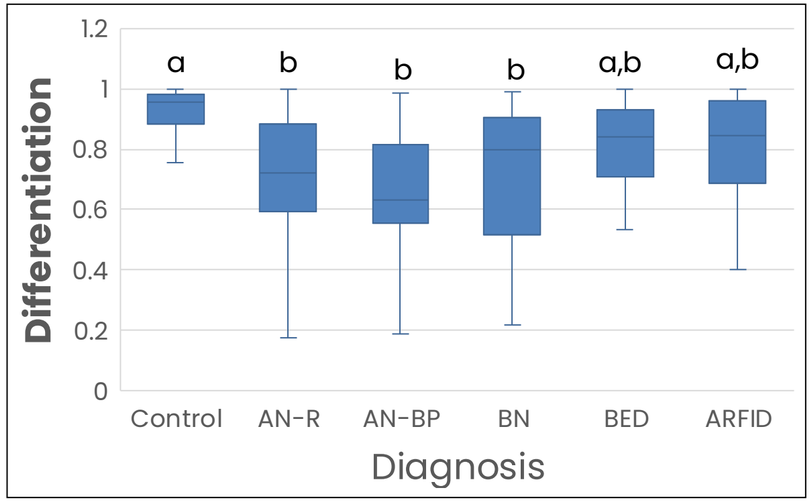


Negative Affect

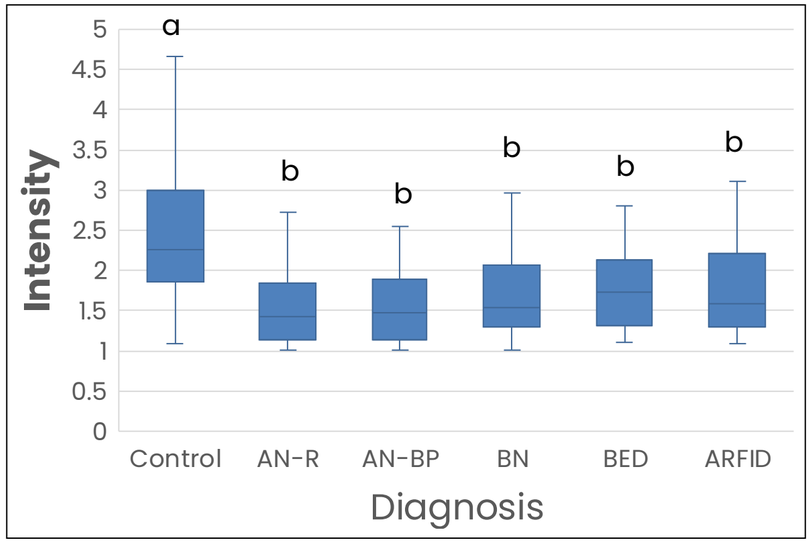


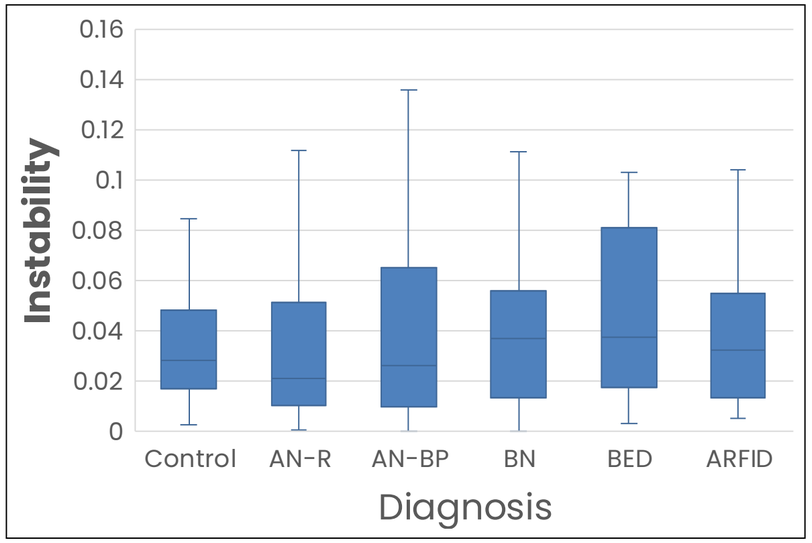


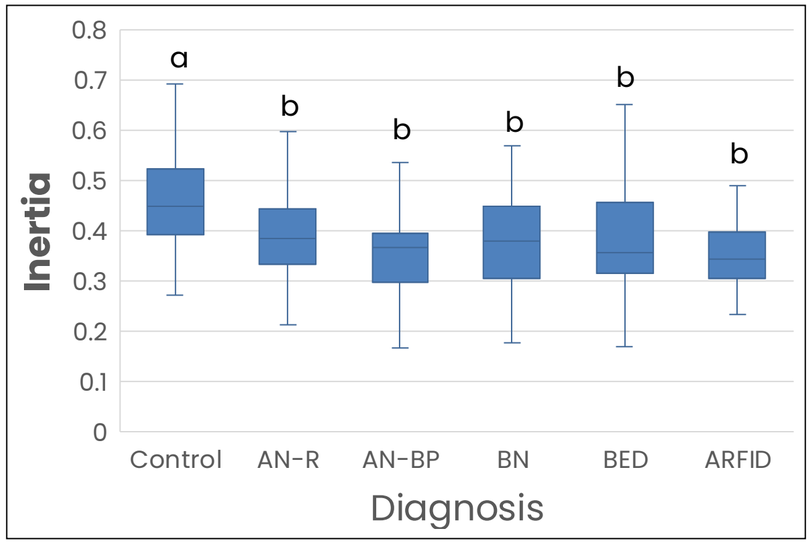


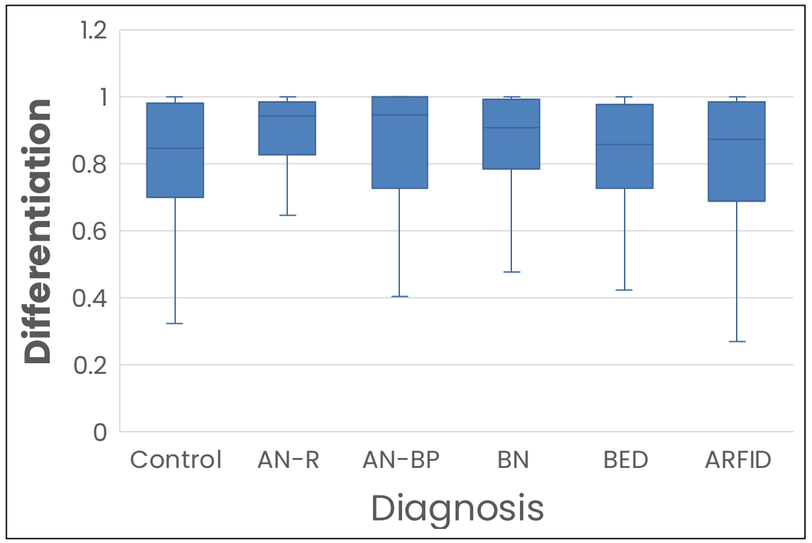


Positive Affect









Within-Subjects Results

	Binge Eating	Purging	Restriction	Maladaptive Exercise
	OR [95% CI]	OR [95% CI]	OR [95% CI]	OR [95% CI]
NA Intensity	1.31 [1.06, 1.61]*	0.86 [0.59, 1.27]	1.04 [0.95, 1.14]	1.02 [0.78, 1.35]
PA Intensity	0.71 [0.48, 1.04]	0.68 [0.30, 1.49]	0.98 [0.87, 1.11]	1.06 [0.67, 1.69]
NA Instability	1.05 [0.90, 1.23]	1.07 [0.97, 1.19]	0.99 [0.90, 1.09]	0.78 [0.45, 1.34]
PA Instability	0.82 [0.55, 1.24]	1.08 [0.45, 2.59]	0.96 [0.85, 1.08]	0.73 [0.34, 1.57]
NA Inertia	1.12 [0.95, 1.32]	1.46 [0.68, 3.14]	1.02 [0.93, 1.13]	0.93 [0.76, 1.12]
PA Inertia	1.25 [1.02, 1.53]*	0.95 [0.48, 1.85]	1.05 [0.95, 1.17]	0.72 [0.55, 0.96]*
NA Differentiation	1.02 [0.75, 1.38]	0.80 [0.40, 1.60]	0.91 [0.83, 1.01]	1.11 [0.72, 1.69]
PA Differentiation	1.10 [0.83, 1.46]	1.83 [0.94, 3.54]	0.98 [0.89, 1.07]	0.81 [0.53, 1.24]

OR = odds ratio; CI = confidence interval
** p < .05 **p < .01 *** p < .001*

Between-Subjects Results

	Binge Eating	Purging	Restriction	Maladaptive Exercise
	OR [95% CI]	OR [95% CI]	OR [95% CI]	OR [95% CI]
NA Intensity	2.32 [1.68, 3.20]***	2.58 [1.53, 4.34]***	2.08 [1.70, 2.55]***	2.87 [1.88, 4.39]***
PA Intensity	0.57 [0.37, 0.86]***	0.58 [0.28, 1.20]	0.46 [0.36, 0.60]***	0.70 [0.43, 1.11]
NA Instability	1.73 [1.29, 2.32]***	1.74 [0.97, 3.14]	1.14 [0.91, 1.41]	0.83 [0.51, 1.35]
PA Instability	1.39 [1.08, 1.80]*	0.73 [0.07, 7.79]	0.98 [0.78, 1.23]	0.70 [0.18, 2.77]
NA Inertia	1.21 [0.83, 1.75]	1.00 [0.53, 1.87]	1.04 [0.80, 1.35]	1.12 [0.68, 1.85]
PA Inertia	1.28 [0.91, 1.79]	1.19 [0.64, 2.21]	0.81 [0.63, 1.03]	1.32 [0.78, 2.22]
NA Differentiation	0.51 [0.34, 0.75]***	0.83 [0.45, 1.54]	0.65 [0.50, 0.83]***	0.48 [0.29, 0.79]***
PA Differentiation	1.02 [0.69, 1.50]	1.28 [0.69, 2.37]	1.95 [1.55, 2.45]***	1.67 [1.04, 2.69]***

OR = odds ratio; CI = confidence interval
** p < .05 **p < .01 *** p < .001*

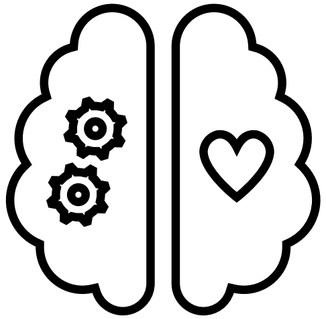
Strengths and Limitations

Strengths:

- The inclusion of PA dynamics as well as NA dynamics
- Comparison with a control group
- Momentary data tells us about temporal relationships that may reflect maintenance processes

Limitations:

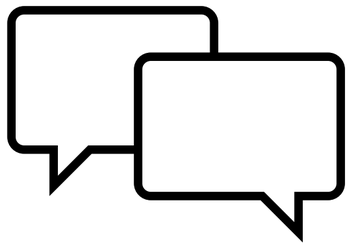
- Sample included mostly White women living in North America
- EMA data is still reliant on self-report



Williams-Kerver et al., 2020

Conclusions

- Hypotheses only partially supported
- Results so far suggest that NA and PA dynamics differentiate individuals with EDs from non-ED controls (with some interesting differences between diagnoses)
- Clarifying the unique patterns of affective associated with different ED behaviours can inform individualized treatment design
- Knowledge of affective triggers may also help individuals learning to implement skills on their own after treatment



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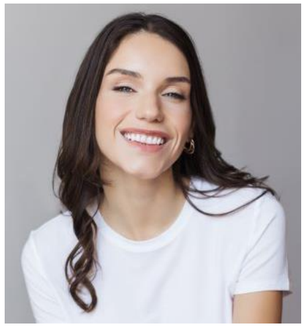

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