Emotional Intelligence and Disordered Eating: Efficacy of Analysis Via Ecological Momentary Assessment

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EMOTIONAL INTELLIGENCE AND DISORDERED EATING

Sarah Kaden & Dr. Elizabeth Dalton
INTRODUCTION

- Disordered eating (DE)
  - Any abnormal eating behavior

- Emotional intelligence (EI)
  - The ability to perceive and handle emotions (Salovey & Mayer, 1989)
  - Debate as to whether it constitutes an intelligence or a personality trait (Petrides, 2009)

- Pilot study to assess the connection between DE, EI, and stress
Anorexia nervosa, bulimia nervosa, binge-eating disorder, and subclinical DE are correlated with lessened EI (e.g. Svaldi, et al., 2012; Harrison, et al., 2010; Markey & Vander Wal, 2007; Cuesta-Zamora, et al., 2018; Griffiths, et al., 2014; Zysberg, 2014).

Increased body dissatisfaction is related to lower EI (e.g. Griffiths, et al., 2014; Svaldi, et al., 2012; Zysberg, 2014).

Subsections of EI related to understanding one’s own and other’s emotions most related to disordered eating (e.g. Hambrook & Tchanturia, 2012; Gardner et al., 2014; Markey & Vander Wal, 2007).

Low EI, as well as increased DE behaviors, are related to higher perceived levels of stress (Espinosa, et al., 2019; Martínez-Monteagudo, et al., 2019; Hendelman, 2017).

How might stress impact the relationship between DE and EI?
ECOLOGICAL MOMENTARY ASSESSMENT (EMA)

- Technology that allows for gathering small amounts of data several times a day
- Participants receive prompts to complete a short survey on their phone
HYPOTHESES

- Global EI scores will be negatively correlated with global DE symptomology (low EI = high DE)
- The Sociability and Emotionality EI subscales will be the most strongly related to DE
- Stress measures will be positively correlated with DE, EI, and actual-ideal weight discrepancy
- Additional research questions:
  - Will body mass index (BMI) be related to EI? (past research is mixed)
  - How much will EI fluctuate day to day?
  - How will the time of day or day of the week affect results?
• Participants
  • E-town students living at or near the college over the summer (n = 20; 75% women, 20% men, 5% other)
  • Recruited through fliers, Campus News, and word of mouth

• Materials
  • Trait Emotional Intelligence Questionnaire – Short Form (TEIQue-SF; α = .81) (Petrides, 2009)
  • Eating Attitudes Test (EAT-26; α = .86) (Garner, Olmsted, Bohr, & Garfinkel, 1982)
  • Perceived Stress Scale (PSS; α = .86) (Cohen, 1994)
  • Daily Hassles (novel measure, similar to previous measures including: Daily Stress Inventory, Brantley, Waggoner, Jones, & Rappaport, 1987; Hassles and Uplifts Scale, DeLongis, Folkman, & Lazarus, 1988; The Inventory of College Students' Recent Life Experiences, Kohn, Lafreniere, & Gurevich, 1990)
  • EMA technology: Expimetrics (Expimetrics, 2018)
• Lab session
  • Complete consent form
• Take survey
  • Demographic information
  • TEIQue-SF
  • EAT-26
• PSS
  • Daily Hassles
• EMA instruction
PROCEDURE

- EMA period
  - Two weeks long
  - Prompts sent at a randomized time three times daily
  - Since my past check-in, I...
    (sample items)
    - (T/F) Had difficulty figuring out what emotion(s) I was feeling (TEIQue-SF)
    - (T/F) Been preoccupied or spent excessive time thinking about food I had consumed or the shape of my body (EAT-26)

In the past four hours, I have been preoccupied or spent excessive time thinking about food I had consumed or the shape of my body.

- Yes
- No
DATA ANALYSIS
PLAN &
RESULTS

• Baseline data: SPSS, mostly correlational analyses
• EMA data: multilevel modeling using Stata and MixWild
• Results (baseline only):

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>Range</th>
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</thead>
<tbody>
<tr>
<td>TEIQue</td>
<td>4.460</td>
<td>0.92</td>
<td>2.90-6.07</td>
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<tr>
<td>EAT</td>
<td>15.41</td>
<td>12.54</td>
<td>0.00-50.00</td>
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<tr>
<td>PSS</td>
<td>20.25</td>
<td>8.89</td>
<td>2.00-35.00</td>
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<tr>
<td>Daily Hassles</td>
<td>8.00</td>
<td>4.39</td>
<td>1.00-16.00</td>
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<tr>
<td>Weight Discrepancy</td>
<td>16.40</td>
<td>19.05</td>
<td>-10.00-80.00</td>
</tr>
<tr>
<td>BMI</td>
<td>25.3</td>
<td>5.48</td>
<td>17.23-40.74</td>
</tr>
</tbody>
</table>
Global EI and global DE scores were not significantly correlated

- Global EI was correlated with Oral Control EAT subscale ($r = -0.481, p = .032$)
- Self-Control TEIQue subscale was correlated with Oral Control EAT subscale ($r = -0.592, p = .006$)

- Global EI was correlated with both perceived stress ($r = -0.660, p = .002$) and objective stress ($r = -0.499, p = .025$)
Global DE was not significantly correlated with perceived stress or objective stress
- Perceived stress was correlated with Bulimia and Food Preoccupation EAT subscale ($r = .528, p = .017$)
- Actual-ideal weight discrepancy was correlated with perceived stress ($r = .468, p = .037$), but not significantly with EI or objective stress
- BMI was not significantly correlated with EI
CONCLUSION

• Why is the Self-Control TEIQue subscale related to DE but not others?  
  • This contradicts past research; do those who perceive more control over emotions perceive more control over food?

• Why were both measures of stress related to the TEIQue?  
  • Perhaps those low in EI may place themselves in more stressful situations, as well as experiencing more perceived stress?

• How will EI measured via EMA inform future research?  
  • If EI fluctuates a great deal day to day, does this mean it is more malleable than intelligences or personality traits usually are?  
  • How will this inform possible interventions?


REFERENCES