

Background

- Eating disorders (EDs) are complex psychiatric conditions that impact physical health and psychological functioning through persistent disturbance of eating behavior significantly¹
- EDs have the second-highest mortality rate of any psychiatric illness²
- Research suggests that individuals with EDs exhibit attentional biases, which may contribute to disordered eating patterns³
- Gathering a better understanding of attentional biases as early indicators in at-risk populations may help inform earlier interventions when treatment is typically more effective⁴
- Current study is part of an ongoing multi-baseline clinical trial (“FlexED” R61MH127137, PI: Merwin)


Goal

The current study aims to investigate the relationship between ED symptom measures and the number of fixations on food and body weight related stimuli, to inform future early interventions for populations at risk of developing EDs,.

Implementation

- Participants were recruited through MyChart messages – online screening questionnaire (Weight Concerns Scale (WCS)) where they expressed interest, provided contact information, and informed consent.
- Completed an Eating Disorder Examination (EDE) and were randomized to a waiting period of 2, 4, or 6 weeks. Participants came in every 2 weeks for monitoring heart rate and eye tracking while simultaneously beginning their ACT intervention.
 - Note: For the purpose of this study, we only analyzed data of the eye-tracking assessments gathered at the baseline visit of the participants.
- At baseline visit, participants fill out Clinical Impairment Assessment (CIA) questionnaires and participate in eye-tracking assessment.
- During the eye-tracking assessment, participants are seated in front of a computer screen in a controlled environment where they are shown body weight and food related stimuli.
 - Tobii Eye Tracker
- Data was entered and analyzed using SPSS software.

Outcomes






Table 1. Participant demographics

	Aim 1 (N=17)
Age (M, SD)	20.08 (3.4)
Race (%)	
White	54.2
Black/African American	25.0
Asian	12.5
More than one race	4.2
Hispanic (%)	16.7
Highest level of education (%)	
High School or GED	4.2
Some college or technical school	33.3
College graduate (bachelor's degree)	29.2
Graduate degree	4.2

Table 2. Bivariate correlations between number of fixations and ED risk questionnaires scores

Variable	M	SD	1	2	3
1. N. fixations	424.57	76.74	-		
2. EDE	2.72	0.8790	-0.073	-	
3. WCS	66.75	18.85	-0.115	.624*	-
4. CIA	19.39	8.73	-.423*	.626*	.625

Note. N. fixations = number of fixations on the image; EDE = Eating Disorder Examination; WCS = Weight Concerns Scale (1-100); CIA= Clinical Impairment Assessment Questionnaire (0 – 48).

Next Steps

- Conduct a study with a longitudinal design and larger sample size for generalizability
- Investigate specific hotspots and frequency of fixation in areas of interest (AOI)
- Explore what causes fixation or aversion on food and body-weight related stimuli
- Understand the impacts of ACT intervention on ED symptom progression (ongoing study)

Conclusion

While number of fixations was not significantly correlated with ED symptom measures such as the EDE or WCS, a moderate negative correlation with CIA scores suggests that greater psychosocial impairment may be associated with visual avoidance of food and body weight stimuli. This highlights the potential role of attentional avoidance as a cognitive feature in individuals experiencing early ED-related distress and symptoms.

Understanding these early cognitive mechanisms could inform the development of more targeted and timely interventions, ultimately improving outcomes for individuals at-risk for eating disorders.

References

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