



BACKGROUND

- A gluten-free diet (GFD) is the mainstay of therapy for gluten-associated disorders (GAD), and non-adherence is associated with worse outcomes and decreased quality of life
- Previous studies have identified disordered eating (DE) in up to 50% of adolescent and adult females with celiac disease (CD)
- Case studies have described reduced adherence to GFD in individuals with comorbid CD and DE
- The UCLA Celiac Collective is a large e-cohort of subjects with self-reported GAD who complete various assessment tools

AIM

- Our aim was to assess the prevalence of comorbid DE in a broader population to include:
 - Adults regardless of gender
 - Other GAD in addition to CD

METHODS

- **Design:** cross-sectional
- **Population:** subset of adult patients recruited to The UCLA Celiac Collective, 2022
- **Assessment Tools:**
 - Celiac Dietary Adherence Test (CDAT)
 - Celiac Symptom Index (CSI)
 - Patient-Reported Outcomes Measurement Information System (PROMIS-29): depression, anxiety, fatigue, social interaction satisfaction
 - Eating Disorder Examination - Questionnaire 6.0
 - Global score ≥ 2.3 indicative of clinically meaningful disordered eating in patients with CD
 - Subscales measure eating restraint, eating concern, shape concern and weight concern

Figure 1. Frequency of DE in our population

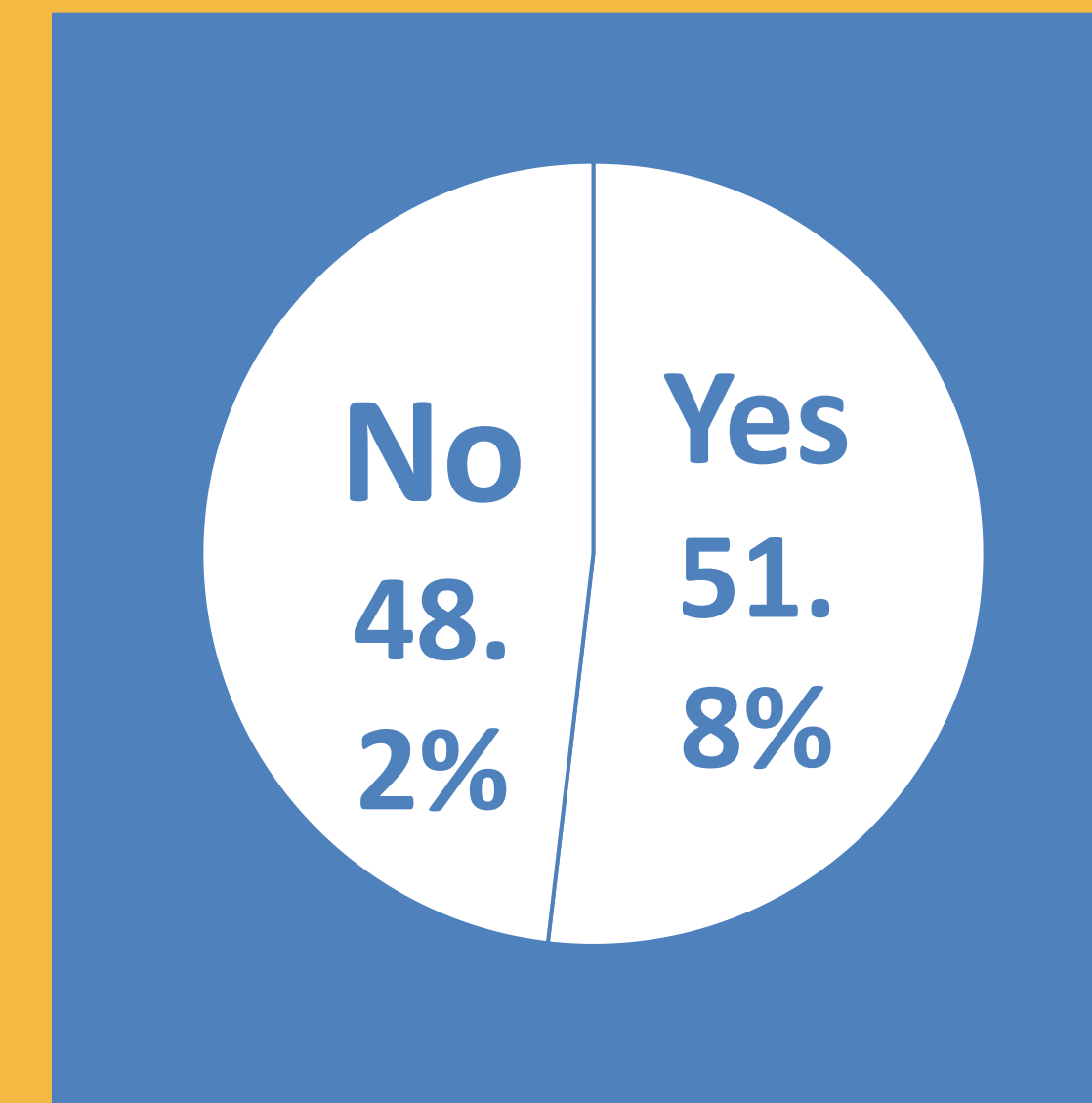


Table 2. EDE-Q subscales in our population vs general population

	Our Sample (Mean, SD)	General Population (Mean, SD)	p-value
Restraint	1.48 (1.47)	1.25 (1.32)	0.39
Eating Concern	0.61 (1.07)	0.62 (0.86)	0.97
Shape Concern	1.55 (1.69)	2.15 (1.60)	0.059
Weight Concern	1.25 (1.53)	1.59 (1.37)	0.22
Global Score	4.65 (4.98)	1.55 (1.21)	0.003

Table 1. Factors related to disordered eating presence

	Disordered Eating Presence		p-value
	No (n=13)	Yes (n=14)	
GAD Diagnosis			
Celiac disease	12 (92.3%)	12 (85.7%)	-
Dermatitis herpetiformis	0 (0%)	1 (7.1%)	-
Non-celiac gluten sensitivity	1 (7.7%)	1 (7.1%)	-
GFD Adherence (CDAT)			
	9.6 (2.4)	13.8 (3.8)	0.02
Celiac Disease Activity (CSI)			
	26.9 (7.3)	39.4 (8.1)	0.004
Active Disease	0 (0.0%)	3 (25.0%)	-
Moderate Disease Control	2 (25.0%)	7 (58.3%)	-
Disease Remission	6 (75.0%)	2 (16.7%)	-
PROMIS-29 Categories			
Anxiety	5.6 (1.9)	8.3 (2.8)	0.026
Depression	4.8 (1.7)	7.5 (3.5)	0.049
Sleep	8.6 (3.0)	8.2 (3.0)	0.761
Fatigue	7.4 (2.1)	12.2 (2.9)	0.002
Social Interaction	14.8 (1.3)	10.3 (3.1)	<0.001
Pain	5.9 (2.2)	8.0 (4.5)	0.342

Data represent score means (standard deviation) unless otherwise noted.

1 Reported by frequency

RESULTS

- More than 50% of participants with GAD have significant DE
- Individuals with GAD have higher global EDE-Q scores compared to the general population
- Worse GFD adherence correlates with higher EDE-Q score, which was statistically significant in the eating concern domain with a trend for restraint, shape concern, and weight concern domains, and global score
- Participants with comorbid DE have worse symptom severity and higher prevalence of depression and anxiety
- Severity of DE is also associated with comorbid fatigue and decreased social interaction satisfaction

DISCUSSION

- Prevalence of DE in individuals with GAD is similar to prevalence of DE in those with CD
- This study is the first to show that adults with comorbid GAD and DE have worse disease activity and psychological distress
- Our preliminary results support previous studies associating DE with GFD non-adherence
- Providers are advised to screen for DE in their GAD population
- Two new tools available for screening DE recently validated in this population: CDFAB and Fear of Food Questionnaire

REFERENCES

- 1) Cadenhead et al 2019. Diminished quality of life among adolescents with coeliac disease using maladaptive eating behaviours to manage a gluten-free diet: a cross-sectional, mixed methods study. J Human Nutrition Diet 32(3):311-20.
- 2) Karwautz et al 2008. Eating pathology in adolescents with celiac disease. Psychosomatics 49(5):399-406.
- 3) Satherly, Howard and Higgs. 2016. The prevalence and predictors of disordered eating in women with celiac disease. Appetite 107; 260-267.