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Does Having Celiac Disease Increase the Risk of Eating Disorders? A Systematic Review

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Abstract

Context: Celiac disease (CD) requires lifelong adherence to a gluten-free diet (GFD), which may contribute to disordered eating behaviors (DEBs) and increased eating disorder (ED) risk. Objective: To systematically evaluate the association between CD and ED risk, including disordered eating, orthorexia nervosa, ARFID, and related psychosocial factors. Data Sources: A systematic search of EBSCOHost, PubMed, Scopus, and SFA's Steen Library identified 568 records prior to deduplication using terms related to celiac disease, gluten-free diet, and eating disorders. The review followed PRISMA 2020 guidelines. Data Extraction: Studies were screened using predefined inclusion criteria. Data extracted included study design, participant characteristics, assessment tools, and outcomes. Study quality and risk of bias were assessed using the Academy of Nutrition and Dietetics Evidence Analysis Library Quality Criteria Checklist. Data Analysis: A narrative synthesis was conducted due to heterogeneity across studies. Findings suggested ED risk in individuals with CD ranged from 6.8% to 43.5%, with evidence of restrictive eating patterns, orthorexic tendencies, ARFID symptoms, and psychosocial distress associated with GFD burden. Conclusions: Current evidence suggests individuals with CD may be vulnerable to disordered eating behaviors, although variability in study quality and methods limits definitive conclusions. Further longitudinal research is needed to clarify mechanisms and inform screening and nutrition care practices.

Keywords: celiac disease, eating disorders, disordered eating behaviors, gluten-free diet, orthorexia nervosa, avoidant/restrictive food intake disorder (ARFID)

1. Introduction

Celiac disease (CD) is a chronic, immune-mediated disease characterized by an abnormal adaptive immune response to dietary gluten in genetically susceptible individuals. Gluten, which is a protein found in wheat, barley, and rye, serves as the predominant environmental trigger for the disease. Gluten exposure in genetically susceptible individuals initiates an inflammatory cascade within the small intestine (Parzanese et al., 2017). In individuals with CD, the ingestion of gluten results in damage to the intestinal mucosa, which can include villous atrophy, crypt hyperplasia, and increased intraepithelial lymphocytes resulting in the impairment of nutrient absorption and intestinal function (Parzanese et al., 2017).

The immunopathogenesis of CD often involves both genetic and environmental components. The presence of human leukocyte antigen (HLA) haplotypes DQ2 and DQ8 is necessary but is not indecently sufficient for the development of CD. The molecules are responsible for presenting gluten-derived peptides to CD4+ T lymphocytes in the intestinal lamina propria (Parzanese et al., 2017). The activation of an immune response will then lead to the production of pro-inflammatory cytokines and autoantibodies resulting in progressive and continual intestinal inflammation and enteropathy upon dietary ingestion of gluten (Parzanese et al., 2017).

CD is no longer considered to be a rare condition. Epidemiologic evidence has been able to approximate a global prevalence of around 1%. Additionally, increasing incidence and prevalence has been observed across multiple geographic regions and age groups over recent decades. Historically, CD was believed to primarily affect children. However, CD can develop at any age, and a growing proportion of new diagnoses have been occurring in adulthood (Lebwohl & Rubio-Tapia, 2021). The clinical presentation is highly variable. Classical gastrointestinal symptoms such as diarrhea, weight loss, and steatorrhea can occur in some individuals while others may have non-classical and/or extraintestinal manifestations including anemia, osteoporosis, neurologic symptoms, and fatigue. A considerable amount of individuals can exhibit minimal or silent gastrointestinal symptoms, which contributes to the rate of underdiagnosis and prolonged exposure to gluten-related intestinal damage (Lebwohl & Rubio-Tapia, 2021).

Currently, strict and lifelong adherence to a gluten-free diet (GFD) is the only effective and proven treatment for CD. Complete and total elimination of gluten from the diet leads to resolution of intestinal inflammation, recovery of the mucosal architecture, and improvement or resolution of clinical symptoms in many patients. However, even the smallest amount of exposure to gluten can reactivate the immune response and result in renewed intestinal injury (Lebwohl & Rubio-Tapia, 2021). Failure to adhere to a GFD or delayed diagnosis may result in serious long-term complications, which can include metabolic bone disease, infertility, liver abnormalities, and malignancy (Parzanese et al., 2017).

The requirement for lifelong adherence to a strict GFD places a substantial and continual burden on individuals living with CD. Because of this, individual eating behaviors and daily food-related decision-making are fundamentally shaped. Adults with CD must consistently monitor food choices, manage concerns related to cross-contamination, and navigate social eating environments where gluten exposures constantly occur. The necessity of dietary vigilance can contribute to feelings of burden and may also contribute to persistent psychosocial challenges and reduced quality of life (Möller et al., 2021).

Given the central role of dietary restriction in the management of CD, concerns have emerged regarding its potential impact on psychological well-being and eating-related behaviors.

Symptoms of anxiety and depression can be common among adults with CD and is strongly associated with poorer quality of life (QOL), independent of disease activity or dietary adherence (Möller et al., 2021) Individuals diagnosed with CD may also have a higher risk of subsequent anorexia nervosa diagnosis. This relationship highlights the potential overlap between medically required dietary restriction and pathological eating behaviors (Mårild et al., 2017). Together, these findings suggest that medically necessary dietary restriction may intersect with psychological vulnerabilities in ways that warrant further examination.

Accordingly, this systematic review aims to evaluate whether individuals diagnosed with CD are at an increased risk of developing eating disorders compared to individuals without a CD diagnosis. By examining this association, the review seeks to clarify the broader implications of chronic immune-mediated gastrointestinal disease and its treatment on eating behavior and mental health, thereby informing earlier screening and multidisciplinary management strategies.

2. Methods

A comprehensive search of peer-reviewed literature was conducted using EBSCOhost, PubMed, Scopus, and Stephen F. Austin State University's library database. Studies were identified using predefined search terms (See Table 1), and reference lists of eligible articles were hand-searched to locate additional relevant studies. This process yielded 10 peer-reviewed articles published between 2015 and 2025 for inclusion in the review (see Table 3).

2.1 Protocol and Registration

This systematic review was conducted and reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines to ensure methodological rigor, transparency, and reproducibility throughout the review process (Page et al., 2021). A review protocol was developed a priori and registered with the International Prospective Register of Systematic Reviews (PROSPERO), and the registration ID is CRD420251086954.

2.2 Search Strategy

Using MeSH terms below, a search and examination was conducted across EBSCOhost, PubMed, Scopus, and Stephen F. Austin State University's library database to obtain the articles necessary to complete this systematic review.

Table 1. Key Word/MeSH Terms

Key Words MeSH Terms to describe the population	Key Words MeSH Terms to describe the intervention	Key Words MeSH Terms to describe the outcome
Adults	Celiac Disease	Feeding and Eating Disorders
Children	Gluten-Free Diet	Anorexia Nervosa
Adolescents	Autoimmune Diseases	Bulimia Nervosa
Celiac disease	Chronic Diseases	Binge-Eating Disorder
Control Group		Avoidant Restrictive Food Intake Disorder (ARFID)

The search strategy combined Boolean operators AND and OR using the following primary search string:

(celiac disease) AND (adult OR child OR adolescent) AND (eating disorder OR disordered eating OR anorexia nervosa OR bulimia nervosa OR binge eating disorder OR orthorexia OR avoidant restrictive food intake disorder)

2.3 Eligibility Criteria

To obtain the most relevant and accurate research articles, extensive inclusion and exclusion criteria were created. Eligibility criteria were established a priori to identify studies relevant to the research question. Studies were included if they examined children, adolescents, or adults living with CD and evaluated associations with eating disorder risk or disordered eating behaviors. Original research studies employing observational or interventional designs published in English between 2015 and 2025 were considered eligible. Studies involving non-CD populations, secondary research, non-English publications, or very small sample sizes were excluded. Table 2 outlines the inclusion and exclusion criteria.

Table 2. Inclusion/Exclusion Criteria

Criteria	Inclusion	Exclusion
Age	Children, Adolescents, and Adults	N/A
Gender	Male and Female	N/A
Setting / Country	All countries	N/A
Health Status / Problem / Condition	Celiac disease	Any other condition that is not celiac disease
Intervention / Exposure	Living with celiac disease	Individuals not living with celiac disease
Outcome	Risk of developing eating disorders	Not at risk of developing eating disorders
Study Design Preferences	Original quantitative primary research, including cohort studies, case-control studies, cross-sectional studies, and prospective observational studies	Systematic reviews, meta-analyses, narrative reviews, editorials, case reports, conference abstracts, and other non-primary research
Size of Study Groups:	Greater than 5	Less than 5 participants
Language	English	Non-English studies
Publication Year Range	2015-2025	Before 2015

2.4 Data Extraction and Quality Assessment

Data extraction was conducted by the primary author using a predetermined adapted data extraction table (Younas & Ali, 2021). Extracted variables included author and year, study purpose, design, sample characteristics, data collection methods, participant characteristics, exposure, and outcomes. Study quality and risk of bias were assessed using the Academy of Nutrition and Dietetics Evidence Analysis Library Quality Criteria Checklist for Primary Research (Academy of Nutrition and Dietetics, 2022). Studies were subsequently categorized using the "stoplight" approach, in which studies were assigned low risk (green), some concerns (yellow), moderate (orange), or high risk (red) ratings according to the extent to which they met established quality criteria related to study design, validity, methodological rigor, and risk of bias (Academy of Nutrition and Dietetics, 2016). This structured rating process provided a standardized framework for evaluating the strength and consistency of the evidence base and supporting interpretation of confidence in the review findings. In addition, use of color-coded signaling to highlight study quality and potential bias enhances transparency in evidence appraisal and facilitates identification of findings that warrant greater caution in interpretation (Moore, 2021).

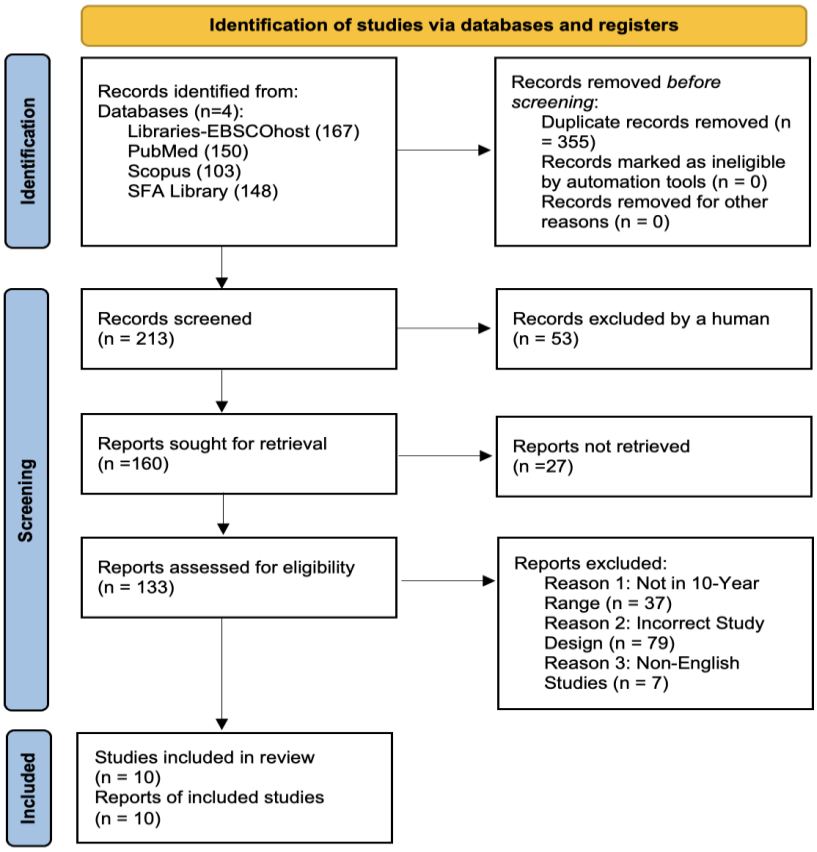

Figure 1. PRISMA 2020 Flow Diagram Utilized to Identify Studies for Inclusion

3. Results

Following PRISMA Guidelines, systematic screening and application of inclusion and exclusion criteria resulted in ten studies meeting eligibility for inclusion in this review (Page et al., 2021). The screening process consisted of multiple sequential stages, including identification of records through comprehensive database searches, removal of duplicate

records, and initial screening of titles and abstracts for relevance. Articles deemed potentially eligible underwent full-text review to ensure alignment with predefined inclusion criteria related to study population, methodology, and outcome variables (Page et al., 2021). A detailed summary of included studies and their characteristics is presented in Table 3.

Study designs consisted primarily of cross-sectional comparative investigations, retrospective observational analyses, cohort-based surveys, and one qualitative interpretative phenomenological analysis (Bennett et al., 2022; Fraser et al., 2022; Gercek et al., 2025; Kujawowicz et al., 2022; Lee et al., 2024; Nisihara et al., 2024; Rabiee et al., 2024; Satherley et al., 2022; Satherley et al., 2016; Tokatly Latzer et al., 2018). Sample sizes ranged from 7 to 741 participants (Satherley et al., 2022; Nisihara et al., 2024). Studies were conducted across Brazil, Turkey, Israel, Poland, Iran, Australia, the United Kingdom, and the United States, contributing to heterogeneity in healthcare systems, diagnostic criteria, and cultural dietary norms (Bennett et al., 2022; Fraser et al., 2022; Gercek et al., 2025; Kujawowicz et al., 2022; Lee et al., 2024; Nisihara et al., 2024; Rabiee et al., 2024; Satherley et al., 2022; Satherley et al., 2016; Tokatly Latzer et al., 2018).

Across studies, validated psychometric instruments were consistently employed, including the Eating Attitudes Test (EAT-26, EAT-40), ORTO-11 and ORTO-15 for orthorexia risk, the Nine-Item ARFID Screen (NIAS), the Binge Eating Scale (BES), the Celiac Dietary Adherence Test (CDAT), as well as disease-specific quality-of-life tools (Bennett et al., 2022; Fraser et al., 2022; Kujawowicz et al., 2022; Lee et al., 2024; Nisihara et al., 2024; Rabiee et al., 2024). No study utilized structured DSM-5 diagnostic interviews for formal eating disorder diagnoses beyond screening tools.

Findings are synthesized below across five primary outcome domains, followed by a risk of bias and study quality assessment. The primary outcome domains include eating disorder prevalence and risk, orthorexia and restrictive pathology, ARFID-like behaviors, psychological predictors, and gluten-free diet adherence and quality of life.

3.1 Overall Eating Disorder Risk

The prevalence of eating disorder (ED) risk among individuals with celiac disease (CD) was varied across studies, ranging from 6.8% in some adult samples to 43.5% in others, depending on screening instrument thresholds and sample characteristics (Fraser et al., 2022; Rabiee et al., 2024). In the largest study included (n = 741), an analytical cross-sectional comparison was conducted between 484 self-reported adults with CD and 257 matched healthy controls (Nisihara et al., 2024). The risk of ED, which was defined using EAT-26 screening criteria, was identified in 34.2% of the CD group and 37.7% of controls, with no statistically significant results between-group difference ($p = 0.39$). However, a subgroup analysis was conducted within the CD cohort, and Nisihara and authors (2024) revealed significant associations between elevated EAT-26 scores and depressive symptoms ($p = 0.0013$), perceived difficulty living with CD ($p < 0.0001$), and dissatisfaction with body weight ($p < 0.0001$). The findings suggest while overall ED risk did not differ from controls, psychosocial burden within the CD population was strongly linked to disordered eating symptomatology.

A cross-sectional sample of 217 adults with CD reported a substantially higher ED risk prevalence of 43.5% using EAT-26 cutoffs (Rabiee et al., 2024). Additionally, 65.9% of participants endorsed body dissatisfaction, and 41.1% demonstrated body image distortion using the Stunkard Figure Rating Scale. Rabiee and colleagues (2024) used logistic regression modeling to demonstrate a statistically significant association between poorer gluten-free diet (GFD) adherence and higher ED risk (OR = 2.09, 95% CI: 1.11–3.91, $p = 0.022$). The findings

indicate in some cohorts, disordered eating symptoms may coexist with reduced dietary compliance.

In adolescent populations, 136 youth with CD were evaluated, and disordered eating behaviors (DEBs) were identified in in 19% of females and 7% of males (Tokatly Latzer et al., 2018). DEBs were significantly associated with older age ($p = 0.04$), overweight status ($p = 0.02$), and female sex ($p = 0.06$) participants. Notably, strict GFD adherence, which was reported by 32% of participants, was not correlated ($p = 0.52$) with DEBs, suggesting maladaptive eating behaviors in adolescents may not directly reflect dietary compliance (Tokatly Latzer et al., 2018). Furthermore, clinically significant DEBs were present in 6–22% of adult CD samples across pooled analyses, reinforcing variability in prevalence estimates depending on population and assessment approach (Fraser et al., 2022). Overall, ED and DEB prevalence demonstrated substantial variability across populations, with significant associations identified with age, sex, weight status, and psychosocial factors, while findings related to GFD adherence were not consistent across studies.

3.2 Orthorexia Nervosa and Restrictive Eating Patterns

Within adolescents, Gercek and team (2025) reported significantly higher orthorexia nervosa (ON) symptoms in CD participants compared to controls, as measured by ORTO-11 (CD mean = 25.46 ± 5.26 vs. control mean = 28.93 ± 5.13; $p = 0.009$). Lower ORTO scores indicate higher orthorexic symptomatology. Additionally, CD adolescents demonstrated significantly higher EAT-40 scores (26.26 ± 11.2 vs. 18.20 ± 8.1; $p = 0.001$), which indicates increased levels of impaired eating attitudes. Notably, anxiety, depression, and OCD symptoms measured via RCADS did not significantly differ between groups ($p > 0.05$), suggesting orthorexic and restrictive eating behaviors have the possibility to be disease-specific rather than manifestations of generalized psychopathology (Gercek et al., 2025). Overall, adolescents with CD demonstrated significantly higher ON symptoms and impaired eating attitudes compared to controls, while no significant differences were observed in anxiety, depression, or OCD measures.

Assessment on adult women's orthorexia risk using ORTO-15 found a prevalence estimate of 71% when using a 40-point cutoff, with a reduction to a 32% estimate when using an even stricter 35-point threshold (Kujawowicz et al., 2022). Participants classified at orthorexia risk were significantly more likely to prepare their own meals (94% vs. 78%, $p = 0.006$), as well as to report intrusive food-related thoughts that caused distress (64% vs. 8%, $p = 0.001$). Interestingly, individuals at risk for ON were less likely to report monitoring caloric content (46% vs. 69%, $p = 0.001$), suggesting focus on food purity and wholeness rather than caloric restriction (Kujawowicz et al., 2022). Qualitative data contextualized the findings, as participants described pervasive fear of gluten exposure, hypervigilance, catastrophic thinking related to contamination (Satherley et al., 2022). Participants' identities became closely tied to dietary vigilance, and this mindset was reinforced through the concept of being a "good celiac" (Satherley et al., 2022). The psychological processes were identified as contributing to rigid dietary control, social withdrawal, and maladaptive food avoidance behaviors (Satherley et al., 2022). Similarly, Lee and team (2024) reported food-related vigilance, social anxiety, and maladaptive eating behaviors to be associated with CD. Collectively, orthorexia risk varied based on assessment thresholds, with significant associations observed with food preparation behaviors, distressing food-related thoughts, and reported patterns of vigilance, anxiety, and avoidance.

3.3 Avoidant Restrictive Food Intake Disorder (ARFID)

ARFID-like presentations were also prevalent in CD populations. Bennet and colleagues (2022) conducted a retrospective study on 137 adult CD patients who were attending a specialty clinic and found 57% of participants met criteria for suspected ARFID based on NIAS screening. Despite high prevalence, Bennett and team (2022) reported no significant differences between ARFID and non-ARFID groups in age ($p = .20$), gender ($p = .97$), BMI ($p = .98$) micronutrient deficiencies ($p = .55$), bone disease ($p = .48$), biopsy activity ($p > 0.05$), or GFD adherence ($p > 0.05$). The authors reported participants' scores from Impact of a Gluten-Free Diet Questionnaire (IGFDQ) indicated food and social burden domains to be the strongest predictors of ARFID symptoms ($p = .008$ and $p = .002$, respectively). This suggests ARFID-like behaviors may be driven more by psychosocial strain than by the severity of physiological disease.

3.4 Physiological Distress as a Central Predicator

When CD-specific factors (dietary adherence, symptom severity, years with CD) and non-specific factors (BMI, age, psychological distress) were entered into a hierarchical regression model, psychological distress remained the only independent predictor of global disordered eating ($p < 0.001$), accounting for 27.6% of the variance, with CD-specific variables contributing an additional non-significant 3% (Fraser et al., 2022). Binge eating severity was additionally predicted by BMI ($p < 0.001$), psychological distress ($p < 0.001$), years with CD ($p < 0.05$), and dietary nonadherence ($p < 0.05$), with the full model explaining 50.2% of the variance (Fraser et al., 2022). Similarly, Nishihara and team (2024), found depressive symptoms were significantly associated with elevated EAT-26 scores ($p = 0.0013$). Anxiety, identity threat, and hyper-responsibility for dietary purity were identified as mechanisms involved in maintaining maladaptive eating behaviors (Satherley et al., 2022). Psychological distress demonstrated consistent significance across models, while additional demographic and clinical factors were associated with binge eating severity.

3.5 Gluten-Free Diet Adherence and Quality of Life

Associations between GFD adherence and eating pathology were inconsistent across studies. Rabiee and team (2024) reported poorer adherence to a GFD was significantly associated with higher ED risk, with non-adherent individuals demonstrating greater prevalence of ED symptoms compared to adherent individuals (OR = 2.09, 95% CI: 1.11–3.91, $p = 0.022$). In contrast, both Bennett and team (2022) and Tokatly Latzer and team (2018) reported no significant association between GFD adherence and DEBs or clinical characteristics, including comparisons between strict adherence and lower adherence groups ($p > 0.05$, respectively). Collectively, findings regarding the relationship between GFD adherence and eating pathology were inconsistent across studies, with both significant and non-significant associations reported.

Quality of life (QOL) findings were more consistent across studies. Lee and team (2024) reported moderate overall QOL impairment among adults with CD (mean QOL score = 57.8) along with elevated social anxiety scores (mean SAQ = 78.82). Lea and colleagues (2024) found shorter duration of adherence to a GFD to be significantly associated with lower QOL scores and higher levels of DEBs ($p < 0.05$). Additionally, Bennett and team (2022) found food-related social burden, as measured by IGFDQ domains, to be identified as a significant correlate of ARFID symptoms ($p \leq 0.05$). Therefore, QOL outcomes showed consistent associations with lower QOL, higher social anxiety, and greater food-related burden, along with DEBs and ARFID-related symptoms.

3.6 Risk of Bias and Study Quality Assessment

As previously described, the Academy of Nutrition and Dietetics Evidence Analysis Library Quality Criteria Checklist was used to evaluate methodological quality and risk of bias for each included study (Academy of Nutrition and Dietetics, 2022). Quality grades are analyzed in the Quality Criteria Table (see Table 4). Of the ten included studies, five were rated as Grade II (Fair/Neutral) due to appropriate use of validated screening instruments, adequate statistical analyses, and generally clear reporting. However, studies were limited by cross-sectional designs, reliance on self-reported measures, and absence of formal clinical ED diagnoses. The remaining studies were rated as Grade III (Limited/Weak) primarily due to convenience sampling, recruitment through celiac-specific organizations, predominantly female samples, and lack of longitudinal follow-up. One qualitative study was additionally limited due to its small sample size, though researchers provided valuable insight into lived experiences and psychological mechanisms.

Table 3. Article Summary Table

Authors and Year	Purpose	Study Design, Samples, and Data Collection	Population + Participants	Intervention	Outcomes + Results
(Bennett et al., 2022)	The purpose and aim of this study was to recognize the prevalence of avoidant/restrictive food intake disorder (ARFID) in patients with CD, as well as examine the association between their metabolic complications, disease control, diet adherence, and correlation with symptom and quality-of-life metrics.	Retrospective descriptive study (n=137 adults with biopsy-confirmed CD). Medical record review, laboratory markers (tTG, IgA, IgG, DGP IgA/IgG, micronutrient panels), and validated surveys (SDE, CDSD, IGFDQ, ARFID-cl) assessed clinical status, symptoms, QOL, and ARFID risk.	Adults with biopsy-confirmed celiac disease receiving care at the Vanderbilt University Medical Center celiac disease clinic (United States). Final sample included 137 participants (30 men, 107 women) who completed at least one ARFID survey administered through the clinic between January 2018 and August 2020.	There was no clinical intervention. Instead, surveys were used to observe each patient's adherence to their gluten-free diet, celiac disease symptoms, the impact of celiac disease/diet on their QOL, and their symptoms that are suggestive of ARFID.	57% of participants met criteria for suspected ARFID (30 clinical, 48 subclinical). Common drivers of restriction included fear of GI discomfort (71%), poor appetite (23%), and picky eating (21%). No significant differences were observed between ARFID and non-ARFID groups across demographic or clinical variables (all $p > 0.05$). IGFDQ domains were the only significant predictors of ARFID (OR = 1.64, $p = 0.01$; OR = 1.66, $p = 0.05$; OR = 1.59, $p = 0.01$).
(Fraser et al., 2022)	The purpose and aim of this study was to replicate and extend Satherley et al.'s (2016) study exploring CD specific and non-specific factors predicting disordered eating.	Observational, cross-sectional study design conducted in Australia (n=187 adults with medically diagnosed CD). Recruited via celiac organization newsletter; online survey included CDAT, CeD-GSRS, BES, and CD-FAB.	Adults ≥18 years, English-speaking, and medically diagnosed with celiac disease were recruited through a large Australian celiac organization. Participants completed an online survey distributed through newsletter communications; final analytic sample included 187 participants after exclusions.	No clinical intervention was in place. Instead, questionnaires were utilized including the CDAT, CeD-GSRS, BES, and CD-FAB.	Disordered eating (DE) was significantly associated with female gender, poorer dietary adherence, psychological distress, GI symptoms, and CD-related food concerns. Psychological distress remained the only independent predictor of DE ($p < 0.001$), explaining 27.6% of variance. Binge eating was predicted by BMI, psychological distress ($p < 0.001$), age, years with CD, and dietary adherence, with total variance explained of 50.2%.
(Gercek et al., 2025)	The purpose and aim of this study is to compare orthorexia nervosa (ON) symptoms, general eating attitudes, and anxiety/depression/OCD symptoms between adolescents with CD and their healthy peers without CD.	Cross-sectional case-control study conducted in Turkey (n=60 adolescents; 30 CD, 30 controls). In-person interviews and questionnaires included K-SADS-PL, EAT-40, RCADS, and ORTO-11.	Adolescents aged 12–18 were recruited from pediatric gastroenterology and psychiatric departments in Afyonkarahisar and Istanbul, Turkey. Structured interviews and questionnaires were completed in person, resulting in a final sample of 60 participants (30 CD; 30 controls).	There was no clinical treatment administered. Instead, evaluation tools included semi-structured K-SADS-PL interviews, ORTO-11 for ON risk, EAT-40 for disordered eating, and RCADS (child & parent) to gauge anxiety, depression, and OCD.	Adolescents with CD demonstrated significantly higher orthorexia symptoms (ORTO-11: 25.46 vs. 28.93, $p = 0.009$) and impaired eating attitudes (EAT-40: 26.26 vs. 18.20, $p = 0.001$) compared to controls. No significant differences were observed in anxiety, depression, or OCD symptoms ($p > 0.05$).
(Kujawowicz et al., 2022)	The purpose and aim of this study was to assess the risk of developing orthorexia-nervosa and determine eating behaviors in women clinically diagnosed with CD.	Cross-sectional observational study conducted in Poland (n=123 women with CD). Convenience recruitment; demographic/health surveys, dietary and activity questionnaires, and adapted ORTO-15.	Adults with clinically diagnosed celiac disease were recruited in Poland through the Celiac Disease Association website and social media platforms. Survey-based data collection yielded a final sample of 123 women after exclusion of male participants.	There was no clinical or experimental intervention. Instead, the researchers evaluated the natural dietary behaviors and orthorexia risk via a dietary survey questionnaire, physical activity questionnaire, and an adapted ORTO-15 questionnaire.	Orthorexia prevalence was 71% (cutoff = 40) and 32% (cutoff = 35). ORTO-15 scores differed significantly between groups ($p = 0.0001$). Significant correlations were observed with mood ($\rho = 0.58$), food-related concerns ($\rho = 0.55$), and self-esteem ($\rho = 0.51$). Age was positively correlated with ORTO-15 scores ($\rho = 0.30$, $p = 0.001$). Participants at risk reported higher food-related

					anxiety (64% vs. 8%).
(Lee et al., 2024)	The purpose and aim of this study was to investigate which demographic and health characteristics in adults with celiac disease are linked to maladaptive eating attitudes and behaviors, social anxiety, and QOL.	Cross-sectional observational study conducted in the United States (n=538 adults with biopsy-confirmed CD). Online survey included demographic/health data, CD-QOL, CD-FAB, and SAQ.	Adults with biopsy-confirmed celiac disease were recruited through email invitation and completed surveys electronically in the United States. Final sample included 538 participants (471 women, 67 men).	There was no clinical intervention. Instead, the data from the CD-QOL, SAQ, CD-FAB was observed and analyzed to determine the results.	Mean QOL score was 57.8, indicating moderate impairment. Lower QOL was associated with younger age, shorter GFD duration, and lower income ($p < 0.05$). Social anxiety scores were higher in women ($p = 0.026$), younger participants ($p < 0.003$), and single individuals ($p < 0.001$). Maladaptive eating attitudes were higher in younger adults.
(Nisihara et al., 2024)	This study was conducted in order to evaluate the prevalence of eating disorders in Brazilian celiac patients and compare the results with a healthy control group without celiac disease	Analytical cross-sectional study conducted in Brazil (n=741 adults; 484 CD, 257 controls). Online questionnaire collected demographic and disease data; EAT-26 assessed eating disorder risk.	Adults residing in Brazil were recruited through celiac support groups, association websites, Facebook, Instagram, WhatsApp, and email. Participants completed online questionnaires, yielding a final sample of 741 participants (484 CD; 257 matched controls).	There was no clinical intervention. Instead, participants completed the Eating Attitudes Test-26 (EAT-26). This test is used to measure the cognitive and behavioral associations with disordered eating. Participants also answered questions about their demographic data (sex, age, schooling or level of education, and ethnicity) and CD diagnosis/symptoms data (gluten free diet, whether they received professional help after diagnosis, family history of CD, weight, depressive symptoms).	No significant difference in ED risk between CD (34.2%) and controls (37.7%). Within CD, higher EAT-26 scores were significantly associated with depression ($p = 0.0013$), difficulty living with CD ($p < 0.0001$), and weight dissatisfaction ($p < 0.0001$).
(Rabiee et al., 2024)	The purpose and aim of this study is to assess the prevalence of eating disorders (EDs) and body image disturbance in patients with CD, as well as examine the possible correlation between EDs, body image dissatisfaction/distortion, and gluten-free diet (GFD) adherence in these patients.	Cross-sectional study conducted in Iran (East-Azerbaijan CD registry) (n=214 adults with biopsy-confirmed CD). EAT-26, FRS, pv-CDAT, and anthropometric measures (height, weight).	Adults aged 18–55 with biopsy-confirmed celiac disease were recruited from the East-Azerbaijan celiac disease registry at Emam Reza Hospital, Iran. Data and face-to-face assessments yielded a final sample of 214 participants.	No clinical interventions were in place. Instead, the EAT-26, FRS, and pv-CDAT questionnaires were utilized to collect and analyze data.	ED prevalence was 43.5%, with higher prevalence in GFD non-adherent individuals (50% vs. 33.3%, $p = 0.019$). Non-adherence was associated with higher bulimia ($p = 0.007$) and oral control scores ($p = 0.002$). ED risk was higher in non-adherent individuals (OR = 2.09, 95% CI: 1.11–3.91). Body image dissatisfaction (65.9%) and distortion (41.1%) were not significantly associated with adherence.
(Satherley et al., 2022)	The purpose and aim of this study was to understand the experiences of CD and their influence on subsequent unhelpful eating and lifestyle patterns.	Qualitative interpretative phenomenological analysis conducted in New Zealand (n=7 adults with CD). Online focus group explored eating behaviors and well-being; data analyzed via hand coding and NVivo.	Adults with biopsy-confirmed celiac disease were recruited through celiac support groups in New Zealand. Participants completed a 120-minute password-protected online focus group, resulting in a final sample of 7 participants.	There was no clinical intervention involved within this study. Instead, a 120-minute-long focus group took place discussing the individual's pre- and post-diagnosis experiences, food beliefs, eating behaviors, and well-being. These responses were then analyzed via hand-coding and importing data into NVivo software.	Three themes were identified: diagnostic uncertainty, fear of gluten exposure, and identity as a "good celiac." Participants reported hypervigilance, food-related anxiety, and restrictive behaviors consistent with ARFID, with all participants scoring high on food neophobia.
Satherley et al., 2016)	The need for dietary management in CD may lead to the development of disordered eating. This study's purpose and aim was to examine the prevalence of disordered eating and factors predicting disordered eating in women with CD, compared with other dietary-controlled conditions.	Comparative cross-sectional study conducted in New Zealand (n=503 women across CD, IBD, T2DM, and controls). Demographic/health data and validated questionnaires (IPQ-R, DASS-21, FNS, EAT-26, BES).	Women aged 18–69 with celiac disease, IBD, T2DM, or no chronic condition were recruited in New Zealand and completed survey-based assessments. Total sample comprised 503 participants across comparison groups.	There was no clinical intervention taking place. Instead, the data from the IPQ-R, DASS-21, FNS, EAT-26, and BES was observed and analyzed to determine the results.	EAT-26 scores were significantly higher in CD vs. healthy controls and T2DM ($p = 0.001$). BES scores differed across groups ($p < 0.001$), with CD higher than controls but lower than T2DM.
(Tokatly Latzer et al., 2018)	The purpose and aim of this study was to assess the incidence and risk factors for disordered eating behaviors (DEBs) among individuals with CD, as well as examine a possible association between adherence to gluten-free diet and and DEBs.	Cross-sectional descriptive study conducted in Israel (n=136 adolescents with CD). Web-based survey included demographic data, EAT-26, and GFD adherence questionnaire.	Adolescents aged 12–18 with celiac disease were recruited through the National Celiac Disease Foundation in Israel. Participants completed anonymous web-mediated surveys, yielding a final sample of 136 participants.	There was no clinical intervention in place. Instead, the EAT-26 and GFD questionnaires were utilized to collect and analyze data.	DEBs were present in 19% of females and 7% of males. DEBs were associated with older age ($p = 0.04$), overweight status ($p = 0.02$), and female sex ($p < 0.06$). No association was found between DEBs and GFD adherence ($p = 0.52$).

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Table 4. Quality Criteria Table

Study	Random Sequence Generation	Allocation Concealment	Blinding	Incomplete Data	Selective Reporting	The overall risk of bias
(Bennett et al., 2022)						
(Fraser et al., 2022)						
(Gercek et al., 2025)						
(Kujawowicz et al., 2022)						
(Lee et al., 2024)						
(Nisihara et al., 2024)						
(Rabiee et al., 2024)						
(Satherley et al., 2022)						
(Satherley et al., 2016)						
(Tokatly Latzer et al., 2018)						

Note. Green = Low risk
Yellow = Some concerns
Red = High risk
Orange = Moderate

4. Discussion

This systematic review synthesized findings from ten studies examining the relationship between celiac disease (CD) and disordered eating behaviors (DEBs), including overall eating disorder risk, orthorexia nervosa (ON), avoidant/restrictive food intake disorder (ARFID), psychological predictors, and the relationship and connection between gluten-free diet (GFD) adherence and quality of life (QOL). Across the included literature, evidence suggests individuals with CD may experience increased vulnerability to maladaptive eating behaviors. However, findings were heterogeneous across study designs, populations, and measurement tools. The variability in prevalence estimates and associated predictors suggests the relationship between CD and disordered eating is complex and likely influenced by both disease-specific and psychosocial factors.

4.1 Overall Eating Disorder (ED) Risk

The prevalence of ED risk among individuals with celiac disease varied substantially. Reported estimates ranged from approximately 6.8% to 43.5%, depending on the screening instruments used and the characteristics of the populations examined (Fraser et al., 2022; Nisihara et al., 2024; Rabiee et al., 2024; Satherley et al., 2016; Tokatly Latzer et al., 2018). Some studies suggested individuals living with CD exhibit higher levels of DEBs when compared to healthy controls or individuals with other chronic dietary-controlled illnesses. For example, Satherley and colleagues (2016) reported significantly higher EAT-26 scores among individuals with CD compared with healthy controls, supporting the hypothesis dietary restrictions required for disease management may influence eating behaviors. Similarly, Fraser and colleagues (2022) found DEBs were associated with disease-specific factors including gastrointestinal symptoms and dietary concerns. Collectively, evidence suggests the restrictive nature of the GFD may contribute to DEBs in some individuals.

However, evidence across the studies was not entirely consistent. In one of the largest studies included, Nisihara and colleagues (2024) reported no statistically significant difference in ED risk between individuals with CD and matched healthy controls despite finding a relatively high prevalence rates in both individuals with CD and healthy control participants. The findings suggest while DEBs may occur frequently in CD populations, the prevalence of DEBs may not appear to consistently exceed rates observed in the general population.

Two studies also identified associations between ED risk and body image-related variables. Rabiee and colleagues (2024) reported high levels of body dissatisfaction and body image distortion among individuals with CD, both of which were significantly associated with elevated ED risk. Furthermore, adolescent studies identified female sex, increasing age, and overweight status as predictors of DEBs (Tokatly Latzer et al., 2018). The findings remain consistent with broader eating disorder literature identifying female adolescents as a population at increased risk for disordered eating pathology. Taken together, the findings suggest while CD may contribute to vulnerability for DEBs, this relationship may be moderated by demographic and psychosocial factors rather than the disease itself alone (Fraser et al., 2022; Nisihara et al., 2024; Rabiee et al., 2024). The restrictive nature of the GFD may act as a contextual factor that connects with existing psychological or behavioral vulnerabilities to influence eating attitudes.

4.2 Orthorexia Nervosa and Restrictive Eating Patterns

Orthorexia nervosa (ON) and restrictive eating tendencies emerged as notable themes within the literature examining eating behaviors in CD populations. Orthorexia is characterized by an excessive preoccupation with food quality and dietary purity, which can result in rigid food

rules, restrictive eating patterns, and increased anxiety surrounding food consumption (Kujawowicz et al., 2022). The strict and often restrictive dietary monitoring required for gluten avoidance may contribute to behaviors resembling orthorexic tendencies.

Two studies identified elevated ON risk among individuals with CD. Kujawowicz and team (2022) reported a substantial proportion of women with CD met screening criteria for ON risk using the ORTO-15 instrument. Similarly, Gercek and colleagues (2025) found adolescents living with CD expressed significantly greater orthorexia symptoms and impaired eating attitudes when compared to their healthy control participants. The findings suggest the medical necessity of avoiding gluten may contribute to intensified vigilance surrounding food selection, as well as food preparation.

However, the interpretation of ON prevalence in CD populations remains complex. Researchers have highlighted that behaviors characteristic of orthorexia may closely resemble the necessary dietary vigilance required for effective CD management (Gercek et al., 2025; Kujawowicz et al., 2022). Because strict monitoring of food ingredients and preparation is required to prevent gluten exposure, distinguishing between appropriate dietary management and pathological dietary restriction can be challenging in individuals with CD.

Furthermore, qualitative findings indicate fear of gluten exposure and anxiety related to dietary contamination may actively contribute to DEBs beyond those medically necessary for disease management (Satherley et al., 2022). This intensified vigilance may reinforce rigid eating patterns, as well as contribute to psychological distress surrounding food consumption. Collectively, findings suggest orthorexic tendencies may emerge in CD populations when necessary dietary vigilance escalates to excessively restrictive or anxiety-driven.

4.3 Avoidant Restrictive Food Intake Disorder (ARFID)

Avoidant/restrictive food intake disorder (ARFID) represents another form of restrictive eating behavior that may occur among individuals with CD. Unlike traditional eating disorders like anorexia nervosa or bulimia nervosa, ARFID is characterized by restrictive eating patterns not motivated by weight or body image concerns. Instead, this restrictive behavior is motivated by fear of adverse consequences associated with eating.

Evidence included in this review suggests ARFID-like behaviors may occur relatively frequently among individuals with CD. Bennett and team (2022) reported a substantial proportion of adults with CD met criteria for suspected ARFID based on their screening assessments. Within this population, restrictive eating behaviors were primarily associated with fear of gastrointestinal symptoms, worries about gluten exposure, and avoidance of foods perceived as unsafe.

Importantly, ARFID-like behaviors were not associated with improved clinical outcomes or better adherence to the GFD (Bennett et al., 2022). Individuals exhibiting ARFID symptoms did not indicate improved disease control or better intestinal outcomes when compared to individuals without ARFID symptoms. The findings suggest excessive food avoidance may represent maladaptive coping strategies related to anxiety surrounding food safety rather than effective disease management behaviors.

The identification of ARFID-like behaviors in CD populations highlights the importance of considering restrictive eating patterns beyond traditional weight-related eating disorders. Because ARFID behaviors are driven by fear of negative consequences rather than body image concerns, they can be overlooked in routine clinical assessments of eating behaviors.

4.4 Psychological Distress as a Central Predictor

Psychological distress emerged as one of the most consistent predictors of DEBs across the studies included in this review. Two investigations identified connections between DEBS and psychological variables such as anxiety, depression, and disease-related burden (Fraser et al., 2022; Nisihara et al., 2024). Fraser and team (2022) reported psychological distress remained the strongest predictor of DEBs even when disease-specific variables were included within predictive models. Similarly, individuals reporting greater difficulty managing the lifestyle demands associated with CD expressed higher levels of DEBs (Nisihara et al., 2024). Psychological distress appears to play a central role in linking the demands of CD management to the development of DEBs.

Additional qualitative research further supports the findings by indicating individuals with CD frequently report anxiety related to accidental gluten exposure, food preparation, as well as social eating situations (Satherley et al., 2022). Fear of contamination and intensified dietary vigilance can contribute to chronic stress surrounding food consumption, which, in turn, reinforce restrictive or avoidant eating patterns. Together, the findings suggest psychological distress plays a central role in the development and maintenance of DEBs in CD populations. The psychological burden associated with maintaining an intensely strict GFD may contribute to maladaptive coping strategies, especially among individuals experiencing anxiety or depressive symptoms.

4.5 Gluten-Free Diet Adherence and Quality of Life

The relationship between GFD adherence, DEBs and quality of life (QOL) was also examined across several studies included in this review (Bennett et al., 2022; Lee et al., 2024; Rabiee et al., 2024). Evidence was able to suggest DEBs may influence adherence to the GFD, although the findings remain mixed. Rabiee and colleagues (2024) reported individuals with CD, who demonstrated poorer adherence to the GFD, were significantly more likely to exhibit ED symptoms. The findings suggest DEBs could interfere with effective dietary management in some individuals with CD. However, other studies indicated intense dietary vigilance or restrictive eating patterns do not necessarily result in improved adherence or clinical outcomes (Bennett et al., 2022). The findings suggest the relationship between GFD adherence and DEBs is complex, with dietary vigilance not necessarily translating to improved adherence and, in some cases, potentially contributing to maladaptive eating patterns.

QOL also emerged as an important factor in the management of CD. Previous research has demonstrated maintaining a strict GFD can negatively impact one's social functioning, especially in situations involving dining out, travel, and shared meals (Lee et al., 2021). Anxiety in relation to cross-contamination and limited food availability may contribute to social avoidance and reduced dietary flexibility. Additionally, individuals who recently initiated a GFD may experience greater psychological burden and poorer QOL compared with individuals who have lived with CD for longer periods of time (Lee et al., 2021). The findings suggest adaptation to dietary management may improve over time, although the social and psychological challenges associated with maintaining a GFD may persist beyond recent diagnosis.

Overall, findings highlight the importance of balancing strict dietary adherence with psychological well-being. While lifelong adherence to a GFD is the primary treatment for CD, as emphasized by clinical guidelines from the American College of Gastroenterology and the European Society for Clinical Nutrition and Metabolism, emerging evidence suggests excessive dietary restriction and heightened anxiety surrounding food may negatively impact

QOL and contribute to DEBs (Al-Toma et al., 2019; Rubio-Tapia et al., 2013). Additionally, the Academy of Nutrition and Dietetics emphasizes the importance of individualized, patient-centered nutrition care that supports both nutritional adequacy and sustainable dietary patterns (Academy of Nutrition and Dietetics, 2022). The findings further reinforce guideline recommendations supporting interdisciplinary care, including collaboration between Registered Dietitians and mental health professionals, to address both the nutritional and psychological complexities of CD management. Therefore, the findings align with existing clinical guidance by underscoring the need to support both effective dietary adherence and a healthy relationship with food.

4.6 Risk of Bias and Quality Assessment

The risk of bias assessment, using the Academy of Nutrition and Dietetics Evidence Analysis Library Quality Criteria Checklist, provided insight into the strength and reliability of evidence included in this review (Academy of Nutrition and Dietetics, 2022). Table 4 visually summarizes methodological strengths and limitations across included studies, highlighting areas of both methodological rigor and potential bias. Overall, many studies were rated as neutral quality, primarily due to limitations related to cross-sectional study designs, sample selection, and reliance on self-reported data. While these designs provide insight into associations and prevalence, they limit causal inference regarding the relationship between CD and DEBs (Fraser et al., 2022; Kujawowicz et al., 2022; Rabiee et al., 2024).

Several methodological strengths were also identified and are reflected in the positive ratings within Table 4. Many studies utilized validated psychometric screening tools, including the Eating Attitudes Test (EAT-26), ORTO-11/ORTO-15, the Binge Eating Scale (BES), and the Nine-Item ARFID Screen, supporting reliability and comparability across studies. Additionally, some studies included relatively large sample sizes and comparative control groups, strengthening the ability to evaluate differences between CD and non-CD populations (Fraser et al., 2022; Nisihara et al., 2024; Satherley et al., 2016).

Common sources of potential bias included reliance on screening tools rather than formal clinical diagnoses, which may have influenced prevalence estimates, as well as possible selection bias associated with online surveys, registries, and specialty clinic recruitment (Kujawowicz et al., 2022; Rabiee et al., 2024). Table 4 also reflects variability in the control of confounding variables across studies, which may have affected observed associations between CD and DEBs (Fraser et al., 2022; Tokatly Latzer et al., 2018).

Overall, the risk-of-bias analysis indicated while the studies provide valuable insights into the relationship between CD and DEBs, the overall quality of evidence remains neutral and primarily observational in nature. The predominance of cross-sectional designs and self-reported screening measures highlights the need for future research employing longitudinal designs and standardized diagnostic criteria to better understand the true relationship between CD diagnosis, dietary management, and the development of DEBs.

4.7 Strengths

A major strength of this review is adherence to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Guidelines, which enhances transparency, methodological rigor, and reproducibility throughout the review process (Page et al., 2021). Following PRISMA Guidelines ensures study selection, data extraction, and reporting procedures are conducted systematically and consistently, thereby reducing the risk of bias and improving the overall reliability of the findings.

Additionally, this review provides a comprehensive evaluation of multiple forms of maladaptive eating behaviors associated with CD, including traditional ED risk, ON, and ARFID. By examining several constructs of disordered eating, the findings allowed for a broader understanding of how dietary management of CD may influence eating attitudes and behaviors (Bennett et al., 2022; Fraser et al., 2022; Kujawowicz et al., 2022).

The studies included in this review were conducted across several countries including the United States, Brazil, Iran, Poland, Turkey, Israel, and Australia. This geographic diversity was able to improve the generalizability of the findings and provide insight into how cultural and dietary factors can influence both GFD adherence and DEBs (Gercek et al., 2025; Nisihara et al., 2024; Rabiee et al., 2024).

Many studies utilized validated assessment tools such as the Eating Attitudes Test (EAT-26), ORTO-11/ORTO-15, the Binge Eating Scale (BES), and the Nine-Item ARFID Screen. The use of standardized instruments strengthens the reliability of the findings and improves comparability across studies evaluating eating pathology in CD populations (Fraser et al., 2022; Kujawowicz et al., 2022; Nisihara et al., 2024).

4.8 Limitations

Most studies included in this review employed cross-sectional designs, which limit the ability to establish causal relationships between CD and DEBs (Fraser et al., 2022; Kujawowicz et al., 2022; Rabiee et al., 2024). Consequently, the current evidence base remains unclear as to whether CD contributes directly to the development of DEBs or whether individuals with preexisting vulnerabilities experience greater difficulty adapting to the GFD.

Another limitation is the reliance on self-reported questionnaires rather than structured clinical diagnoses of EDs. Screening instruments such as the EAT-26 and ORTO-15 identify individuals at risk, but they do not confirm DSM-5 diagnostic criteria, which may influence reported prevalence estimates (Kujawowicz et al., 2022; Rabiee et al., 2024). Several studies recruited participants through online surveys or patient registries, which may introduce selection bias and limit the representativeness of study samples (Fraser et al., 2022; Rabiee et al., 2024). Additionally, many study samples consisted predominantly of women, and one study included women only, which may limit the generalizability of findings to male populations and may influence observed prevalence estimates of DEBs (Kujawowicz et al., 2022; Lee et al., 2024; Tokatly Latzer et al., 2018).

Importantly, only ten studies met inclusion criteria for this review, representing a relatively small evidence base. The limited number of included studies constrains interpretation of findings, reduces the strength of conclusions that can be drawn, and highlights the need for additional research in this area. Finally, considerable variability existed across studies in screening tools, diagnostic thresholds, and sample characteristics. Differences in measurement approaches and study methodology may contribute to variability in reported prevalence estimates and limit direct comparison between studies (Fraser et al., 2022; Kujawowicz et al., 2022; Rabiee et al., 2024).

4.9 Application for Practitioner

The findings of this review suggest healthcare professionals managing patients with CD should remain attentive to the potential presence of DEBs. Evidence across several studies indicated individuals with CD may demonstrate elevated levels of disordered eating attitudes,

orthorexia-like tendencies, or restrictive eating patterns related to concerns about gluten exposure (Bennett et al., 2022; Fraser et al., 2022; Kujawowicz et al., 2022). As a result, clinicians may benefit from incorporating routine screening for DEBs during nutritional counseling sessions. Brief screening tools such as the Eating Attitudes Test (EAT-26) or similar validated instruments may assist in identifying patients who may require additional psychological evaluation (Nisihara et al., 2024; Rabiee et al., 2024).

Registered Dietitians and other healthcare providers should emphasize balanced dietary approaches when counseling patients with CD. While strict adherence to the GFD is necessary for disease management, excessive dietary restriction or anxiety surrounding food can contribute to DEBs and reduced dietary variety (Kujawowicz et al., 2022; Satherley et al., 2022). Therefore, educational strategies should focus not only on gluten avoidance, but they should also focus on promoting flexibility in safe food choices and maintaining a healthy relationship with food.

Because psychological distress appears to be a key predictor of DEBs in CD populations, interdisciplinary care may be particularly beneficial (Fraser et al., 2022; Nisihara et al., 2024). Collaboration between Registered Dietitians, Gastroenterologists, and mental health professionals may improve patient outcomes by addressing both the nutritional and psychological aspects of CD management. Supporting patients in navigating social eating environments, dining outside the home, and managing cross-contamination concerns may also improve adherence to the GFD while preserving quality of life (Lee et al., 2021).

4.10 Future Research Directions

Future research should further investigate the relationship between CD and DEBs using longitudinal study designs to better understand how eating attitudes and behaviors evolve following diagnosis and during long-term management of the GFD. The predominance of cross-sectional research limits the ability to determine whether disordered eating patterns develop because of dietary management or whether preexisting psychological vulnerabilities contribute to these behaviors (Fraser et al., 2022; Rabiee et al., 2024). Additionally, future studies should incorporate standardized diagnostic assessments rather than relying solely on screening instruments, as this will help to improve the accuracy of eating disorder prevalence estimates in CD populations (Kujawowicz et al., 2022). Further research examining psychological factors such as anxiety related to gluten exposure, social challenges associated with dietary restrictions, and disease-related distress may help clarify mechanisms contributing to maladaptive eating behaviors, as well as inform targeted interventions aimed at improving both dietary adherence and overall quality of life for individuals living with CD (Fraser et al., 2022; Satherley et al., 2022).

5. Conclusion

This systematic review examined the relationship between CD and DEBs across ten studies representing diverse populations and research designs. Overall, the findings suggest individuals with CD may experience increased vulnerability to maladaptive eating behaviors, including elevated ED risk, ON tendencies, and avoidant or restrictive eating patterns. Psychological distress, dietary vigilance associated with maintaining a strict GFD, and disease-related lifestyle challenges appear to contribute to the development or maintenance of these behaviors (Fraser et al., 2022; Kujawowicz et al., 2022; Rabiee et al., 2024). However, results across studies were heterogeneous, and the predominance of cross-sectional designs and reliance on self-reported screening tools limit the ability to determine causal relationships or precise prevalence estimates.

Despite limitations, the findings highlight important clinical implications for healthcare providers managing individuals with CD. Routine screening for DEBs and attention to psychological well-being may be beneficial components of comprehensive CD management. Interdisciplinary care approaches involving Registered Dietitians, Gastroenterologists, and mental health professionals may help support both effective dietary adherence and overall quality of life. Continued research employing longitudinal designs and standardized diagnostic methods will be important for clarifying the relationship between CD and DEBs, as well as for informing evidence-based interventions aimed at supporting individuals living with CD.

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Authors' Contributions

CS and KH were responsible for the study design and revising. CS was responsible for data collection and drafted the manuscript, and KH provided revisions for multiple drafts. All authors read and approved the final manuscript.

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