International Journal of Food and Nutritional Health:Vol. 1 No. 1, pp: 108 – 124 (2026)
DOI: 10.4197/Fnj.1-1.7

Assessment of awareness and knowledge regarding gluten, gluten-free diet, and celiac disease among university students

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Abstract: Lifelong adherence to a strict gluten-free diet is the only known treatment for celiac disease. This study aimed to assess the awareness and knowledge level of students at King Abdulaziz University in Saudi Arabia regarding gluten-free diet and celiac disease. A descriptive cross-sectional study was conducted among a convenience sample of 1136 bachelor's students from various academic fields, using a web-based questionnaire. Data collection included demographic characteristics, knowledge of gluten, gluten-free diet, and celiac disease, and their relationship. The majority of participants were females (94.2%) and aged between 18-20 years (46.83%). Findings indicated poor awareness of celiac disease, with 75.1% of students reporting they had never heard of celiac disease. In contrast, 75.4% of participants were familiar with a gluten-free diet. Approximately half of the participants (51.9%) showed poor knowledge of celiac disease, while only 25.8% had good knowledge. Regarding the gluten-free diet, 22.3% of participants exhibited moderate knowledge, while 36.8% had poor knowledge. Significant differences in knowledge about celiac disease and gluten-free diet were observed based on gender (P = 0.012 and 0.008, respectively) and academic field (P <0.001 for both). Regarding knowledge of the relationship between celiac disease and gluten-free diet, 47.2% of participants demonstrated moderate knowledge, with significant associations observed only with the academic field (P <0.001). The findings revealed a lack of knowledge about celiac disease and gluten-free diet among KAU students in Saudi Arabia. Developing and implementing nutritional education programs may enhance understanding of celiac disease and its association with a gluten-free diet.

Keywords: Awareness; knowledge; celiac disease; students; gluten; gluten-free diet

1. Introduction

Celiac disease (CD) is an autoimmune disorder that damages the small intestine and is triggered by eating food containing gluten in genetically predisposed individuals. This condition results from a complex interaction of dietary, immunological, and environmental factors [1]. Gluten is a protein complex found in wheat, rye, and barley [2], has been a major component of the Arab diet. Gluten-related disorders are gradually emerging as a relevant epidemiological issue, with an estimated global prevalence of around 5.0% [3]. In Saudi Arabia, a meta-analysis conducted in 2018 reported that the seroprevalence of CD was 2.7% while biopsy-proven CD was 1.4% [4].

CD is characterized by malabsorption due to villous damage in the small intestine, leading to nutritional deficiencies and other related conditions such as iron deficiency anemia and osteoporosis. Also, CD has negative side effects outside the small intestine, including an increased risk of developing autoimmune disorders such as type 1 diabetes [5]. Untreated or undiagnosed CD can cause long-term health complications, whereas early interventions reduce the risk of

developing further conditions. One of the key factors delaying intervention is the lack of knowledge regarding CD. Research indicates a lack of knowledge among health professionals [6], CD patients [7], and the public [8]. According to Hill et al. (2005), the only known treatment for CD is lifelong adherence to a strict gluten-free diet (GFD) [1]. Adherence to a GFD is affected by several factors, including the knowledge level about CD among patients and their families, psychological factors affecting CD patients, and a lack of understanding among family members and friends about the importance of adhering to a GFD. Other factors include limited availability of gluten-free (GF) options in restaurants, high cost of GF products, and insufficient labeling [9].

Meanwhile, a noticeable increase in individuals following GFD may be related to newly diagnosed CD cases and a common perception that GFD is healthy. A study found that individuals with a strong focus on healthy eating habits are more likely to avoid gluten [10]. In addition, some people believe that removing gluten from their diet may alleviate acne or improve their health [11]. However, scientific evidence has not confirmed health benefits for individuals who are not gluten sensitive. Research indicated that eliminating gluten from the diet does not yield health improvements for non-sensitive individuals [12]. Knowledge, perceptions, and beliefs significantly influence dietary choices and lifestyle changes [11]. Misconceptions and limited knowledge regarding GFD may lead individuals to adopt these diets without proper guidance, potentially increasing the risk of nutrient deficiencies [11,13]. A study indicated that GF products are generally less nutritious compared to their conventional counterparts [14]. Christoph et al. (2018) found that, compared to those on a GFD, people following gluten-containing diets tend to exhibit healthier dietary and lifestyle habits [15]. The growing popularity of the GFD among non-celiac individuals highlights the gap between public perceptions and scientific evidence regarding the role of gluten in a healthy diet.

Despite the worldwide popularity of GFD, there is limited research regarding knowledge of GFD and CD among university students in Saudi Arabia. Thus, this research aimed to assess the awareness and knowledge level of students at King Abdulaziz University in Saudi Arabia about GFD and CD. The findings may shed light on the importance of implementing nutrition education programs to improve public knowledge and perception regarding CD and GFD.

2. Materials and Methods

Study design:

A descriptive cross-sectional study using a web-based questionnaire was conducted between October and December 2023 among bachelor's students from all disciplines of King Abdulaziz University (KAU) in Jeddah, Saudi Arabia, to evaluate their awareness and knowledge regarding GFD and CD. Ethical approval was obtained by King Abdul-Aziz University's Biomedical Ethics Research Committee (Reference No. 693-23)

Study population:

The study included a convenience sample of 1,136 bachelor's students across various academic fields, including scientific, literary, and health disciplines. Participants provided informed consent electronically by completing the online questionnaire. Master's students, faculty members, and individuals outside KAU were excluded.

Data collection:

The questionnaire link was distributed through various social media platforms, and the researcher visited students in their respective departments to encourage participation.

Questionnaire:

The questions were adopted from previous studies [11,16-21]. The questionnaire was translated into Arabic with slight modifications to improve comprehension. The Arabic version was piloted by an Arabic language expert and three PhD holders in nutrition to ensure face and content validity.

The questionnaire comprised four sections. The first section included demographic information, including gender, age, marital status, academic field, and current academic year. The second section comprised eight questions assessing awareness and knowledge of CD, such as *"Which part of the body does celiac disease directly affect?", "Is celiac disease genetically inherited?",* and *"Does celiac disease have symptoms?".* The third section included ten questions on knowledge of GFD and related products, such as wheat, quinoa, and rice. The final section assessed knowledge of the relationship between CD and GFD, including questions such as, "*Is a gluten-free diet the only known treatment for Celiac Disease?", "Can celiac patients consume all types of cereal and bread?",* and *"Can celiac patients consume gluten-containing foods?"*

Most questions required "yes", "no", or "don't know" responses, while others were multiple-choice. A score of one was assigned for each correct answer, and zero for each incorrect or "I don't know" response. Knowledge scores were categorized as poor (score = 0-1), moderate (score = 2-3), or good (score = 4 or more), with the maximum possible knowledge score being 7.

Statistical analysis:

Statistical analyses were conducted using IBM SPSS Statistics (Version 23.0). Frequencies and percentages were calculated for categorical data and mean and standard deviations were determined. Participants' knowledge levels were compared by sociodemographic characteristics using chi-square analysis, with p-values < 0.05 considered statistically significant.

3. Results

3.1. Descriptive characteristics

Of the 1,136 study participants, the majority were females, comprising 94.2% (n=1072), while males accounted for only 5.8% (n=66). The age distribution showed that around 46.8% (n=532) of participants were between 18-20 age group, and about 43.0% (n=488) were between 21-23. Most of the participants were single 91.6% (n=1040), with smaller percentages being married 7.0% (n=79). Regarding academic fields, 55.0% of participants were in scientific fields, 41.6% (n=473) in literary fields, and 3.4% (n=38) in health fields. The demographic characteristics of the participants are presented in Table 1.

Table 1. Demographic characteristics of study participants

Variables	***n***	**%**
Gender:		
Female	1070	94.2
Male	66	5.8
Age:		
18-20	532	46.8
21-23	488	43.0
24+	116	10.2
Material status:		
Single	1040	91.6
Married	79	7.0
Divorced	15	1.3
Widow	2	0.18
Academic field:		
Healthy	38	3.4
Literary	473	41.6
Scientific	625	55.0
Academic year:		
Preparatory Year	12	1.0
First year	174	15.3
Second Year	278	24.5
Third Year	313	27.6
The fourth year and above	359	31.6

3.2. Awareness of celiac disease and gluten-free diets

Awareness of CD and GFD is presented in Figure 1. Among the 1,136 participants, only 24.9% (n=283) were aware of CD, while the majority, 75.1% (n=853), were not aware of it. In contrast, a considerable proportion, 75.4% (n=857), were aware of the GFD.

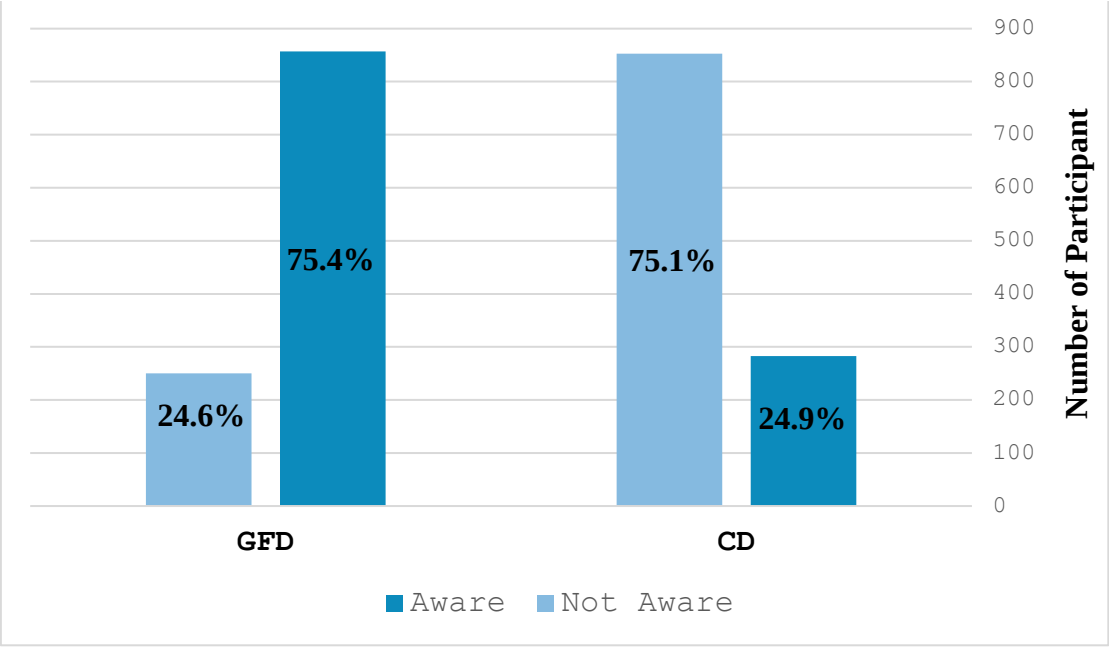

Figure *1.* Awareness of celiac disease and gluten-free diets

3.3. *Participants' knowledge of celiac disease*

The knowledge level of CD among participants was categorized as poor, moderate, and good. Half of the participants 51.9% (n= 590) demonstrated poor knowledge, while a quarter 25.8% (n= 293) showed good knowledge, and 22.3% (n=253) had moderate knowledge, as shown in Figure 2.

Analysis of participants' responses revealed limited knowledge of CD. Only 20.8% (n=236) correctly identified CD as an autoimmune disease, while 15.1% (n=172) recognized that it could be genetically inherited. Additionally, 29.0% (n=329) correctly identified the small intestine as the organ directly affected by CD, and 39.3% (n=447) recognized that CD can affect individuals of all ages, not just children. Knowledge of CD symptoms was also low, with only 35.7% (n=405) acknowledging the symptoms and 34.8% recognizing that untreated CD could lead to other diseases. Lastly, only 27.6% (n=395) correctly identified the symptoms of CD. These findings highlight a significant gap in knowledge about CD among the participants Table 2.

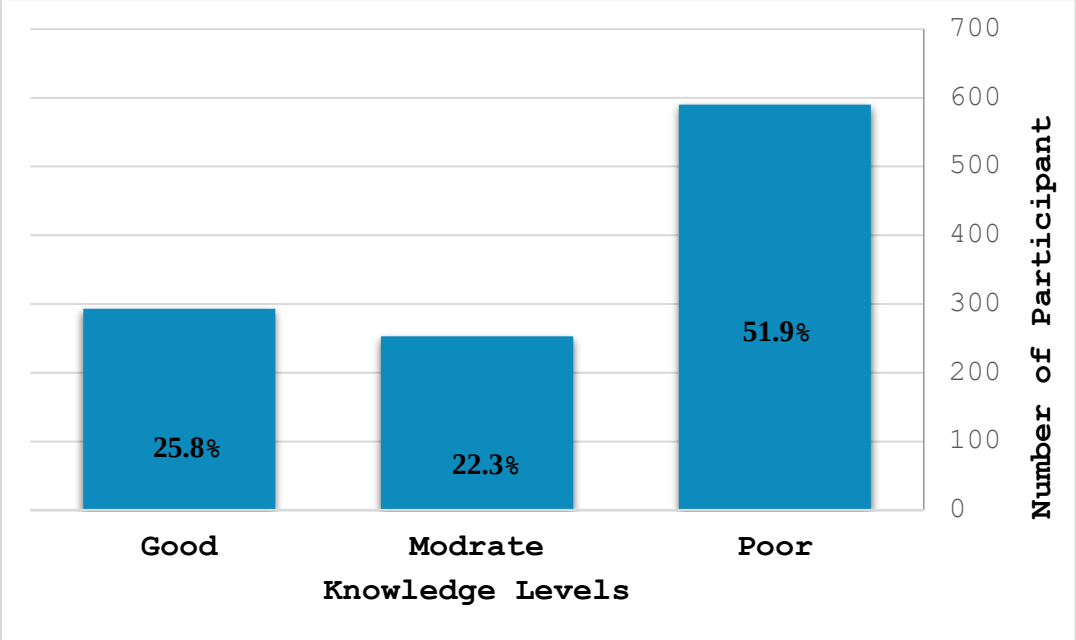

Figure 2. Participants' knowledge of celiac disease

Table 2. Participants' knowledge of celiac disease

Questions	Responses	*n*	%
Is celiac disease an autoimmune disease?	Not correct	900	79.2
	Correct	236	20.8
Is celiac disease genetically inherited?	Not correct	964	84.9
	Correct	172	15.1
Which part of the body celiac disease directly affects?	Not correct	807	71.0
	Correct	329	29.0
Celiac disease affects children only?	Not correct	689	60.7
	Correct	447	39.3
Does celiac disease have symptoms?	Not correct	731	64.3
	Correct	405	35.7
Does celiac disease, if not treated, lead to other disease?	Not correct	741	65.2
	Correct	395	34.8
Symptoms of celiac disease include all of the following EXCEPT?	Not correct	822	72.4
	Correct	314	27.6

3.4. Participants' knowledge of celiac disease according to demographic characteristics

Female participants generally demonstrated higher knowledge, with 26.4% (n=282) achieving a "good" knowledge level compared to only 16.7% (n=11) of males ($P = 0.012$). Academic field also showed notable variation, as 71.1% (n=27) of those in health-related fields had "good" knowledge, while lower percentages were seen among literary and scientific fields ($P < 0.001$). In contrast, age, marital status, and academic year did not demonstrate statistically significant differences in knowledge levels Table 3.

Table 3. Participants' knowledge of celiac disease according to demographic characteristics

Variables		**Poor**		**Moderate**		**Good**		
		n	**%**	***n***	**%**	***n***	**%**	**P-Value**
Gender:	Female	544	50.8	244	22.8	282	26.4	0.012*
	Male	46	69.7	9	13.6	11	16.7	
Age:	18-20	267	50.2	133	25.0	132	24.8	0.063
	21-23	267	54.7	100	20.5	121	24.8	
	24+	56	48.3	20	17.2	40	34.5	
Material status:	Single	534	51.3	237	22.8	269	25.9	0.393
	Married	45	57.0	12	15.2	22	27.8	
	Divorced	10	66.7	4	26.7	1	6.7	
	Widow	1	50.0	0	0.0	1	50.0	
Academic field:	Healthy	5	13.2	6	15.8	27	71.1	0.000*
	Literary	278	58.8	100	21.1	95	20.1	
	Scientific	307	49.1	147	23.5	171	27.4	
Academic year:	Preparatory Year	4	33.3	3	25.0	5	41.7	0.373
	First year	85	48.9	46	26.4	43	24.7	
	Second Year	149	53.6	62	22.3	67	24.1	
	Third Year	169	54.0	69	22.0	75	24.0	
	The fourth year and above	183	51.0	73	20.3	103	28.7	

*Values of $p < 0.05$ were considered significant

3.5. Participants' knowledge about gluten-free diets

The knowledge level of GFD was classified into three categories: poor, moderate, and good. Almost half of the participants 44.6% (n= 507) demonstrated a moderate level of knowledge, while over one-third 36.8% (n= 418) showed poor knowledge, and 18.6% (n = 211) exhibited good knowledge, as shown in Figure 3.

More than half of the participants 51.1% (n=581) correctly identified that GFD is not necessarily healthy for everyone, however, a considerable percentage 48.9% (n=555) still believed

otherwise. While 58.6% (n=666) of participants correctly identified sources of gluten, only 25.7% (n=292) accurately identified foods that do not contain gluten. There was significant misinformation regarding the perceived health benefits of a gluten-free diet: 88.6% (n=1006) incorrectly believed it could help with acne, and 90.1% (n=1024) incorrectly believed it could aid in weight loss. Additionally, 73.5% (n=835) wrongly assumed that gluten could cause disease in non-sensitive individuals, and 70.8% (n=804) incorrectly believed gluten-free products to be generally more nutritious than gluten-containing alternatives Table 4.

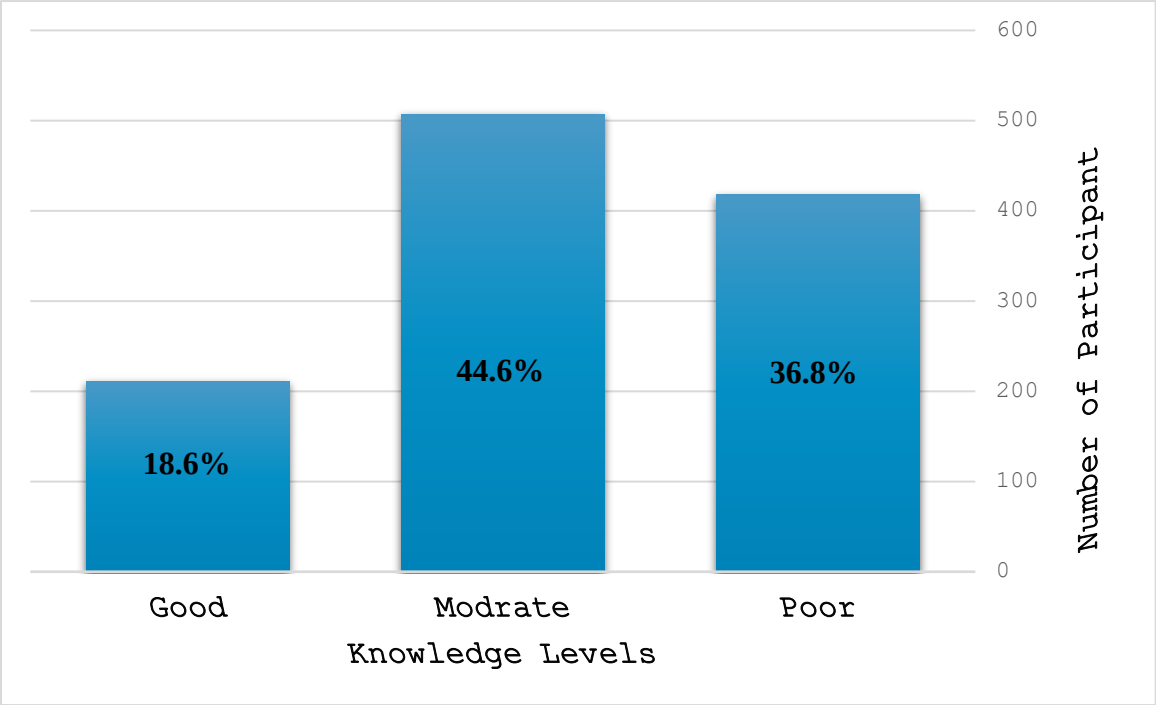

Figure 3. Participants' knowledge of gluten-free diets

Table 4. Participants' knowledge of gluten-free diets

Questions	Responses	*n*	%
Is a gluten free diet healthy for everyone?	Not correct	555	48.9
	Correct	581	51.1
Which of the following foods DOES NOT contain gluten?	Not correct	844	74.3
	Correct	292	25.7
Is gluten found in wheat?	Not correct	470	41.4
	Correct	666	58.6
Can a gluten free diet help with acne?	Not correct	1006	88.6
	Correct	130	11.4
Can gluten free diet help with weight loss?	Not correct	1024	90.1
	Correct	112	9.9
Can gluten cause disease in individuals who are not gluten sensitive?	Not correct	835	73.5
	Correct	301	26.5
Are gluten-free products generally more nutritious than their gluten-containing alternative?	Not correct	804	70.8
	Correct	332	29.2

3.6. Participants' knowledge of gluten-free diets according to demographic characteristics

Gender differences were observed, with a higher percentage of males 54.5% (n=36) demonstrating poor knowledge regarding GFD compared to females 35.7% (n=382) (P = 0.008). Knowledge levels across age groups were relatively similar, with no statistically significant differences (P=.831). Marital status did not show differences in knowledge about GFD (P = 0.982). However, academic field was significantly associated with knowledge levels (P <0.001), as participants from scientific fields were more likely to have good knowledge about GFD 21.6% (n=135) compared to those in literary fields 13.3% (n=63), as shown in Table 5.

Table 5. Participants' knowledge of gluten-free diets according to demographic characteristics
*Values of $p < 0.05$ were considered significant

Variables		**Poor**		**Moderate**		**Good**		
		n	**%**	***n***	**%**	***n***	**%**	**P-Value**
Gender:	Female	382	35.7	485	45.3	203	19.0	0.008*
	Male	36	54.5	22	33.3	8	12.1	
Age:	18-20	190	35.7	246	46.2	96	18.0	0.831
	21-23	187	38.3	208	42.6	93	19.1	
	24+	41	35.3	53	45.7	22	19.0	
Material status:	Single	382	36.7	462	44.4	196	18.8	0.982
	Married	29	36.7	37	46.8	13	16.5	
	Divorced	6	40.0	7	46.7	2	13.3	
	Widow	1	50.0	1	50.0	0	0.0	
Academic field:	Healthy	10	26.3	15	39.5	13	34.2	0.000*
	Literary	222	46.9	188	39.7	63	13.3	
	Scientific	186	29.8	304	48.6	135	21.6	
Academic year:	Preparatory Year	4	33.3	5	41.7	3	25.0	0.135
	First year	55	31.6	81	46.6	38	21.8	
	Second Year	105	37.8	130	46.8	43	15.5	
	Third Year	130	41.5	130	41.5	53	16.9	
	The fourth year and above	124	34.5	161	44.8	74	20.6	

3.7. Participants' knowledge of the relationship between gluten-free diets and celiac disease

The knowledge level of the relationship between CD and GFD was classified into three categories: poor, moderate, and good. Around 47.2% (n=536) had moderate knowledge, while one-third 33.7% (n =383) had poor knowledge, and 19.1% (n = 293) had good knowledge, as shown in Figure 4.

The majority of participants demonstrated a lack of knowledge about the dietary needs of celiac patients. A high percentage of participants 43.0% (n=489) incorrectly responded to statements such as "Celiac patients require a special type of diet". The statement "A gluten-free diet is the only known treatment for celiac disease" was correctly answered by only 20.7% (n=253) of respondents. Additionally, 42.8% (n=486) of participants correctly understood that celiac patients cannot consume all types of cereals and bread, while 57.2% (n=650) provided incorrect answers. The majority of participants 74.6% (n=847) incorrectly believed that patients with celiac disease can consume gluten-containing foods if they are asymptomatic, while only 25.4% (n=289) correctly understood that these foods should be avoided. A majority of participants 92% (n=1045) incorrectly believed that celiacs can consume gluten-containing foods. Regarding the risk of

nutritional deficiencies, 72.4% (n=823) of participants incorrectly believed that celiac patients would not experience deficiencies on a gluten-free diet, as shown in Table 6.

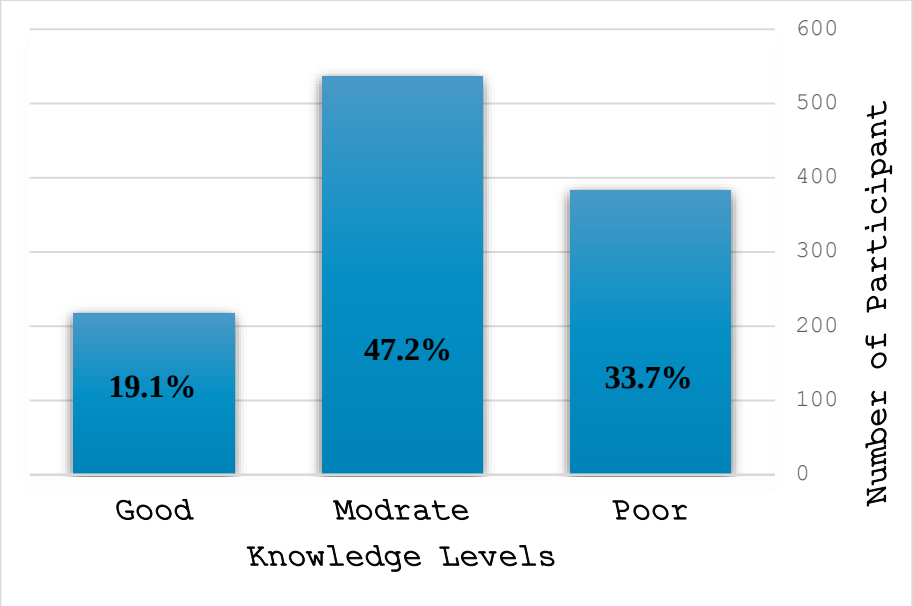

Figure 4. Participants' knowledge of the relationship between gluten-free diets and celiac disease

Table 6. Participants' knowledge of the relationship between gluten-free diets and celiac disease

Questions	Responses	*n*	%
Do celiac patients require a special type of diet?	Not correct	489	43.0
	Correct	647	57.0
Is a gluten-free diet the only known treatment for celiac disease?	Not correct	901	79.3
	Correct	235	20.7
Can celiac patients consume all type of cereal and bread?	Not correct	650	57.2
	Correct	486	42.8
Is it true celiac patients cannot consume gluten-containing foods?	Not correct	1045	92.0
	Correct	91	8.0
Can patients with celiac disease eat foods containing gluten if they do not show any symptoms?	Not correct	847	74.6
	Correct	289	25.4
Can patients with celiac disease be exposed to nutritional deficiencies by following a gluten-free diet?	Not correct	823	72.4
	Correct	313	27.6

3.8. Participants' knowledge of the relationship between gluten-free diets and celiac disease based on demographic characteristics

Table 7 presents the distribution of knowledge levels across various demographic and academic variables. For demographic characteristics, gender, age, and marital status did not significantly affect knowledge levels regarding the relationship between gluten-free diets and celiac disease. However, academic field had a significant effect ($P<0.001$), with students in scientific fields showing a higher percentage of good knowledge regarding the relationship between gluten-free diets and celiac disease (36.8%) compared to those in literary or healthy fields. However, academic year did not have a significant impact ($P = 0.602$).

Table 7. Participants' knowledge of the relationship between gluten-free diets and celiac disease based on demographic characteristics

Variables		**Poor**		**Moderate**		**Good**		
		n	**%**	***n***	**%**	***n***	**%**	**P Value**
Gender:	Female	355	33.2	506	47.3	209	19.5	0.182
	Male	28	42.4	30	45.5	8	12.1	
Age:	18-20	180	33.8	256	48.1	96	18.0	0.542
	21-23	162	33.2	233	47.7	93	19.1	
	24+	41	35.3	47	40.5	28	24.1	
Material status:	Single	345	33.2	498	47.9	197	18.9	0.608
	Married	32	40.5	31	39.2	16	20.3	
	Divorced	5	33.3	7	46.7	3	20.0	
	Widow	1	50.0	0	0.0	1	50.0	
Academic field:	Healthy	4	10.5	20	52.6	14	36.8	0.000*
	Literary	195	41.2	204	43.1	74	15.6	
	Scientific	184	29.4	312	49.9	129	20.6	
Academic year:	Preparatory Year	3	25.0	6	50.0	3	25.0	0.602
	First year	53	30.5	87	50.0	34	19.5	
	Second Year	104	37.4	123	44.2	51	18.3	
	Third Year	107	34.2	150	47.9	56	17.9	
	The fourth year and above	116	32.3	170	47.4	73	20.3	

*Values of $p < 0.05$ were considered significant

4. Discussion

This research aimed to evaluate the level of awareness and knowledge regarding CD and GFD among KAU students. The study revealed a significant lack of knowledge about CD, with the majority of participants being unaware that individuals with CD cannot consume gluten-containing

foods. Moreover, a substantial number of participants incorrectly identified a lifelong GFD as the sole treatment for CD.

The lack of knowledge revealed in this study aligns with the findings from previous studies conducted in Saudi Arabia [17], Kuwait [21] and Turkey [8]. Regarding students' awareness of CD, the findings in this study found that only (24.9%) of participants had heard of CD. This level of awareness is comparatively lower than in recent studies conducted in Saudi Arabia and Turkey, where (48.4%) and (50.9%) among the general public, respectively, reported prior awareness of the disease. In contrast, a study conducted in Kuwait reported the lowest level of awareness (14.9%) among the public. Awareness and societal acceptance are crucial for the social and psychological well-being of individuals affected by CD [8].

Insufficient knowledge regarding CD has consistently been observed across various demographic groups, including healthcare professionals [6,7], who play a crucial role as the primary identifiers of such health conditions. In the current study, the highest levels of CD knowledge were found among individuals in health-related disciplines, which aligns with findings from a study within the pharmacist community [22]. These findings highlight the potential for early case detection and timely diagnosis within these fields. However, the variations in knowledge levels across different disciplines highlight the need for further educational intervention, particularly in non-health related fields such as the literary and scientific fields, to enhance overall awareness and understanding of CD.

Awareness of the GFD among participants was higher than their awareness of CD, with the majority (75.4%) being familiar with the diet. This level of awareness aligns with a recent study conducted in Saudi Arabia, in which (76.9%) of the general public reported prior awareness of the GFD [23]. However, nearly one-half of the participants advocated for a GFD as a healthy dietary option. It is important to note that a GFD is specifically recommended for individuals diagnosed with CD or gluten-related disorders. The results of this study indicate moderate to poor knowledge regarding the GFD and its specific association with CD.

The growing trend of following a GFD may be attributed not only to individuals diagnosed with CD or those with other gluten-related disorders but also to the widespread belief that the GFD is inherently healthier. This study revealed a high percentage of incorrect responses when participants were asked about the potential health benefits of a GFD, such as its effect on acne and weight loss. These results suggest that misconceptions significantly influence dietary choices. This observation is supported by a previous study that identified factors encouraging GFD adherence, including perceived benefits such as weight loss, improved digestive health, and improved skin appearance, despite a lack of scientific evidence supporting these claims in individuals without gluten sensitivity [11].

Excluding gluten from the diet is essential for managing medical conditions such as CD. Although adherence to a GFD can promote small intestine recovery in celiac patients, it can also lead to deficiencies in both macronutrients and micronutrients due to dietary restrictions. Substituting gluten-containing foods with alternatives like rice, corn, and potatoes, which have a higher glycemic index, may increase the risk of glucose intolerance and metabolic disorders, including diabetes, hypertension, and obesity [24]. However, long-term adherence to a GFD requires continuous and regular health monitoring to mitigate these risks.

The current findings revealed that most of participants perceive GF products as more nutritious compared to their gluten-containing counterparts. This perception may be influenced by popular media, which often describes gluten as harmful. However, GF products are often lacking nutritional superiority. Fry et al. (2018), highlighted that GF products tend to contain higher levels of fat, sugar, and sodium content compared to regular products, while often being generally deficient in protein and dietary fiber [14]. Additionally, Aston (2006) also stated that GF products commonly exhibit low in essential nutrients such as B vitamins, vitamin D, iron, zinc, and magnesium [24]. Surprisingly, approximately three-fourths of participants believed that patients with CD do not experience nutritional deficiencies by following a GFD, despite extensive research that concurs that a GFD can lead to imbalances in nutritional intake [25,26]. When adopting dietary changes, it is crucial to consider the perceived benefits, suitability for the condition, and potential side effects, as underestimating these factors may hinder weight loss and overall health outcomes.

Strengths and limitations:

This study provides valuable insights into the current knowledge and awareness about CD and GFD among university students from various fields in Jeddah, Saudi Arabia. A key strength of this study is its large sample of university students, which ensures statistical power and provides a comprehensive assessment of knowledge within this specific population. However, this study has several limitations. First, its cross-sectional design limits causal inferences. Second, the use of a self-administered electronic questionnaire may have introduced response bias. Additionally, the study was limited to students at KAU, which may restrict the generalizability of the findings to the broader population.

5. Conclusion

This study aimed to evaluate the level of awareness and knowledge regarding CD and GFD among KAU students. The findings reveal that awareness of CD was low, with most participants being unfamiliar with it, while a majority were aware of the GFD. In addition, there was a lack of knowledge regarding both CD and GFD among students in Jeddah, Saudi Arabia. These findings highlight the need for enhanced awareness, particularly concerning the treatment of CD and the implications of following a GFD. Educational initiatives should be implemented to improve knowledge of CD and its association with GFD, with a particular focus on students in non-medical fields.

Author Contributions: Conceptualization, M.H.; methodology, M.H.; software, M.H.; validation, M.H., J.B., A.I., and N.A.; formal analysis, M.H., J.B., A.I., and N.A.; investigation, M.H.; resources, M.H., J.B., A.I., and N.A.; data curation, M.H., J.B., A.I., and N.A.; writing—original draft preparation, J.B., A.I., and N.A.; writing—review and editing, M.H., J.B., A.I., and N.A.; visualization, M.H.; supervision, M.H.; project administration, M.H. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The manuscript incorporates all datasets produced or examined throughout this research study.

Conflicts of Interest: The authors declare no conflicts of interest

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International Journal of Food and Nutritional Health:Vol. 1 No. 1, pp: 108 – 124 (2026)
DOI: 10.4197/Fnj.1-1.7

تقييم الوعي والمعرفة بالغلوتين، والنظام الغذائي الخالي من الغلوتين، ومرض السيلياك لدى طلاب الجامعة

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الملخص:

يُعدّ الالتزام مدى الحياة بنظام غذائي صارم خالٍ من الغلوتين العلاج الوحيد المعروف لمرض السيلياك. هدفت هذه الدراسة إلى تقييم مستوى الوعي والمعرفة لدى طلاب جامعة الملك عبد العزيز في المملكة العربية السعودية فيما يتعلق بالنظام الغذائي الخالي من الغلوتين ومرض السيلياك. أُجريت دراسة وصفية مقطعية على عينة مكونة من ١١٣٦ طالبًا وطالبة من مختلف التخصصات الجامعية، باستخدام استبيان إلكتروني. شمل جمع البيانات الخصائص الديموغرافية، معرفة الغلوتين، النظام الغذائي الخالي من الغلوتين، ومرض السيلياك، والعلاقة بينها. كانت غالبية المشاركين من الإناث (٩٤,٢%)، وتراوحت أعمارهم بين ١٨ و٢٠ عامًا (٤٦,٨٣%). أشارت النتائج إلى ضعف الوعي بمرض السيلياك، حيث أفاد ٧٥,١% من الطلاب أنهم لم يسمعوا به من قبل. في المقابل، كان ٧٥,٤% من المشاركين على معرفة بالنظام الغذائي الخالي من الغلوتين. أظهر ما يقرب من نصف المشاركين (٥١,٩%) معرفة ضعيفة بمرض السيلياك، بينما كان لدى ٢٥,٨% فقط معرفة جيدة. أما فيما يتعلق بالنظام الغذائي الخالي من الغلوتين، فقد أظهر ٢٢,٣% من المشاركين معرفة متوسطة، بينما كانت معرفة ٣٦,٨% منهم ضعيفة. لوحظ اختلاف في المعرفة حول مرض السيلياك والنظام الغذائي الخالي من الغلوتين بناءً على الجنس ($P = 0.012$ و٠,٠٠٨ على التوالي) والتخصص الأكاديمي ($P < 0.001$ لكلا الجنسين). وفيما يتعلق بمعرفة العلاقة بين مرض السيلياك والنظام الغذائي الخالي من الغلوتين، أظهر ٤٧,٢% من المشاركين معرفة متوسطة، مع وجود ارتباط إحصائي فقط مع التخصص الأكاديمي($P < 0.001$) . كشفت النتائج عن نقص في المعرفة حول مرض السيلياك والنظام الغذائي الخالي من الغلوتين بين طلاب جامعة الملك عبد العزيز في المملكة العربية السعودية. قد يُسهم تطوير وتنفيذ برامج للتثقيف الغذائي في تعزيز فهم مرض السيلياك وعلاقته بالنظام الغذائي الخالي من الغلوتين.

الكلمات المفتاحية: الوعي؛ المعرفة؛ مرض السيلياك؛ الطلاب؛ الغلوتين؛ النظام الغذائي الخالي من الغلوتين