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Review Article

**AWARENESS OF CELIAC DISEASE AMONG SAUDI  
POPULATION****Mohammed.S. Alzahrani<sup>1</sup>, Housam.S. Alzahrani<sup>1</sup>, Nasser.F. Alqahtani<sup>1</sup>,  
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Alhanouf Abdullah Alyhya<sup>1</sup>.**<sup>1</sup>Almaarefa University**Abstract**

**Background:** Celiac disease ( CD ) is an autoimmune disorder Indus by gluten ingestion in genetic predispose patient, which will cause atrophy of small intestinal villous. There was study established in 2013, in three regions of Saudi kingdom and they said that “ Our data suggest celiac disease prevalence might be one of the highest in the world “, a few study about this disease it may suggest of some awareness defect .

**Objectives of the Study:** To evaluate the public awareness and attitude towards coeliac disease. **Methods:** It's a cross-sectional randomized study. Estimated on 1001 cases to know the awareness of celiac disease among Saudi population

**Results:** One thousand and one participants joined this questionnaire from different regions in Saudi Arabia as in table (1). Regarding age, the highest age group was 14 to 25 years (65.3% of the participants), followed by 25 to 35 years (21.47% of participants), then more than 36 years (11.69% of participants) .701 participant heard about gluten sensitivity before (70.03%) , 382 participants (38.16%) were aware of the symptoms of gluten sensitivity ,and 182 participants (18.18%) were suffering from gluten sensitivity while 321 participant (32.07%) changed their diet regimen into gluten free diet.

**Conclusion:** A significant proportion of people have poor knowledge of CD. This can potentially lead to delays in diagnosis and treatment. A campaign of increased awareness of CD is needed, which should include educational sessions and workshops for health care professionals and people and use of media for public information

**Keywords:** Celiac disease, awareness, Saudi Population

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**INTRODUCTION:**

Celiac disease (CD) is a chronic autoimmune disorder in which ingestion of gluten (a group of proteins in wheat, rye, and barley) leads to villous atrophy in genetically susceptible individuals. Prevalence of CD is approximately 0.5 to 1% in general population. [1]

The true prevalence of CD in Kingdom of Saudi Arabia (KSA) is not known due to lack of a national epidemiological study, but regional data shows that it is a common disorder in this part of the world. [2,3,4]

Celiac disease has a broad clinical spectrum with 4 patterns recognized as per Oslo definition. [5]

In classical (typical) CD, the patient presents with features of malabsorption such as diarrhea, steatorrhea, and weight loss or growth failure. In non-classical (atypical) CD, signs and symptoms of malabsorption are absent or minimal with patients having other intestinal or extra-intestinal symptoms. This is becoming a predominant mode of presentation especially in older children and adolescents. Some symptoms may overlap between these 2 types. In both classical and non-classical CD, the serologic test results are abnormal and varying degrees of villous atrophy is present. In subclinical CD, previously referred to as asymptomatic CD, the disease is below the threshold of clinical detection without symptoms or signs sufficient to trigger CD testing in routine clinical practice. Some of these individuals might be screened as they have a high risk of developing CD. These patients will have abnormal serologic test results, as well as villous atrophy. In potential CD, previously called latent CD, the patient has an abnormal antibody test, but normal small intestinal histology. Several of these individuals will develop the intestinal lesion over time, thus requiring careful monitoring and follow-up. Physicians need to be aware that CD is a common disorder, has diverse clinical presentations and a timely diagnosis is essential to avoid serious complications of untreated disease. [6,7]

The aim of this study to asses and evaluate general population understanding, knowledge

and attitude toward coeliac disease.

**METHODOLOGY:**

**Objectives of the Study:**

To evaluate the public awareness and attitude towards coeliac disease.

**Aim of the Study:**

To asses and evaluate general population understanding, knowledge and attitude toward coeliac disease.

**Specific Objectives:**

1. Study the general population understanding of coeliac disease and its manifestations.
2. Study general population awareness of coeliac disease risk factors and symptoms.
3. Recognize the parent's knowledge and awareness toward their affected children.
4. Asses the general population knowledge about the diagnostic tests for coeliac disease.

**Secondary Objectives:**

1. Asses general population knowledge of how to deal with the lifestyle of coeliac disease patient.
  2. General population awareness of the outcomes of undiagnosed coeliac disease.
- project description:

A questionnaire designed to survey public awareness and attitudes toward coeliac disease, which will be posted online & distributed to the public.

**Study Area/Setting:**

The study is conducted in Kingdom of Saudi Arabia..

**Study Subjects:**

All Saudi population aged above 13 years are included in this study.

Those who are under 13 years not included in this study .

**Study Design:**

It's a cross-sectional randomized study.

**Sample Size:**

Estimated about 1001 cases

**Sampling Technique:**

Randomization of study population based on

different websites and other social media. Data Collection methods, instruments used, measurements Through online questionnaires.

#### Data Management and Analysis Plan:

The statistical package SPSS version 21 will be used to do the data analysis.

Descriptive statistics will be calculated for all the variables in the study.

A private computer with password will be used to save the data and the access to these data will be only by the research team. The data entrance will be by all research team members.

#### How it unique:

We couldn't find any research was done in Saudi Arabia, that meets with our goals this study will enhance the level of the awareness throw out awareness camping and public orientation about disease to minimizing the morbidity and mortality by screening for suspected patient, and it's only limited to Saudi population.

#### Ethical Considerations:

The study will be online questioner so there will be no contact with patients.

### RESULTS:

One thousand and one participants joined this questionnaire from different regions in Saudi Arabia as in table (1). Regarding age,

the highest age group was 14 to 25 years (65.3% of the participants), followed by 25 to 35 years (21.47% of participants), then more than 36 years (11.69% of participants). 701 participant heard about gluten sensitivity before (70.03%), 382 participants (38.16%) were aware of the symptoms of gluten sensitivity, and 182 participants (18.18%) were suffering from gluten sensitivity while 321 participant (32.07%) changed their diet regimen into gluten free diet. 358 participants were knowing people with gluten sensitivity (35.76%), 532 participants (53.14%) were considering gluten sensitivity is associated with other morbidities, only 297 participants (29.67%) were knowing the treatment of gluten sensitivity, 285 participants (28.47%) were knowing the complication of this disease, 876 participants (87.51%) willing to know more about this disease by conferences or educational campaign or brochures see table (2). The participants acquired their data about these disease from social web sites (44.9%), family members (22%), physicians (22.7%), health campaign (9%) and work colleagues (1.4%).

Most of participant with gluten sensitivity had a diet regimen in order to control the disease symptoms (51.2%) rather than controlling the disease activity (48.2%). For age of onset of gluten sensitivity it was higher from 6 months to 10 years followed by more than 30 years, see table (3).

Table (1): distribution of participants in different provinces in Saudi Arabia

Regions	Number
<b>Riyadh</b>	524
<b>Makkah</b>	182
<b>Estern province</b>	78
<b>Tabuk</b>	13
<b>Hail</b>	12
<b>Alqasim</b>	32
<b>Northen border</b>	6
<b>Al Baha</b>	13
<b>Asir</b>	36
<b>Jazan</b>	4
<b>Najran</b>	3
<b>Madinah</b>	21
<b>Others</b>	77

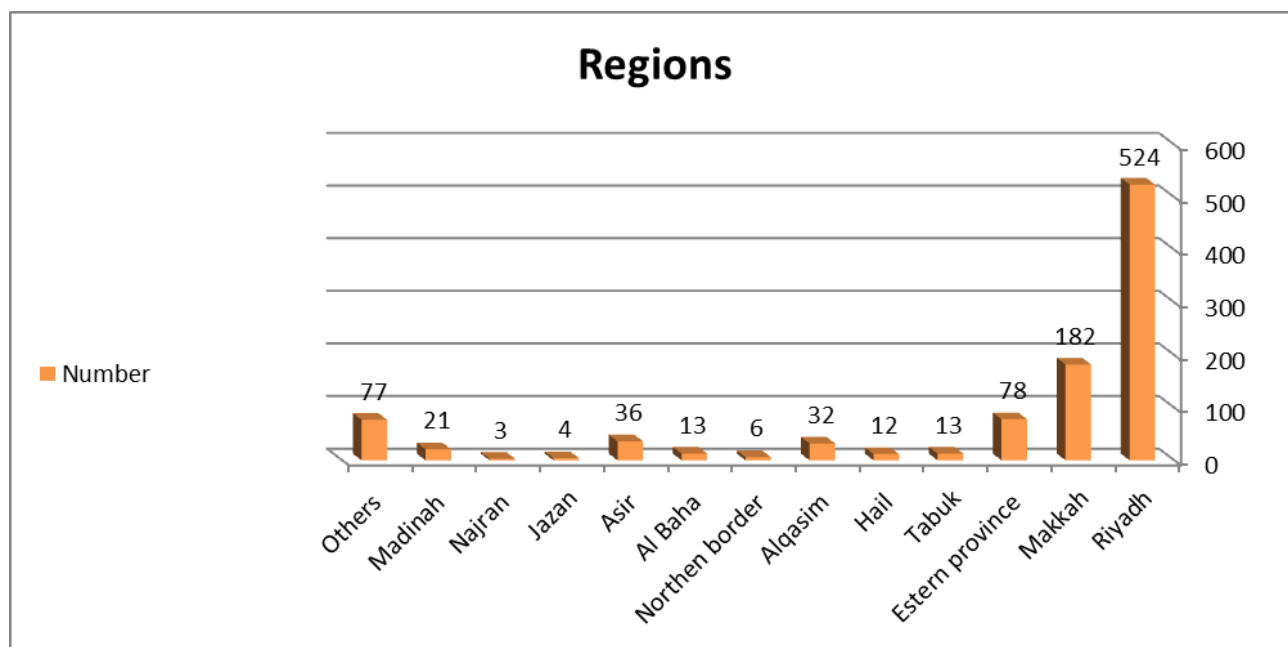
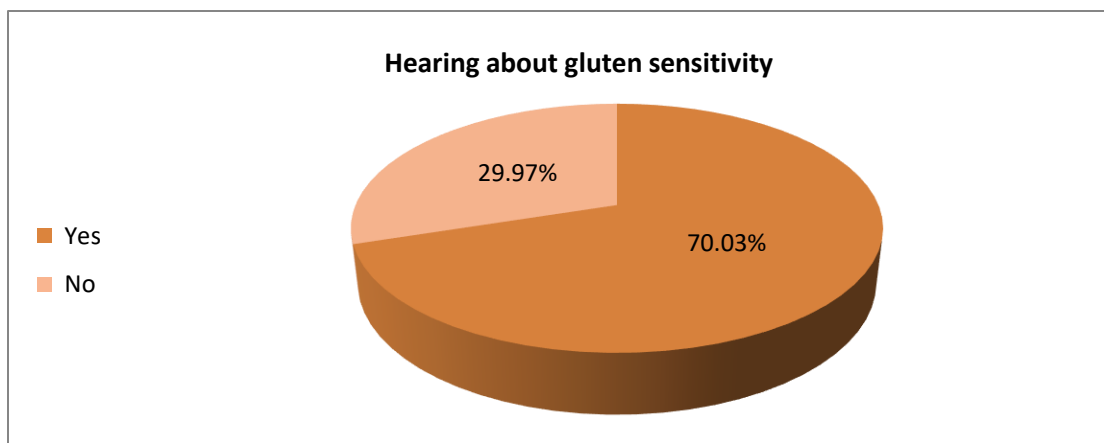
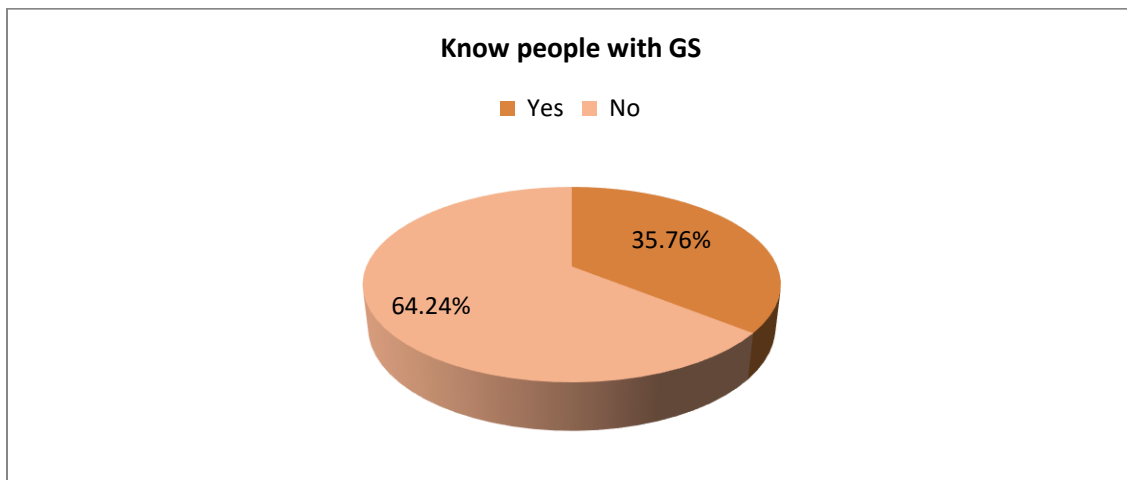
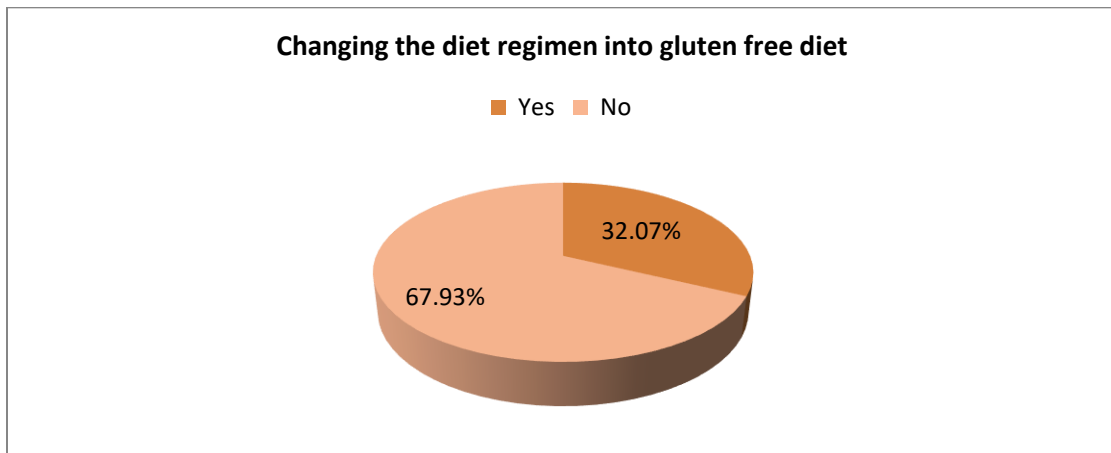
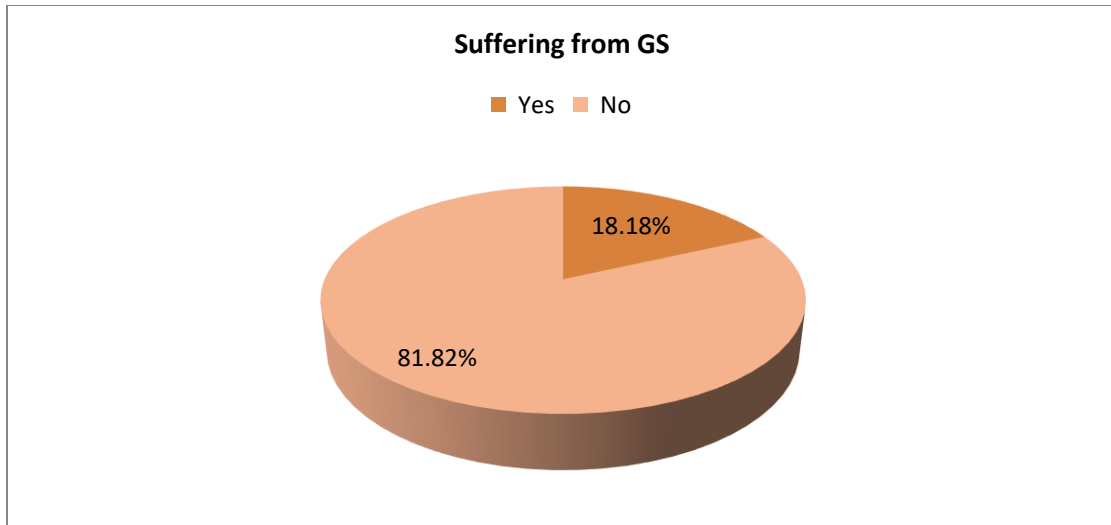
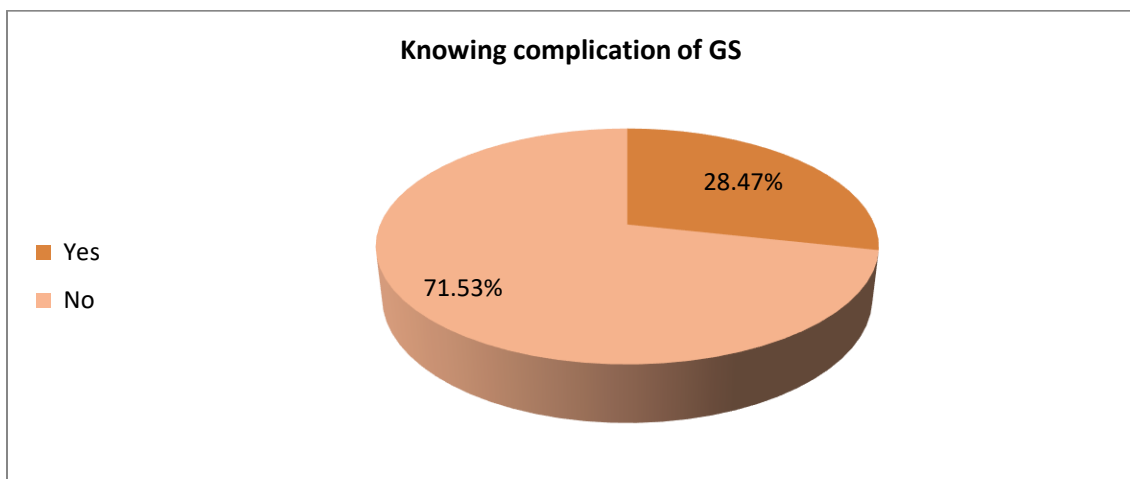
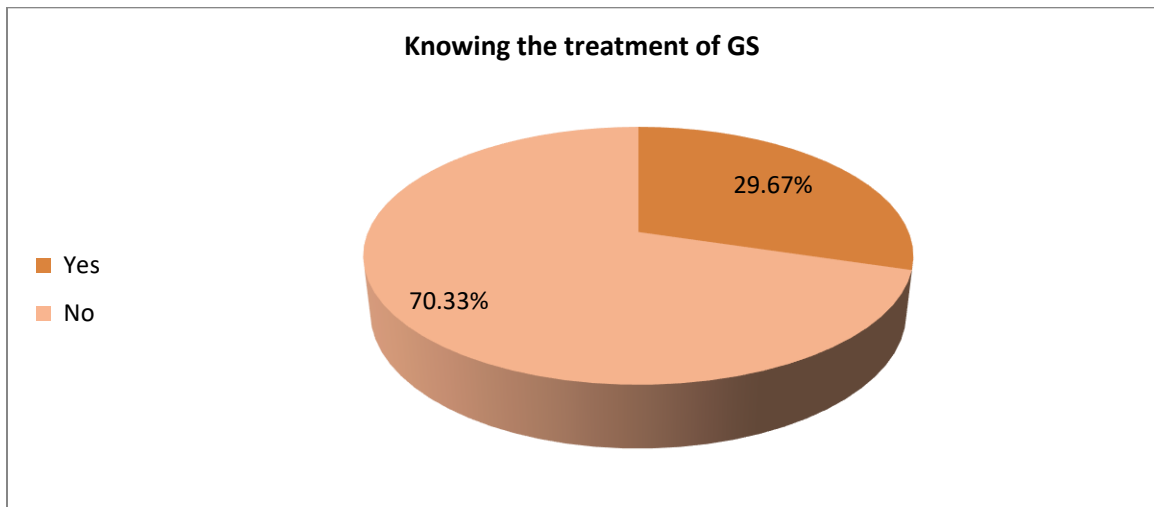
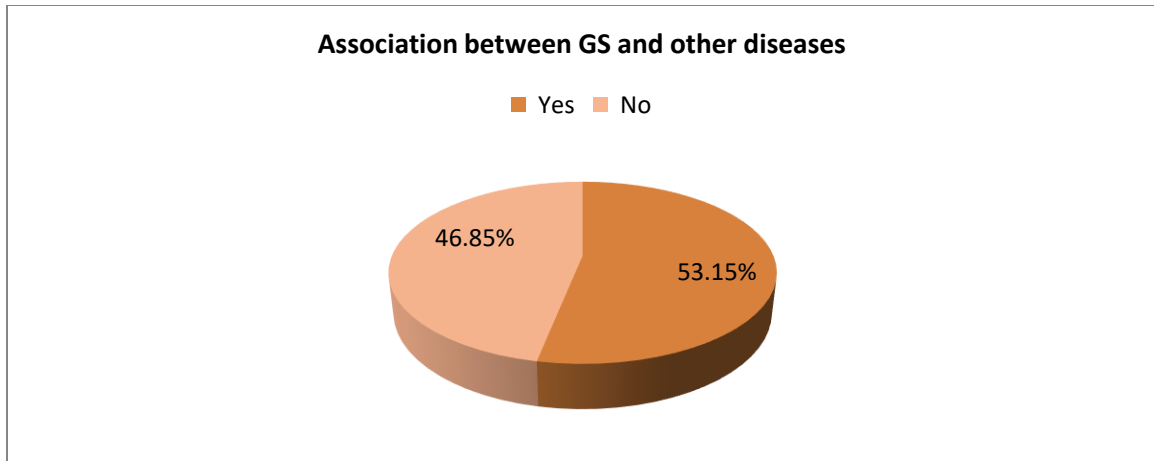


Table (2): descriptive data and its analysis in the questionnaire

Parameters	Answer: Yes		Answer: No	
	No	%	No	%
Hearing about gluten sensitivity	701	70.03	300	29.97
Awareness about symptoms of GS	382	38.16	619	61.84
Suffering from GS	182	18.18	819	81.82
Changing the diet regimen into gluten free diet	321	32.07	680	67.93
Know people with GS	358	35.76	643	64.24
Association between GS and other diseases	532	53.14	469	46.86
Knowing the treatment of GS	297	29.67	704	70.33
Knowing complication of GS	285	28.47	716	71.53
Welling to know more data about GS through conferences, educational campaigns and brochures	876	87.51	125	12.49







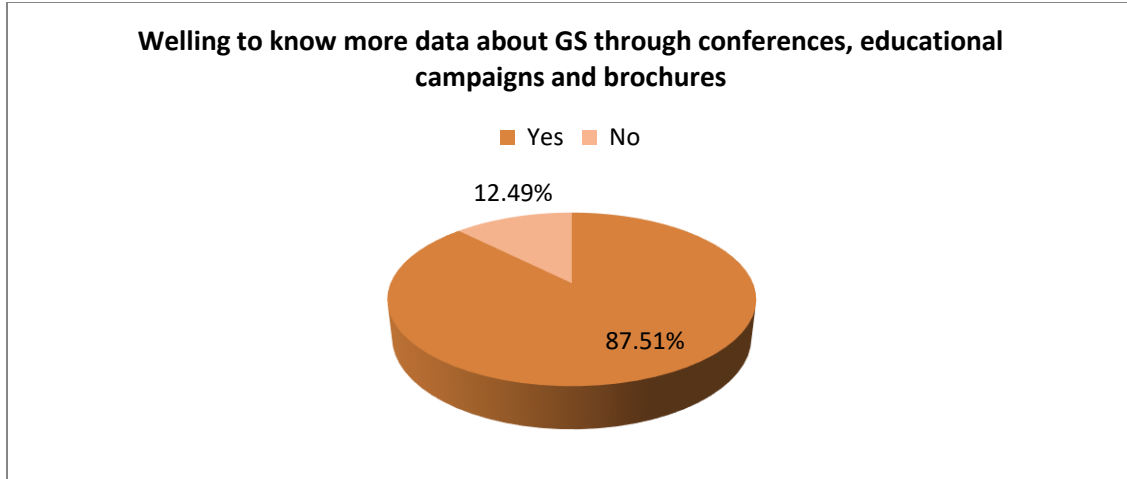
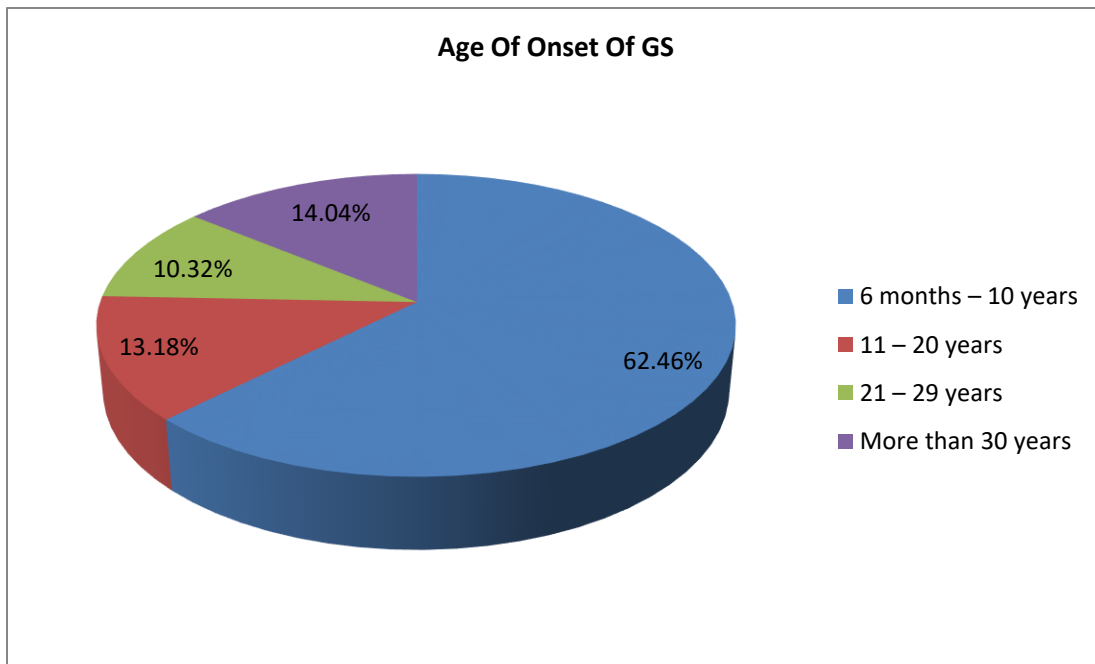


Table (3): age of onset of GS

Age	No	%
6 months – 10 years	218	62.5
11 – 20 years	46	13.2
21 – 29 years	36	10.3
More than 30 years	49	14



**DISCUSSION:**

Celiac disease was considered to be a rare mal-absorptive disorder of infancy and early childhood; however, recent data reveals that

it is a very common disorder that affects 0.5-1% of the population. The clinical spectrum of CD is wide. It can be symptomatic (classical, non-classical), sub-



clinical(asymptomatic), or occur in a potential (latent) form Classical symptoms of CD include abdominal pain, diarrhea, and weight loss. However, many individuals present with non-classical symptoms including anemia, extreme weakness, osteoporosis, oral ulcers, increased liver enzymes, rash, migraine, menstrual irregularities, and infertility. Vomiting, dental enamel defects, and short stature are additional presentations in the pediatric population. Delays in diagnosis may further lead to growth failure and delayed puberty in children.

There is a lack of data on the health care professional's knowledge of CD. It is likely that poor knowledge may translate into delays in diagnosis as the condition goes unrecognized. In our study although good percentage of people 701 participant heard about gluten sensitivity before (70.03%) but only they heard about the name, because only 38.16% had a good Awareness about symptoms of GS which is alarming considering CD being a common disorder. 18.18% in our participating people Suffering from GS which consider high percentage may be for lack of information about diagnosis. In other study the percentage was 3.5%. for the fear of this disease 32.07% of the people in our study are Changing the diet regimen into gluten free diet. Although some people knew about disease but little knew about treatment and complication but the most want to know more and more about this disease.

For age of onset of gluten sensitivity it was higher from 6 months to 10 years.

### CONCLUSION:

A significant proportion of people have poor knowledge of CD. This can potentially lead to delays in diagnosis and treatment. A campaign of increased awareness of CD is needed, which should include educational sessions and workshops for health care professionals and people and use of media for public information.

### RECOMMENDATION:

There is a need to improve awareness of CD both in the health care profession and the public. Education needs to be provided on of ways CD can present. Educating the family

and public is critical as patients.

### ACKNOWLEDGEMENT:

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### REFERENCES:

- Hill ID, Dirks MH, Liptak GS, Colletti RB, Fasano A, Guandalini S, et al. Guideline for the diagnosis and treatment of celiac disease in children: Recommendations of the North American Society for Pediatric Gastroenterology, Hepatology and Nutrition. *J Pediatr Gastroenterol Nutr* 2005; 40: 1-19.
- Aljebreen AM, Almadi MA, Alhammad A, Al Faleh FZ. Seroprevalence of celiac disease among healthy adolescents in Saudi Arabia. *World J Gastroenterol* 2013; 19: 2374-2378.
- Al Attas RA. How common is celiac disease in Eastern Saudi Arabia? *Ann Saudi Med* 2002; 22: 315-319.
- Abu-Zekry M, Kryszak D, Diab M, Catassi C, Fasano A. Prevalence of celiac disease in Egyptian children disputes the east-west agriculture-dependent spread of the disease. *J Pediatr Gastroenterol Nutr* 2008; 47: 136-140.
- Ludvigsson JF, Leffler DA, Bai JC, Biagi F, Fasano A, Green PH et al. The Oslo definitions for coeliac disease and related terms. *Gut* 2013; 62: 43-52.
- Assiri A, Saeed A, Saeed E, Elmouzan M, Alsarkhy A, Alturaiki A, et al. Assessment of knowledge of celiac disease among health care professionals. *Saudi Med J* 2015; 36: 751-753.
- Catassi C, Kryszak D, Louis-Jacques O, Duerksen DR, Hill I, Crowe SE, et al. Detection of Celiac disease in primary care: a multicenter case-finding study in North America. *Am J Gastroenterol* 2007; 102: 1454-1460.
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