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Life Experiences with Coeliac Disease among Patients Referred to Iranian Coeliac Society

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Abstract

Introduction: During the last two decades, the rate of diagnosing coeliac disease has increased significantly in Iran. The present study aims to describe the life experiences with coeliac disease among the patients referred to the Iranian Coeliac Society in 2017.

Methods: In the present descriptive phenomenology, 19 patients with coeliac disease referred to the Iranian Coeliac Society, were selected as participants by purposeful sampling method. The data were collected through in-depth interviews with an average of 45 minutes for each session at the coeliac center. The sampling process continued until the data saturation was achieved. The nine-step Colaizzi method was used to analyze the data.

Results: Based on the results, eight issues such as psychological distress, fighting with disease, disease ambiguity, challenging diets, disease non-acceptance, social isolation, the tendency towards spirituality, disease acceptance efforts, and four other categories such as fear, anxiety, despair, stress and mental instability, and 11 subcategories were identified as life experiences with Coeliac disease. About living with coeliac disease, 8 themes were extracted from the patients' experiences.

Conclusion: Since the findings help nurses understand the life experiences of coeliac patients, they can provide appropriate nursing care based on the patient's needs through the research result.

Keywords: Coeliac Disease, Life Experiences, Phenomenology

1. Introduction

Celiac disease (CD) is an autoimmune sickness in which the ingestion of gluten triggers an immune attack on the small bowel, as well as a serological response in susceptible subjects (1). In CD, unlike other autoimmune diseases, the immunogenic antigens that trigger immune responses, have already been identified and highly characterized (2). As such, removing those antigens by enduring a gluten-free diet (GFD) is a well-known effective treatment for CD.

It is estimated that 1% of the world population suffers from CD (3). Considering a global population of eight billion people, there are roughly eighty million patients with CD. The classical presentation of CD is malabsorption manifestations such as diarrhea, weight loss, and nutrition deficits, although most patients will remain asymptomatic or with non-specific and extra intestinal symptoms (4, 5).

Moreover, it is reported that the prevalence of the disease in the US and Europe is 0.4-1%, while 3%-

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20% in the Middle East (3 and 4). In Iran, it is reported to be similar to that of the world or even higher (6). The only way to cure coeliac disease is to strictly follow a very gluten-free diet for a lifetime. Gluten is found in many foods such as wheat, barley, and rye, which is used in many foods such as pasta, breakfast cereals, soups, sauces, biscuits, cakes, and meat products (7). To adopt the gluten-free diet, patients face barriers such as the deficiency and unavailability of gluten-free foods, high-cost foodstuffs, incorrect labeling of food products, lack of information in this area, and not accepting (resisting) it due to the lack of good taste of the products(8). Despite the positive effects of following such diets, people with coeliac disease complain about not feeling well. It seems that the disease affects all parts of the patient's life (9). In this context, nurses can play a central role in providing patient care (10). Therefore, it is important for nurses and all members of the health team to know what patients care about and how they experience it.

Further, becoming aware of others' experiences helps nurses understand their real concerns, evaluate the patient, and explain the disease process regarding the situation that nurses have. Similarly, they can be effective in improving the symptoms of the disease, educating their spouse and family, as well as improving the life quality of patients (11). It is qualitative research that can be used to describe and make sense of one's life experiences (12). On the other hand, it is difficult to identify human emotions by quantitative methods and it is appropriate to study human experiences phenomenological (13). Therefore, the question "How patients experience this disease" which is posed in this study, was the basis for the researcher to explain the patients' experiences with Coeliac and take a step toward understanding the way they live with it to improve the quality of life among them.

2. Materials and Methods:

This study was conducted to be qualitatively and phenomenological in line with the research objective which describes the life experiences of patients with coeliac disease in Isfahan. The population included the Iranian Coeliac Society. After obtaining the Code of Ethics (IR.IAU.KHUISF.REC.1397.114) from the Ethics Committee of the university, the researchers started their work by explaining the goals and importance of the study to the participants. In this study, the participants were selected based on a purposeful sampling. Therefore, the patients who were diagnosed by a physician, who had a profile in the Iranian Coeliac Society wishing to participate in the study were able to share their experiences. In addition, they were excluded if the participants withdrew from the study or were not willing to share their experiences. In this study, sampling continued until the data saturation was achieved after an in-depth semi-structured interview with 19 participants. Another interview was conducted for more assurance and no new code was found. Therefore, 20 patients participated in this study. Observations and field notes were other ways of data collection. The patients were interviewed in a quiet and convenient location, provided for the researcher by the Iranian Coeliac Center in Isfahan. After communicating with participants, explaining the research objectives and observing the research ethics, the interview started with a general open-ended question "*Please tell me when you got to know you have the disease*", and then went on with more specific questions. All interviews were recorded and after obtaining the participants' consent, notes were taken to record their non-verbal statements, then word-for-word interviews were transcribed on paper, which were finally analyzed. Each interview's duration was 45 minutes on average. The interview finished by asking a question "Do you think there is any contributing point that can be added?"

The data were analyzed by Colaizzi Method (14). To this end, the researcher first described coeliac disease and asked how they would experience it if they studied the patients’ experiences. Then, the researcher, referring to the Iranian Coeliac Society, collected the data through a semi-structured interview and recorded the participants' comments. After recording each conversation and listening to them, the researcher transcribed them word by word. Then, the statements that were directly related to the study phenomenon were identified and each important excerpt was given a special meaning. At this stage, the researcher repeatedly reviewed specific information determined by the underline method to obtain a more general and abstract concept and tried to find out what meanings could be inferred. Then, the extracted primary codes were organized into some clusters. This stage was repeated for each participant's description and then arranged the formulated concepts into specific subject categories.

To make the data acceptable, the researcher strived for long-lasting partnerships, close relationships, building a climate of trust with the participants to express their experiences without worrying and deeply understanding the participants' perspectives. In addition, the codes were validated through a review by two participants and the opinion of the supervisors and advisors. In-depth interviews, field notes, descriptions and recording of all details were used to increase data reliability throughout the research process. For confirmability, all conversations were recorded in the interviews. This study aimed to provide as much detail as possible for the field and allow other researchers to follow the same procedure. The researcher presented the study procedure to increase the data transferability clearly, precisely and purposefully for others to follow. On the other hand, the study results were provided to three individuals who had similar positions and characteristics to the participants but did not participate in the study so that they could judge the similarity of research results with their experiences. In addition, attempts were made to collect data and interviews through the most appropriate samples with the greatest possible diversity in terms of age, gender, and disease duration as far as possible.

The questionnaires were coded and the study data were collected anonymously. In addition, the patients were assured about the confidentiality of their data and the voluntary nature of the study.

3. Results:

The mean age of the participants was 35.47±12.30. In addition, 68% of the subjects (N=13) were female and the rest were male. Further, 68% (N=13) were married, 31% were single (N=6) and 1% (N=1) were divorced. Furthermore, 31% (6 people) didn’t even have a high school diploma, 47% (9 people) had a diploma, and 22% (4 people) were academically educated. Table 1 demonstrates the demographic characteristics of the participants. Table 2 indicates the findings in 980 basic codes, 19 categories, and 8 Experiences.

Table1: Demographic characteristics of the samples

Participants’ code	Gender	Age	Marital status	Academic level	Duration of the disease by year
1	Female	24	Married	Diploma	2
2	Male	17	Single	B.A	2
3	Female	40	Married	middle school degree	3
4	Female	35	Divorced	B.A	12
5	Male	31	Married	Diploma	3
6	Female	28	Married	Diploma	4
7	Female	60	Married	Elementary school	8
8	Female	52	Married	Diploma	2
9	Female	58	Married	Elementary school	4
10	Female	36	Married	Diploma	2
11	Male	23	Single	Middle School degree	4
12	Female	45	Married	Elementary school	10
13	Female	26	Single	B.A	5

14	Female	36	Married	Diploma	1
15	Female	39	Married	Associate Degree	5
16	Male	23	Single	Diploma	1
17	Male	37	Married	Diploma	8
18	Female	43	Married	Middle school degree	9
19	Male	21	Single	Diploma	1

Table2: Main issues and categories derived from the findings

Experience	Main Category
Psychological distress	Fears and worries Despair Stress Mental instability
Fighting with the disease	Physical Experiences of the disease Importance of observing a diet
Disease ambiguity	Unknown disease Pursuing disease diagnoses
High-challenging diet	Experiences of producing gluten-free products Strict diet
Not accepting the disease	Complaining about the fate Escaping from the truth
Social isolation	Limited relationships The associates’ heavy look
Tendency towards spirituality	Trusting and resort
Trying to accept the disease	Positive views Adaptability

3. 1. Psychological Distress

3.1.1. Fears and Worries

Some participants feared the disease in the future. They worried if the disease might turn into cancer, what would happen to them at older age and whether it would become worse. One of the participants said, "Now I'm young and my body can handle this condition, consider the next 10 years, can we deal with it? I’ m concerned about the future…” (No.4)

Some participants were concerned about the future of their children. Some, about infecting their child, others about activating the gene in their offspring and some others about children's careers in the future, whether the community would accept them as workforce. Or, would they prefer a perfectly healthy person? Some participants were concerned about their children’s marriage. Some noted that their children will face some marriage issues due to this disease. Some were also concerned about their pregnancy. Regarding despair, participant No. 4 stated, “*Sometimes I get angry and despaired*”. Considering stress, participant No. 12 stated that mostly stress and anxiety bother him/her.

Marriage concerns were considered as one of the most important. Due to insufficient knowledge, the society does not understand and accept the disease. For example, participant No. 13 stated:

I had a suitor who told me to forget about my allergies and everything was over. Well, I get very annoyed. I said what is allergy now? They treat me that way and don't let me explain. I have been influenced by this. She left me without knowing or even talking about it.

Additionally, some participants stated that they hid it from those around them due to fears: the fear of the people’s reaction as well as of endless questions and answers, and of being under scrutiny and disintegrating life and family. In this regard, participant No. 18 shares her experience as follows:

I didn't let my mother-in-law know that I was ill because I thought it was a bad thing that I was being taken ill. I hid it for almost a year, for example, when I went to their house, I said I wasn’t hungry. For example, sometimes when I was hiding my biscuit in the car, my mother-in-law would say that there was a smell, but I wouldn't say anything. I thought they might consider it something like cancer, they may say my son got into difficulty and now he should spend her much of money.

3.1.2. The Main Category of Despair

Some participants became frustrated and harassed by the difficulty of tolerating the disease and began to blaspheme. In this regard, participant No. 4 said:

Sometimes, I get angry, I'm disappointed with God. Sometimes, I even get blasphemous. But then I regret it. I teach the Quran to children in the mosque. When I teach them, I tell myself that if I teach and invite others for patience, you have to be patient, then I will regret it and return to God again.

Some participants have expressed dissatisfaction with their current lives, finding it difficult to change the situation following the disease and it is painful for them knowing that their lives are not as they used to be and that they cannot be like others. In addition, Participant No. 4 said:

My life was good, but I had less patience due to the experience I was getting bored with. It was really hard. At last, it was hard to see what others could eat". My life was good, but I was getting bored with the experiences I got across, I had less patience. It was really hard again. Finally, it was hard to see what others could eat that I couldn't.

A number of participants stated that they had no hope for the future and that whatever they intended for their future failed and had no motivation for the future. Participator No. 11 stated, *"I was thinking a lot about my future, but now it is ruined, I have nothing to lose. I want to see how it goes. "*

3.1.3. The Main Category of Stress

Some participants complained about their stress and anxiety. It is so distressing both due to the physical disorders by the disease and its psychological consequences, leading the patient to the clinic to get rid of this painful experience. In this regard, participant No. 12 said,

I get annoyed with stress and anxiety a lot, I don't understand my state anymore, I was taken to the doctor, injected sedative and then I got better after I woke up a few hours later.

Participants consider stress as a factor which exacerbates their disease. The experience expressed by patients indicates that there is a direct relationship between stress and symptoms of the disease, and the symptoms will intensify if the patient is stressed.

Participant No. 17 said, "Stress is a fatal toxicity for the disease, two kinds of stress are related to office and the disease itself."

3.1.4. The Main Category of Mental Instability

Some participants are suffering from depression, a feeling that overshadows and changes the normal procedures of their lives. For example, participant No. 10 said,

Truly, I was very upset when I was depressed and was crying a lot, asking why I should be like this. Why can't I eat the bread that everyone can? Sometimes, I didn't want any food, I just wanted to eat bread, so my depression got worse. Why it is difficult to eat the bread that everyone can and is easily available? While talking about their diseases, some patients had shifting moods such as laughter, crying, spite, silence, etc. Although not a word spoken, they had thousands of words in their hearts. Therefore, the researcher sought to demonstrate the importance of these concepts by bringing these modes into the research and considering the code for each.

The participant No.19 was unable to continue the interview and was crying. He was asked: "How did you feel when you were told that you had the disease?" He replied, *"How did I feel? First, I was sent on a treatment regimen and told nothing to eat and I was very upset and depressed. It was hard for me, what should I do at the parties ... I still feel sad, but well ... (Crying). "*

3.2. The Issue of Fighting the Disease

3.2.1. Physical Experiences of the Disease

According to the analysis of the codes obtained in this study, a large number of participants suffered from gastrointestinal experiences such as severe abdominal pain, nausea, vomiting, diarrhea, bloating, etc. These patients indicated that these symptoms developed after eating foods containing gluten, especially bread. Participant No. 1 said, “I always had stomachaches and pains during the whole night, was awake all the time, had a stomachache and intestinal ache, always was eating soup and didn’t know it’s bad for me”. One night I was in the hospital, suffering from severe pain, diarrhea, vomiting and severe nausea. Some participants complained of bone pain. Some reported frequent hand and foot stings. For example, participant No. 1 said, "I had a lot of physical and bone pains, I had severe bone pain when my intestine was working normally." Some participants stated that they were suffering from weakness and lethargy, numbness and weakness affecting the normal course of their lives, and one participant pointed out that the disease made him unable to do his routine and it was hard to manage his life.

Accordingly, participant No. 18 stated, "My body was numb and I was always asleep, unable to do my work, always restless, tired of myself, having lost my life, always down, my neighbors were coming and doing my job." Some participants stated that they had decentralization, carelessness in lessons, academic failure, forgetfulness, decreased ability to learn new material, and indicated that they were not like this before. Participator No. 3 said, "I am very careless in learning, and have to read a material a couple of times to remember well. I hadn't been like this before. However, I'm ruining my exam now, and it's not because I don't know, I just forget it”.

3.2.3. The Issue of Fighting with the Disease

According to a number of patients, since the beginning of their diet, the treatment process has improved and they have regained their sense of health. As one participant said, her diarrhea and digestive problems have declined dramatically since she started her diet. Accordingly, participant No. 7 said, *Maybe, it was God’s blessing which happened, because I have been on a diet since I was like this, I don't have food anymore or heartache, got a lot better, I had never had a delicious meal. Thank goodness that I'll be like this, understand it and maybe enjoy my life a little more.*

A number of participants reported a return of symptoms after eating gluten-free foods. Some have mentioned that their symptoms begin only hours after meals. For example, participant No. 1 said,

When I visit my husband’s family, they put a different pot form, because I have become ill a couple of times I didn't mind and neglected my diet. Every time this happens, my symptoms start 2-3 hours later. First, I get heartache and then severe nausea.

3.3. Disease Ambiguity

3.3.1. Unknown Disease

Some participants reported that they have been frequently referred to the doctor because of general health and the doctor’s failure to properly diagnose the disease has forced them to return to the doctor for pain relief. As the participant No. 1 said,

I was involved in about six months, and the doctors didn't even know what my disease was. I went on a trip out of town, and then I got sick, always had a stomachache and an intestinal ache, and I've been visiting doctors since I was twelve years old.

Some participants expressed dissatisfaction with the physicians’ lack of proper information. *For example,* participant No. 2 said, that *doctors spend less than five minutes talking to the patient, just limited yes-no questions and answers. They don't answer very well. I still haven't understood what cases in the experiment were high and what were low. They don't take time to explain exactly.*

Participant No. 16 said, "For a while, I was visiting doctors and they were unable to diagnose symptoms. I had a stomachache in the morning and intestinal pain and no one could say why.

3.3.2. Pursuing Disease Diagnosis

Many patients were unaware of such a disease before becoming infected. Many had not even heard it, and when diagnosed, they wondered what it was. In this case, participant No. 4 said,

I had never heard of this disease before and wondered what it was. Just got it?" The diagnosing ways are in fact the same methods that were suggested by the doctor and they work afterward. Patients noted clinical experiments and sonography techniques, especially endoscopy, for definitive diagnosis of the disease.

Further, participant No. 7 said, *I've had severe diarrhea and constipation for alternative weeks since last year. I was feeling like this after eating soup and crying out of stomachache last year. I visited a doctor, was asked whether I did specialized experiments. I said no. After the experiment, I was told that I had coeliac. But to make sure, I had to do an endoscopy which confirmed the doctor's statement and I was told that I had coeliac disease.*

3.4. High-challenging Diet

3.4.1. Experiences Related to Providing Gluten-free Products

Patients with coeliac disease should provide bread and cake, and other gluten-free foods from related markets. Therefore, these patients prefer to make their own at home due to the high cost of these products as well as the commuting difficulties. In this regard, they referred to the experiences of making bread and pastries difficulties. In this regard, participant No. 18 said,

I had to make my cake and everything. It didn't work out well, didn't have an oven, so I made it in a frying pan. It was hard at all, whether it was bread or cake, I had to eat rice wherever we went. I hated eating cooked foods but had to eat them, my bread turned out very bad.

Many participants said that gluten-free foods weren't of high quality and diversity. Therefore, they had to use foreign products, which were difficult to provide. On the other hand, some participants stated that if gluten-free products in Iran are sufficiently diverse like other countries, they can adapt to the disease much better, and there won't be any difference between them and healthy people. Participant No. 10 said:

I'm from Chaharmahal. They don't have bread there, it's unavailable. Once, I didn't have bread. There was enough bread whenever Miss ... came. He sent a message on Telegram that I brought bread. Whenever I come here, I get bread and go. Well, I can't come any time, I'll be without bread for a week. If I had flour, I'd bake a cake for myself. I ate but it's difficult...

Some participants complained about the poor quality of the products and said that these products did not taste what they were familiar with, which created a kind of discontent and dissatisfaction. Participator No. 15 stated: “You just go eat this bread, it tastes flour and it disgusts me, it's not like bread”.

3.4.2. Strict Diet

Difficulties in maintaining a gluten-free diet have a wide range which affects not only the body but also the patient's psyche. In this regard, participant No. 2 stated, “For example, my roommate who was beside me could easily eat everything I could not. It was hard that I could not tell them to go out."

3.5. Not Accepting the Disease

3.5.1. Complaining about the Fate

The question raised by many participants is: why them, among their family and relatives? He finds himself alone among them and thinks of himself as a separate individual, complains, and says, "Why not them?" Participant No. 14 stated in this regard, "I experienced this disease early and was always saying why me, not others."

3.5.2. Escaping from the Truth

Many participants said that they considered the disease unrealistic and did not believe its occurrence in its early stages. They said that there is no such disease and that we are treated like guinea pigs. Is it possible not to eat bread at all? Participant No. 11 said, "My diet has had no effect. I feel like everything is useless and they're examining me like a guinea pig. No result is achieved.”

3.6. Social Isolation

3.6.1. Limited Relationships

According to younger participants, one of the challenges they face is limiting their relationships with their peers. They refuse to accompany their friends out of the house because of their special diet, and these relationships gradually decreased which affects them emotionally. Participant No. 3 said, "When I go out with my friends, there are so many things they can eat, but I can't. Well, my relationships get more limited and I have to be with my family more."

3.6.2. The Associates’ Heavy Looks

Some participants felt uneasy about the associates’ heavy looks. Participant No. 17 said,

The way colleagues look at and think of you is very bad. For example, when everyone wants to eat breakfast during work time, everybody looks at it as a wonder while taking special bread. They looked at him like a poor and miserable man. They feel pity and psychologically it is very distressing.

3.7. Tendency Towards Spirituality

3.7.1. Trusting

Most participants in the study stated that the disease made them feel closer to God and it made them comfortable. Participator No. 5 said,

I do not mean to become so close to God but to get a moment alone with Him. I always say it could be a miracle waking up in the morning having these experiences solved. Then, I say no, God has chosen you and you are selected. So, don't be ungrateful.

3.7.2. Resorting

During the interview, the participants discussed their prayers and resorts to seek healing and regain health. Participator No. 8 said,

I have repeatedly prayed for this in my daily prayer. I asked God to save us and heal all our patients. Although it is not a serious disease, everyone wants to be healthy. Even if you have the slightest headache, you want your health back.

3.8. Trying to Accept the Disease

3.8.1. Positive Views

Many participants spoke of their dreams and a better future. Participant No. 8 said, "I wish I could go back to normal, I like to eat foods I always cooked myself, like before. I loved breakfast with warm Sangak bread, I love going back to my early days. "

The participants with a positive view of the disease have accepted it better. They consider it as a friend and adapt themselves to it. Participant No. 14 mentioned her experience: "But, I gradually coped with it and became friends with my pain and coeliac. We are two friends now."

3.8.2. Adaptability

Participants discussed how they adapted to the disease and shared their experiences about the activities which helped them cope with it. Participant No. 2 describes his / her experience with coping with dieting,

"Oh, yeah let me just say one thing, my study field is exceptional children now ... maybe that has nothing to do with it, but I want to say how I accept and adapt myself to the disease. I love working with children, and seeing them how they live in difficult conditions. Well, I see them and thank God for my health, thank God a thousand times, and I got to adaptability...

4. Discussion:

Eight Experiences were derived from the patients' experiences related to living with coeliac. According to the participants' responses during the interview, psychological distress was divided into four main categories such as fears and anxieties, despair, stress, and psychological instability. In this regard, Bahrami and Mani Seftat (2018) compared mental health components between coeliac patients and healthy people among 40 patients aged 18-80 years in West Azerbaijan province and found that the mean score of anxiety and depression was significantly higher among patients with coeliac disease (14). In addition, the results of studies by Zingone et al. (2015), and Sheikhian et al. (2015) indicated that the coeliac disease along with mental disorders such as depression and anxiety. Generally, coeliac patients' mental and physical health is reduced dramatically compared to healthy individuals (15, 16). To explain the relationship between coeliac disease and psychiatric disorders, the biological basis of coeliac such as endorphin-like peptides, intestinal permeability, genes, cerebral perfusion (intracranial pressure) and immune-related factors should be highlighted. Endorphin-like peptides may cross the blood-brain barrier, affect behavior, and cause changes in the ECG and levels of neurotransmitters (17). Thus, it is necessary to pay special attention to patients' mental health.

Fighting with the disease was another experience raised in this study and included physical health matters and diet importance. In line with the present study, the risk of bone fractures (18), weight loss (19), nutritional disorder (20), and vitamin K and D deficiency (21) were reported among the patients with coeliac disease. On the other hand, the results of previous studies (e.g., Mooney et al., 2015; Samasca et al., 2014) indicated that a gluten-free diet can reduce inflammation symptoms such as antibody levels and help treat intestinal damage by gluten inflammation among the patients.

Further, disease ambiguity including unknown disease and pursuing the diagnosis was considered in this study. Similarly, Basiri et al. (2011) found that most patients' complaints were related to a lack of sufficient information about their physician's diagnosis and treatment (22). Kalrouzi et al. (2010) reported that 8% of the patients were not satisfied with the physicians' performance regarding their rights. In fact, lack of physicians' and patients' awareness about the disease, lack of high sensitivity and specificity diagnostic tests have led to delayed diagnosis. Therefore, the healthcare team needs to provide patients and their families with complete information about the disease and its complications, treatment, and self-care.

Additionally, a highly-challenging diet included gluten-free provision and dietary experiences. Difficulties in baking bread and accessing gluten-free products, as well as their low quality and high costs are considered among the difficulties with providing gluten-free products. Since using such a diet is considered the only way to cure coeliac disease and making them is of high cost and difficulty, food experts are looking for ways to replace gluten in a variety of foods today.

Not accepting the disease is another issue achieved in the present study including complaining about fate and escaping from the truth. The existing experiences in these patients can lead them to a defense mechanism of denial and escape from the reality of the disease.

In addition, social isolation includes limited relationships and the associates' heavy looks. In line with the results obtained in this regard, Barzegar et.al. (2015) (23) found that the mean of shame, social isolation, distrust, inadequacy, and failure variables were higher among the patients than those of healthy people. Patients perceive others' knowledge of the disease as an obstacle to achieving goals such as marrying a loved one, tenure of a favorite occupation and thus hide the disease from others.

Another Experience is related to the tendency towards spirituality including trust and resort.

Several studies indicated that spiritual counseling and healing can improve patients’ mental health. For example, some studies indicated that spirituality can improve the patients’ mental health (e.g., Agaali et al., 2011, Yaghoubi et al., 2012) (24).

Finally, adaptability can be defined as a response to a change in stimulus which allows the organism to adapt to changes appropriately. This definition indicates that adaptation occurs over time. Adaptation to disease is considered a process of maintaining a positive view of the world in facing a health experience. Adaptation is important among patients because it is directly related to the patients' self-care behaviors and facing new conditions. Similarly, Ahangarzadeh et al. indicated that positive thinking reduced depression, anxiety, and stress among coronary heart disease patients (25).

The present study has some limitations. The statistical population was limited to coeliac patients referred to the Iranian Coeliac Center, indicating the spatial limitation of the study. Further, the individual characteristics of each patient can influence how he/she responds to the questions which are beyond the control of the researcher.

So do not forget the following tips for treatment:

The only way to cure this disease is to follow a 100% gluten-free diet for the rest of your life.

After removing gluten from the diet, the small intestine starts to rebuild itself quickly, but in some cases, this rebuilding is not done, and immunosuppressive drugs (steroids) must be prescribed to the patient.

1. Removing wheat, barley, oats, black or rye, as well as all products that contain these grains such as bread, biscuits, cakes, cookies, pastries, pasta, soups, sauces, pizza.
2. Taking food supplements (vitamins and minerals) to eliminate the effects of malnutrition.

5. Conclusion:

The results obtained from coeliac patients’ experiences were divided into eight including psychological distress, fighting with the disease, disease ambiguity, high-challenging diet, disease no acceptance, social isolation, a tendency towards spirituality, and trying to accept the disease. Based on the results, patients’ mental and physical health declined dramatically, and they are struggling with the disease due to physical and dietary experiences. The disease is unknown to these patients so they are trying to identify the disease. In addition, they face many difficulties in providing gluten-free products and are initially refused to accept the disease. Further, many of patients' difficulties such as diet resulted in social isolation, and they reduced their stress through spirituality and finally tried to adapt to the disease by accepting it.

Nurses play an essential role in improving the health quality of these types of patients in order to encourage them to obey their specific diet strictly which is gluten free and make them aware of all aspects of their disease.

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Conflict of interest:

There is no conflict of interest in this study.

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