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# Selected Aspects of Tourist Activity among People Suffering from Celiac Disease 


#### Abstract

The article aims to analyse tourist activities of people suffering from celiac disease, identify their typical patterns of behaviour and barriers that inhibit or prevent their participation in some tourism services. Based on these findings, the author proposes solutions for hotels and catering facilities that they could use to build a competitive advantage. The analysis is based on results of a survey and netnography. It was found that people with celiac disease or their legal guardians had to plan their trips taking into account special nutritional needs, associated travelling with an increased risk of exacerbating disease symptoms and almost always experienced discomfort related to special nutritional needs when travelling. The author concludes travel experience of people with celiac disease can be improved by raising awareness and sensitivity of hotel staff and facilitating access to reliable information on the composition and methods of preparing gluten-free meals.


Keywords: celiac disease, tourist activity, food intolerance, accessible tourism

## 1. Introduction

The increasingly competitive nature of the current business environment in the hospitality and catering sector has made it more challenging for enterprises to provide consumers with services at competitive prices, without sacrificing value creation and profitability (Ofori \& Appiah-Nimo, 2022). As Nasifoglu, Ozturen \& Bayighomog (2020) point out, customer requirements are changing, as is their involvement in the value formation process. These changes are accompanied by growing competition, which requires companies to innovate in order to ensure organisational sustainability. Yoo, Yeon \& Lee (2022) recognised the important role of introducing non-technological innovations to achieve a competitive advantage in the hospitality industry. Examples of this trend include innovative behaviours and creativity of hotel employees (Nasifoglu, Ozturen \& Bayighomog, 2020) or

[^0]the role of hospitableness (Mody, Suess \& Lehto, 2019). As noted by Niezgoda, Markiewicz \& Gierczak (2016), customers demand products of higher quality, designed to meet their individual needs and preferences. It is therefore reasonable to focus attention on a special group of customers that use hotel and catering services, namely, people with special food requirements that can be the result of a particular lifestyle or disease.

Tourism is an activity that can have a considerable effect on the quality of a person's lifestyle (Uysal, Berbekova \& Kim, 2020). Chief among the numerous benefits of travelling is the fact that by leave their place of residence people have an opportunity to change their daily rhythm of life, escape from the noise or pollution of the city and improve their mental and physical health (Różycki, 2022). However, there is a group of tourists for whom travelling poses a very high health risk, namely people who suffer from celiac disease.

The article examines tourist activities of people suffering from celiac disease, identifies their typical patterns of behaviour and barriers that inhibit or prevent their participation in some tourism services. Based on these findings, the author proposes solutions for hotels and catering facilities that they could use to build a competitive advantage.

The following research hypotheses were formulated at the beginning of the study:

H1. In terms of organisation, people with celiac disease or their legal guardians adapt their trips to special nutritional needs.

H2. People with celiac disease or their legal guardians associate travelling with an increased risk of disease symptom exacerbation.

H3. People with celiac disease or their legal guardians experience discomfort related to special food needs during travelling.

## 2. Literature Review

Celiac disease is a chronic, immune-mediated enteropathy of the small intestine in genetically-predisposed individuals caused by exposure to gluten, a protein found in grains such as wheat, rye and barley (Limanowska et al., 2014). It occurs in about $1 \%$ of the population (Bierła et al., 2019), though, according to some researchers, this level may be higher since many cases remain undiagnosed. This is because adult sufferers often do not exhibit typical symptoms of celiac disease but only atypical ones (Durazzo et al., 2022). Nonetheless, thanks to the growing body of
knowledge and better diagnostic procedures, the disease is diagnosed more frequently (Lebwohl \& Rubio-Tapia, 2021).

The only available treatment procedure is to maintain a strict gluten-free diet, which excludes all products containing the above-mentioned cereals, including those that may only be contaminated with them during the production process, improper storage or transport. A strict gluten-free diet strongly affects the daily life of patients and their relatives. Numerous studies have demonstrated the negative impact of a gluten-free diet on the life quality of people with celiac disease. Lee and Newman (2003) reported problems such as difficulties with eating out (86\%), travelling ( $82 \%$ ), impact on family ( $67 \%$ ) and even the negative effect on career or work ( $41 \%$ ). Brończyk-Puzoń et al. (2014) found that people suffering from celiac disease, food allergies or gluten sensitivity are less satisfied with their psychological, social and general health compared to those who do not follow a gluten-free diet for therapeutic purposes. According to Pietras-Mrozicka (2018), celiac sufferers have a limited ability to travel, eat out during family or social gatherings and perform their work duties. The necessity to follow a diet changes forms of interaction with others, often causes celiac sufferers to withdraw from some forms of social life and can also affect attitudes towards health and pro-health behaviors. The literature includes relatively few studies on the tourist activity of people suffering from celiac disease, which mainly examine the range of gastronomic offerings. Muñoz-Mazón et al. (2021) researched strategies employed by tourists suffering from celiac disease to reduce their perceived risk associated with travelling. Participants including celiac sufferers and those with non-celiac gluten sensitivity were divided into 3 groups according to the declared impact of the disease on travelling. It was found that tourists for whom the perceived risk associated with travelling was high spent more time looking for information before travelling than those who had a lower risk perception. Moreover, those who perceived the risk as high used more sources of information, were more likely to look for answers to their questions and doubts in informal sources, such as social networks. The authors of the study propose ways in which public and private institutions could raise the general level of knowledge about celiac disease, e.g. among employees, and improve the quality of information offered to tourists with special food needs.

Fuentes-Moraleda et al. (2022) conducted a qualitative study involving 32 semistructured in-depth interviews with different stakeholders including representatives of the celiac and non-celiac gluten sensitivity community (associations and influencers), restaurant managers, service providers, and nutritionists. There was a high level of consensus among the respondents as to the main ways of reducing the risk of gluten consumption, which include tourist information, staff safety training, legislation and meal preparation protocols to reduce the risk of gluten
cross-contamination. The interviewees also reported problems with limited nutritional information offered by restaurants or tourist resorts, such as allergens. According to the study's authors, tourism companies should find effective channels of communication to gain a sustainable competitive advantage and satisfy customer groups like celiac sufferers or those with non-celiac gluten intolerance.

There are also studies concerning the main problems faced by tourists suffering from celiac disease in different countries, e.g. in the United Kingdom (Towers \& Pratten, 2003), Turkey (Taşkin \& Savlak, 2021) or the Czech Republic (Regnerová, Šálková \& Varvažovská, 2016; Šálková \& Tichá, 2020), which report similar findings. One of them is the lack of public awareness regarding food intolerances (including celiac disease), which is associated with a high perceived risk of eating out resulting from the lack of trust in the staff of catering facilities and a very limited choice meals for tourists with special dietary needs.

In recent years, with the increasing importance of accessibility in the tourism sector, the problem has been investigated in numerous studies and addressed in regulations and planning strategies, both at national and international levels (Cañulaf \& Rodríguez, 2015). Social tourism programmes implemented all over the world enable more people to go on vacation and facilitate recreation for the sick and disabled. As well as helping to combat seasonality and social exclusion they support regional and local development and improve the overall quality of life. These developments are extremely important in the era of uncertainty experienced by contemporary societies (Stasiak, 2021). Making tourism more accessible also means eliminating barriers for people with special food needs (Cañulaf \& Rodríguez, 2015). Beltramo, Duglio \& Cappelletti (2022) analysed accessibility in mountain shelters in Gran Paradiso National Park in Italy and found that all shelter managers had adapted their facilities to accommodate guests with special dietary requirements who now constitute a significant part of their customers, thus demonstrating their ability to change operational processes, habits and behaviours in response to new market requirements.

## 3. Methods

The following study is based on information collected during a questionnaire survey and netnographic data (Kozinets \& Brzozowska-Brywczyńska, 2012) from groups of Facebook users interested in celiac disease and gluten-free diets. Information collected from social media was used to create the questionnaire and helped in the interpretation of its results.

The questionnaire consisted of 25 questions ( 4 of which were open-ended), but how many of them were answered by individual respondents depended on their replies. In open-ended questions respondents were asked about their reasons for not travelling, the main problems encountered in catering establishments (they could indicate up to 3 problems) and things they missed the most when travelling. Of the remaining 21 questions, 14 required a single answer, 1 was a multiple choice question, and 6 offered options on a 5 -point Likert scale. The questions concerned celiac disease, patterns of tourist behavior and examples of special celiac-related preparation before travelling and behaviour during the stay.

The degree to which respondents adapted various aspects of travelling to the requirements of a strict gluten-free diet was measured by asking them to indicate the order in which individual aspects of travelling were selected, the need to have access to certain services and infrastructure and behaviours related to the use of catering establishments when travelling. In order to measure the perceived risk associated with travelling, the respondents were asked about their diseaserelated reasons for choosing not to travel and information-seeking behaviour before and during the actual trip. Respondents' sense of discomfort experienced when travelling was measured by questions about their enjoyment of traveling before the diagnosis, about the lack of spontaneity, the sense of relief and gratefulness after receiving help from the staff, and the feeling of being perceived as oversensitive.

The survey was conducted in September 2022 using Google Forms. A selfselected sample of respondents included adults with celiac disease or legal guardians of children suffering from this disease. The link to the questionnaire was on relevant Facebook interest groups ("Celiacy" [Celiac sufferers] - 19,000 members, "Celiacy w podróży" [Celiac sufferers on the move], "Celiak - turysta" [Celiac sufferers as Tourists] - 3,200 members, "Celiakia grupa konsultacyjna" - [Celiac Disease Consultation Group] - 2,600 members, "Stowarzyszeni z Celiakią i na Diecie Bezglutenowej" [Associated with Celiac Disease and Gluten Free Diet] - a group for members of the Polish Association of People with Celiac Disease and Gluten-Free Diet - 2,300 members, "Celiakia-BezglutenoweŻycie" [Celiac Disease - Gluten Free Life] - 9,500 members, "Celiacy w Krakowie" [Celiac sufferers in Krakow] 500 members and the blog "Bezglutenowa mama" [Gluten-free Mum] whose author shared the invitation to participate in the survey on her FB profile (https://www. facebook.com/bezglutenowamama).

Table 1: Socio-demographic characteristics of respondents ( $\mathrm{n}=298$ )

| Characteristic |  | n | $\%$ |
| :--- | :--- | :---: | :---: |
| Sex | female | 275 | $92 \%$ |
|  | male | 23 | $8 \%$ |
| Age | up to 40 | 187 | $63 \%$ |
|  | over 41 | 111 | $37 \%$ |
| Education | university | 242 | $81 \%$ |
|  | secondary and primary | 56 | $19 \%$ |
| Family members with <br> celiac disease | adult only | 148 | $49.5 \%$ |
|  | child/children only | 121 | $40.5 \%$ |
|  | adult and child/children | 29 | $10 \%$ |
| Duration of the gluten-free diet | 1 year or less | $1-5$ years | 68 |
|  | more than 5 years | 115 | $38.5 \%$ |

Source: own research

A screening question at the start of the survey was designed to make sure that answers were provided by respondents who had made at least 1 trip including a stay of at least one 1 night since the diagnosis. Only $5.4 \%$ of respondents had not taken any trips indicating reasons such as problems with maintaining a diet during trips, feeling unwell and the fact of being recently diagnosed. 282 respondents completed the whole questionnaire.

## 4. Results

Q: How often during the year do you travel for the following purposes (think of the last 3-4 years)

How often during the year does your child travel for the following purposes (think of the last 3-4 years).

The most frequent reasons for travelling chosen by adult celiac sufferers (167 respondents) included recreation or leisure, visiting relatives and friends, while over $40 \%$ indicated travelling on business. Health or religious reasons were less frequent. In the case of children suffering from celiac disease, (143 respondents) the most popular were leisure trips, visits at relatives and friends; approximately $45 \%$ of the children participated in summer or winter camps, and $36 \%$ went on school trips with an overnight stay.

Q: To what extent do you follow a gluten-free diet during your tourist trips? To what extent does your child/children follow a gluten-free diet during tourist trips?

Sick adults most frequently said that they strictly adhered to a diet during their trips (approx. 56\%); over $39 \%$ said they occasionally ate products potentially containing traces of gluten when there was no other choice; less than $3 \%$ consumed such products often, while 2 persons indicated that they consciously ate glutencontaining meals. Asked about their sick children, $76 \%$ of respondents believed that their children strictly adhered to a gluten-free diet during their travels, while the rest thought their children ate potentially contaminated products when there was no other option.

Q: How do you organize your trips and/or trips with a child suffering from celiac disease?

Most of the respondents said they organised their own or their children's trips on their own, about $30 \%$ rely on the services of travel agencies, and $13 \%$ indicated that their trips were organised by other institutions, e.g. their employers. When planning their trips, $41 \%$ of respondents first look for places where there are safe gluten-free meals nearby (restaurants, canteens, properly stocked shops, access to a kitchen), and pay less attention to specific destinations or regions. $45 \%$ of respondents first choose a specific destination and then look for information about appropriate meal options or choose places with access to a kitchen. Only $14 \%$ of respondents said their travel choices were determined by the attractiveness of a given place and not by concerns about safe food options. Interestingly, almost $63 \%$ of those mainly concerned about the availability of safe meals were parents (legal guardians) of sick children, while $73 \%$ of respondents who were not worried about food-related problems before going on a trip were adults with celiac disease. This difference was found to be statistically significant ( $X^{2}=16.90, d f=2, p<0.001$ ).

Q: Please rate how important the following tourist services are for you as a celiac sufferer and/or as a parent/carer of a child/children suffering from celiac disease.

As be seen in Figure 1, accommodation with access to a kitchen and shops offering gluten-free products are the two most important factors. The offer of glutenfree meals in the facility or at restaurants nearby is important for tourists but not necessary. Almost $80 \%$ of respondents declared that they always or almost always take products that could be used to prepare a hot meal with them on travels, while about $95 \%$ usually take the bread and gluten-free snacks.


Figure 1: The importance of selected services for tourists with celiac disease.
Source: own research

Q: When traveling, do you and/or your sick child/children use restaurants/catering places (this includes hotel restaurants/canteens in accommodation facilities serving e.g. breakfast) (Fig. 2).
$46 \%$ of respondents said that they always or usually ate at restaurants, eateries or canteens; $31 \%$ did so sometimes and $22 \%$ rarely or never. The follow-up question was the way respondents decided where to eat and how they obtained information about its suitability for people suffering from celiac disease. The majority said they chose places with a certificate, such as the "Non-gluten menu" a programme launched by the Polish Association of People with Celiac Disease and on a Gluten-Free Diet. When deciding to eat in non-certified restaurants, the respondents usually looked for information on social media or relied on recommendations from specially-created mobile applications, such as "Find Me Gluten Free", and when arriving at a restaurant, they asked the staff if they could eat a safe, gluten-free meal, often requesting a written list of allergens. In this respect, adults celiac sufferers turned out to be less careful than parents or carers of sick children: only $29 \%$ of them were afraid of cross-contamination, compared to $71 \%$ in the case of parents/carers ( $c h i^{2}=31.41, d f=5, p<0.001$ ). They were also more likely to simply ordered dishes not containing gluten ingredients $\left(c h i^{2}=20.27, d f=5\right.$, $p<0.001$ ). Furthermore, before the trip, parents/carers of children with celiac
disease were more likely to send instructions on how to safely prepare meals to accommodation facilities that also offered meals ( $c h i^{2}=19.20, d f=5, \mathrm{p}<0.001$ ). They were also more concerned about potential cross-contamination (chi ${ }^{2}=5.37$, $d f=1, p=0.021$ ). Based on the results of the $c h i^{2}$ test, all of these differences are statistically significant.

I. As regards catering options, e.g. at a hotel, I send an email with instructions on how to prepare glutenfree meals safely. II. As regards catering options, e.g. at a hotel, I call in advance to make sure that meals are gluten-free. III. In the absence of a certificate, I order dishes without ingredients containing gluten. IV. In the absence of a certificate, I always ask questions to check meal safety and other details (e.g. allergens). V. In the absence of a certificate, I only ask for allergen information, I am not worried about crosscontamination. VI. I check information about a given restaurant regarding gluten-free meals, e.g. using applications such as Find Me Gluten Free or on social media. VII. I choose certified establishments whenever possible.

Figure 2. Behaviours of tourists with celiac disease when using catering establishments

Q: Which of the factors listed below (Fig. 3) are the most problematic for you when using catering establishments (please select at most 3 answers).

For the majority of respondents the biggest problems was the lack of knowledge about celiac disease among the staff, the limited offering of gluten-free dishes and products, and the fear of cross-contamination of meals. Less than $2 \%$ chose the 'other' option, where they could provide problems. It is worth noting that this option was selected in order to emphasize and clarify other answers. 2 respondents said that, in addition to lacking knowledge, the staff of catering establishments also sometimes deliberately misled customers. According to one respondent, the worst thing was their lack of awareness about the consequences of gluten consumption by celiac patients. One respondent noted that a gluten-free diet was commonly associated with a fashionable celebrity whim.


Figure 3: Problems faced by respondents in catering establishments.
Percentages do not add up to 100 since respondents could indicate several answers.
Source: own research

Q: How often during your tourist trips do you and/or your sick child/children feel the following emotions (Fig. 4):

Given the relatively limited number of restaurants that cater for the needs of celiac sufferers or shop that sell gluten-free food, problems associated with having
to maintain a strict gluten-free diet a lot of can cause emotional distress. More than $50 \%$ of respondents always or almost always feel that their trips are not as enjoyable as they were before their diagnosis. People who had been diagnosed more than 5 years earlier were more likely to choose "rarely" or "never". This difference is statistically significant $\left(c h i^{2}=11.25, d f=4, p=0.023\right)$. Over $70 \%$ felt that there was no room for spontaneity during trips because practically every activity had to be planned with the diet in mind. $80 \%$ of respondents always felt grateful and relieved each time the restaurant staff showed their sympathy and support. Almost $70 \%$ of respondents often or from time to time felt that others considered them oversensitive because of their dietary needs. Younger respondents (aged up to 40) were more likely to indicate that travelling was not as pleasant as before the diagnosis: they accounted for $65 \%$ of those who chose the option "always" and $76 \%$ of those who selected "usually". This difference turned out to be statistically significant $\left(c h i^{2}=17.58, d f=4, p<0.001\right)$.


Figure 4: Emotions experienced by people with celiac disease during their tourist trips
Source: own research

Q: What do you miss the most (if anything) during tourist trips as a consequence of limitations resulting from your disease?

For 195 respondents, the biggest problem was the limited range of gluten-free dishes and products, which, according to several respondents, was particularly acute in smaller towns; a few respondents mentioned problems with food in their destination (the lack of gluten-free dishes at chain fast-food restaurants or glutenfree snacks at gas stations); one person also complained about bars in tourist hostels). Other complaints included the lack of freedom and spontaneity, having to carefully plan each day, incoveniences for healthy travel companions, not enough educated staff who do not underestimate the consequences of gluten consumption and respect the concerns of celiac sufferers. The following statements express respodents' emotions and frustration related to the problem of travelling:

- Places where you can go in and eat a hot soup, dinner and sometimes ice cream without having to look for a place like that within 100 km !
- Freedom to visit many places. It is sad to see your child's wistful look when feeling the aroma of waffles, ice-cream, chips and pizza smell.
- What is lacking the most is freedom. I have this fear in the back of my mind: are you sure it's gluten-free? Won't it hurt me? Can I be sure I won't get sick?

Q: Have you ever cancelled your trip / your child/children's trip because of potential problems with maintaining a gluten-free diet? If so, can you indicate specific reasons for cancelling?

The fact of being a celiac sufferer and having to follow a strict gluten-free diet was the reason why $46 \%$ of adult respondents and $55 \%$ of children had at some point made a decision to cancel their travel plans. The most frequently mentioned reasons include the lack of catering facilities or shops offering gluten-free food. Another common reason was lack of help and support. Respondents also reported cancelling trips organised by travel agencies, their business trips, trips to nonEuropean countries, sanatoriums, or trips to family celebrations, e.g. weddings. Children's trips had been cancelled because the staff of accommodation facilities, organisers of school trips and summer or winter camps showed reluctance to accommodate children's special dietary needs.

## 5. Discussion

As can be seen from the previous section, when organising their trips, celiac sufferers often need to make special arrangements (e.g. type of accommodation) to make sure they can follow a strict gluten-free diet. As many as $41 \%$ of respondents indicated that the main criterion in searching for possible destinations was the availability of gluten-free meals, while other factors were considered to be less important. This finding stands in contrast with results of studies regarding the decision-making process in tourism (Wattanacharoensil \& La-ornual 2019), which suggests that tourists choose destinations primarily on the basis of their perceived image created by marketing, media or opinions of other tourists. In the case of celiac sufferers, such decisions are largely determined by the existence of specific tourist services and not by the destination image. In their case, the ability to satisfy their need for recreation greatly depends on being able to maintain a healthy diet. This is what distinguishes tourists suffering from celiac disease from other tourists, who usually do not think about tourism-related health risks (Mahadevan \& Strehlow, 2017). A study by Reichel, Fuchs \& Uriely (2007) also indicated that food safety was a key factor influencing destination selection and travel planning, as evidenced by the fact that respondents tended to choose accommodation options with access to a kitchen. It was also important for them that there should be at least a gluten-free food shop, although they almost always took some food with them anyway. Similar trip arrangements undertaken to accommodate special dietary needs were observed by Barnett et al. (2012) who studied behaviours of consumers with allergies to peanuts and nuts. They found that respondents used a variety of strategies to stay safe, such as going to familiar places, limiting their activities, carrying allergy information cards in the language of the country they were visiting, preparing their own meals, and staying close to medical facilities. It can therefore be concluded that the first hypothesis has been confirmed.

The second hypothesis has also been verified. One of the key factors considered by tourists when planning a trip is the perceived risk associated with travelling and possible ways of mitigating it. Yeung and Yee (2020) found that while being an important aspect of tourist experience, food could cause health problems that can ruin a vacation. Their study indicated that celiac sufferers perceived a higher risk of their health or well-being getting worse while travelling compared with staying at home. As many as half of respondents in their study had decided not to travel for fear of not being able to maintain a proper diet. Lepp and Gibson (2003) found that perceived food-related health risks were higher than other travel-related risks. Most respondents also reported being frequently afraid of cross-contamination, which could in many cases lead to symptoms of poisoning. Similar findings were
also reported by Sverker, Hensing \& Hallert (2005). The primary way of reducing the perceived risk associated with travelling is to collect information. Research results suggest such information plays an important role in travel preparations and during actual trips. Reliable and credible sources of information are particularly important. Since such information is often not offered by service providers, as shown by other studies (Fuentes-Moraleda et al., 2022; Muñoz-Mazón et al., 2021; Šálková \& Tichá, 2020), respondents have no choice but to rely on other sources, such as social media or special apps. It is worth emphasizing that this sense of uncertainty and high risk experienced by tourists goes against the idea of creating a hospitality space, which, according to Kaczmarek and Kaczmarek (2011), should feature, among other things, a system of clear and universally understandable information, should be fully accessible and offer a sense of security.

Respondents in the survey described in this article unequivocally highlighted the discomfort associated with the need to follow a strict gluten-free diet when travelling. They admitted that trips did not enjoy their trips as much as they had before the diagnosis, they felt uncomfortable having to constantly ask about food safety, check information, and were stressed about causing trouble to the staff of catering facilities. In a study by Pietras-Mrozicka (2018), respondents also emphasized the sense of being different, which resulted from the lack of other people's understanding for their condition. What made eating out particularly stressful was Insufficient knowledge and low levels of social awareness about the glutenfree diet. This is why it was particularly difficult for respondents to ask questions about dish ingredients, which they perceived as causing trouble, a sense of being different from other diners, and the lack of other people's understanding for their specific dietary needs. Respondents also reported factors causing discomfort when travelling, such as lack of spontaneity and not being fully free to make decisions. Similar results can be found in Tudball et al. (2015) regarding the experience of travelling with multiple medicines. Young respondents described the preparation for the trip and the need to adapt their travel plans to their medication regimen as onerous and inconsistent with the spirit of spontaneity. It is also worth noting that people following a strict gluten-free diet are practically unable to experience culinary tourism. As noted by Kesgin et al. (2022), the pleasure derived from food consumption has a big effect on the level of satisfaction and memories of a tourist. It can therefore be concluded that and the third hypothesis has also been confirmed.

A gluten-free diet is not only used by celiac sufferers but also by people suffering from allergies or hypersensitivity to gluten, temporary gluten intolerance caused by, e.g. an antibiotic therapy, autism or some autoimmune diseases. Moreover, some people follow a gluten-free diet because it is a healthy food trend. Catering
facilities interested in meeting requirements for safe gluten-free meals can rely on the support of the Polish Association of People with Celiac Disease and the Gluten-Free Diet. For 10 years, the organisation has been running a nationwide information and educational programme about the gluten-free menu, which can be used to create a database and certification for various types of restaurants and catering companies. The association offers staff training about the gluten-free diet and dish preparation. Facilities whose employees have been trained are included in the programme, receive a certificate, have the right to use the programme logo and are included in search results for celiac-friendly places. In this way they can gain new customers, both from Poland and abroad ${ }^{1}$. Based on a study of restaurants in six cities (Bali, Singapore, Sydney, Paris, Dubai and Doha), Oktadiana, Pearce \& Mohammadi (2020) argue that companies need to be encouraged to think about how they can expand the knowledge and skills of their staff in the field of preparing, cooking and serving food in line with various dietary restrictions resulting not only from medical indications but also from lifestyle choices (e.g. veganism) or religious dietary rules.

## 6. Conclusions

The empirical results obtained by the author and those reported in the literature suggest that awareness and sensitivity on the part of the staff are among the key factors affecting the way in which tourists suffering from celiac disease perceive the quality of customer service. Various studies emphasize the importance of training in this area (Fuentes-Moraleda et al., 2022; Muñoz-Mazón et al., 2021; Taşkin \& Savlak, 2021; Šálková \& Tichá, 2020; Regnerová, Šálková \& Varvažovská, 2016; Towers \& Pratten, 2003). As noted by Pietras-Mrozicka (2018), better knowledge about celiac disease and limitations faced by those who suffer from it could improve their participation in social life, facilitate self-fulfilment and prevent their life quality from getting worse.

The results of the study also show how much celiac sufferers rely on access to reliable information when preparing for and during their tourist trips. If such information is not provided to people with special dietary needs, their entire tourist experience is likely to be affected by feelings of uncertainty and concerns about potential health risks.

[^1]The main limitation of the study described in the article is the fact it is based on a self-selected sample of respondents, which is not representative of the population of celiac sufferers in Poland. However, since the results are consistent with those reported in other studies, they can be assumed to be reliable.

Further research could be carried out to analyse opinions of different groups of people with specific food needs in other illnesses than celiac disease. It would also be useful to analyse the phenomenon from the supply side, e.g. to study catering establishments at the destination to identify the main barriers they encounter in creating an offer suitable for such tourists.

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## Wybrane aspekty aktywności turystycznej osób z celiakią

Streszczenie. Celem artykułu jest analiza aktywności turystycznej osób chorych na celiakię, określenie typowych dla nich wzorców zachowań oraz wskazanie barier, które utrudniają lub uniemożliwiają im udział w niektórych usługach turystycznych. Na podstawie wniosków z badania autorka proponuje rozwiązania, które hotele i obiekty gastronomiczne mogą wykorzystać do budowania swojej przewagi konkurencyjnej. Analiza opiera się na wynikach ankiety i netnografii. Stwierdzono, że osoby z celiakią lub ich opiekunowie prawni muszą planować podróże z uwzględnieniem specjalnych potrzeb żywieniowych. W związku z tym w ich przypadku podróżowanie wiąże się ze zwiększonym ryzykiem zaostrzenia się objawów chorobowych i prawie zawsze z dyskomfortem wynikającym ze specjalnych potrzeb żywieniowych. Można zatem stwierdzić, że doświadczenia osób z celiakią związane z podróżowaniem można poprawić poprzez podniesienie świadomości i wrażliwości personelu hotelowego oraz ułatwienie dostępu do rzetelnych informacji na temat składu i sposobu przygotowania posiłków bezglutenowych.
Słowa kluczowe: celiakia, aktywność turystyczna, nietolerancja pokarmowa, turystyka dostępna


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[^1]:    ${ }^{1}$ More information about the programme (in Polish) can be found on its website https://men-ubezglutenu.pl/o-programie/

