

BARRIERS TO PARTICIPATION IN TOURISM IN THE DISABLED

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Abstract

Introduction. Physical activity is critical to effective rehabilitation in people with disabilities and, consequently, is of high importance in their lives. However, participation of the disabled in physical activity, including tourism, is a much more complex issue than in the case in able-bodied individuals. **Material and methods.** This paper aims to fill the gap and familiarise the reader with barriers faced by the disabled who engage in tourism. The study group consisted of randomly selected 460 participants with certificates specifying the degree of their disability. The group included 55 (12%) individuals with visual impairments, 203 (44.1%) individuals with hearing impairments, and 202 (43.9%) individuals with locomotor system disabilities. **Results.** The data derived from interviews made with people with physical dysfunctions, designed with a view to achieving the aims of the study, were used to develop logistic regression models. **Conclusions.** On average, the greatest and smallest numbers of barriers were reported by individuals with severe disabilities and those who had large families, respectively. Younger disabled people most often complained about the equipment barriers to participation in tourism. Older respondents were mostly challenged with social barriers. Of all the determinants analysed in the study, the perception of barriers to participation in tourism most often depended on the subjects' degree of disability.

Key words: disability, barriers to participation in tourism, logistic regression model

Introduction

Nowadays, tourism and active recreation are becoming increasingly popular among people with disabilities. This poses a challenge for organisations operating in the tourism market, particularly those that promote and prepare tourist events so that disabled individuals can also participate in tourism and active recreation. Tourism and recreation represent an important component of the rehabilitation of disabled people, contributing to the minimisation of the effects of limited physical mobility, and help them overcome their limitations and cope with disability-related complexes.

The international literature on the topic highlights that disability influences numerous aspects of life, including the possibility to participate in tourism. A great number of the disabled do not travel at all, while others are active tourists. However, the latter face numerous challenges. Kwai-sang You, McKercher, and Packer [1] are some authors who have discussed these problems. They unambiguously state that the literature on the subject does not present tourist experiences which result from empirical research, but focuses on generalisations that are detached from reality. At the same time, they argue that the development of the tourism market for the disabled is very often neglected and that the research studies in carried out this field in the early 1980s and 1990s were not continued. These authors used interviews as

the most reliable methodology. They divided participants into individuals with limited mobility and those visually impaired. In order to capture practical experiences, they first conducted independent interviews with organisations established to support the disabled. The key information from these interviews helped identify a group of fundamental problems.

Disabled people who participate in tourism face a plethora of barriers. One of the most often quoted classifications of barriers making it difficult for the disabled to participate in tourism was proposed by Smith, who divided them into real, environmental, and interactive barriers [2].

Real barriers result directly from the type of disability or are indirectly related to it (e.g. parents' or caretakers' overprotectiveness or inadequate education) and are originally internal. Smith listed the following real barriers: lack of knowledge, health-related problems, social ineptness, and physical and psychiatric dependency. The following barriers were included in the group of environmental barriers: attitude, architecture, ecology, transport, law, and regulations. Interactive barriers, on the other hand, are insufficient abilities to face the challenge and communication barriers.

Barriers limit the sense of freedom, personal control, and competence. A disabled person may interpret failures as their personal defeats, even though they were caused by external factors. This results in the withdrawal from participation or gener-

ates negative feelings in the course of doing something or after it has been done. This also leads to a reduced sense of satisfaction and self-confidence. Tourism should be a way to escape from daily life and its problems, but very often disabled people face the same problems in new situations. Organising special trips for the disabled excludes them from the rest of society and limits the opportunities to choose various social roles.

The most frequent and common barriers to participation in tourism experienced by the community of people with disabilities in Poland include financial, social, psychological, organisational, equipment, and architectural barriers, as well as a lack of personnel and tourist offers [3]. The aim of this paper is to identify the determinants that affect the perception of particular barriers in tourism. This aim can be expressed in the form of the following research questions:

1. What are the determinants of the perception of barriers?
2. Do the barriers vary depending on the degree of disability?

Material and methods

A diagnostic survey was used to diagnose the factors which determine barriers to participation in tourism reported by people with disabilities. The method was adjusted to the aim of the study and included questions related to tourism practised by the disabled. Data were collected from 2012 to 2014 from interviews based on a questionnaire.

The study group consisted of randomly selected 460 participants with certificates confirming the degree of their disability. The group included 55 (12%) individuals with visual impairments, 203 (44.1%) individuals with hearing impairments, and 202 (43.9%) individuals with locomotor system disabilities. The respondents were members of Polish organisations and centres for the disabled from the Lesser Poland, Silesian, Subcarpathian, and Łódzkie Provinces. The study group comprised 213 men (46.3%) and 247 (53.7%) women. Their mean age was 54.6 ± 15.8 years and 53.2 ± 15.2 years for men and women, respectively. The difference between the mean age in the subgroups of men and women was statistically insignificant ($t = 1.02$; $p = 0.314$).

The analysis of the determinants of reporting particular barriers and the design of adequate models was based on the financial, social, psychological, organisational, equipment, and architectural barriers, as well as the lack of personnel and tourist offers.

Sixteen demographic and social characteristics were taken into account as factors determining the choice of barriers. These included: place of residence, sex, marital status, number of children, education, degree of disability, membership in tourism organisations, tourist traditions in the family, help of other people, living with the family, progressing disability (not congenital or caused by an injury), type of dysfunction (impaired vision, hearing, or locomotor system), financial status, and age. An analysis of the related literature showed that these characteristics influence the choice of barriers to participation in tourism reported by the disabled.

Logistic regression was used for the statistical analysis to develop a model of the effect of specific characteristics on the choice of barriers reported by the disabled. The barriers to participation in tourism (determined using "Yes" or "No" answers) represented the dependent variables (Y). The above 16 characteristics were used as independent variables $x = [1, x_1, \dots, x_{16}]$.

The logistic regression model, which determines the likelihood of the choice of a barrier to participation in tourism depending on determinants x_1, \dots, x_{16} , is given by the following equation:

$$P(Y=1/x) = \frac{e^{\beta_0 + \beta_1 x_1 + \dots + \beta_p x_p}}{1 + e^{\beta_0 + \beta_1 x_1 + \dots + \beta_p x_p}} \quad (1)$$

The Wald test was used to verify the coefficients of logistic regression β_j for $j = 0, \dots, 16$. Based on the coefficient β_i , the odds ratio, and its 95% confidence interval for i of this feature was calculated. The stepwise elimination of features was employed to design a barrier selection model including only significant determinants.

Results

Table 1 presents the number of barriers to participation in tourism chosen by the disabled within particular categories of determinants. Each respondent was allowed to choose multiple barriers. The "Total number of barriers reported" column contains the number of barriers chosen by participants within a particular category of determinants. The next column, "Number of respondents", gives the number of people for each category. The number of barriers per person is also presented. The final row provides information about the mean age of study participants who reported the barriers.

Out of 8 barriers taken into consideration in the questionnaire, 1.35 barriers per person were reported on average in the group of disabled people examined in the study. The greatest number of barriers was chosen by people with severe disabilities (1.84 barriers per person). People with higher education chose, on average, 1.62 barriers per person, whereas the disabled who did not have any children chose 1.59 barriers per person. The fewest barriers were chosen by the respondents who had four or more children (1.07 barriers per person). The results are presented in Table 1.

With regard to the age of the study participants with disabilities, the youngest ($x = 46.5$ years old) participants tended to choose barriers related to equipment, whereas the oldest ones ($x = 61.2$ years old) chose social barriers. The results are presented in Table 1.

The main barriers to participation in tourism most often chosen by the disabled were financial barriers (67.8%), followed by organisational barriers (29.1%). The least frequently chosen barrier was related to the lack of personnel (2.2%). The results are presented in Table 2.

The relations between the determinants and particular barriers to participation in tourism are illustrated in Table 3, which contains p values assigned to the statistical tests from the one-dimensional statistical analysis. P values ≤ 0.05 , which indicate statistically significant links between the determinants and the barriers, are written in bold.

Multivariate statistical analysis was also performed. Table 4 and Figures 1-8 present the results of the analysis.

The following factors influenced the perception of financial barriers to participation in tourism by study participants: living in a city (with more than 10,000 residents), young age, mild physical disability, and living with the family (Fig. 1).

The perception of social barriers is more often noticeable in disabled men with severe disabilities who had been raised in families without a tradition of engaging in tourism and were not living with their families at the time of the study (they lived alone or in nursing homes) (Fig. 2).

Table 1. Number of respondents reporting particular types of barriers according to the categories of determinants and mean age of respondents who reported particular types of barriers

Determinants		Barriers (1 – Yes)								Total number of barriers reported	Number of respondents	Barriers per respondent
		Financial	Social	Psychological	Organisational	Equipment	Architectural	No personnel	No travel offers			
		n	n	n	n	n	n	n	n			
Place of residence	Rural area	98	35	8	89	12	7	3	5	257	191	1.35
	Town	50	6	6	9	4	4	1	5	85	69	1.23
	City	164	16	18	36	14	11	6	15	280	200	1.40
Sex	Male	135	34	19	72	15	5	3	10	293	213	1.38
	Female	177	23	13	62	15	17	7	15	329	247	1.33
Marital status	Single	123	28	15	59	9	8	4	9	255	187	1.36
	Married	189	29	17	75	21	14	6	16	367	273	1.34
Number of children	0	78	17	10	32	9	3	2	6	157	99	1.59
	1	77	5	8	26	5	4	3	6	134	100	1.34
	2	102	12	10	34	8	13	3	8	190	154	1.23
	3	46	21	3	39	8	2	2	5	126	93	1.35
	4	9	2	1	3	0	0	0	0	15	14	1.07
Education	No education	2	7	0	12	1	0	0	0	22	15	1.47
	Primary	20	8	3	11	2	1	0	0	45	37	1.22
	Vocational	92	28	11	63	7	11	2	7	221	169	1.31
	Secondary general	40	1	4	12	2	1	1	1	62	48	1.29
	Secondary vocational	83	6	3	17	11	8	2	10	140	103	1.36
	Post-secondary	19	1	1	4	0	0	0	2	27	20	1.35
	Incomplete higher	21	3	2	4	2	0	2	3	37	26	1.42
Degree of disability	Severe	28	5	3	13	7	14	1	8	79	43	1.84
	Moderate	131	43	15	87	9	4	4	6	299	227	1.32
	Mild	153	9	14	34	14	4	5	11	244	190	1.28
Car ownership	No	136	31	16	70	7	14	4	12	290	214	1.36
	Yes	176	26	16	64	23	8	6	13	332	246	1.35
Membership in organisations for the disabled	No	281	53	29	122	26	16	10	23	560	414	1.35
	Yes	31	4	3	12	4	6	0	2	62	46	1.35
Membership in tourist organisations	No	282	54	28	129	24	20	8	24	569	421	1.35
	Yes	30	3	4	5	6	2	2	1	53	39	1.36
Tourist traditions in the family	No	252	55	23	115	24	19	8	23	519	382	1.36
	Yes	60	2	9	19	6	3	2	2	103	78	1.32
Help of other people	No	225	39	22	86	22	19	6	22	441	325	1.36
	Yes	87	18	10	48	8	3	4	3	181	135	1.34
Living with family	No	62	38	7	85	3	8	2	1	206	149	1.38
	Yes	250	19	25	49	27	14	8	24	416	311	1.34
Progressing disability	No	134	24	14	48	19	15	7	16	277	179	1.55
	Yes	178	33	18	86	11	7	3	9	345	281	1.23
Dysfunction type	Locomotor system dysfunction	142	21	5	73	13	7	5	9	275	202	1.36
	Vision dysfunction	123	33	22	51	11	13	3	13	269	203	1.33
	Hearing dysfunction	47	3	5	10	6	2	2	3	78	55	1.42
Financial status	Good	145	41	17	111	17	13	7	13	364	259	1.41
	Bad	167	16	15	23	13	9	3	12	258	201	1.28
Total		312	57	32	134	30	22	10	25	622	460	1.35
Mean age of respondents who reported barrier		49.3	61.2	48.3	57.5	46.5	51.5	49.9	49.1	–	53.9	–

Total in a row can be greater than total number of people in the last column.

Table 2. Percentage of respondents reporting particular types of barriers according to the categories of determinants

Determinants		Barriers (1 – Yes)								Number of respondents (100%)
		Financial	Social	Psychological	Organisational	Equipment	Architectural	No personnel	No travel offers	
		%	%	%	%	%	%	%	%	
Place of residence	Rural area	51.3	18.3	4.2	46.6	6.3	3.7	1.6	2.6	191
	Town	72.5	8.7	8.7	13.0	5.8	5.8	1.4	7.2	69
	City	82.0	8.0	9.0	18.0	7.0	5.5	3.0	7.5	200
Sex	Male	63.4	16.0	8.9	33.8	7.0	2.3	1.4	4.7	213
	Female	71.7	9.3	5.3	25.1	6.1	6.9	2.8	6.1	247
Marital status	Single	65.8	15.0	8.0	31.6	4.8	4.3	2.1	4.8	187
	Married	69.2	10.6	6.2	27.5	7.7	5.1	2.2	5.9	273
Number of children	0	78.8	17.2	10.1	32.3	9.1	3.0	2.0	6.1	99
	1	77.0	5.0	8.0	26.0	5.0	4.0	3.0	6.0	100
	2	66.2	7.8	6.5	22.1	5.2	8.4	1.9	5.2	154
	3	49.5	22.6	3.2	41.9	8.6	2.2	2.2	5.4	93
	4	64.3	14.3	7.1	21.4	0.0	0.0	0.0	0.0	14
Education	No education	13.3	46.7	0.0	80.0	6.7	0.0	0.0	0.0	15
	Primary	54.1	21.6	8.1	29.7	5.4	2.7	0.0	0.0	37
	Vocational	54.4	16.6	6.5	37.3	4.1	6.5	1.2	4.1	169
	Secondary general	83.3	2.1	8.3	25.0	4.2	2.1	2.1	2.1	48
	Secondary vocational	80.6	5.8	2.9	16.5	10.7	7.8	1.9	9.7	103
	Post-secondary	95.0	5.0	5.0	20.0	0.0	0.0	0.0	10.0	20
	Incomplete higher	80.8	11.5	7.7	15.4	7.7	0.0	7.7	11.5	26
Degree of disability	Higher	83.3	7.1	19.0	26.2	11.9	2.4	7.1	4.8	42
	Severe	65.1	11.6	7.0	30.2	16.3	32.6	2.3	18.6	43
	Moderate	57.7	18.9	6.6	38.3	4.0	1.8	1.8	2.6	227
Car ownership	Mild	80.5	4.7	7.4	17.9	7.4	2.1	2.6	5.8	190
	No	63.6	14.5	7.5	32.7	3.3	6.5	1.9	5.6	214
Membership in organisations for the disabled	Yes	71.5	10.6	6.5	26.0	9.3	3.3	2.4	5.3	246
	No	67.9	12.8	7.0	29.5	6.3	3.9	2.4	5.6	414
Membership in tourist organisations	Yes	67.4	8.7	6.5	26.1	8.7	13.0	0.0	4.3	46
	No	67.0	12.8	6.7	30.6	5.7	4.8	1.9	5.7	421
Tourist traditions in the family	Yes	76.9	7.7	10.3	12.8	15.4	5.1	5.1	2.6	39
	No	66.0	14.4	6.0	30.1	6.3	5.0	2.1	6.0	382
Help of other people	Yes	76.9	2.6	11.5	24.4	7.7	3.8	2.6	2.6	78
	No	69.2	12.0	6.8	26.5	6.8	5.8	1.8	6.8	325
Living with family	Yes	64.4	13.3	7.4	35.6	5.9	2.2	3.0	2.2	135
	No	41.6	25.5	4.7	57.0	2.0	5.4	1.3	0.7	149
Progressing disability	Yes	80.4	6.1	8.0	15.8	8.7	4.5	2.6	7.7	311
	No	74.9	13.4	7.8	26.8	10.6	8.4	3.9	8.9	179
Dysfunction type	Yes	63.3	11.7	6.4	30.6	3.9	2.5	1.1	3.2	281
	Locomotor system dysfunction	70.3	10.4	2.5	36.1	6.4	3.5	2.5	4.5	202
	Vision dysfunction	60.6	16.3	10.8	25.1	5.4	6.4	1.5	6.4	203
Financial status	Hearing dysfunction	85.5	5.5	9.1	18.2	10.9	3.6	3.6	5.5	55
	Good	56.0	15.8	6.6	42.9	6.6	5.0	2.7	5.0	259
	Bad	83.1	8.0	7.5	11.4	6.5	4.5	1.5	6.0	201
Total (%)		67.8	12.4	7.0	29.1	6.5	4.8	2.2	5.4	460
Total number of respondents (n) who reported barrier		312	57	32	134	30	22	10	25	460

Total of % in a row does not equal 100% since respondents were allowed to choose multiple barriers.

Table 3. The influence of determinants on the types of barriers reported: p values

Determinants (n = 460)	Barriers (1 – Yes)							
	Financial	Social	Psychological	Organisational	Equipment	Architectural	Lack of personnel	No travel offers
Place of residence	<0.001	0.005	0.144	<0.001	0.926	0.636	0.566	0.080
Sex	0.058	0.031	0.124	0.041	0.675	0.023	0.296	0.517
Marital status	0.436	0.164	0.458	0.344	0.219	0.675	0.966	0.626
Number of children	<0.001	<0.001	0.443	0.014	0.473	0.114	0.954	0.916
Education	<0.001	<0.001	0.058	<0.001	0.294	0.347	0.138	0.139
Degree of disability	<0.001	<0.001	0.955	<0.001	0.009	<0.001	0.830	<0.001
Car ownership	0.067	0.203	0.683	0.115	0.008	0.099	0.676	0.879
Membership in organisations for the disabled	0.947	0.423	0.903	0.632	0.529	0.006	0.286	0.732
Membership in tourist organisations	0.204	0.352	0.397	0.019	0.019	0.915	0.186	0.408
Tourist traditions in the family	0.059	0.004	0.081	0.309	0.646	0.671	0.785	0.220
Help of other people	0.317	0.693	0.806	0.051	0.739	0.097	0.454	0.050
Living with family	<0.001	<0.001	0.187	<0.001	0.007	0.683	0.397	0.002
Progressing disability	0.010	0.597	0.561	0.383	0.005	0.004	0.040	0.008
Dysfunction type	0.001	0.050	0.003	0.008	0.342	0.350	0.576	0.688
Financial status	0.001	0.011	0.707	<0.001	0.967	0.787	0.377	0.655
Age	<0.001	<0.001	0.036	0.001	0.007	0.467	0.416	0.117

χ^2 test or Student t-test.

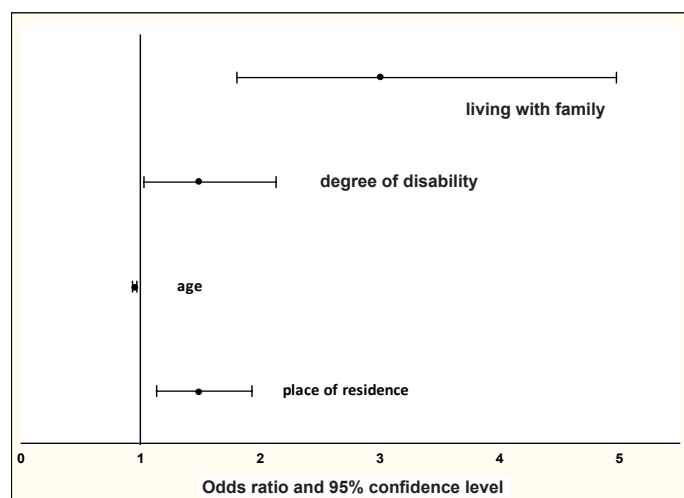
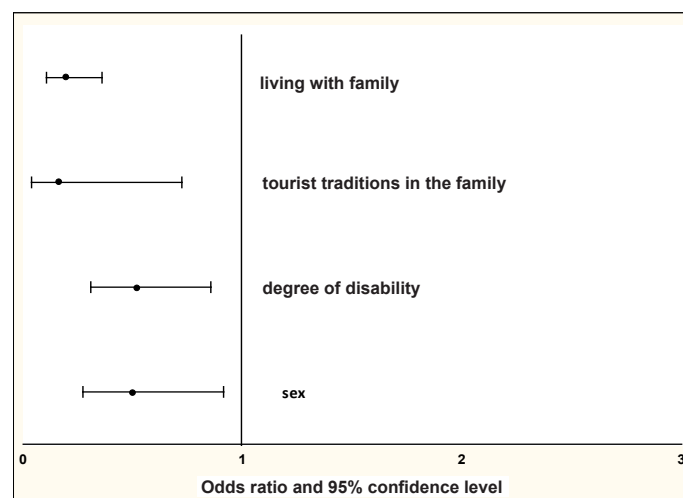
**Figure 1.** Financial barriers**Figure 2.** Social barriers

Table 4. Determinants of the perception of barriers to participation in tourism reported by means of stepwise logistic regression

Financial	Constant = −1.48	Place of residence	Age	Degree of disability	Living with family
	Beta	0.390	−0.054	0.390	1.096
	p value	0.004	0.000	0.036	0.000
	Odds ratio	1.476	0.947	1.477	2.993
	−95%CL	1.131	0.929	1.025	1.802
	+95%CL	1.927	0.965	2.129	4.972
Social	Constant = 1.57	Sex	Degree of disability	Tourist traditions in the family	Living with family
	Beta	−0.697	−0.666	−1.800	−1.637
	p value	0.024	0.010	0.017	0.000
	Odds ratio	0.498	0.514	0.165	0.195
	−95%CL	0.272	0.308	0.038	0.106
	+95%CL	0.913	0.855	0.723	0.359
Psychological	Constant = −3.36	Education			
	Beta	0.163			
	p value	0.038			
	Odds ratio	1.177			
	−95%CL	1.009			
	+95%CL	1.374			
Organisational	Constant = 2.35 -1.189	Place of residence	Degree of disability	Living with family	
	Beta	−0.494	−0.555	−1.717	
	p value	0.000	0.003	0.000	
	Odds ratio	0.610	0.574	0.180	
	−95%CL	0.472	0.397	0.112	
	+95%CL	0.789	0.830	0.288	
Equipment	Constant = −3.0	Car ownership	Membership in tourist organisations	Progressing disability	
	Beta	1.186	1.084	−1.073	
	p value	0.008	0.033	0.007	
	Odds ratio	3.274	2.957	0.342	
	−95%CL	1.353	1.088	0.156	
	+95%CL	7.920	8.036	0.747	
Architectural	Constant = 2.99	Age	Degree of disability		
	Beta	−0.033	−2.174		
	p value	0.047	0.000		
	Odds ratio	0.968	0.114		
	−95%CL	0.937	0.052		
	+95%CL	1.000	0.248		
No personnel	Constant = −5.69	Education			
	Beta	0.358			
	p value	0.007			
	Odds ratio	1.430			
	−95%CL	1.103			
	+95%CL	1.853			
No travel offers	Constant = −5.00	Living with family			
	Beta	2.516			
	p value	0.014			
	Odds ratio	12.377			
	−95%CL	1.649			
	+95%CL	92.888			

The disabled with university degrees noticed psychological barriers to participation in tourism (Fig. 3).

Organisational barriers were mostly perceived by the disabled with severe disabilities, living in rural areas without their families (living alone or in nursing homes) (Fig. 4).

Equipment barriers to participation in tourism were experienced by the disabled people who drove their own cars, were members of tourist organisations, and who did not suffer from progressing disability (they had congenital disability or a disability following an injury) (Fig. 5).

Younger disabled people with severe disabilities complained about the architectural barriers to participation in tourism (Fig. 6).

Insufficient personnel was a barrier to participation in tourism perceived by the disabled with university degrees (Fig. 7).

The disabled living with families emphasised the lack of travel offers adjusted to the disabled as a barrier to participation in tourism (Fig. 8).

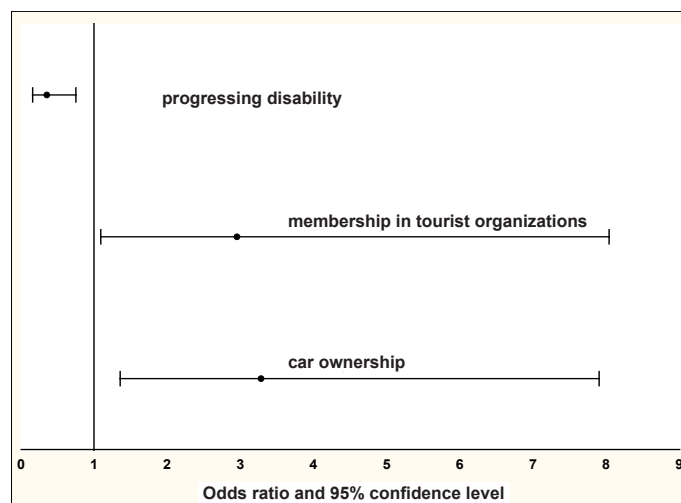


Figure 5. Equipment barriers

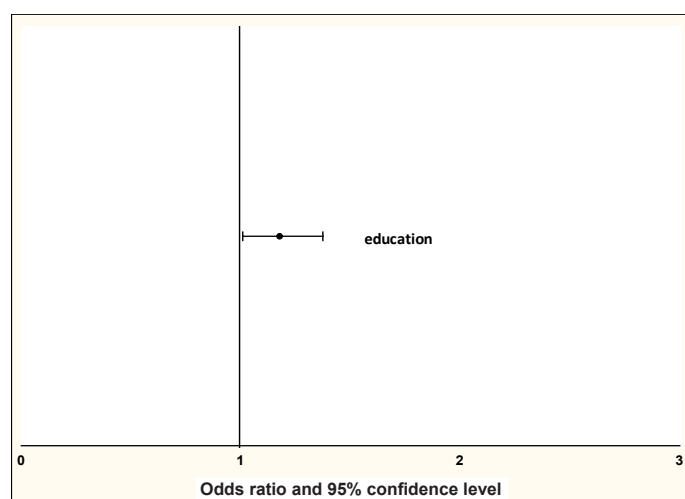


Figure 3. Psychological barriers

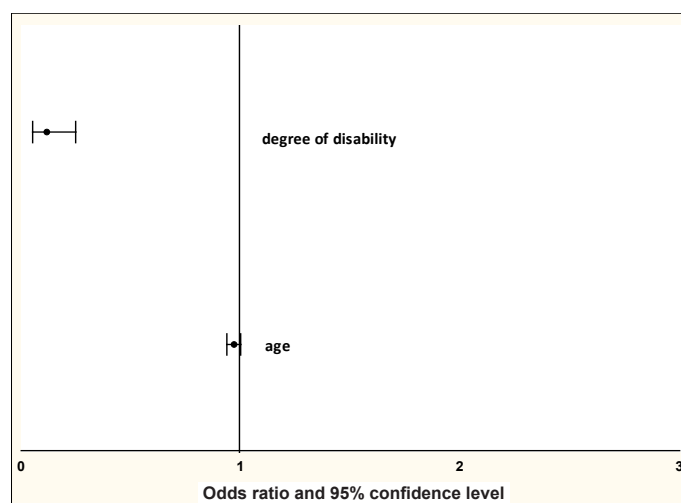


Figure 6. Architectural barriers

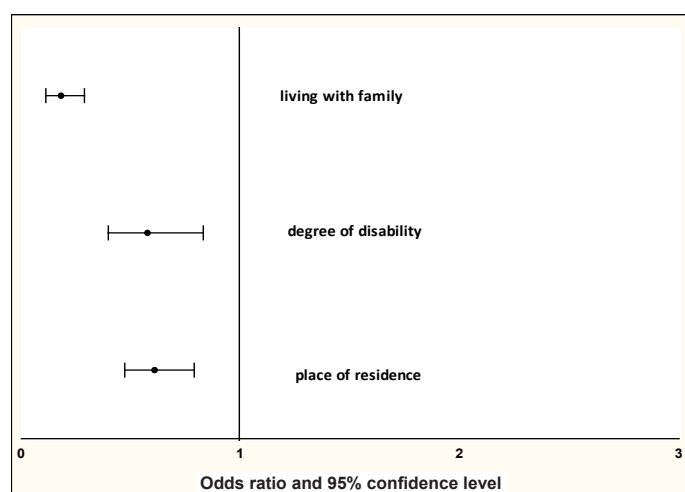


Figure 4. Organisational barriers

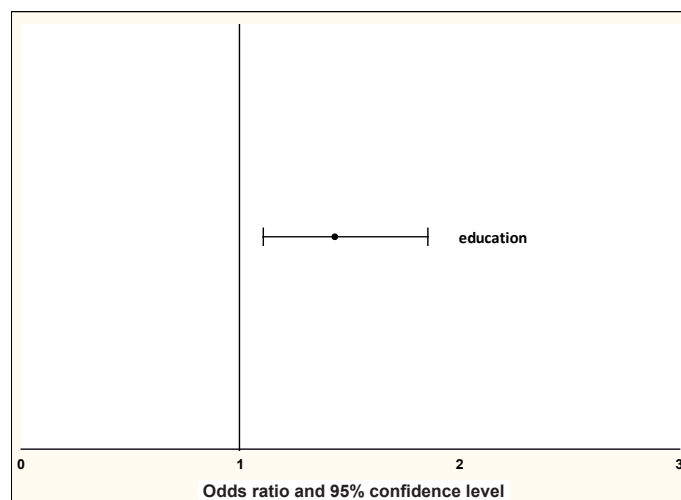


Figure 7. No personnel



Figure 8. No travel offers

Discussion

Great Britain is an example of a country which is engaged in solving problems related to tourism among the disabled, including the barriers to participation in tourism. The introduction of the Discrimination Disability Act (DDA) in 1995 attracted substantial political and economic interest of service providers and the tourist market to the problems of the disabled [4]. This study was aimed at examining disabled people's opinions with respect to their needs. The following conclusions were drawn from the study:

- access to communication represents a critical barrier for the disabled; this mainly refers to transportation;
- the disabled can be regarded as so-called "tied tourists" since they want to travel but have limited opportunities to do so due to their disability and/or lack of resources.

The study found major barriers which the disabled have to face during holidays, such as limited access to certain destinations and financial limitations. Based on the analyses presented in the study, it needs to be stated that the main barrier to participation in tourism by the disabled people is the financial barrier. Furthermore, the research results also revealed a broader spectrum of the problems since it was focused on the determinants of particular barriers to participation in tourism. In addition to the barriers indicated by the DDA, it is also interesting how these barriers are perceived by the disabled.

An in-depth analysis of the barriers performed by the current authors, with a focus on the degree and types of dysfunction, indicated that all participants complained in general about financial barriers. Those barriers, however, affect especially young people with mild disabilities who live with their families in big cities (with more than 10,000 inhabitants).

Disabled men with severe disabilities, with no tourist traditions in the family, and not living with their families (living alone or in nursing homes) emphasised mostly social barriers. The study is consistent with the findings presented by other authors. For example, in her study, Dewine stressed that tourist and recreational activity of the disabled has been little explored as a determinant of social acceptance [5]. Her study presented different aspects of relations between social acceptance and the experience of participating in recreation in the community of the disabled. Our own research points to the importance of how social barriers are perceived.

The disabled with university degrees perceived psychological barriers to participation in tourism. Organisational barriers were emphasised by the disabled living in rural areas, those with severe disabilities, and those who did not live with their families (living alone or in nursing homes). Our study found that being a member of tourist, recreational, and social organisations makes it easier for disabled people to function with respect to participation in tourism. It should be stressed that projects related to tourism of the disabled in Poland have been implemented, among other things, by tourist and social organisations (e.g. "Tourism for Everybody" organised by the Polish Tourist and Sightseeing Society, PTTK). These organisations have access to information on buildings adapted to the needs of the disabled and buildings without architectural barriers, as well as up-to-date information on the number of offers available.

The issues discussed above are also topical in Hong Kong. McKercher, Packer, Yua, and Lam state that tourist agents are largely ineffective in meeting the needs of the specialised tourist market of the disabled; agents ignore disabled people needs, which, in turn, leads to blatant or covert discrimination [6]. The aim of the research conducted by those authors was to find out if travel agents strive to make it easier for the disabled to travel.

Their findings revealed that tourist agents were incompetent in meeting the needs of the disabled. The approach to disabled tourists in Hong Kong is characterised by blatant or covert discrimination. In general, travel agents do not want to engage themselves in affairs of the disabled. Tourist offers are not sufficient and not flexible enough and inadequately adjusted, and, consequently, disabled tourists are unable to fully participate in all events and activities. A general conclusion of the research was that travel agents in Hong Kong hinder the development of tourism for the disabled. This conclusion coincides with the findings of the present study since tourist agents in Poland also tend not to meet the needs of the disabled. In particular, the disabled respondents who lived with their families regarded the insufficient number of tourist offers as a barrier to participation in tourism. A similar pattern is observed in the case of equipment barriers since there are problems with the access to the equipment adjusted to the disabled.

These observations and models used by the authors seem to be consistent with the findings presented by Cavitano and Cuckovich [7], who analysed barriers related to transport for the disabled, highlighting the necessity to strengthen investment policies in order to facilitate tourist mobility. Their final model is useful for the analysis of travelling among the disabled. However, the authors are of the opinion that it highlights problems on a macro scale, while there still is a need to reach further, to specify problems on a micro scale, that is, in elements of travelling among the disabled.

The authors of this paper had similar aims, focusing on a more thorough analysis of barriers to participation in tourism. This explains our approach to distinguishing, for example, particular types of disability. The study aim, related to barriers to participation in tourism by the disabled, was to provide knowledge and information on this topic on a micro scale. This paper refers to this micro scale by distinguishing determinants related to individual barriers, instead of simply analysing them as a whole. Such an approach helped reveal that the architectural barriers to participation in tourism are noticed by younger disabled persons with severe disabilities. Insufficient personnel were a barrier to participation in tourism perceived by the disabled with university degrees.

Apart from barriers in the strict sense, a substantial difficulty in organising tourism and recreation for the disabled is

poor knowledge and general unfamiliarity with the problem of disability.

In one of his articles, Przecławski [8] stressed that "...to make participation in tourism available for people with special needs (the disabled), their preferred form of tourism and needs resulting from the situation of this particular group of people have to be taken into consideration". Despite the obviousness of this claim, research studies currently performed in Poland do not provide answers to the question of how this in many ways justifiable demand should be met. Similar problems are faced by other European countries, where, as Buhalis et al. [9] argued, this segment of tourism will thrive only if each group of customers is understood thoroughly.

This problem seems to be rather complex since, on the one hand, the so-called internal determinants, such as the possibility to participate in tourism resulting from specific types of dysfunction, personal aptitudes and needs, etc. have to be considered, but on the other hand, one cannot forget about external determinants, such as financial status, transport, etc.

Jones [10] holds a similar view. He attempted to make organisers of tourism for the disabled aware that the best thing they can do is to show their understanding for their customers. A comprehensive diagnosis and identification of barriers to participation in tourism and organising recreation in places friendly for the disabled are needed.

Conclusions

1. On average, the greatest and smallest numbers of barriers were reported by individuals with severe disability and those who had large families, respectively.
2. Younger disabled people most often complained about the equipment barriers to participation in tourism. Older respondents were mostly challenged with social barriers.
3. The degree of disability exerts a significant influence on the perception of financial, social, organisational, as well as architectural barriers.
4. Living with the family has an effect on the perception of financial, social, and organisational barriers and on the lack of tourist offers.

5. Of all the determinants analysed in the study, the perception of barriers to participation in tourism most often depended on the degree of disability.

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