Analysis of Disabled Individuals' Level of Satisfaction with Accommodation Facilities

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Abstract

This research was planned and conducted in order to identify the level of satisfaction of the visually impaired people with the accommodation facility where they stayed. Using a quota sampling method 202 orthopedically and visually impaired people living within the provincial borders of Ankara. When the distribution and arithmetical mean of the orthopedically disabled individuals" responses to expression in the "Scale for the Orthopedically Disabled Individuals" Status of Satisfaction with Accommodation Facilities" were examined, the lowest satisfaction level was related to "sports centers appropriate for disabled people", "bathrooms which are large enough to easily move a wheelchair". When the distribution and arithmetical mean of the visually impaired individuals" responses to each expression in the "Scale for the Visually Impaired Individuals" Status of Satisfaction with Accommodation Facilities" were examined, the lowest satisfaction level was related to: "audio alarm system which announces the arrival of lift", "restaurant menus written in Braille".

Key Words: Orthopedically impaired, Visually impaired, Accommodation facility, Satisfaction level

1. Introduction

Today, there are many handicapped people in the world, and their number is gradually increasing. According to a study conducted by World Bank and World Health Organization, today there are 1 billion handicapped people in the world (World Health Organization (WHO), 2011). Handicapped people encounter countless obstacles everywhere both outside and in their own houses (Müftüoğlu, 2006: 2). These obstacles result in functional performance deficiencies and other problems for handicapped people, lower their quality of life qualities and cause various psychological and social problems (Ünügür, 2003: 99). The problems of handicapped people should be considered to be an issue of global human rights; especially in Turkey, handicapped people experience many difficulties in their social lives. These problems might occur in many areas of life, and they prevent them from having a functionally integrated life in the society (Subaşıoğlu, 2008: 4003). In order to solve this social issue, handicapped people should have access to and participate in social activities outside their homes (Müftüoğlu, 2006: 2). Therefore, handicapped people should not be excluded from the tourism sector, which is part of the social and cultural activities of many societies. Participating in these important activities not only enriches the lives of handicapped people, but also increases tourism income and potential of countries. Accommodation facilities for handicapped people that require special services and equipment, and studies and researches regarding this issue are very limited in Turkey (Artar and Karabacak, 2003: 18). There is no detailed study in the literature which examines the satisfaction level of handicapped customers in relation to accommodation facilities. Therefore, this study aimed to examine whether handicapped people are satisfied with the accommodation facilities.

2. Method

2.1. Universe and Sample of the Study

Orthopedically and visually handicapped people living in Ankara who had stayed in an accommodation facility in the last 5 years constituted the universe of this research. Only these two groups of handicapped people were included in the research as the resources of the researcher are very limited. In Turkey only 1.25% and 0.60% in 2002 of the population are orthopedically and visually handicapped, respectively, however these two groups of handicapped people are thought to encounter more problems in accommodation facilities than other handicapped people. Sampling was chosen via "*quota sampling method*" in the research. Orthopedically handicapped people participating in the research constituted 2.58% of all the orthopedically handicapped people in Ankara, and the visually handicapped people participating in this research constituted 2.42% of all the visually handicapped people in Ankara. This proportion was considered to be sufficient to represent the universe, and a total of 202 people of which118 were orthopedically handicapped and 84 visually handicapped, were included in the research.

2.2. Data Collection Techniques

A Questionnaire was used as the data collection instrument in the research. There were two sections in the questionnaire. The first section contained questions regarding handicapped person's age, gender, education level, marital status, work situation, monthly income, handicap type, date the handicap began, special equipments/he uses, the last type of accommodation facility s/he visit, the purpose of her/his stay and details of an person who accompanied her/him. The second section consisted of the "Scale Measuring the Satisfaction Levels of Orthopedically Handicapped People Regarding the Accommodation Facilities" and the "Scale Measuring the Satisfaction Levels of Visually Handicapped People Regarding the Accommodation Facilities", which were revised and developed by the researcher based on the "Hotel Accessibility Scale" created by Darcy (2008) together with other resources (Erdoğan, 1994, Israeli, 2002, Lazarus and Kaufman, 1988, OFD, 2004, TSE, 1991). Darcy's "Hotel Accessibility Scale" (2008) is a five point Likert scale of 55 topics. The questions in the "Hotel Accessibility Scale" were reviewed in relation to the situation in Turkey some statements were removed and new ones were added. The "Scale Measuring the Satisfaction Levels of Orthopedically Handicapped People Regarding Accommodation Facilities" and the "Scale Measuring the Satisfaction Levels of Visually Handicapped People Regarding Accommodation Facilities" are five point Likert scales (very dissatisfied, slightly satisfied, satisfied, very satisfied, perfectly satisfied) consisted of 41 and 28 topics, respectively. All the topics in the scales were prepared parallel to each other and included positive statements, and then they were administered to the sample group.

The validity of the scales was tested by experts then prior to the main application a pilot study was conducted prior with 15 orthopedically and 15 visually and any problems detected were solved. Moreover, a factor analysis was applied regarding these two scales in the questionnaire, and only one factor was found with more than a 70% explanation rate of variance. The research data was collected via face-to-face meetings. The topics in the questionnaire were read to the visually handicapped people during these meetings. Each topic was scaled with a five point Likert scale, and the internal consistencies were measured via Cronbach'sAlpha (α) coefficient. The Cronbach's Alpha(α) coefficients of the "Scale Measuring the Satisfaction Levels of Orthopedically Handicapped People Regarding Accommodation Facilities" and the "Scale Measuring the Satisfaction Levels of Visually Handicapped People Regarding Accommodation Facilities" were determined as follows; expectation= .880 and .819, and perception= .927 and .845, respectively. These results indicated that the scales had a high credibility.

2.3. Data Analysis Techniques

The Data were analyzed via an SPSS version 14.01 program, and the demographic and individual characteristics of the people in the sample group were presented in frequency and percentage distributions. The satisfaction levels of the handicapped people regarding the accommodation facilities were determined to be the difference between their perceptions and expectations regarding the services they were offered, and the difference between the arithmetic means of the perceptions and expectations regarding each statement was determined to be the satisfaction level [Perception ($\bar{x}a$)-Expectation($\bar{x}b$)]. This means that if the perception levels were lower than the expectation levels, the difference would be negative, thus indicating dissatisfaction. If the perception levels were higher than the expectation levels, the difference would be positive, thus indicating satisfaction (Bitner, 1990: 70, Emir, 2007: 79, Oliver, 1997: 19).

In order to determine the importance of the difference between the perceptions and expectations regarding the statements in the questionnaire (satisfaction level), a parametric test, Dependent/Repeated-Measures T Test was used. For both scales in the questionnaire only one factor was found to be than 70%, and the Cronbach's Alpha values of the scales were above 0.80. These values indicate that the scales had a high validity and credibility.

2.4. Limitations of the Research

Orthopedically and visually handicapped people living in Ankara constitute the limitation of this research. As these handicapped people cannot be determined via the records of accommodation facilities, they are contacted through the associations, unions and sports clubs they attended, and this was another limitation of the research.

3. Findings and Discussion

3.1. Individual Characteristics of the Handicapped People

Most of the handicapped people participating in the research were in the21-30 age group (42.1%), males (60.4%), university graduates (48.0%), single (56.4%), unemployed (52.5%), had a monthly income of 601-1000 TL (38.6%), were orthopedically handicapped (58.4%), use wheel chairs (39.3%),and had acquired disabilities (52.5%). Most of the handicapped people in the research had stayed at accommodation facilities such as five-star hotels, holiday resorts, hostels, apart hotels, motels and campsites, all equally distributed (20.3%), for vacation-fun purposes (52.5%) with their families (47.5%).

3.2. Expectations and Perceptions of the Handicapped People Regarding the Accommodation Facilities (Satisfaction Level)

The statistics regarding the expectations, perceptions and satisfaction levels of the orthopedically handicapped people participating in the research are given in Table 1. According to the results of the Dependent/Repeated Measures T-Test in Table 1, a significant difference was observed between the expectations and perceptions regarding each statement in the scales, which determined the expectations and perceptions (satisfaction levels) [Perception($\bar{x}_a$)-Expectation($\bar{x}_b$)] of the participants in the research ($p<.001$).

Considering the arithmetic means and the responses of the handicapped people to each statement in the scale, dissatisfaction was observed mostly in the following topics: "There was a fitness center appropriate for handicapped people" ($\bar{x}_a$-$\bar{x}_b$=-2.69), "The size of the bathroom was sufficient to allow free movement with a wheelchair" ($\bar{x}_a$-$\bar{x}_b$=-2.46), "There was a swimming pool appropriate for handicapped people" ($\bar{x}_a$-$\bar{x}_b$=-2.44), "The toilet seat was 45-50 cm above the ground" ($\bar{x}_a$-$\bar{x}_b$=-2.44),and "The mirror in the bathroom was adjustable" ($\bar{x}_a$-$\bar{x}_b$=-2.43). The height of toilet seat should be appropriate for the user so that s/he can easily sit on the toilet from the wheel chair (Wylde et al., 1994: 162). These results indicated that necessary adjustments have been made in the bathroom, and a special fitness center and swimming pool are important factors for the handicapped people. According to the study by Arıcı (2010) conducted in Istanbul, Izmir, Ankara and Trabzon, 69.8% of the accommodation facilities in the research do not have special swimming pools for handicapped people furthermore, Artar and Karabacakoğlu (2003) found that 91.0% of the hotels do not have a lift or another special system in the pools for handicapped people. According to the study by Yaylı and Öztürk (2006) conducted to determine the attitudes of the managers of the accommodation facilities regarding the market for physically handicapped people, the places in the hotels which were not appropriate for handicapped people were the stairways, bathrooms and toilets.

The statistics regarding the expectations and perceptions (satisfaction levels) of the visually handicapped people participating in the research are given in Table 2. As seen in Table 2, there is a significant difference between the expectations and perceptions regarding each statement in the scales, which determined the expectations and perceptions (satisfaction levels) [Perception($\bar{x}_a$)-Expectation($\bar{x}_b$)] of the visually handicapped people in the research ($p<.001$). According to the test results in Table 2, the expectation levels of the visually handicapped people regarding the services they were offered were observed to be much higher than their perception levels. This indicated a significant dissatisfaction regarding all the services. Considering the arithmetic means and the responses of the handicapped people to each statement in the scale (Table 2), dissatisfaction was observed mostly in the following subject matters: "There were audible warning systems in the elevators indicating arrival to the desired floor" ($\bar{x}_a$-$\bar{x}_b$=-3.77), "There was a menu written in Braille at the restaurant" ($\bar{x}_a$-$\bar{x}_b$=-3.73), "There were leaflets introducing the facility written in Braille" ($\bar{x}_a$-$\bar{x}_b$=-3.68),and "There was an audible system warning of possible dangers" ($\bar{x}_a$-$\bar{x}_b$=-3.67).

In the research undertaken by Rahim and Samad (2010), the most serious problem in the hotels they studied was found to be the lack of an audible system warning of possible danger; Artar and Karabacakoğlu (2003) stated there was no audible warning system in the elevators in 82.0% of the hotels. These results indicated that the arrangements at accommodation facilities were insufficient for visually handicapped people, and that necessary arrangements should be made in order to increase the satisfaction level. Significant differences were observed between the perception and expectation levels of the participants in terms of the type of their handicaps, education levels, working situation, monthly income levels and handicap conditions ($p<.01$).

4. Conclusion and Suggestions

The results of the current research are as follows:

- A significant difference was found between the arithmetic means of the expectations and perceptions of the handicapped people regarding each statement in the "Scale Measuring the Satisfaction Levels of the Orthopedic Handicapped People Regarding Accommodation Facilities".
- A significant difference was found between the arithmetic means of the expectations and perceptions of the handicapped people regarding each statement in the "e Scale Measuring the Satisfaction Levels of the Visually Handicapped People Regarding Accommodation Facilities".

Considering the above mentioned results of this research, the following suggestions are made in order to increase their satisfaction levels in relation to the accommodation facilities;

- The arrangements in the accommodation facilities should be made in the light of the opinions of the handicapped people,
- All the arrangements in the accommodation facilities should be made considering all types of handicaps,
- The arrangements in the accommodation facilities should be made considering the sizes of the equipment that handicapped people use,
- Arrangements should be made for handicapped people in the rooms and bathrooms of the accommodation facilities, the shower cabin should be very close to the ground, there should be an emergency button in the bathroom, the floor covering of the bathroom should be of non-slip material, the sizes of the doors should be sufficient to allow free movement with a wheel chair, and the height of the toilet seat should be appropriate,
- There should be a fitness center and swimming pool in the accommodation facilities appropriate for handicapped people,
- There should be audible warning systems everywhere in the facility, including guestrooms and elevators for visually handicapped people,
- There should be leaflets written in Braille introducing the facility for visually handicapped people,
- The personnel in the accommodation facilities should be well-trained so that they can inform handicapped people of the services and facility, and help them regarding any difficulties they might encounter,
- More studies should be made on this subject, which could contribute to increasing the quality of life of handicapped people.

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Table 1: Statistics regarding the expectations and perceptions (satisfaction levels) of the orthopedically handicapped people towards the accommodation facilities in which they stayed (n=118)

Statements	Measurement	Very dissatisfied (1) %	Slightly satisfied (2) %	Satisfied (3) %	Very satisfied (4) %	Perfectly satisfied (5) %	$\bar{x}$	s.s.	Satisfaction level $\bar{x}_a$-$\bar{x}_b$	p
1.There was a parking lot for handicapped people	Expectation	.00	.86	5.08	16.95	77.11	4.70	.60	-1.89	*
	Perception	24.58	11.86	34.75	15.25	13.56	2.81	1.33		
2.The height of the reception desk was appropriate for handicapped people	Expectation	.86	1.69	10.17	22.89	64.40	4.48	.81	-1.51	*
	Perception	17.80	11.86	37.28	21.19	11.86	2.97	1.24		
3.There was a telephone at an appropriate height on the entrance or reception desk	Expectation	1.69	2.55	11.86	19.50	64.40	4.43	.92	-1.46	*
	Perception	19.50	10.17	38.98	16.95	14.41	2.97	1.28		
4. The reception area was sufficiently comfortable enough for handicapped people	Expectation	.00	.00	5.94	26.28	67.79	4.61	.60	-1.75	*
	Perception	18.64	16.11	37.28	16.11	11.86	2.86	1.24		
5.Direction signs indicating the places for handicapped people were clear and adequate	Expectation	2.55	1.69	10.17	19.50	66.09	4.45	.93	-1.99	*
	Perception	29.66	20.34	30.50	13.56	5.94	2.46	1.22		
6.Obstacle-free roads for handicapped people were available	Expectation	.00	.00	3.39	21.19	75.42	4.72	.52	-2.03	*
	Perception	22.89	15.25	39.83	14.41	7.63	2.69	1.20		
7.The switches were illuminated	Expectation	0.86	4.25	25.42	21.19	48.31	4.12	.99	-1.18	*
	Perception	22.03	14.41	22.89	28.81	11.86	2.94	1.34		
8.The facility areas were sufficiently illuminated	Expectation	.00	.00	19.50	27.97	52.53	4.33	.79	-1.16	*
	Perception	12.72	19.50	22.89	27.97	16.95	3.17	1.28		
9.The size of the entrance door of the accommodation facility was sufficient	Expectation	.00	1.69	2.55	24.58	71.17	4.65	.62	-1.67	*
	Perception	17.80	17.80	27.11	22.89	14.41	2.98	1.31		
10.The entrance was sufficiently illuminated	Expectation	.00	.86	16.95	33.05	49.14	4.30	.78	-.83	*
	Perception	13.56	5.08	27.11	28.81	25.42	3.47	1.30		
11.The reception was sufficiently lightened	Expectation	.86	2.55	16.95	33.89	45.75	4.21	.88	-.88	*
	Perception	14.41	10.17	24.58	29.66	21.19	3.33	1.31		
12.The widths of the corridors were sufficient to allow free movement with a wheel chair	Expectation	.00	.00	5.08	16.95	77.95	4.73	.55	-2.03	*
	Perception	23.72	16.11	35.59	15.25	9.33	2.70	1.25		
13.The guest's room was on the ground floor	Expectation	4.25	5.08	12.72	16.11	61.86	4.26	1.13	-1.27	*
	Perception	20.34	12.72	30.50	20.34	16.11	2.99	1.34		
14.The room was near the elevator	Expectation	6.78	3.39	12.72	14.41	62.70	4.23	1.21	-1.22	*
	Perception	23.72	9.33	32.20	11.86	22.89	3.01	1.45		
15.The size of the door of the room was sufficient	Expectation	.00	.00	5.94	20.34	73.72	4.68	.58	-2.12	*
	Perception	28.81	16.11	33.05	14.41	7.63	2.56	1.26		
16.The floor covering was of non-slip material	Expectation	.00	.86	3.39	19.50	76.26	4.71	.57	-2.18	*
	Perception	27.11	24.58	26.28	11.86	10.17	2.53	1.29		
17.The room was sufficiently illuminated	Expectation	.00	1.69	12.72	27.97	57.62	4.42	.78	-1.25	*
	Perception	17.80	16.95	16.11	28.81	20.34	3.17	1.40		
18.The switches and plugs were 100 cm above the ground	Expectation	.00	1.69	11.02	21.19	66.09	4.52	.76	-1.63	*
	Perception	24.58	13.56	27.97	16.11	17.80	2.89	1.41		
19.There was enough space between the walls, furniture and fixtures in the room for moving freely with a wheel chair	Expectation	.00	.86	10.17	18.64	70.34	4.58	.71	-2.19	*
	Perception	33.89	13.56	34.75	14.41	3.39	2.40	1.19		
20.The height of the bed was sufficient	Expectation	.00	.86	9.33	22.89	66.95	4.56	.70	-2.18	*
	Perception	34.75	15.25	32.20	12.72	5.08	2.38	1.23		

21.The switches could be easily seen and accessed from the bed, and there was a remote control for TV	Expectation	.00	.86	11.02	22.89	65.25	4.52	.72	-1.87	*
	Perception	24.58	13.56	38.98	17.80	5.08	2.65	1.18		
22.The height of the bed was adjustable	Expectation	3.39	.00	8.47	29.66	58.47	4.40	.91	-2.14	*
	Perception	35.59	22.89	24.58	13.56	3.39	2.26	1.18		
23.The size of the door of the bathroom was sufficient	Expectation	.00	1.69	11.02	14.41	72.87	4.58	.75	-2.18	*
	Perception	35.59	10.17	35.59	15.25	3.39	2.41	1.21		
24.The size of the bathroom was sufficient to allow free movement with a wheel chair	Expectation	.86	.86	7.63	13.56	77.11	4.65	.73	-2.46	*
	Perception	40.67	18.64	25.42	11.02	4.25	2.19	1.21		
25.The mirror in the bathroom was adjustable	Expectation	.86	.86	11.86	16.95	69.48	4.53	.80	-2.43	*
	Perception	44.92	16.95	24.58	10.17	3.39	2.10	1.19		
26.The height of the wash basin was sufficient	Expectation	.86	.00	5.94	16.95	76.26	4.68	.67	-2.36	*
	Perception	40.67	11.86	27.97	14.41	5.08	2.31	1.28		
27.The toilet seat was 45-50cm above the ground	Expectation	.86	.00	3.39	16.11	79.65	4.74	.61	-2.44	*
	Perception	41.53	12.72	26.28	13.56	5.94	2.30	1.30		
28.There were handholds in the bathroom	Expectation	.86	.86	3.39	11.86	83.04	4.75	.64	-2.11	*
	Perception	27.97	21.19	18.64	22.89	9.33	2.64	1.35		
29.There was a seat in the shower cabin	Expectation	2.55	.00	1.69	9.33	86.44	4.77	.72	-2.17	*
	Perception	31.36	15.25	23.72	21.19	8.47	2.60	1.35		
30.The shower head was adjustable and the hose was long enough	Expectation	.00	1.69	5.08	19.50	73.72	4.65	.66	-2.00	*
	Perception	27.97	14.41	29.66	20.34	7.63	2.65	1.29		
31.There was a space under the table/kitchen worktop (80cm)	Expectation	.00	3.39	12.72	20.34	63.56	4.44	.84	-2.22	*
	Perception	36.44	22.03	27.97	10.17	3.39	2.22	1.15		
32.The height of the elevator switches were sufficient	Expectation	.00	.00	11.86	20.34	67.79	4.56	.70	-1.97	*
	Perception	29.66	11.86	34.75	16.95	6.78	2.59	1.26		
33.The size of the elevator cabin was sufficient	Expectation	.00	.86	5.94	22.03	71.17	4.64	.64	-2.13	*
	Perception	29.66	17.80	33.89	9.33	9.33	2.51	1.27		
34.The heights of the switches inside the elevator cabin were sufficient	Expectation	.00	1.69	7.63	21.19	69.48	4.58	.71	-2.04	*
	Perception	29.66	11.86	38.98	13.56	5.94	2.54	1.22		
35. The floor covering of the elevator was of non-slip material	Expectation	1.69	.86	7.63	19.50	70.34	4.56	.81	-2.08	*
	Perception	32.20	16.95	27.97	16.95	5.94	2.47	1.27		
36.There was a swimming pool appropriate for handicapped people	Expectation	.00	2.55	7.63	13.56	76.26	4.64	.74	-2.44	*
	Perception	43.22	16.11	21.19	16.95	2.55	2.19	1.24		
37.There was a fitness center appropriate for handicapped people	Expectation	.86	1.69	8.47	11.86	77.11	4.63	.78	-2.69	*
	Perception	50.84	17.80	21.19	7.63	2.55	1.93	1.12		
38.The catering arrangements were appropriate for handicapped people	Expectation	2.55	2.55	16.11	33.89	44.92	4.16	.96	-1.50	*
	Perception	31.36	12.72	22.89	24.58	8.47	2.66	1.37		
39.The heights and widths of the tables in the restaurant were sufficient	Expectation	.86	1.69	5.08	26.28	66.09	4.55	.75	-1.95	*
	Perception	28.81	18.64	24.58	19.50	8.47	2.60	1.31		
40.The space between the tables at the restaurant was sufficient to allow free movement with a wheel chair	Expectation	.86	.86	7.63	17.80	72.87	4.61	.74	-2.05	*
	Perception	30.50	17.80	25.42	17.80	8.47	2.56	1.32		
41.The restaurant was sufficiently illuminated	Expectation	.86	2.55	20.34	22.89	53.39	4.26	.93	-.79	*
	Perception	21.19	5.08	14.41	24.58	34.75	3.47	1.53		

Table 2: Statistics regarding the expectations and perceptions (satisfaction levels) of visually handicapped people towards the accommodation facilities in which they stayed (n=84)

Statements	Measurement	Very dissatisfied (1) %	Slightly satisfied (2) %	Satisfied (3) %	Very satisfied (4) %	Perfectly satisfied (5) %	$\bar{x}$	s.s.	Satisfaction level $\bar{x}_a$-$\bar{x}_b$	p
1.The roads to open public spaces were obstacle-free for handicapped people	Expectation	.00	.00	1.20	10.73	88.10	4.87	.37	-2.62	*
	Perception	40.48	15.49	27.39	11.90	4.76	2.25	1.24		
2.The door sills were not low	Expectation	2.38	1.20	4.76	13.11	78.57	4.64	.83	-2.37	*
	Perception	32.15	23.81	33.33	5.96	4.76	2.27	1.12		
3.There were seats near the elevators for handicapped people	Expectation	9.52	10.73	4.76	25.01	50.00	3.95	1.36	-2.03	*
	Perception	47.62	25.19	20.43	3.58	3.58	1.92	1.07		
4.The switches and plugs were 100 cm above the ground	Expectation	1.20	3.58	17.87	16.67	60.73	4.32	.97	-1.63	*
	Perception	25.01	13.11	32.15	27.39	2.38	2.69	1.19		
5.The guest rooms were comfortable enough for handicapped people	Expectation	1.20	1.20	13.11	15.49	69.05	4.50	.86	-2.25	*
	Perception	39.30	15.49	26.19	19.05	.00	2.25	1.17		
6.The room was near the elevators	Expectation	14.29	8.35	14.29	20.25	41.68	3.67	1.46	-1.32	*
	Perception	39.30	20.25	17.87	10.73	11.90	2.36	1.40		
7. There were non-slip carpets on the elevator floors	Expectation	9.52	3.58	10.73	16.67	59.52	4.13	1.31	-2.01	*
	Perception	44.06	11.90	34.54	7.14	2.38	2.12	1.13		
8.There was a swimming pool appropriate for handicapped people	Expectation	4.76	1.20	11.90	15.49	66.67	4.38	1.06	-2.75	*
	Perception	60.73	17.87	19.05	2.38	.00	1.63	.88		
9. There was a fitness center appropriate for handicapped people	Expectation	5.96	2.38	7.14	11.90	72.63	4.43	1.12	-2.95	*
	Perception	61.90	32.15	2.38	3.58	.00	1.48	.72		
10. The catering was appropriate for handicapped people	Expectation	2.38	2.38	5.96	16.67	72.63	4.55	.90	-2.31	*
	Perception	45.24	7.14	30.95	11.90	4.76	2.24	1.28		
11.The room was on the ground floor	Expectation	14.29	17.87	14.29	8.35	45.24	3.52	1.55	-.89	*
	Perception	30.95	19.05	19.05	17.87	13.11	2.63	1.42		
12.There were Braille numbers on the doors	Expectation	.00	.00	2.38	10.73	86.92	4.85	.42	-3.38	*
	Perception	70.25	15.49	11.90	2.38	.00	1.46	.80		
13.The floor covering in the room was appropriate	Expectation	1.20	.00	10.73	13.11	75.01	4.61	.78	-2.40	*
	Perception	35.71	15.49	44.06	2.38	2.38	2.20	1.04		
14.There were leaflets written in Braille for handicapped people	Expectation	.00	1.20	2.38	15.49	80.95	4.76	.55	-3.46	*
	Perception	79.77	10.73	9.52	.00	.00	1.30	.64		
15.There were automatic doors in case of an emergency	Expectation	.00	.00	3.58	10.73	85.71	4.82	.47	-3.40	*
	Perception	72.63	13.11	14.29	.00	.00	1.42	.73		
16.There were handrails on the stairways	Expectation	.00	.00	4.76	8.35	86.92	4.82	.49	-2.21	*
	Perception	32.15	13.11	28.57	14.29	11.90	2.61	1.38		
17. The floor coverings on the stairs could be easily felt.	Expectation	1.20	1.20	3.58	8.35	85.71	4.76	.69	-3.31	*
	Perception	72.63	13.11	10.73	3.58	.00	1.45	.83		

18.The widths of the stairs were sufficient	Expectation	.00	.00	1.20	17.87	80.95	4.80	.43	-2.61	*
	Perception	38.10	20.25	30.95	5.96	4.76	2.19	1.16		
19.The heights and depths of the stairs were sufficient	Expectation	0.00	0.00	1.20	16.67	82.15	4.81	.42	-2.61	*
	Perception	38.10	20.25	27.39	11.90	2.38	2.20	1.15		
20.Different construction materials were used in different areas of the facility so that handicapped people could easily tell that they are in a different place	Expectation	1.20	.00	3.58	15.49	79.77	4.73	.65	-3.39	*
	Perception	78.57	15.49	1.20	3.58	1.20	1.33	.78		
21.There were international signs on the doors written in Braille which can easily be felt	Expectation	1.20	1.20	4.76	13.11	79.77	4.69	.73	-3.37	*
	Perception	78.57	10.73	10.73	.00	.00	1.32	.66		
22.There were audible systems warning of possible dangers	Expectation	.00	.00	1.20	13.11	85.71	4.85	.40	-3.67	*
	Perception	86.92	8.35	4.76	.00	.00	1.18	.49		
23.There were audible warning systems in the elevators indicating arrival to the desired floor	Expectation	.00	.00	.00	8.32	91.68	4.92	.28	-3.77	*
	Perception	88.10	9.52	2.91	.00	.00	1.14	.41		
24.There were Braille numbers on the switches in the elevators	Expectation	.00	.00	.00	10.73	89.30	4.89	.31	-3.48	*
	Perception	76.19	8.35	14.29	.00	1.20	1.42	.82		
25.There were Braille numbers on the elevator doors indicating the floor reached	Expectation	2.38	.00	2.38	13.11	82.15	4.73	.73	-3.50	*
	Perception	85.71	8.35	4.76	.00	1.20	1.23	.65		
26.There were leaflets written in Braille introducing the facility	Expectation	.00	.00	1.20	14.29	84.54	4.83	.41	-3.68	*
	Perception	89.30	5.96	4.76	.00	.00	1.15	.48		
27. There was a menu at the restaurant written in Braille	Expectation	1.20	.00	1.20	11.90	85.71	4.81	.57	-3.73	*
	Perception	92.86	5.96	1.20	.00	.00	1.08	.32		

**p<.001* $\bar{x}_a - \bar{x}_b$ *: difference between the arithmetic means of perception and expectation (satisfaction)*