



THE REQUIREMENTS OF DISABLED CUSTOMERS: A STUDY OF BRITISH CUSTOMERS IN EGYPTIAN HOTELS

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ABSTRACT

The disabled customer market has become an increasingly important market in the hotel industry; however, the literature revealed a gap between what hotels provide and what needed by people with disability (PwD), which this study aims to bridge such a gap. The study employed a questionnaire comprising questions on 57 hotel attributes. The hotel attributes were divided into three groups: hotel employees, guest room, and public areas. A total of 200 questionnaires were distributed to a convenience sample of British PwD customers. Among the questionnaires returned, 126 were useable, representing a response rate of 63%. The analysis of variance test was employed to determine the presence of significant differences between four types of disabilities (i.e., hearing, sight, physical, and intellectual) in relation to the importance and performance of the 57 hotel attributes. Additionally, importance-performance analysis (IPA) was conducted using SPSS. The results showed some statistically-significant differences for two hotel attributes. Specifically, people with physical disabilities attached more importance to two hotel attributes, i.e., “Automated door openings should be provided”, and “All corridors should be suitable for wheelchair users.

Keywords: People with disability (PwD), British customers, Egyptian hotels, Importance-performance analysis (IPA), Hearing disability, Sight disability, Physical disability, Intellectual disability.

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Contribution/ Originality

This study contributes in the existing literature to investigate the requirements of British customers with disabilities in Egyptian hotels. The findings of the current study would be useful and helpful for hotels in making sure that the required facilities for disabled customers are covered in their plan.

1. INTRODUCTION

The disabled customer market has become an increasingly important market for the hospitality and tourism industry worldwide (Arellano, 2003). In particular, there is an increase in the numbers of the disabled customers in Europe and the United States (Arellano, 2003; Van, 2007). Senior citizens who are over 55 years old are likely to experience disability as their age (Fleischer and Pizam, 2002). According to the United Nations (2006) by 2050 the size of the senior citizens is expected to increase twice over. As a result, age-related disability will also be likely to increase (Glover and Prideaux, 2009). Furthermore, the economic contribution of PwD to hospitality and tourism industry is expected to increase (Dwyer and Darcy, 2008). Arellano (2003) argued that serving disabled market could generate billions in the industry.

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According to Liachowitz (2010) the World Health Organization (WHO) defined disability as “the long-term or permanent functional limitations produced by physical impairments”. According to Buhalis and Darcy (2011) the WHO classified PwD into eleven types: i) people in wheelchairs; ii) people who experience difficulties with independent mobility without the need of additional devices; such as a walker, cane or crutches; iii) elderly people; iv) infants and children under 5 years old; v) the visually impaired; vi) people with hearing disabilities; vii) people suffering from heart disease, arthritis, asthma; viii) people suffering from panic attacks and various phobias; ix) pregnant women; x) people with mobility difficulties resulting from a previous disease or accident; xi) people who are mentally retarded. In this regards, Daniels *et al.* (2005) categorized PwD into four different types: hearing, sight, physical and intellectual disability.

The previously-mentioned types of PwD encounter several difficulties when they are travelling to a destination (McKercher *et al.*, 2003). These difficulties include the need for special equipment at their accommodation and well-trained staff (Ray and Ryder, 2003). Disabled tourists are not capable of participating in tourism activities; they may need some special arrangements to facilitate their participation in tourism activities (Turco *et al.*, 1998). Special arrangements should include accessing information resources, transportation, accommodation, food and beverage facilities, and tourist attractions (e.g., theme parks and historical buildings). Such difficulties may affect PwD desire to take part in tourism activities (McKercher *et al.*, 2003). Travelling for any purpose is regarded as a human right; depriving anyone of this right is regarded as discrimination (McKercher *et al.*, 2003). Therefore, if hotel providers wish to cater for PwD, then they should remove the challenges faced by PwD, such as mobility impairment, visual impairment, and mental impairment (Thapar *et al.*, 2004). In order to increase the numbers of disabled tourists, first, hotels should have the necessary facilities in place to serve the special needs of PwD (Shaw, 1999; Flores, 2006; Ozturk *et al.*, 2008) second, hotels should train staff to interact well with PwD (Thapar *et al.*, 2004). Particularly, disabled tourists are loyal customers to hotels that provide good accessibility (Westcott, 2004).

Although the hospitality and tourism industry has been reinforced to address the basic needs of PwD through the establishment of the United Nations' Convention on the Rights of PwD (United Nations, 2006) the literature revealed a gap between what hotels provide and what needed by PwD (Daniels *et al.*, 2005). Lack of employee training (Miller and Kirk, 2002), lack of communication, lack of knowledge about various disability impairments (McKercher *et al.*, 2003), discrimination, and poor attitude towards PwD (Daniels *et al.*, 2005) are possible reasons for such a gap. Additionally, hotels may assume that a disabled tourist is incapable of participating in any activities (Daruwalla and Darcy, 2005). Thus, this study aims to identify the disability-related requirements of PwD in Egyptian hotels. Egypt was chosen to identify new markets after the decline of visitor numbers following the Egyptian Revolution 2011. Specifically, this study aims to answer the following research questions: i) What are the major requirements of PwD in Egyptian hotels?; ii) Are there any significant gaps between the offered facilities by Egyptian hotels and the needs of PwD?

2. LITERATURE REVIEW

2.1. Requirements of Disabled Customers in Hotels

For PwD, a suitable accommodation is a prerequisite requirement in any destination. This is because if PwD cannot find a suitable accommodation that meets their needs, they have to change their destination choice (Darcy, 2010). Non-disabled tourists, on the other hand, can accept any form of accommodation if they have the desire to travel to a particular destination (Darcy, 2010). Darcy (2010) identified three requirements for PwD in a destination, that: accessible accommodation that complies with access standards; importance attributed to the role of accommodation in terms of overall trip satisfaction; detail and accuracy of information about accommodation. Furthermore, Pegg and Stumbo (2010) identified seven criteria that PwD would change to improve their stay in the

future, that: easy to push on floor surfaces; extending or motorizing drapery pulls; widening hallways; changing door directions to swing open; placing light switches as placed close to the bed as possible; the phone placed as close to the bed as possible; reducing the amount of furniture in the room. In this regards, Williams *et al.* (2007) pointed that hotel websites should be customized to meet the various disability impairments and needs of disabled tourists for whom information provided plays an important role in travel decision-making.

2.2. Facilities of Disabled Customers in Hotels

Lodging facilities have numerous limitations when catering for PwD, such as transportation, misplaced wheelchairs, the issue of accessibility to various public facilities, and an incapability to deal appropriately towards PwD (Sen and Mayfield, 2004). Disabled customers often find it difficult to move around freely and perform activities as quickly as non-disabled people (Daniels *et al.*, 2005). Rice (2006) argued that hotel managers often do nothing more to cater for the needs of PwD. Particularly, understanding the behavior of PwD is often overlooked (Gröschl, 2007). Several researchers (Williams *et al.*, 2007; Eichhorn *et al.*, 2008; Mills *et al.*, 2008) reported that people who are blind or visually-impaired face some difficulties in accessing hotel websites. In addition, hotel managers often do not recognize the needs of PwD; do not promote disabled rooms appropriately (Darcy, 2000; O'Neill and Knight, 2000). As a result, hotels reported low occupancy of accessible rooms (Australian Hotels Association (AHA), 1998; Healey, 2008). Therefore, hotel providers should make reasonable adjustments for their premises to meet the needs of PwD, such as providing extra help; making changes to the way services are provided; providing step-free access (Disability Services Commission, 2000).

In 2010, the Egyptian Ministry of Tourism established new specifications for disabled facilities in hotels. These include public toilets for disabled customers with the need to apply the following specifications: disabled door should be outward swinging, at least 100 cm wide and with safety handles between 90-120 cm height from floor level; providing disabled guest room (e.g., 1% of total rooms with a minimum of 1 room per hotel); if a disabled room is not on the ground floor an elevator should be provided; floors should be on a hard surface (no carpet allowed); main room lights should be controllable from the bed; all corridors should be suitable for wheelchair users; providing a separate lockable room with shelves and hangers, exclusively used for luggage storage and for the storage of wheelchairs and crutches for PwD must be available.

2.3. Importance-Performance Analysis (IPA)

In the current study, the importance-performance analysis (IPA) was used to explore possible gaps between what hotels provide and what PwD require. The IPA first introduced by Martilla and James (1977). In the current study, the IPA matrix consists of two axes: the vertical axis represents the importance of the disability-related attributes; the horizontal axis represents the performance of these attributes (see Figure 1). The IPA matrix comprises four quadrants. Quadrant A: "Concentrate here", involves disability-related attributes with high importance and low performance. These attributes are major weaknesses and require immediate attention for improvement by the hotels. Quadrant B: "Keep up with the good work", involves disability-related attributes with high importance and high performance. These attributes are major strengths for maintaining a competitive advantage for hotels. Quadrant C: "Low priority", entails disability-related attributes with low importance and low performance. Therefore, these attributes do not require additional effort by the hotels. Quadrant D: "Possible overkill", involves disability-related attributes with low importance and high performance. As a result, hotels should deploy resources committed to these disability-related attributes elsewhere.

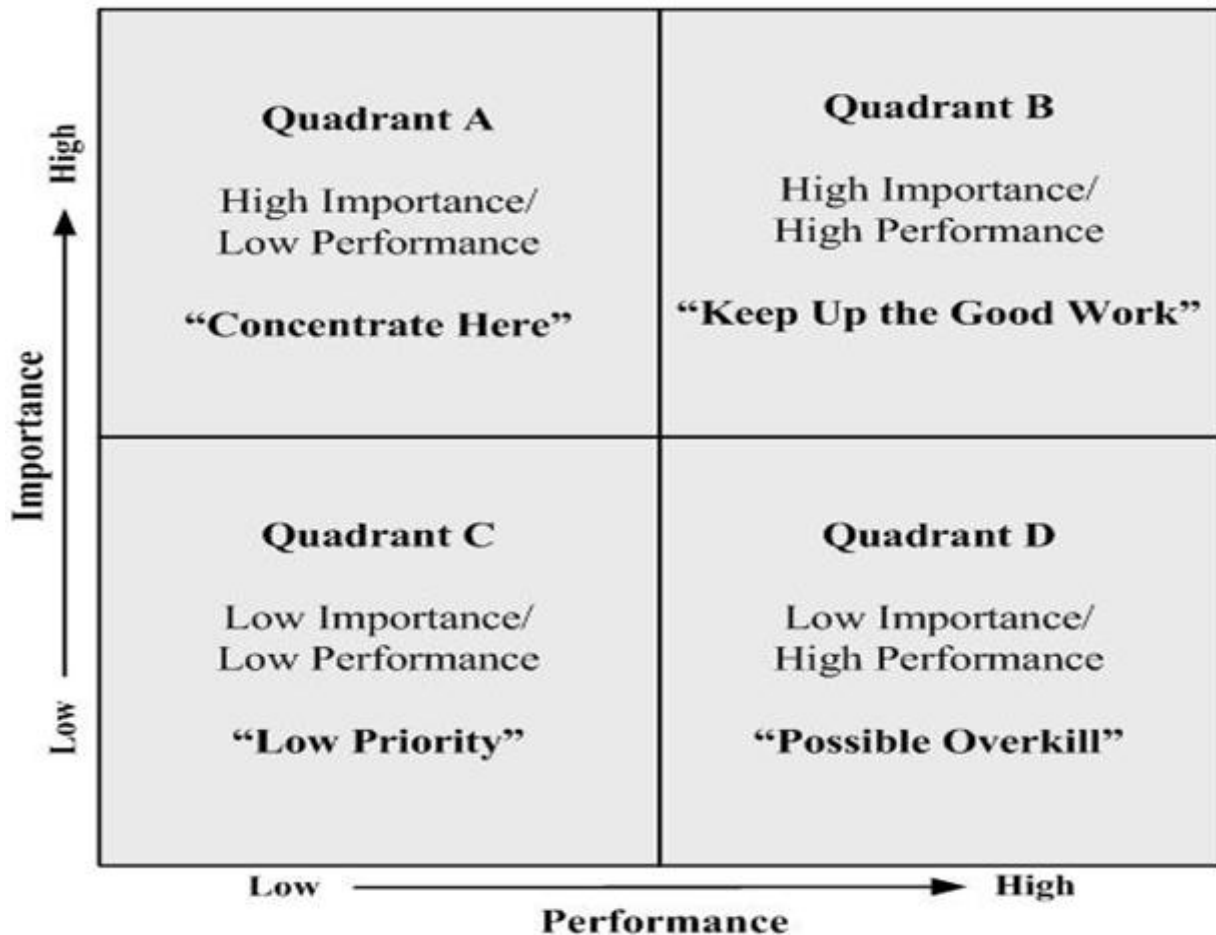


Figure-1. The importance-performance matrix

Source: Adapted from Martilla and James (1977)

3. METHODOLOGY

3.1. Survey Instrument

The current study employed a quantitative method, in the form of a questionnaire, to identify the disability-related requirements of British PwD in a sample of Egyptian hotels. The questionnaire was adapted from previous studies (Darcy, 2010; Schitko and Simpson, 2012; Navarro *et al.*, 2014). Table 1 shows the sources of the final questionnaire items. The questionnaire fine-tuned through discussions with a sample of hotel employees, hotel managers, and representatives of guest relations departments. It was pilot-tested to verify the validity of the questions as well as to assess the wordings, the continuity and flow, the question sequence, and the length and timing.

The final the questionnaire comprises four parts. In the first part, respondents evaluated the importance of 57 disability-related attributes on a 5-point Likert scale: “1 = not at all important,” “2= slightly important,” “3= moderately important,” “4= very important,” and “5 = extremely important”. In the second part, respondents asked to evaluate their satisfaction with the same attributes on a 5-point Likert scale: “1 = very dissatisfied,” “2= somewhat dissatisfied,” “3= no opinion,” “4= somewhat satisfied,” and “5 = very satisfied”. In the third part, respondents asked to identify the possible recommendations according to their experience regarding the subject under investigation. The fourth part included profiling information (gender, age).

Table-1. Construct measurement and sources

Factor	Item	Measure	Survey source
Hotel Employees (E)	E1	Employees should display patience and a willingness to meet my needs.	(Grady and Ohlin, 2009); (Schitko and Simpson, 2012; Navarro <i>et al.</i> , 2014).
	E2	Employees should be conscious of their actions when working with me.	
	E3	Employees need to be respectful of persons with disabilities.	
	E4	Employees should to be aware of ways to get my attention.	
	E5	Employees need to know different techniques for communicating with me.	
	E6	Employees should know basic sign language.	
	E7	Employees should greet me with a friendly face.	
	E8	Employees should help me by writing things down.	
	E9	Employees should have formal disability training.	
	E10	Employees should understand disability issues.	
	E11	Employees should to be familiar with all areas of hotel in order to be able to recognize any potential obstacles and provide better directions for me.	
	E12	Employees should have an adequate understanding of my needs.	
	E13	Hotels should provide specialists in disability services at reservation centers.	
Guest Rooms (R)	R1	Rooms for disabled persons should be on the ground floor.	(Darcy, 2010; Egyptian Ministry of Tourism, 2010; Navarro <i>et al.</i> , 2014).
	R2	Main room lights should be controllable from the bed.	
	R3	Bright lighting and color contrast in rooms should be available.	
	R4	Free internet in rooms should be available.	
	R5	Clear signs for items in the rooms should be available.	
	R6	Braille or large print labels near key room features (doors, coffee maker, refrigerator, etc.) should be available.	
	R7	Keys with a missing corner to know which way they go into the door should be available.	
	R8	Alarm clocks, strobes, bed shakers and communication devices should be available.	
	R9	Wider doors for room entry should be available.	
	R10	Accessible door handles should be available.	
	R11	Accessible safety chain and spy-holes should be available.	
	R12	Flooring should be on a hard surface with no carpet.	
	R13	The bathroom door should be outward swinging, with accessible handles.	
	R14	The bathroom doorway should be at least 100 cm wide.	
	R15	The toilet cabin should be wide enough to enable easy access for wheelchair users (with a minimum of 1m clear in front of the toilet seat).	
	R16	The toilet seat height should be accessible for wheelchair users (between 43-49 cm) with internal or external water jet.	
	R17	The wash hand basin should be accessible for wheelchair users with a sufficient space under basin.	
	R18	A mirror should be provided over the wash hand basin with a height between 50-80 cm.	
	R19	The wash hand basin should have a long arm tap.	
	R20	Safety rails horizontal and vertical should be provided beside the wash hand basin, toilet seat and overhead shower.	
	R21	A wheeled-shower chair and/or wall-mounted shower seat should be provided.	
Public Areas (P)	P1	Designated dining tables for disabled persons should be provided.	(Tantawy <i>et al.</i> , 2004; Darcy, 2010; EMT, 2010; Atef, 2011).
	P2	The menu should on special dietary items.	
	P3	A large print menu, signs and information should be provided.	
	P4	Accessible serving counters (buffet) for wheelchairs should be provided.	
	P5	Step-free access (level or ramped) and/or lift access to main entrance	

	should be provided.
P6	Clear pathways to front desk, concierge, restaurants, etc. should be provided.
P7	Automated door openings should be provided.
P8	Ground level/lobby level accessible restrooms for disabled persons should be provided.
P9	Glued carpets in public areas should be provided.
P10	Level or ramped access to public areas should be provided.
P11	Access routes that are flat (without steps) and with a stable surface should be provided.
P12	Clear turning spaces in rooms, entrance, halls etc. should be provided.
P13	All corridors should be suitable for wheelchair users.
P14	Separate lockable rooms for the storage of wheelchairs and crutches for disabled persons should be provided.
P15	Fire alarm lights should be brighter.
P16	Brighter lighting and color contrast in hallways should be provided.
P17	Lifts adapted for disabled people should be provided.
P18	Pool handrails on the steps or transfer points should be provided.
P19	Pools with a lift to get people in and out of the water should be provided.
P20	Wider shop spaces should be provided.
P21	Accessible fitness facilities should be provided.
P22	Designated disabled parking with a priority location in the parking lot should be provided.
P23	24/7 medical services should be available.

Source: Adapted from (Darcy, 2010; Schitko and Simpson, 2012; Navarro *et al.*, 2014)

3.2. Sample and Recruitment Procedure

In the current study, the target population was all British customers with disabilities who visited Sharm El-Sheikh Resort. A representative judgmental sample of 20 five-star hotels out of 42 hotels in Sharm El-Sheikh was selected (Egyptian Hotel Association, 2014). Sharm El-Sheikh is a popular resort destination in Egypt. International tourists visit Sharm El-Sheikh for the 3S's: sea, sand, and sun. British tourists were surveyed in this study on the basis of being the largest market for Egyptian hotels (Central Agency for Public Mobilization and Statistics, 2014). The researchers made contact with the twenty front-office managers to explain the nature and purpose of the research. The front-office managers explained to their staff the nature and purpose of the questionnaire. Questionnaires were handed out to a convenience sample of British customers with disabilities at check-in; so that they could take it away and complete it in their own time then return it to reception. All the questions assured participant confidentiality. A total of 200 questionnaire forms were randomly distributed to a convenience sample of British disabled customers visited Sharm El-Sheikh, whereas, 126 usable forms were returned, representing a response rate of 63 percent.

3.3. Statistical Analysis

In the current study, SPSS version 22 was used to analyze the collected data. First, the means were employed to rank the importance of hotel attributes for British PwD customers. Second, the Mann-Whitney U test was used to test for differences between genders. Third, the Kruskal-Wallis test was applied to explore the differences among disability types. Fourth, importance-performance analysis (IPA) was conducted using SPSS (i.e., Scatter plot).

4. RESULTS

4.1. Demographics

Table 2 presents the profile of the 126 surveyed British customers with disabilities. The participants comprised 66.7% females and 33.3% males. The participants were of various age groups. The majority (40.5%) of the participants were about 51 years old and above. The participants represented the four types of disabilities indicated by Daniels *et al.* (2005). Specifically, 38.1% of the participants were suffering hearing disability, followed by physical disability (33.3%), sight disability (23.8%), and intellectual disability (4.8%).

Table-2. Profile of respondents (N=126)

Variables	Frequencies	Percentage
Gender		
Female	84	66.7
Male	42	33.3
Age		
20 or less	27	21.4
21-35	27	21.4
36-50	21	16.7
51 or above	51	40.5
Disability type		
Hearing disability	48	38.1
Sight disability	30	23.8
Physical disability	42	33.3
Intellectual disability	6	4.8

4.2. Importance-Performance Analysis (IPA) for Hotel Attributes

Table 3 reveals the most and least important hotel attributes as perceived by British customers with disabilities. The most important hotel employees' attributes were "Employees need to be respectful of persons with disabilities" (M = 4.55); "Employees should display patience and a willingness to meet my needs" (M = 4.48); "Employees should greet me with a friendly face" (M = 4.38). The most important guest rooms' attributes were "Rooms for disabled persons should be on the ground floor" (M = 4.17); "Accessible safety chain and spy-holes should be available" (M = 4.07); "Main room lights should be controllable from the bed" (M = 4.05). The most important public areas' attributes were "Level or ramped access (Step-free access) to main entrance should be provided" (M = 4.31); "Clear pathways to front desk, concierge, restaurants, etc. should be provided" (M = 4.29); "Level or ramped access to public areas should be provided" (M = 4.26). The least important hotel employees' attributes as viewed by British customers were "Employees should know basic sign language" (M = 3.24); "Employees should help me by writing things down" (M = 3.31); "Employees should be aware of ways to get my attention" (M = 3.62). The least important guest rooms' attributes were "Flooring should be on a hard surface with no carpet" (M = 3.00); "Alarm clocks, strobes, bed shakers and communication devices should be available" (M = 3.33); "The bathroom door should be outward swinging, with accessible handles" (M = 3.55). The least important public areas' attributes were "Designated disabled parking with a priority location in the parking lot should be provided" (M = 3.05); "Glued carpets in public areas should be provided" (M = 3.50); "Separate lockable rooms for the storage of wheelchairs and crutches for disabled persons should be provided" (M = 3.64).

Table 3 indicates that employees' attributes with the highest performance levels, from the British customers' perspectives, were "Employees should greet me with a friendly face" (M = 4.09); "Employees need to be respectful of persons with disabilities" (M = 4.05); "Employees should display patience and a willingness to meet my needs" (M = 3.91). Guest rooms' attributes with the highest performance levels were "Accessible door handles should be available" (M = 3.16); "Wider doors for room entry should be available" (M = 3.10); "Flooring should be on a hard

surface with no carpet” (M = 2.86). Public areas’ attributes with the highest performance levels were “Automated door openings should be provided” (M = 3.82); “A large print menu, signs, and information should be provided” (M = 3.66); “Fire alarm lights should be brighter” (M = 3.62). Employees’ attributes with the least performance levels were “Employees should have formal disability training” (M = 1.18); “Hotels should provide specialists in disability services at reservation centers” (M = 1.30); “Employees should have an adequate understanding of my needs” (M = 1.92). Guest rooms’ attributes with the least performance levels were “A wheeled-shower chair or wall-mounted shower seat should be provided” (M = 1.00); “The hand wash basin should have a long arm tap” (M = 1.00); “Alarm clocks, strobes, bed shakers, and communication devices should be available” (M = 1.00). Public areas’ attributes with the least performance levels were “Pools with a lift to get people in and out of the water should be provided” (M = 1.00); “Separate lockable rooms for the storage of wheelchairs and crutches for disabled persons should be provided” (M = 1.00); “Designated dining tables for disabled persons should be provided” (M = 1.00).

The gap analysis between the importance and performance of the hotel attributes in Table 3 revealed statistically-significant differences for 52 hotel attributes out of 57 (i.e., $P < 0.05$). No significant differences were detected on five attributes, i.e., “Employees should greet me with a friendly face”; “Employees should be helping me by writing things down”; “Flooring should be on a hard surface with no carpet”; “A large print menu, signs, and information should be provided”; “Brighter lighting and color contrast in hallways should be provided”. In all cases, British customers’ expectations of the importance of hotel attributes were higher than their performance. The biggest gaps found in: “Ground level/lobby level accessible restrooms for disabled persons should be provided” (df = 3.13); “Employees should have formal disability training” (df = 3.03); “Designated dining tables for disabled persons should be provided” (df = 2.97); “A wheeled-shower chair or wall-mounted shower seat should be provided” (df = 2.93); “Safety rails horizontal and vertical should be provided beside the wash hand basin, toilet seat, and overhead shower” (df = 2.86); “Accessible safety chain and spy-holes should be available” (df = 2.85).

Table-3. Gap analysis between importance and performance of hotel attributes as perceived by PwD

Survey		Importance		Performance		Difference	Z	Sig. (2-tailed)
		Mean	IR	Mean	PR			
E	Hotel Employees							
E1	Employees should display patience and a willingness to meet my needs.	4.48	2	3.91	3	0.57	-4.845	0.000*
E2	Employees should be conscious of their actions when working with me.	4.31	5	2.53	8	1.78	-5.726	0.000*
E3	Employees need to be respectful of persons with disabilities.	4.55	1	4.05	2	0.50	-2.811	0.005*
E4	Employees should to be aware of ways to get my attention.	3.62	11	3.41	4	0.21	-1.922	0.055*
E5	Employees need to know different techniques for communicating with me.	3.69	10	1.98	10	1.71	-5.467	0.000*
E6	Employees should know basic sign language.	3.24	13	2.54	7	0.70	-2.553	0.011*
E7	Employees should greet me with a friendly face.	4.38	3	4.09	1	0.29	-1.588	0.112
E8	Employees should help me by writing things down.	3.31	12	3.06	6	0.25	-3.359	0.720
E9	Employees should have formal disability training.	4.21	7	1.18	13	3.03	-5.748	0.000*
E10	Employees should understand disability issues.	4.36	4	2.00	9	2.36	-5.698	0.000*
E11	Employees should to be familiar with all areas of hotel in order to be able to recognize any potential obstacles and provide better directions for me.	4.31	6	3.30	5	1.01	-5.142	0.000*
E12	Employees should have an adequate understanding of my needs.	4.05	8	1.92	11	2.13	-5.778	0.000*
E13	Hotels should provide specialists in disability services at reservation centers.	4.00	9	1.30	12	2.70	-5.707	0.000*
R	Guest Rooms							
R1	Rooms for disabled persons should be on the ground floor.	4.17	1	1.75	9	2.42	-5.694	0.000*

R2	Main room lights should be controllable from the bed.	4.05	3	1.40	12	2.65	-5.711	0.000*
R3	Bright lighting and color contrast in rooms should be available.	3.57	18	2.21	7	1.36	-4.857	0.000*
R4	Free internet in rooms should be available.	4.00	5	1.65	10	2.35	-5.499	0.000*
R5	Clear signs for items in the rooms should be available.	3.67	16	2.31	6	1.36	-4.712	0.000*
R6	Braille or large print labels near key room features (doors, coffee maker, refrigerator, etc) should be available.	3.83	11	1.00	18	2.83	-5.514	0.000*
R7	Keys with a missing corner to know which way they go into the door should be available.	3.79	13	1.17	16	2.62	-5.577	0.000*
R8	Alarm clocks, strobes, bed shakers and communication devices should be available.	3.33	20	1.00	19	2.33	-5.346	0.000*
R9	Wider doors for room entry should be available.	3.79	14	3.10	2	0.69	-2.861	0.004*
R10	Accessible door handles should be available.	3.98	7	3.16	1	0.82	-3.528	0.000*
R11	Accessible safety chain and spy-holes should be available.	4.07	2	1.22	14	2.85	-5.722	0.000*
R12	Flooring should be on a hard surface with no carpet.	3.00	21	2.86	3	0.14	-1.264	0.206
R13	The bathroom door should be outward swinging, with accessible handles.	3.55	19	1.29	13	2.26	-5.624	0.000*
R14	The bathroom doorway should be at least 100 cm wide.	3.60	17	2.42	5	1.18	-4.990	0.000*
R15	The toilet cabin should be wide enough to enable easy access for wheelchair users (with a minimum of 1m clear in front of the toilet seat).	3.90	10	1.19	15	2.71	-5.645	0.000*
R16	The toilet seat height should be accessible for wheelchair users (between 43-49 cm) with internal or external water jet.	4.00	6	2.05	8	1.95	-5.383	0.000*
R17	The wash hand basin should be accessible for wheelchair users with a sufficient space under basin.	4.02	4	1.44	11	2.58	-5.704	0.000*
R18	A mirror should be provided over the wash hand basin with a height between 50-80 cm.	3.81	12	2.61	4	1.20	-4.670	0.000*
R19	The hand wash basin should have a long arm tap.	3.69	15	1.00	20	2.69	-5.581	0.000*
R20	Safety rails horizontal and vertical should be provided beside the wash hand basin, toilet seat and overhead shower.	3.95	8	1.09	17	2.86	-5.704	0.000*
R21	A wheeled-shower chair and/or wall-mounted shower seat should be provided.	3.93	9	1.00	21	2.93	-5.650	0.000*
P	Public Areas							
P1	Designated dining tables for disabled persons should be provided.	3.97	14	1.00	21	2.97	-5.600	0.000*
P2	The menu should on special dietary items.	3.98	13	2.01	12	1.97	-5.368	0.000*
P3	A large print menu, signs and information should be provided.	3.95	15	3.66	2	0.29	-1.816	0.069
P4	Accessible serving counters (buffet) for wheelchairs should be provided.	4.00	12	1.33	17	2.67	-5.712	0.000*
P5	Level or ramped access (Step-free access) to main entrance should be provided.	4.31	1	3.60	4	0.71	-3.754	0.000*
P6	Clear pathways to front desk, concierge, restaurants, etc. should be provided.	4.29	2	2.39	9	1.90	-5.689	0.000*
P7	Automated door openings should be provided.	4.05	10	3.82	1	0.23	-2.405	0.016*
P8	Ground level/lobby level accessible restrooms for disabled persons should be provided.	4.17	6	1.04	20	3.13	-5.738	0.000*
P9	Glued carpets in public areas should be provided.	3.50	22	1.13	19	2.37	-5.616	0.000*
P10	Level or ramped access to public areas should be provided.	4.26	3	2.20	11	2.06	-5.734	0.000*
P11	Access routes that are flat (without steps) and with a stable surface should be provided.	4.10	8	1.28	18	2.82	-5.730	0.000*
P12	Clear turning spaces in rooms, entrance, halls etc. should be provide	4.07	9	3.36	5	0.71	-5.720	0.000*
P13	All corridors should be suitable for wheelchairs' users.	4.24	4	2.99	6	1.25	-3.981	0.000*
P14	Separate lockable rooms for the storage of wheelchairs and crutches for disabled persons should be provided.	3.64	21	1.00	22	2.64	-5.432	0.000*
P15	Fire alarm lights should be brighter.	3.90	16	3.62	3	0.28	-5.436	0.000*
P16	Brighter lighting and color contrast in hallways should be provided.	3.83	18	2.89	7	0.94	-1.350	0.177
P17	Lifts adapted for disabled people should be	4.17	7	1.56	15	2.61	-5.705	0.000*

	provided.							
P18	Pool handrails on the steps or transfer points should be provided.	4.05	11	2.77	8	1.28	-5.266	0.000*
P19	Pools with a lift to get people in and out of the water should be provided.	3.88	17	1.00	23	2.88	-5.592	0.000*
P20	Wider shop spaces should be provided.	3.76	19	2.32	10	1.44	-5.173	0.000*
P21	Accessible fitness facilities should be provided.	3.76	20	1.88	15	1.88	-5.435	0.000*
P22	Designated disabled parking with a priority location in the parking lot should be provided.	2.05	23	1.99	13	0.06	-5.670	0.000*
P23	24/7 medical services should be available.	4.21	5	1.99	14	2.22	-5.685	0.000*

Notes: IR: Importance rank; PR: Performance rank; * absolute z-value > 3.29, p<0.001=Significant difference.

The following sections show the results of the importance-performance analysis for hotel employees' attributes, guest rooms' attributes, and public areas' attributes.

4.3. Analysis of Hotel Employees Attributes

Figure 2 shows the hotel employees importance-performance matrix. According to IPA, four attributes. i.e., “Employees should be conscious of their actions when working with me”; “Employees should have formal disability training”; “Employees should understand disability issues”; “Employees should have an adequate understanding of my needs” fell into Quadrant A ‘Concentrate Here’. These attributes were the major weaknesses for hotels serving PwD. Four attributes, i.e., “Employees should display patience and a willingness to meet my needs”; “Employees need to be respectful of persons with disabilities”; “Employees should greet me with a friendly face”; “Employees should be familiar with all areas of hotel in order to be able to provide better directions for me” fell into Quadrant B: ‘Keep up the Good Work’. These attributes were the major strengths for hotels. Three attributes, i.e., “Employees need to know different techniques for communicating with me”; “Hotels should provide specialists in disability services at reservation centers”; “Employees should know basic sign language” fell into Quadrant C ‘Low Priority’. Two attributes, i.e., “Employees should be aware of ways to get my attention”; “Employees should help me by writing things down” fell into Quadrant D ‘Possible Overkill’. These attributes were less important from the perspectives of British PwD customers.

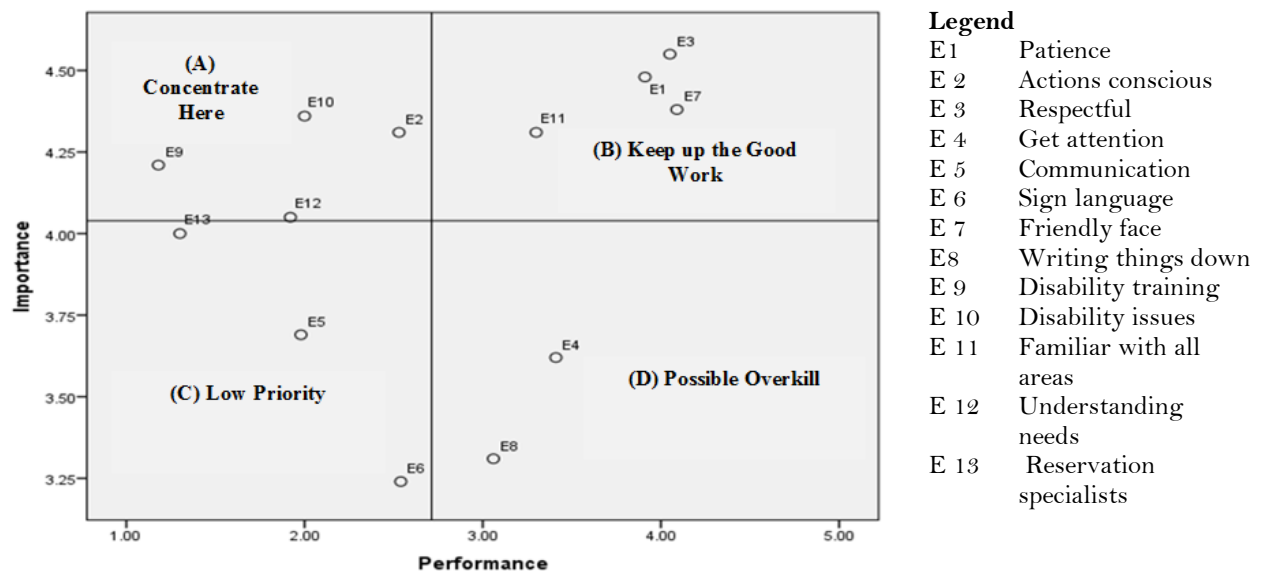


Figure-2. Hotel employees' importance-performance matrix

4.4. Analysis of Guest Rooms Attributes

Figure 3 shows the guest room's importance-performance matrix. According to IPA, nine attributes, i.e., “Rooms for disabled persons should be on the ground floor”; “Main room lights should be controllable from the bed”; “Free internet in rooms should be available”; “Braille or large print labels should be available”; “Keys with a

missing corner should be available”; “Accessible safety chain and spy-holes should be available”; “The wash hand basin should be accessible for wheelchair users with a sufficient space under basin”; “Safety rails should be provided beside the wash hand basin, toilet seat, and overhead shower”; “A wheeled-shower chair or wall-mounted shower seat should be provided” fell into Quadrant A ‘Concentrate here’. These attributes were the major weaknesses for hotels serving PwD. Three attributes, i.e., “Accessible door handles should be available”; “The toilet seat height should be accessible for wheelchair users, with internal or external water jet”; “A mirror should be provided over the wash hand basin, with a height between 50-80 cm” fell into Quadrant B ‘Keep up the Good Work’. These attributes were the major strengths for hotels. Three attributes, i.e., “Alarm clocks, strobes, bed shakers, and communication devices should be available”; “The bathroom door should be outward swinging, with accessible handles”; “The wash hand basin should have a long arm tap” fell into Quadrant C ‘Low priority’. Five attributes, i.e., “Bright lighting and color contrast in rooms should be available”; “Clear signs for items in the rooms should be available”; “Wider doors for room entry should be available”; “Flooring should be on a hard surface with no carpet”; “The bathroom doorway should be at least 100 cm wide” fell into Quadrant D ‘Possible Overkill’. These attributes were less important from the perspectives of British PwD customers.

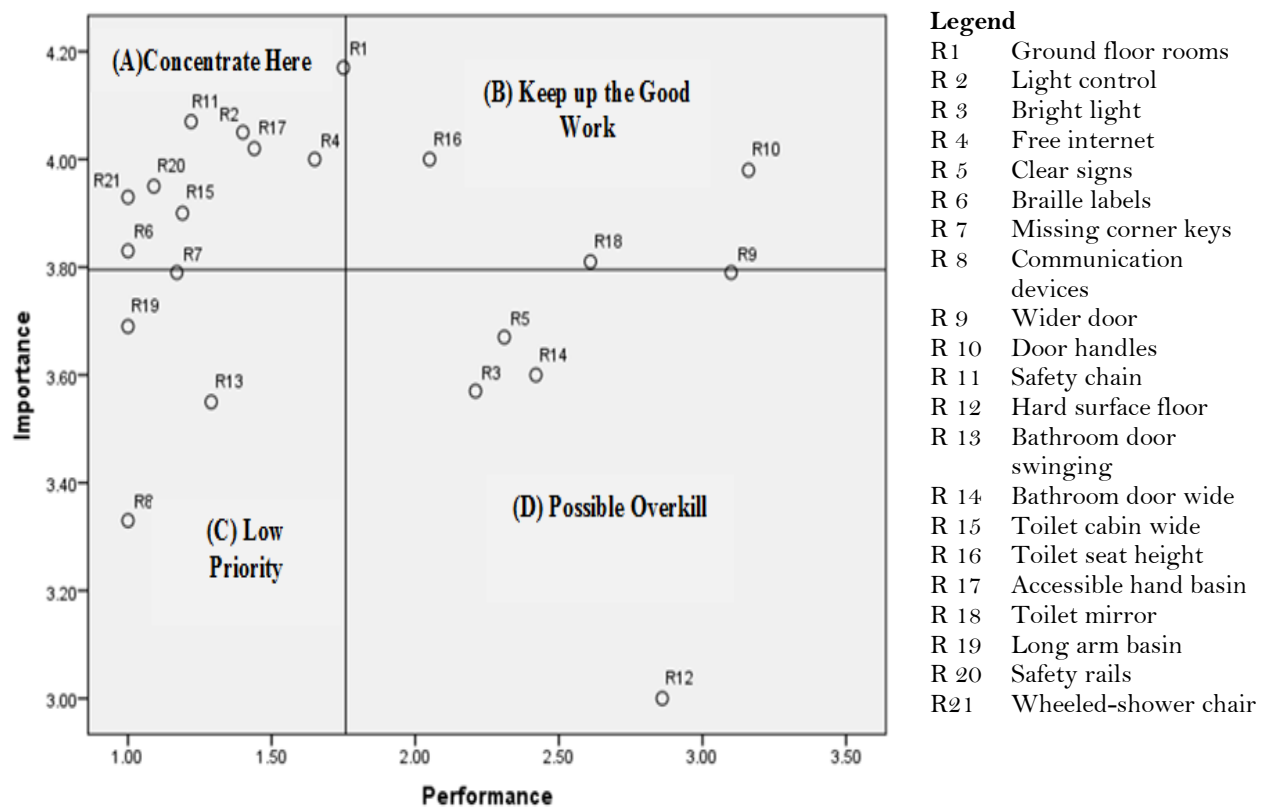


Figure-3. Guest room's importance-performance matrix

4.5. Analysis of Public Area Attributes

Figure 4 shows the public areas' importance-performance matrix. Eight attributes, i.e., “Designated dining tables for disabled persons should be provided”; “The menu should on special dietary items”; “Accessible serving counters for wheelchair users should be provided”; “Ground level accessible restrooms for disabled persons should be provided”; “Level or ramped access to public areas should be provided; “Access routes that are flat (without steps) and with a stable surface should be provided; “Lifts adapted for disabled people should be provided”; “24/7 medical services should be available” fell into Quadrant A ‘Concentrate Here’. These attributes were the major weaknesses

for hotels. Seven attributes, i.e., “A large print menu, signs, and information should be provided”; “Level or ramped access (i.e., step-free access) to main entrance should be provided”; “Clear pathways to front desk, concierge, and restaurants should be provided”; “Automated door openings should be provided”; “Clear turning spaces in rooms, entrance, and halls should be provide”; “All corridors should be suitable for wheelchair users”; “Pool handrails on the steps or transfer points should be provided” fell into Quadrant B ‘Keep up the Good Work’. These attributes were the major strengths for hotels. Five attributes, i.e., “Glued carpets in public areas should be provided”; “Separate lockable rooms for the storage of wheelchairs and crutches for disabled persons should be provided”; “Pools with a lift to get people in and out of the water should be provided”; “Accessible fitness facilities should be provided”; “Designated disabled parking with a priority location in the parking lot should be provided” fell into Quadrant C ‘Low priority’. Three attributes, i.e., “Fire alarm lights should be brighter”; “Brighter lighting and color contrast in hallways should be provided”; “Wider shop spaces should be provided” fell into Quadrant D ‘Possible Overkill’.

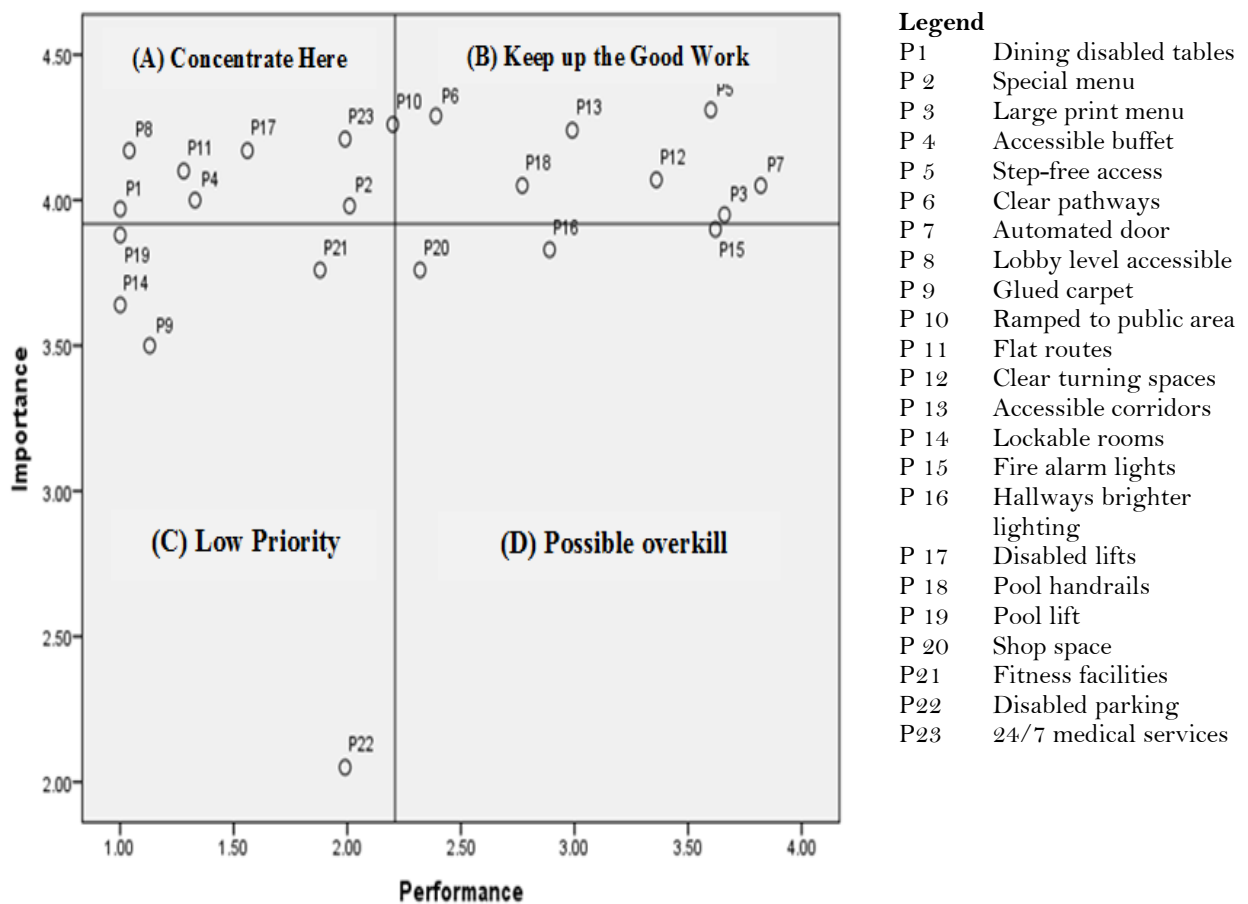


Figure-4. Public areas' importance-performance matrix

4.6. Analysis of Variance among the Four Disability Types

The results of variance analysis, among the four disability types (i.e., hearing, sight, physical, and intellectual disability) shown in Table 4. The results showed significant differences for two hotel attributes (i.e., $P < 0.05$), which are “Automated door openings should be provided”; “All corridors should be suitable for wheelchair users”. British customers with physical disabilities attached more importance to the attribute “Automated door openings should be provided” than did customers with hearing, sight, and intellectual disabilities. In addition, British customers with physical disabilities attached more importance to the attribute “All corridors should be suitable for wheelchair users” than did customers with sight and intellectual disabilities.

Table-4. Comparing the importance of hotel attributes as viewed by British PwD customers.

Hotel attributes	Mean rank				Chi-Square	Sig. (2-tailed)	Differences
	Hearing disability	Sight disability	Physical disability	Intellectual disability			
Employees patience	21.44	18.90	18.90	20.75	1.097	.778	
Actions conscious	22.81	17.70	22.36	24.00	1.591	.661	
Respectful	23.00	17.30	23.61	15.75	3.412	.332	
Get attention	24.66	17.80	20.07	24.75	2.464	.482	
Communication	26.13	18.15	18.25	24.00	4.392	.222	
Sign language	23.25	16.85	24.89	7.00	6.047	.109	
Friendly face	23.59	18.30	21.96	17.50	1.781	.619	
Writing things down	25.16	22.15	17.32	18.25	3.386	.336	
Disability training	22.22	16.55	25.07	15.50	3.923	.270	
Disability issues	21.00	19.30	24.93	12.50	3.189	.363	
Familiar with all areas	18.91	17.30	27.21	23.25	6.014	.111	
Understanding needs	23.66	18.10	21.82	19.00	1.669	.644	
Reservation specialists	23.13	20.45	21.54	13.50	1.348	.718	
Ground floor rooms	21.16	20.40	24.61	8.00	4.243	.236	
Light control	19.63	20.70	25.43	13.00	3.170	.366	
Bright light	22.56	18.60	21.82	25.25	.934	.817	
Free internet	26.47	18.00	18.46	20.50	5.333	.149	
Clear signs	22.66	20.70	20.43	23.75	.387	.943	
Braille labels	21.94	19.30	23.43	15.50	1.276	.735	
Missing corner keys	21.03	20.15	23.82	15.75	1.185	.757	
Communication devices	22.91	20.10	20.82	22.00	.406	.939	
Wider door	21.38	15.85	26.32	17.00	4.974	.174	
Door handles	20.41	20.95	24.32	13.25	2.009	.571	
Safety chain	21.13	19.75	24.39	13.00	2.245	.523	
Hard surface floor	20.94	21.50	23.46	12.25	1.610	.657	
Bathroom door swinging	18.88	17.25	28.39	15.50	7.413	.060	
Bathroom door wide	20.09	17.65	26.86	14.50	4.881	.181	
Toilet cabin wide	19.84	18.95	26.79	10.50	5.537	.136	
Toilet seat height	22.34	16.85	25.96	6.75	7.068	.070	
Accessible hand basin	22.41	19.40	24.07	6.75	4.513	.211	
Toilet mirror	21.63	17.65	25.61	11.00	4.411	.220	
Long arm basin	18.94	16.60	28.32	18.75	7.383	.061	
Safety rails	20.28	17.05	27.00	15.00	5.402	.145	
Wheeled-shower chair	20.97	16.60	25.89	19.50	3.844	.279	
Dining disabled tables	23.22	15.60	23.71	21.75	3.480	.323	
Special menu	24.13	20.55	21.68	4.00	5.478	.140	
Large print menu	22.88	17.60	22.71	21.50	1.495	.683	
Accessible buffet	22.28	15.35	26.18	13.25	6.233	.101	
Step-free access	21.25	20.05	25.11	5.50	5.833	.120	
Clear pathways	23.38	18.80	23.00	9.50	3.595	.309	
Automated door	18.84	17.60	28.61	12.50	8.594	.035*	H<P, S<P, P>I
Lobby level accessible	23.47	16.05	25.21	7.00	7.603	.055	
Glued carpet	20.66	20.60	24.75	10.00	3.074	.380	
Ramped to public area	22.56	18.35	24.07	10.75	3.576	.311	
Flat routes	19.69	20.90	23.46	25.25	1.045	.790	
Clear turning spaces	20.50	19.00	25.75	12.25	3.818	.282	
Accessible corridors	22.56	16.40	26.07	6.50	8.155	.043*	S<P, P>I
Lockable rooms	22.00	17.40	22.61	30.25	2.450	.484	
Fire alarm lights	21.59	19.80	22.57	21.75	.338	.953	
Hallways brighter lighting	20.44	22.80	22.61	15.75	.858	.836	
Disabled lifts	20.09	18.25	26.93	11.00	5.948	.114	

Pool handrails	22.47	19.45	21.11	26.75	.854	.837	
Pool lift	22.94	17.20	23.29	19.00	2.038	.565	
Shop space	23.19	15.90	23.57	21.50	3.110	.375	
Fitness facilities	24.00	18.95	21.21	16.25	1.598	.660	
Disabled parking	24.03	16.15	24.29	8.50	6.492	.090	
24/7 medical services	23.91	18.80	19.32	31.00	3.354	.340	

Notes: H: Hearing disability; S: Sight disability; P: Physical disability; I: Intellectual disability

5. DISCUSSION AND CONCLUSIONS

The overall objective of the current study was to identify the possible gaps between the levels of importance and levels of satisfaction with the hotel attributes as indicated by British PwD customers. The results of the importance-performance analysis (IPA) showed that four hotel employees' attributes fell into Quadrant A 'Concentrate Here'. British PwD customers agreed that hotels need better preparation in the areas of "Employees should be conscious of their actions when working with me"; "Employees should have formal disability training"; "Employees should understand disability issues"; "Employees should have an adequate understanding of my needs". These attributes were of high importance for British PwD customers. This is consistent with prior studies (Miller and Kirk, 2002; McKercher *et al.*, 2003) which focused on the importance of employee training in order to serve PwD appropriately. Therefore, hotels should train their employees to deal with PwD appropriately. In a similar vein, nine guest room attributes, i.e., "Rooms for disabled persons should be on the ground floor"; "Main room lights should be controllable from the bed"; "Free internet in rooms should be available"; "Braille or large print labels should be available"; "Keys with a missing corner should be available"; "Accessible safety chain and spy-holes should be available"; "The wash hand basin should be accessible for wheelchair users with a sufficient space under basin"; "Safety rails should be provided beside the wash hand basin, toilet seat, and overhead shower"; "A wheeled-shower chair or wall-mounted shower seat should be provided" fell into Quadrant A. These guest room attributes similarly achieved the highest importance scores in Pegg and Stumbo (2010) findings. For the public area attributes, eight attributes, i.e., "Designated dining tables for disabled persons should be provided"; "The menu should on special dietary items"; "Accessible serving counters for wheelchair users should be provided"; "Ground level accessible restrooms for disabled persons should be provided"; "Level or ramped access to public areas should be provided"; "Access routes that are flat (without steps) and with a stable surface should be provided"; "Lifts adapted for disabled people should be provided"; "24/7 medical services should be available" fell into Quadrant A. These public area features received the highest importance scores in previous studies (Atef, 2011; Kim *et al.*, 2012; Navarro *et al.*, 2014). The aforementioned hotel attributes were the major weaknesses. Therefore, hotels should make reasonable adjustments for their guest rooms and public areas to meet the previously-mentioned needs of British PwD customers.

The IPA, on the other hand, revealed that four hotel employees attributes, i.e., "Employees should display patience and a willingness to meet my needs"; "Employees need to be respectful of persons with disabilities"; "Employees should greet me with a friendly face"; "Employees should be familiar with all areas of hotel to provide better directions for me" fell into Quadrant B: 'Keep up the Good Work'. Three guest room attributes, i.e., "Accessible door handles should be available"; "The toilet seat height should be accessible for wheelchair users, with internal or external water jet"; "A mirror should be provided over the wash hand basin, with a height between 50-80 cm" fell into Quadrant B. Seven public area attributes, i.e., "A large print menu, signs, and information should be provided"; "Level or ramped access (i.e., step-free access) to main entrance should be provided"; "Clear pathways to front desk, concierge, and restaurants should be provided"; "Automated door openings should be provided"; "Clear turning spaces in rooms, entrance, and halls should be provide"; "All corridors should be suitable for wheelchair users"; "Pool handrails on the steps or transfer points should be provided" fell into Quadrant B. British PwD

customers agreed in that Egyptian resort hotels were performing best in the aforementioned fourteen attributes. This may be because it is a mandatory requirement for the Egyptian hotels to provide the previously-mentioned facilities (EMT, 2010). Thus, these hotel attributes are the major strengths for the Egyptian resort hotels. These attributes were received high performance scores in other studies ((Ray and Ryder, 2003; Thapar *et al.*, 2004). Therefore, hotels should keep up the good work of the previously-mentioned facilities and attributes by providing regular training courses for their employees to improve their communication skills when dealing with disabled customers.

Further analysis of the importance-performance matrixes (Figures 2, 3, and 4) showed that eleven hotel attributes, i.e., “Employees need to know different techniques for communicating with me”; “Hotels should provide specialists in disability services at reservation centers”; “Employees should know basic sign language”; “Alarm clocks, strobes, bed shakers, and communication devices should be available”; “The bathroom door should be outward swinging, with accessible handles”; “The wash hand basin should have a long arm tap”; “Glued carpets in public areas should be provided”; “Separate lockable rooms for the storage of wheelchairs and crutches for disabled persons should be provided”; “Pools with a lift to get people in and out of the water should be provided”; “Accessible fitness facilities should be provided”; “Designated disabled parking with a priority location in the parking lot should be provided” fell into Quadrant C ‘Low Priority’. British PwD customers rated these eleven hotel attributes as less important. These findings are consistent with Turco *et al.* (1998) and McKercher *et al.* (2003) findings which showed that disabled tourists are not capable of participating in tourism activities such as fitness and water activities. A designated disabled parking area is not a requirement for British PwD customers who always use an airplane as the preferred form of transport (Caber and Albayrak, 2014). Thus, hotels should amend the aforementioned hotel facilities in their marketing plan to attract British PwD customers.

Furthermore, the IPA revealed that ten hotel attributes, i.e., “Employees should be aware of ways to get my attention”; “Employees should help me by writing things down”; “Bright lighting and color contrast in rooms should be available”; “Clear signs for items in the rooms should be available”; “Wider doors for room entry should be available”; “Flooring should be on a hard surface with no carpet”; “The bathroom doorway should be at least 100 cm wide”; “Fire alarm lights should be brighter”; “Brighter lighting and color contrast in hallways should be provided”; “Wider shop spaces should be provided” fell into Quadrant D ‘Possible Overkill’. Although, Egyptian hotels were performing best in the aforementioned ten hotel attributes, British PwD customers rated these attributes as less important. Thus, hotels should amend the aforementioned hotel facilities in their marketing plan to attract British PwD customers.

The results of variance analysis showed significant differences for two hotel attributes out of fifty-seven attributes (i.e., $P < 0.05$). Consistent with the results of Pegg and Stumbo (2010) British customers with physical disabilities attached more importance to the attributes “Automated door openings should be provided”; “All corridors should be suitable for wheelchair users” than did customers with hearing, sight, and intellectual disabilities. Therefore, hotels should make reasonable adjustments for their corridors and doors to meet the needs of British customers with physical disabilities.

In terms of the limitations of the current study, the sample may be considered relatively small. Future research may include a comparative study of a larger sample of PwD to provide more meaningful results. This study surveyed the requirements of British customers with disabilities in Egyptian resort hotels. Further studies may investigate the disability requirements of other nationalities such as Russian market. Using a questionnaire was another methodological limitation in this study. Future studies could conduct interviews with the four types of disability in order to provide a richer understanding of the required hotel facilities for PwD. But despite these

limitations, this study has useful implications for hotels. The findings of the current study would be useful and helpful for hotels in making sure that the required facilities for PwD customers are covered in their plan.

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