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## **PREPREKE U OKOLIŠU U RAZVOJU TURIZMA ZA OSOBE S INVALIDITETOM**

### **ENVIRONMENTAL BARRIERS TO TOURISM DEVELOPMENT FOR PEOPLE WITH DISABILITIES**

**SAŽETAK:** Turistička infrastruktura i objekti trebali bi biti pristupačni osobama s invaliditetom. Taj se segment turističkog tržišta u posljednjih nekoliko desetljeća naziva pristupačnim turizmom. Cilj ovog rada je istražiti prepreke u okolišu i pristupačnost turizma u Teheranu koje utječu na razvoj turizma za osobe s tjelesnim invaliditetom i motoričkim poteškoćama. Dvije stotine stanovnika Teherana koji imaju tjelesni invaliditet i motoričke poteškoće ispunilo je upitnik. Za analizu podataka korištena je konfirmatorna faktorska analiza. Prepreke u okolišu u razvoju turizma za osobe s invaliditetom grupirane su u tri glavna područja turizma koja obuhvaćaju prijevoz, znamenitosti i smještaj, a za svako od njih zasebno su istraženi njihovi pojedini elementi i pristupačnost. Općenito, ustanovilo se da načela i standardi prilagodbe potrebama osoba s invaliditetom u glavnim područjima turizma u Teheranu nisu odgovarajući. Ustanovljeno je da je prijevoz najvažnija prepreka u razvoju turizma za osobe s invaliditetom i motoričkim poteškoćama.

**KLJUČNE RIJEČI:** pristupačni turizam, prepreke u okolišu i građevne prepreke, osobe s tjelesnim invaliditetom i motoričkim poteškoćama, razvoj turizma, Teheran

**ABSTRACT:** Tourism infrastructure and facilities should be accessible for people with disabilities. This segment of the tourism industry market has been known as accessible tourism in recent decades. The aim of this study is to investigate the environmental barriers and accessibility of Tehran tourism that affect tourism development for people with physical and motor disabilities. A questionnaire was distributed to 200 Tehran residents with physical and motor disabilities. Confirmatory factor analysis was used to analyze data. Environmental barriers to tourism development for these people were classified in three major areas including transportation, attractions and accommodation. For each area various elements and accessibility were investigated separately. In general, principles and standards of fitting the facilities according to the needs of people with disabilities in the main areas of Tehran tourism are found to be inappropriate. Transportation facilities were identified as the most prominent barrier of tourism development for people with physical and motor disabilities.

**KEY WORDS:** accessible tourism, environmental and built barriers, people with physical and motor disabilities, tourism development, Tehran

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## 1. UVOD

Paralelno s rastom i razvojem turizma, nastala su i nova tržišta i posebni oblici turizma. U posljednjih nekoliko desetljeća u istraživanju turizma se pojavio i proširio novi pojam, pristupačni turizam (Nazari Orakani, 2014). To se područje različito naziva: kao turizam za osobe s invaliditetom (Burnett i Bender-Baker, 2001; Yau *et al.*, 2004), turizam s neometanim pristupom (Cameron, 2000), turizam bez prepreka – u nekim zemaljama, poput Japana (Foggin *et al.*, 2003), inkluzivni turizam (Buhalis *et al.*, 2005; Shaw, 2007), univerzalni turizam (Darcy, 2006), a odnedavno i pristupačni turizam (Buhalis i Darcy, 2011:10; Darcy, 2006, 2010; Darcy i Dickson, 2009; Shafiei *et al.*, 2014:32).

Konvencija Ujedinjenih naroda utvrdila je 2009. godine prava osoba s invaliditetom u gotovo svim područjima, a to su pristupačnost, zapošljavanje, obrazovanje, zdravstvo, samostalan život, sudjelovanje u kulturnim i sportskim aktivnostima i građanska prava. Kako osobe s invaliditetom sudjeluju u kulturnom životu, rekreaciji, aktivnostima u slobodno vrijeme i sportu, članak 30 priznaje prava osoba s invaliditetom na pristup mjestima na kojima se odvijaju kulturne aktivnosti i pružaju usluge u kulturi, poput kazališta, muzeja, kina, knjižnice i turističkih usluga (Pagan, 2012).

Pravo na putovanje i pristup turističkim aktivnostima i sadržajima trebali bi biti ključno socijalno pravo osoba s invaliditetom i njihovih obitelji (Var *et al.*, 2011). Rekreacija i turizam, kao dio građanskih prava, smatraju se područjem izražavanja osjećaja, samoostvarenja i usavršavanja (Hutchison, 1997). Putovanja i turizam važan su čimbenik kvalitete života za sve ljudе (Var *et al.*, 2011). Osobe s invaliditetom, kao i sve druge osobe, žele i voljne su putovati, ali općenito se može reći da turistički proizvodi i usluge nisu oblikovani prema njihovim potrebama (Kwai-sang Yau *et al.*, 2004).

## 1. INTRODUCTION

Parallel to the growth and development of tourism, new markets and special interest tourism have come into existence. One of the fairly new evolutions in tourism field of study is the emergence and spread of the accessible tourism concept over the last two decades (Nazari Orakani, 2014). This field was defined in different ways as: disabled tourism (Burnett and Bender-Baker, 2001; Yau *et al.*, 2004), easy access tourism (Cameron, 2000), barrier-free tourism – in a number of countries such as Japan (Foggin *et al.*, 2003), inclusive tourism (Buhalis *et al.*, 2005; Shaw, 2007), universal tourism (Darcy, 2006) and accessible tourism as of recently (Buhalis and Darcy, 2011:10; Darcy, 2006, 2010; Darcy and Dickson, 2009; Shafiei *et al.*, 2014:32).

In 2009 the United Nation Convention identified disabled people's rights in almost all fields such as accessibility, employment, education, health, independent living, participation in cultural and sporting activities and civil rights. Due to their participation in cultural life, leisure, free time activities and sports, Article 30 recognizes the disabled people's rights to enjoy access to places for cultural performances or services like theatres, museums, cinemas, libraries and tourism services (Pagan, 2012).

Travel rights and access to tourism activities and facilities should be considered a key social right for the disabled people and their families (Var *et al.*, 2011). Leisure and tourism as a part of civil rights is considered as areas of the expression of feelings, self-actualization and perfection (Hutchison, 1997). Travel and tourism are an important factor of quality of life of all people (Var *et al.*, 2011). People with disabilities, as well as any other persons, desire and are willing to travel, but in general, tourism products and services are not designed for the needs of this group (Kwai-sang Yau *et al.*, 2004).

Shaw-Lawrence (1999) navodi da zemlje koje žele povećati prihod od svojih turističkih tržišta trebaju razumjeti specifične potrebe turista s invaliditetom (Var *et al*, 2011). Osobe s invaliditetom mogu predstavljati značajni dio turističkog tržišta (Israeli, 2002). U Iranu su osobe s invaliditetom zarobljene u svojim domovima jer ne mogu rabiti gradske sadržaje zbog njihove nepristupačnosti. Ako osobama u invalidskim kolicima pribrojimo slijepce i starije osobe, ustanovit ćeemo da veliki postotak stanovništva ne može koristiti mnoge sadržaje i gradske usluge zbog neprikladnih i nestandardiziranih javnih i privatnih objekata te im se tako uskraćuju njihova temeljna prava. Očigledno je da je takvo isključivanje izravno vezano uz prilagođavanje tih objekata osobama s invaliditetom (Nazari Orakani, 2014).

Kako su mnoge zemlje provele znanstvena i tehnička istraživanja velikog tržišta koje čine osobe s invaliditetom i starije osobe, javila se potreba za utvrđivanjem i istraživanjem glavnih prepreka u okolišu i njihovih potkategorija u turizmu kako bi se moglo ocijeniti u kojoj je mjeri turistička infrastruktura u Teheranu pristupačna osobama s invaliditetom. Je li taj grad spreman prihvati i iskoristiti to tržište, bilo u ekonomskom smislu ili kako bi u svim područjima turizma ostvario društvenu pravdu?

Cilj ovog istraživanja je upoznati i istražiti osnovne koncepte i globalne inicijative koji će oblikovati budućnost pristupačnog turizma u raznim zajednicama i zemljama te pridonijeti razumijevanju važnosti pristupačnog turizma i to istraživanjem prepreka u okolišu i pristupačnosti turizma koji utječu na razvoj turizma za osobe s tjelesnim invaliditetom i motoričkim poteškoćama. Ovo istraživanje trebalo bi dati doprinos poznавanju i razumijevanju potreba osoba s invaliditetom i preduvjeta koje je potrebno ispuniti kako bi se one uključile u međunarodna turistička kretanja.

Shaw-Lawrence (1999) noted that countries interested in expanding income of their travel markets must understand the specific needs of tourists with disabilities (Var *et al*, 2011). People with disabilities may be a significant part of the tourism market (Israeli, 2002). In Iran, people with disabilities are imprisoned in their homes because they cannot use urban facilities due to lack of accessibility. If we add the blind and the elderly to the people using wheelchairs, we shall notice that a large percentage of the population are not able to use urban facilities and public services due to inappropriate and non-standardized public and private structures, which deprives them of their most basic rights. It is obvious that this exclusion is directly linked to fitting the facilities to the people with disabilities. (Nazari Orakani, 2014).

Due to the fact that many countries have done scientific and technical studies about the significant market of people with disabilities and the elderly, there is a need to identify and investigate the major environmental barriers and their subdivisions in tourism in order to evaluate the condition of the accessibility of tourism infrastructure in Tehran. Is the city prepared to accept and use this market either economically or in terms of social justice in tourism sector?

The purpose of this study is to introduce and examine key concepts and global initiatives that will shape accessible tourism future for communities and countries, as well as to contribute to the comprehension of the importance of accessible tourism by investigating environmental barriers and accessibility of tourism that affect tourism development for people with physical and motor disabilities. This study should add to the knowledge and understanding of the needs of people with disabilities and the requirements for their involvement in tourism worldwide.

## 2. PREGLED LITERATURE

### 2.1 Invaliditet

Svjetska zdravstvena organizacija (WHO) definirala je 1981. godine invaliditet kao nařušavanje odnosa između pojedinca i okoline (Abdullahi *et al.*, 2015). Pojam ‘invaliditet’ naglasak stavlja na nejednakosti koje su vidljive u odnosu na okolinu i društvene uvjete života ljudi s invaliditetom (Haywood *et al.*, 1999; Ehsani, 2008:199-200). Kako ga je definirala Svjetska zdravstvena organizacija (2007), invaliditet je širok pojam koji uključuje poremećaje te ograničenja u aktivnostima i u sudjelovanju u aktivnostima. Stoga je invaliditet složen fenomen koji se odnosi na djelovanje između individualnih tjelesnih obilježja i obilježja društva u kojemu ta osoba živi. Prema Svjetskoj zdravstvenoj organizaciji, invaliditet se odnosi na „bilo koje ograničenje ili pomanjkanje čovjekove sposobnosti za obavljanje normalnih aktivnosti“ (WHO, 2015).

Općenito govoreći, postoje četiri vrste invaliditeta: invaliditet vezan uz smetnje sluha, invaliditet vezan uz smetnje vida, tjelesni invaliditet i mentalni invaliditet (Shafiei *et al.*, 2014:22).

Tjelesni invaliditet je nemogućnost slobodnog kretanja i obavljanja aktivnosti, kao i kontinuirana nemogućnost obavljanja normalnih dnevnih aktivnosti u razumnoj mjeri i razumnom vremenu. Treba napomenuti da dijabetičari i respiratorni pacijenti, a ponekad i osobe na posebnim dijetama, također spadaju u tu kategoriju (Daniels *et al.*, 2005). Hariston (2007) osobe s invaliditetom definira kao one koje imaju smetnje ili tjelesne ozljede. Prema britanskom Zakonu o diskriminaciji osoba s invaliditetom, osoba s invaliditetom je svaka osoba koja ima mentalna ili tjelesna oštećenja s dugotrajnim i štetnim učinkom na njezinu sposobnost obavljanja dnevnih aktivnosti (Shafiei *et al.*, 2014:22). Evropska mreža pristupačnog turizma navodi da je invaliditet širok pojam koji obuhva-

## 2. RESEARCH LITERATURE REVIEW

### 2.1 Disability

In 1981, World Health Organization (WHO), defined disability as an impairment in the relationship between an individual and the environment (Abdullahi *et al.*, 2015). The term ‘disability’ reflects inequalities which are seen in the environment and social conditions in life of people with disabilities (Haywood *et al.*, 1999; Ehsani, 2008:199-200). As defined by WHO (2007), disability is a broad term that includes disorders, and activity and participation restrictions. Therefore, disability is a complex phenomenon that shows the djelovanje between individual's body features and features of the society where he or she lives in. According to WHO, disability refers to “any restriction or lack of human ability to carry out normal activities” (WHO, 2015).

In general, disability can be classified into four different types - auditory disability, visual disability, physical disability and intellectual disability (Shafiei *et al.*, 2014:22).

Physical disability is inability to freely move or perform, as well as continuous inability to carry out normal and daily activities at a reasonable level and in reasonable time. It should be noted that diabetics and respiratory patients, and sometimes people on special diets, fall in this category (Daniels *et al.*, 2005). According to Hariston's definition for persons with disability (2007), people with disabilities are those who have a series of disabilities or physical injuries. Based on UK Disability Discrimination Act, a person with disability is someone who has a mental or physical damage with long-term and adverse effects on his or her ability to carry out daily activities (Shafiei *et al.*, 2014:22). The European Network of accessible tourism states that disability is a broad concept that includes not only people with motor, auditory, visual and intellectual disorders, but also

ća ne samo osobe s motoričkim smetnjama, smetnjama sluha, vida i mentalnim poremećajima, već i ljudi s respiratornim problemima i raznim vrstama alergija, trudnice i djecu te starije osobe kojima su potrebiti posebni prilagođeni sadržaji (ENAT, 2007).

## **2.2 Ograničenja u putovanju i prepreke za osobe s invaliditetom**

Istraživanja koja se bave problemima osoba s tjelesnim invaliditetom i motoričkim poteškoćama, ustanovila su da glavni izazov za tu skupinu predstavljaju mentalni problemi, jer većini nedostaje samopouzdanje i imaju puno slobodnog vremena u usporedbi s osobama bez invaliditeta. Uz to su tu i drugi društveni problemi poput korištenja prijevoza i neimanja koristi od sadržaja za rekreatiju i sportove kojima bi mogli ispuniti vrijeme (Bahmanpour i Salajegheh, 2008). Osobe s tjelesnim invaliditetom mogu se suočiti s raznim oblicima ograničenja što bi se trebalo uzeti u obzir prilikom planiranja u turizmu. Istraživanja slobodnog vremena uvijek nagašavaju da se ograničenja pojavljuju hijerarhijskim redoslijedom, od interpersonalnih prema intrapersonalnim i strukturnim (okolišnim) dimenzijama (Shafiei *et al.*, 2014:36).

Crawford *et al.* (1991) su istražili 'hijerarhijski' redoslijed tri vrste ograničenja koja utječu na sudjelovanje ili nesudjelovanje u rekreacijskim aktivnostima: intrapersonalna ograničenja, nakon kojih slijede interpersonalna ograničenja i na kraju strukturalna ograničenja. Intrapersonalna ograničenja odnose se na psihološke karakteristike svojstvene pojedinцу poput osobina ličnosti, stavova ili prolaznih psiholoških stanja poput depresije ili raspoloženja. Interpersonalna ograničenja obuhvaćaju ograničenja koja nastaju iz interakcije s drugima, kao što su članovi obitelji, prijatelji, suradnici i susjedi. Strukturne (okolišne) dimenzije obuhvaćaju faktoare kao što su neimanje prilike za bavljenje određenim aktivnostima ili njihovi troškovi, a proizlaze iz vanjskih, okolišnih uvjeta.

people with respiratory problems and different kinds of allergies as well as pregnant women and infants and the elderly who need certain fitted facilities (ENAT, 2007).

## **2.2 Travel Restrictions and Barriers for People with Disabilities**

According to the research done in the field of problems of people with physical and motor disabilities, it was found that the main challenge for this group is mental, as most of them lack self-confidence and have a lot of free time compared to people without disabilities. Also, there are other social issues, such as the use of transportation and the lack of benefit from leisure facilities and sports to fill their free time (Bahmanpour and Salajegheh, 2008). People with physical disabilities may face different kinds of restrictions, which should be taken into consideration in tourism planning. Research on free time always insists that restrictions occur in a hierarchical manner and move from interpersonal to intrapersonal and structural (environmental) dimensions (Shafiei *et al.*, 2014:36).

Crawford *et al.* (1991) examined a 'hierarchical' order of three constraints that influence leisure participation or non-participation: intrapersonal constraints, followed by interpersonal constraints, and finally the structural constraints. Intrapersonal constraints refer to psychological conditions that are internal to the individual such as personality factors, attitudes, or more temporary psychological conditions such as depression or mood. Interpersonal constraints include those constraints that arise from interaction with others such as family members, friends, co-workers and neighbors. Structural (environmental) dimensions include such factors as the lack of opportunities or the cost of activities that result from external conditions in the environment. According to the model of Crawford *et al.* (1991) intrapersonal constraints that affect leisure preferences occur first. Interpersonal constraints follow to in-

Prema modelu kojeg su kreirali Crawford *et al.* (1991) prvo se javljaju intrapersonalna ograničenja koja utječu na preferencije kod slobodnih aktivnosti. Slijede interpersonalna ograničenja koja utječu na interpersonalnu kompatibilnost. I na kraju, sudjelovanje ili nesudjelovanje ovisi o strukturnim ograničenjima (Bindu i Devi, 2016; Crawford *et al.*, 1991).

Ranije provedena istraživanja o putnicima s invaliditetom uglavnom su se fokusirala na probleme pristupačnosti i načine na koje je moguće smanjiti ograničenja vezana uz putovanja. Smith (1987) navodi da zadovoljstvo turista s invaliditetom može biti manje nego kod drugih turista jer važni dijelovi cjelokupnog turističkog iskustva ponekad nisu prilagođeni toj skupini (Smith, 1987). Putovanja i turizam važan su čimbenik postizanja kvalitete života svih ljudi (Var *et al.*, 2011). Osobe s invaliditetom prije svega imaju ograničenja u pogledu načina provođenja svojeg slobodnog vremena i sudjelovanja u aktivnostima vezanima uz zabavu (Shafiei *et al.*, 2014:40). Ti ljudi, kao i svi drugi, putuju, ali turistički proizvodi i usluge nisu oblikovani prema njihovim potrebama (Daniels *et al.*, 2002). Osobe s invaliditetom češće primjećuju i doživljavaju inherentna ekonomска, okolišna i interaktivna ograničenja nego drugi turisti (Shafiei *et al.*, 2014:40). Na sudjelovanje osoba s tjelesnim invaliditetom i motoričkim poteškoćama u turističkim aktivnostima utječe niz prepreka i ograničenja (Nazari Orakani, 2014) koji ih prijeće u putovanjima ili u uživanju u putovanju (Buhalis i Darcy, 2011:192). Ograničenja vezana uz načine provođenja slobodnog vremena dijele se u tri skupine, pri čemu se koriste razni nazivi, ali opće definicije i okvir su isti: 1. intrapersonalna ograničenja (interna), 2. interpersonalna ograničenja (interaktivna) i 3. okolišna ograničenja (strukturna) (Buhalis i Darcy, 2011:7; Nazari Orakani, 2014; Pagan, 2012).

Koncept invaliditeta i društveni model invaliditeta kod Darcyja i Buhalisa sugerira-

fluence interpersonal compatibility. Finally, participation or non-participation is dependent on structural constraints (Bindu and Devi, 2016; Crawford *et al.*, 1991).

Previous studies on passengers with disabilities mainly focused on the accessibility issues and ways of reducing travel restrictions. Smith (1987) states that the satisfaction of tourists with disabilities may be lower than in other tourists because the important parts of the tourism overall experience might not be fitted to these people (Smith, 1987). Travel and tourism are an important factor in the quality of life of all people (Var *et al.*, 2011). People with disabilities primarily have restrictions in terms of their free time and participation in entertainment (Shafiei *et al.*, 2014:40). Like every other person these people tend to travel, but tourism products and services are not designed for their needs (Daniels *et al.*, 2002). People with disabilities are more likely to observe and experience inherent economic, environmental and interactive restrictions compared with other tourists (Shafiei *et al.*, 2014:40). Participation of people with physical and motor disabilities in tourism activities is affected by a set of barriers and restrictions (Nazari Orakani, 2014), that prevent people from traveling or enjoying their journey (Buhalis and Darcy, 2011:192). Free time restrictions are divided into three groups, and in spite of the different names the general definitions and frameworks are the same: 1. intrapersonal restrictions (internal), 2. interpersonal restrictions (interactive) i 3. environmental restrictions (structural) (Buhalis and Darcy, 2011:7; Nazari Orakani, 2014; Pagan, 2012).

The Darcy, Buhalis disability concept and social model of disability suggests that the environment plays a fundamental role in the experiences of people with disabilities. By removing or minimizing the barriers in architecture, transportation and information systems, tourism providers and suppliers can effectively enable people with disabilities to travel. Failure to remove the barriers makes

raju da okolina igra ključnu ulogu u doživljajima osoba s invaliditetom. Uklanjanjem ili svodenjem prepreka u arhitekturi, prijevozu ili sustavu informiranja na najmanju moguću razinu, pružatelji usluga u turizmu mogu osobama s invaliditetom omogućiti da doista putuju. Ako se prepreke ne uklone, uključivanje u turistička kretanja će naprosto biti nemoguće za mnoge građane, čime se isključuje veliki dio potrošača aktivnosti za slobodno vrijeme, a sam turizam ostaje bez velikog dijela tržišta (Buhalis i Darcy, 2011:36). Međutim, za one koji rade u području turizma ključno je znati da je marketing puno više od prodajnih tehnika i oglašavanja. Čak i ako je oglašavanje privlačno, a prodavači umješni, turisti neće posjetiti grad ako on ne pruža optimalni doživljaj prilikom posjeta (Kolb, 2011:57-58).

Glavni problem za osobe s invaliditetom je korištenje rekreativnih sadržaja i usluga (Gohari, 2011:69). Jedan od problema s kojim se bavi socijalna rehabilitacija je prilagođavanje privatnih i društvenih prostora i alata osobama s invaliditetom kako bi se smanjili njihovi svakodnevni problemi. Prilagođavanje okoline osobama s invaliditetom je preinačavanje okoline i osiguravanje opreme potrebne za njihovo slobodno kretanje, djelovanje u okolini a da se pri tome ne osjećaju ugroženima i da imaju koristi od društvenih, kulturnih i ekonomskih sadržaja održavanjem osnovne osobne samostalnosti (Kamanroudi, 2010). Čini se da se osobama s invaliditetom ne posvećuje dovoljna pažnja, a istraživanja su pokazala da potrebe tih ljudi nisu zadovoljene u onoj mjeri kao kod osoba bez invaliditeta (Turco *et al.*, 1998). Turisti s invaliditetom i osobe kojima je potreban poseban pristup objektima suočavaju se s mnogim izazovima u svakom trenutku svojeg putovanja. Od planiranja puta preko rezerviranja smještaja, prijevoza, razgledavanja znamenitosti, kretanja centrima grada ili sela, posjećivanja kulturnih događanja, ulaska u restorane i kafiće, korištenja standardnih sanitarnih čvorova pa do povratka svojim kućama (Shafiei *et al.*, 2014:55).

tourism simply impossible for many citizens, which excludes a large part of consumers of free times activities and deprives the industry of a large market share (Buhalis i Darcy, 2011:36). However, it is essential for those who work in the tourism sector to know that marketing goes beyond sales techniques and advertising. Even if advertising is attractive and sellers are qualified, tourists will not visit the city unless it provides an optimal visiting experience, (Kolb, 2011:57-58).

A major problem for people with disabilities is using leisure facilities and services (Gohari, 2011:69). One of the issues that is examined in social rehabilitation is fitting personal and social spaces and tools for people with disabilities in order to reduce their daily problems. Fitting the environment for people with disabilities is modifying environment and providing the equipment needed so that people with disabilities are able to move freely, act in their environments without feeling threatened, and benefit from social, cultural and economic facilities and services by maintaining essential personal independence (Kamanroudi, 2010). It seems that people with disabilities receive little attention and research has shown that the needs of these people are not met as much as the needs of the people without disabilities (Turco *et al.*, 1998). Tourists with disabilities and people with special access need to face many challenges in every moment of their journey. From planning the trip to booking accommodation facilities, transportation, visiting different sightseeing and attractions, passing through city centers and villages, visiting cultural events, entering restaurants and cafes, using standard toilets and eventually returning back to their hometowns (Shafiei *et al.*, 2014:55).

### 3. PREGLED DOSADAŠNJIH ISTRAŽIVANJA

Dosad u Iranu nisu provedena specijalizirana i znanstvena istraživanja u području putovanja i turizma za osobe s invaliditetom, osim onoga Nazari Orakani koje se bavilo razvojem obrasca pristupačnog turizma. Međutim, postoje neka istraživanja u području prilagođavanja prostora, upravljanja gradovima i uklanjanja prepreka u okolišu za osobe s invaliditetom koje će moći razmotriti u nastavku.

U radu pod nazivom „Prilagođavanje stanovanja i urbanih okolina osobama s ograničenjima u kretanju (Studija slučaja: 8. teheranski okrug)“, Hosseini i Maleki (2008) daju prikaz i analizu fizičkih karakteristika proučavanih područja te nude rješenja za neometano i samostalno kretanje na temelju saznanja o uklanjanju ograničenja za ljudi s posebnim potrebama i o raznovrsnim postojećim problemima i nedostacima.

U drugoj studiji, Kamanroodi (2010) se bavi temom „Strukturna patologija upravljanja i urbanog razvoja: prilagođavanje prostora u Teheranu osobama s invaliditetom“. Ovaj rad fokusira se na „struktorno-upravljačku patologiju“ prilagođavanja stambeno-poslovnih zgrada i javnih prostora osobama s invaliditetom u Teheranu na dve razine, programskoj i izvršnoj, i s malim brojem varijabli te uz njih vezanih indeksa. Rezultati tog istraživanja ukazuju da djelomično centralizirana struktura i disperzirano urbano upravljanje u Teheranu nije prikladno za prilagođavanje urbanih prostora osobama s invaliditetom te zahtijeva razvoj pluralističke političke participativne strukture temeljene na „dobrom vladanju gradom“.

Bahmanpour i Salajegheh (2008) također su se bavili temom „Kvantitativna i kvalitativna studija urbanih prostora u Teheranu iz perspektive osoba s invaliditetom (Studija slučaja: park Laleh)“. Cilj ove studije je promicanje korištenja parkova i gradskih zelenih površina (kako bi se ostvario održi-

### 3. RESEARCH BACKGROUND

Specialized and scientific studies in the field of travel and tourism for people with disabilities have not been done so far in Iran, except for the research by Nazari Orakani which dealt with the development of the accessible tourism pattern. However, there are some studies in the field of fitting, discussion of urban management, and removing living space environmental barriers for people with disabilities, which will be discussed in the following sections.

In a study entitled “Enabling of Housing and Urban Environments for People with Mobility Limitations (Case Study: 8<sup>th</sup> Region of Tehran)”, Hosseini and Maleki (2008) reviewed and analyzed the physical characteristics of the studied area and offered solutions to move freely and independently based on the results obtained on removing restrictions for people with special needs and on the diversity of existing problems and gaps.

In another study, Kamanroodi (2010) discussed the “Structural pathology of management and urban development: making appropriate Tehran spaces for the disabled”. This study focused on the “structural-management pathology” of fitting residential-office buildings and public places for people with disabilities in Tehran on two levels, programmatic and executive, and on a small number of variables and related indexes. According to the findings of the research, partial centralized structure and dispersed Tehran urban management is not appropriate for fitting urban places for people with disabilities and requires the development of a pluralistic political structure of participation based on ‘good urban governance’.

Bahmanpour and Salajegheh (2008) also discussed “Quantitative and Qualitative Study on Urban Places in Tehran from the User’s Perspective for People with Disabilities (Case Study: Laleh Park)”. The aim of the study was to promote usage of parks and urban green areas (for achieving sustainable

vi razvoj grada), osobito za ljudе s tjelesnim invaliditetom i motoričkim poteškoćama. Studija slučaja provedena je na teheranskom parku Laleh, a rezultati su pokazali da je on prosječan s obzirom na karakteristike koje je potrebno imati za osobe s invaliditetom. Stoga je uzeto u obzir samo 30% od odabranih kriterija. Kasnih osamdesetih i sredinom devedesetih godina diljem svijeta provodila su se istraživanja o osobama s invaliditetom u kontekstu putovanja (Var *et al.*, 2011).

Smithov rad (1987) jedan je od prvih koji je analizirao prepreke i ograničenja s kojima se suočavaju osobe s invaliditetom kad sudjeluju u rekreativnim aktivnostima. Ustanovio je tri glavne prepreke: A) intrinzične (interne) prepreke, prije svega nastaju i ovise o razini svijesti turista o njihovim kognitivnim, tjelesnim i mentalnim funkcijama, B) prepreke u okolini, uključuju nametnuta vanjska ograničenja, i C) interaktivne prepreke, odnose se na neusklađenosti između razine zahtjevnosti i njihovih vještina te na komunikacijske prepreke. Ray i Ryder (2003) istražuju potrebe za putovanjima kod osoba s invaliditetom. Ispitali su koliko su informacije važne ljudima s invaliditetom kad planiraju svoja putovanja (Var *et al.*, 2011).

Pagan (2012) u svojem istraživanju prošedenom u Španjolskoj uspoređuje koliko su puta osobe s i bez invaliditeta sudjelovale u turističkim aktivnostima i putovanjima. Najmanji broj putovanja uočen je kod osoba s invaliditetom koje su ograničene u svojim dnevnim aktivnostima. Primijećeno je da muškarci putuju više od žena. S obzirom na čimbenik obrazovanja, koji je podijeljen na tri kategorije, osnovnu, srednju i visoku razinu, više putuju osobe bez invaliditeta sa srednjom razinom obrazovanja i osobe s invaliditetom i niskom razinom obrazovanja. Kod svih osoba, s ili bez invaliditeta, najviša razina sudjelovanja u turističkim aktivnostima i putovanjima uočena je u dobroj skupini od 45 do 54 godine dok je najniža razina putovanja utvrđena kod osoba u dobi iznad 64 godine. Postoji pozitivna i izravna korelacija

urban development), especially for people with physical and motor disabilities. Case study was Tehran's Laleh Park and the results indicated that it is average in terms of having the necessary features for the usage of people with disabilities. Therefore, only 30 percent of the selected criteria were observed in the park. Studies on people with disabilities and travel were conducted in late 1980s and mid-1990s in all over the world (Var *et al.*, 2011).

Smith's work (1987) is one of the first of its kind which analyzed barriers and restrictions that people with disabilities face when they participate in leisure activities. He identified three major barriers: A) intrinsic barriers (internal), primarily resulting from tourists' awareness of the level of their cognitive, physical and mental functions, B) environmental barriers, including imposed external restrictions and C) interactive barriers, related to inconsistencies between the level of challenges and their skills, and communication barriers. Ray and Ryder (2003) examined the travel needs of people with disabilities. They examined the importance of information when people with disabilities are planning for their holidays (Var *et al.*, 2011).

In a study by Pagan (2012) in Spain, the numbers of times that people with and without disabilities have engaged in tourism activities and travel were compared. The minimum number of trips was observed for people with disabilities who are limited in their daily activities. It was observed that men travel more than women. Regarding the education factor, which was divided into three categories – elementary, intermediate and advanced – people without disabilities and with intermediate level of education, and people with disabilities and with low levels of education travel more. In people with and without disabilities, the highest level of participation in tourism activities and travel was recorded in the age group of 45 to 54 while the lowest amount of travel was for people

između veličine obitelji i broja putovanja kao i razine prihoda i broja putovanja (Pagan, 2012).

## **4. METODOLOGIJA**

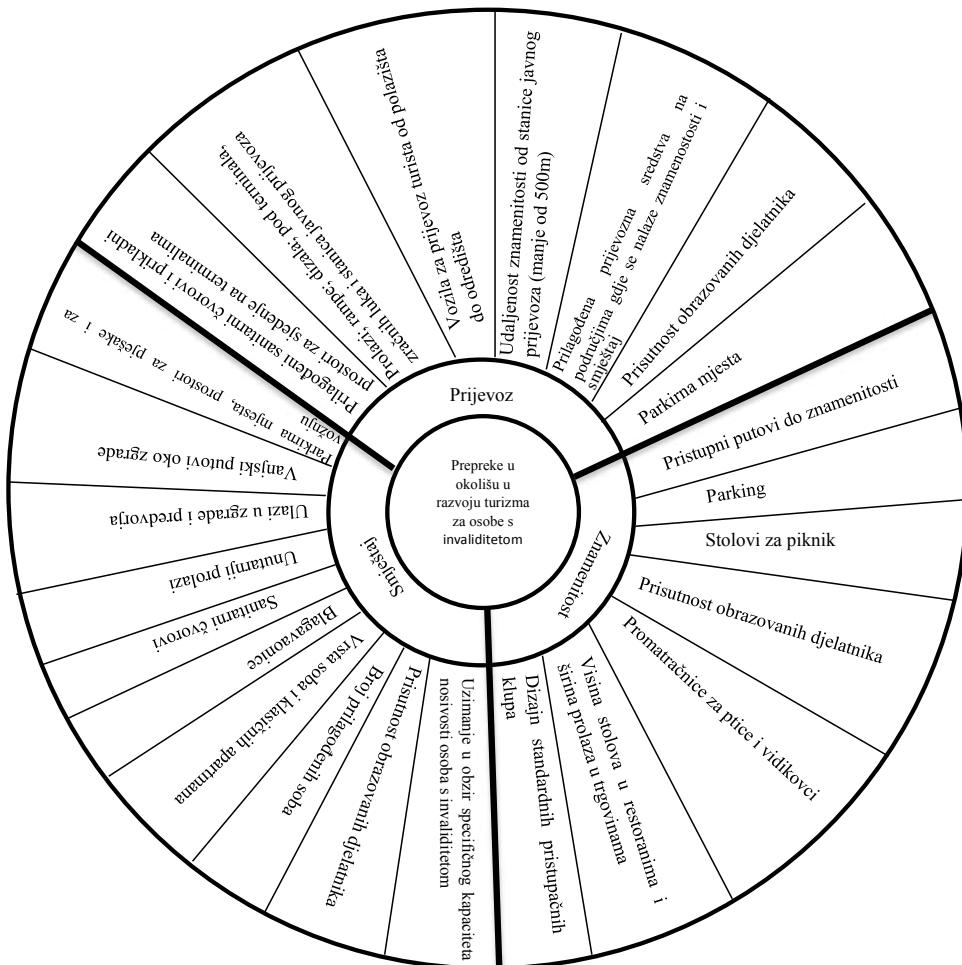
Kako bismo ustanovili i istražili prepreke u okolišu u razvoju turizma za stanovnike Irana s tjelesnim invaliditetom i motoričkim poteškoćama, koristili smo sljedeći model:

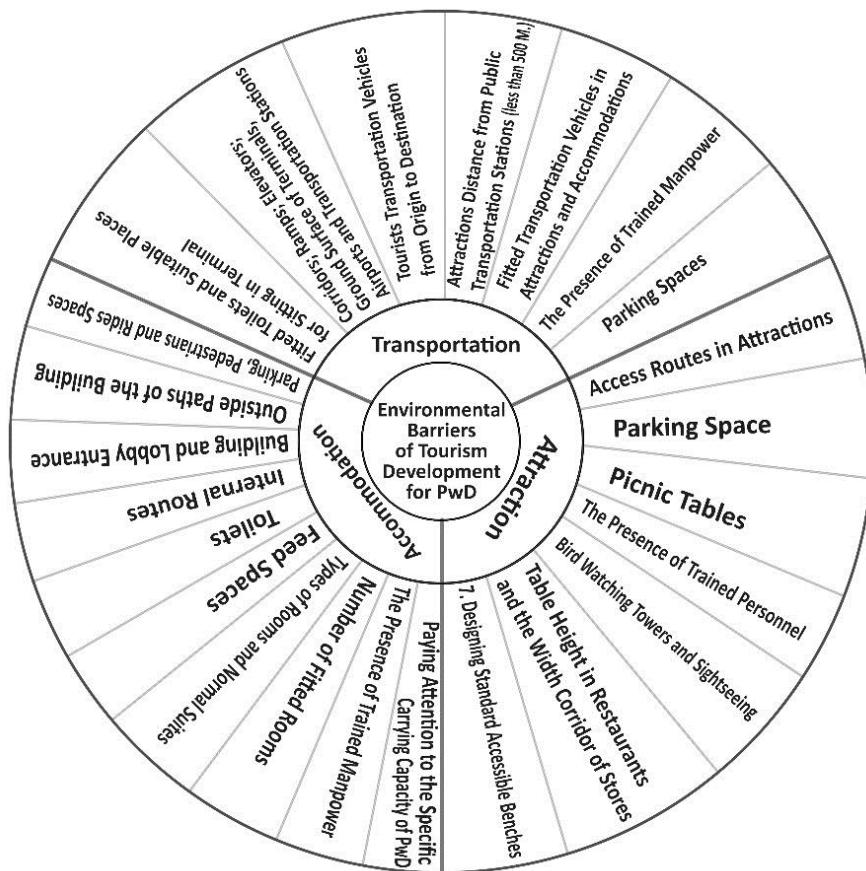
over 64 years old. There was a positive and direct relationship between the size of the family and the number of trips undertaken as well as the level of income and the number of trips (Pagan, 2012).

#### **4. METHODOLOGY**

In order to identify and research environmental barriers to tourism development for residents of Iran with physical and motor disabilities, we used the following model:

*Slika 1: Primarni model istraživačkog koncepta*



**Figure 1: Primary Research Concept Model**

#### 4.1. Metode istraživanja

Za ovo istraživanje korištene su metode deskriptivne statistike. Uzorak kojeg čini 200 osoba s tjelesnim invaliditetom i motoričkim poteškoćama u Teheranu izabran je Cochranovim postupkom s razinom greške od 0,07. Od broja osoba s invaliditetom koje žive u Teheranu i koji su članovi humanitarnih ustanova i udružica koje se bave tom skupinom ljudi odabrane su 64 osobe iz humanitarne organizacije Raad, 27 iz Sahel Omid skupine, 23 iz skupine Bavar, 30 iz organizacije Raad-Alghadir i to metodom jednostavnog slučajnjog uzorkovanja nasumič-

#### 4.1 Research Methodology

The method used in this applied research was descriptive statistics. The sample population included 200 persons with physical and motor disabilities in Tehran according to Cochran's formula at the error level of 0.07. Of the number of people with disabilities living in Tehran and who are members of charity institutions and associations related to these people, 64 people from Raad Charity Organization, 27 from Sahel Omid Group, 23 Bavar Group, 30 from Raad-Alghadir Organization were selected using the random sampling method and 56 electronic question-

nog odabira, a ispunjeno je i analizirano 56 elektronskih upitnika. Podaci su prikupljeni proučavanjem literature i terenski, pomoću intervjuja i upitnika. Utvrđene su sadržajna i izravna valjanost upitnika, a Cronbach alpha koeficijent pouzdanosti iznosi prihvatljivih 79%. Kako bi se upotpunili i potvrdili indikatori, u ovoj studiji korišteni su komentari stručnjaka, poput profesora, znanstvenika i istraživača. Podaci dobiveni upitnicima evaluirani su i analizirani pomoću konfirmatorne faktorske analize, korištenjem programa LISREL.

#### 4.2. Analiza podataka

##### *Model konfirmatorne faktorske analize*

Jedan od problema s kojim se bavi faktorska analiza je i intenzitet internih odnosa među pitanjima. Tabachnick i Fidell (2007) predložile su analizu korelacijske matrice. Ako ona ne sadrži mnogo koeficijenata korelacije većih od 0,3, faktorska analiza možda nije prikladna. Dvije statističke mjerne pomažu evaluirati adekvatnost podataka za faktorsku analizu: Bartlettov test sfernosti i Kaiser-Meyer-Olkinov (KMO) pokazatelj adekvatnosti uzorka. Bartlettov test sfernosti mora biti značajan ( $P < 0,05$ ), a KMO indeks (između 0 i 1) treba iznositi minimalno 0,6 da bi faktorska analiza bila preporučljiva. Prikladnost podataka za faktorsku analizu evaluirana je pomoću navedenih testova, a rezultati su predviđeni u Tablici 1.

naires were completed and examined. Data collection was based on library and field study using interviews and questionnaires. The validity of the questionnaire was calculated by using content and face validity, and Cronbach's alpha was used to measure the reliability of 79% which is an acceptable number. In the present study, experts' comments including professors, scholars and researchers were used to complete and verify indicators. In order to evaluate and analyze the data obtained from the questionnaires, the confirmatory factor analysis by LISREL was used.

#### 4.2 Data Analysis

##### *Confirmatory Factor Analysis Model*

One of the issues which are examined in the factor analysis is the intensity of internal relations between questions. Tabachnick and Fidell (2007) suggest a careful examination of the correlation matrix. If not many correlations are found below 0.3, factor analysis may not be appropriate. Two statistical measures help to evaluate the data factor ability: Bartlett's Sphericity Test and the Kaiser-Meyer-Olkin (KMO) to the adequacy of the sample. Bartlett's Sphericity Test must be significant ( $P < 0.05$ ) and KMO index with a range of 0 to 1, 0.6 being recommended as minimum for the factor analysis. To evaluate the suitability of the data for factor analysis, the mentioned tests were performed and the results were presented in Table 1.

**Tablica 1: Rezultati KMO i Bartlettovog testa / Table 1: KMO and Bartlett's test results**

KMO		.914
Bartlettov test / Bartlett's test	testna veličina Hi kvadrat / Chi-square test statistic	3474.927
	Stupnjevi slobode / Degrees of freedom	276
	P-vrijednost / P-Value	.000

Prema ovim rezultatima, obje analizirane testne veličine govore u prilog adekvatnosti podataka za faktorsku analizu. KMO indeks iznosi 0,914 i veći je od 0,6, a u Bartlettovom testu se nulta hipoteza odbacuje pri svim uobičajenim razinama značajnosti. Oba rezultata pokazuju da su podaci prikladni za faktorsku analizu. Konstruktna valjanost tri varijable, smještaja, znamenitosti i povezoza, izračunata je pomoću konfirmatorne faktorske analize. Prikladnost modela evaluirana je pomoću Hi-kvadrat testa, omjera Hi-kvadrata i pripadajućih stupnjeva slobode, indeksa prikladnosti modela (GIF), korijena srednje kvadratne pogreške aproksimacije (RMSEA) i rezidualnog korijena srednje kvadratne pogreške (RMR). Neodbacivanje nulte hipoteze u Hi-kvadrat testu dokaz je visoke prikladnosti modela. Međutim, taj indeks je često značajan kod uzoraka većih od 100 pa nije dobar za utvrđivanje prikladnosti modela. Ako je omjer hi-kvadrata i pripadajućih stupnjeva slobode manji od 3, prikladnost modela je vrlo dobra, a veliki uzorak utjecat će na povećanje hi-kvadrata puno više nego što na njega utječe pogrešno specificirani model (Ghazitabatabai *et al.*, 2010).

Kriteriji GFI i AGFI predstavljaju proporciju varijance i kovarijance koja je objašnjenu pomoću modela (Hooman, 2001). Oba ta kriterija variraju između 0 i 1; što su bliže 1, prikladnost modela za prikupljene podatke bit će veća (Ghazitabatabai *et al.*, 2010). Kod RMR indeksa utvrđena rezidualna varijanca i kovarijanca uspoređene su s procjenama u modelu. Manje vrijednosti ukazuju na veću prikladnost (Hooman, 2001). Ako su CFI, AGFI, GFI indeksi veći od 0,9, a RMSEA i RMR manji od 0,05, model je prikladan i valjan.

Based on the results, both test statistics speak in favour of sampling adequacy. The KMO measure is equal to 0.914 (i.e. greater than 0.6), and Bartlett's test firmly rejects the null hypothesis at any conventional significance level. These results imply that the data at hand are suitable for factor analysis. The construct validity of three variables, accommodation, attraction and transportation, was calculated by using confirmatory factor analysis. To evaluate the model fit, the chi-square test, ratio of chi-square to its degrees of freedom, goodness of fit index (GIF), root mean square error of approximation (RMSEA) and root mean square residual (RMR) were used. A non-significant chi-square indicates good model fit. However, since this measure is often significant in samples larger than 100, it is not the appropriate measure of model fit. If the ratio of chi-square to its degrees of freedom is lower than 3, the model fit is very good. Chi-square is dependent on the sample size and a large sample will increase the value of chi-square more than that can be attributed to the wrongly specified model (Ghazitabatabai *et al.*, 2010).

The GFI and AGFI criteria represent a relative amount of variance and covariance which is explained by the model (Hooman, 2001). Both of these criteria vary between 0 and 1; the closer to one the higher the goodness of model fit with the observed data (Ghazitabatabai *et al.*, 2010). In the RMR index, the observed residual variance and covariance are compared with estimates made in the model. Smaller values represent better suitability (Hooman, 2001). If CFI, AGFI, GFI indexes are greater than 0.9 and RMSEA and RMR smaller than 0.05, the model is fit and proper.

**Tablica 2: Rezultati valjanosti indeksa prikladnosti za konfirmatornu faktorsku analizu**

Varijabla	Stupnjevi slobode	Hi-kvadrat test veličina	Omjer Hi-kvadrata i pripadajućih stupnjeva slobode	RMSEA	RMR	CFI	AGFI	GFI
Smještaj	35	109,35	3,12	0,051	0,045	0,95	0,76	0,58
Znamenitosti	14	41,22	2,94	0,061	0,053	0,96	0,83	0,91
Prijevoz	14	31,64	2,26	0,039	0,036	0,98	0,77	0,94
Opći model	249	714,21	2,86	0,062	0,048	0,95	0,70	0,75

**Table 2: Goodness of fit index results for confirmatory factory analysis**

Variables	Degrees of freedom	Chi-square test statistic	Ratio of Chi-Square ratio to its degrees of freedom	RMSEA	RMR	CFI	AGFI	GFI
Accommodation	35	109.35	3.12	0.051	0.045	0.95	0.76	0.58
Attractions	14	41.22	2.94	0.061	0.053	0.96	0.83	0.91
Transportation	14	31.64	2.26	0.039	0.036	0.98	0.77	0.94
General model	249	714.21	2.86	0.062	0.048	0.95	0.70	0.75

Indeksi GFI, CFI, AGFI za varijablu smještaja su 0,58, 0,95, 0,76, što ukazuje na to da je model prikladan i valjan; RMSEA i RMR su 0,051 i 0,045 te potvrđuju valjanost modela. Za varijablu znamenitosti, indeksi GFI, CFI, AGFI iznose 0,91, 0,96 i 0,83, što ukazuje na to da je model prikladan i valjan. RMSEA i RMR su 0,061 i 0,053. Za varijablu prijevoza, indeksi GFI, CFI, i AGFI su 0,94, 0,98 i 0,77, što ukazuje na to da je model prikladan i valjan, a indeksi RMSEA i RMR su 0,039 i 0,036. Za opći model, indeksi GFI, CFI i AGFI su 0,75, 0,95 i 0,70, što ukazuje na to da je model prikladan i valjan, dok su indeksi RMSEA i RMR 0,062 i 0,048.

## 5. REZULTATI ISTRAŽIVANJA

Cilj ovog rada je istražiti i ocijeniti prepreke u okolišu i izgrađene prepreke u razvoju turizma za osobe s tjelesnim invaliditetom i motoričkim poteškoćama. Općenito, turizam za osobe s invaliditetom suočava se s raznim preprekama, osobito onima u oko-

GFI, CFI, AGFI indexes for the accommodation variable are 0.58, 0.95, 0.76 respectively, which implies that the model is fit and proper; RMSEA and RMR are 0.051 and 0.045 respectively, thus confirming the goodness of the model. For the attractions variable, GFI, CFI, AGFI indexes are 0.91, 0.96, 0.83 respectively, which implies that the model is fit and proper, RMSEA and RMR are 0.061 and 0.053. For the transportation variable, GFI, CFI, AGFI indexes are 0.94, 0.98, 0.77 respectively, which implies that the model is fit and proper, and RMSEA and RMR indexes are 0.039 and 0.036. For the general model, GFI, CFI, AGFI indexes are 0.75, 0.95, 0.70 respectively, which implies that the model is fit and proper, RMSEA and RMR indexes are 0.062 and 0.048 respectively.

## 5. RESEARCH RESULTS

The aim of this study was to investigate and assess the environmental and built bar-

lišu, koje je ova studija nastojala ustanoviti. Iz tog razloga, u Teheranu su odabrane osobe s tjelesnim invaliditetom i motoričkim poteškoćama, a uz javno dostupne podatke, prikupljeni su i podaci vezani uz turizam i rekreativne aktivnosti.

**Pitanje 1: Koje su prepreke u okolišu u razvoju turizma za osobe s tjelesnim invaliditetom i motoričkim poteškoćama u Teheranu? Koje su najvažnije prepreke?**

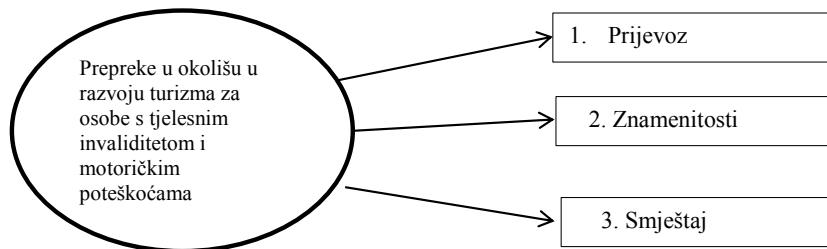
Jedan dio upitnika sastojaо se od nekoliko pitanja kojima se željelo ustanoviti koje prepreke postoje i koja je od njih najznačajnija. Kako bi se to ustanovilo, razmotrene su tri glavne vrste prepreka koje su povezane s turističkom infrastrukturom. Najvažnije prepreke vezane su uz prijevoz (59,8%), znamenitosti (24,6%) i smještaj (15,6%). Svaka od tih općenitih prepreka prikazana je prema važnosti na Slici 2.

riers to tourism development for people with physical and motor disabilities. Generally, tourism for people with disabilities faces different barriers, especially environmental barriers that this study aimed to identify. For this reason, people with physical and motor disabilities in Tehran were selected and the public data on tourism and leisure activities in the city was also collected.

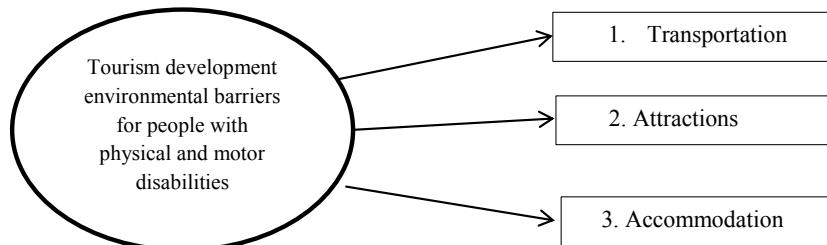
**Question 1: What are the environmental barriers to tourism development in Tehran for people with physical and motor disabilities? And what are the most important barriers?**

A part of the questionnaire consisted of several questions to identify the types of barriers that exist and which of them is most important. In order to answer this question, three major types of barriers linked to tourism infrastructure were discussed. The most important barriers refer to transportation (59.8%), attraction (24.6%), and accommodation (15.6%). Each of these general barriers was arranged in terms of importance in Figure 2.

**Slika 2: Stupanj važnosti prepreka u okolišu u razvoju turizma za osobe s tjelesnim invaliditetom i motoričkim poteškoćama**



**Figure 2: The importance level of environmental barriers to tourism development for people with physical and motor disabilities**



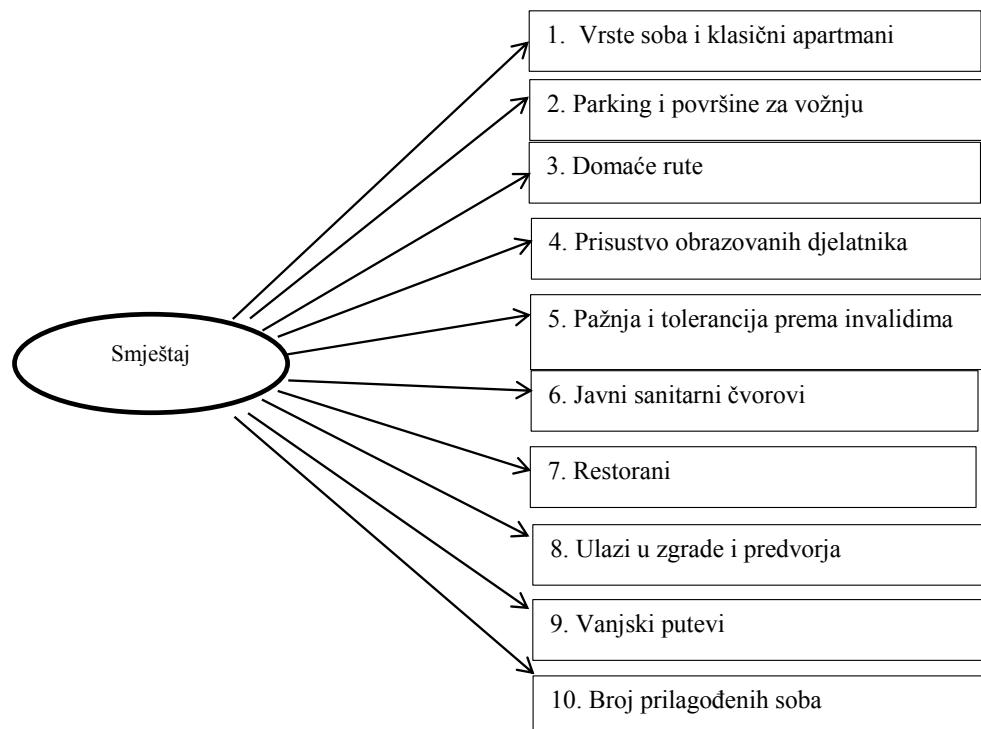
**Pitanje 2:** U kojoj se mjeri poštuju načela i standardi prilagodbi prostora za osobe s tjelesnim invaliditetom i motoričkim poteškoćama u raznim aspektima smještaja (parking, vanjski putovi, razne vrste soba i apartmana itd.)

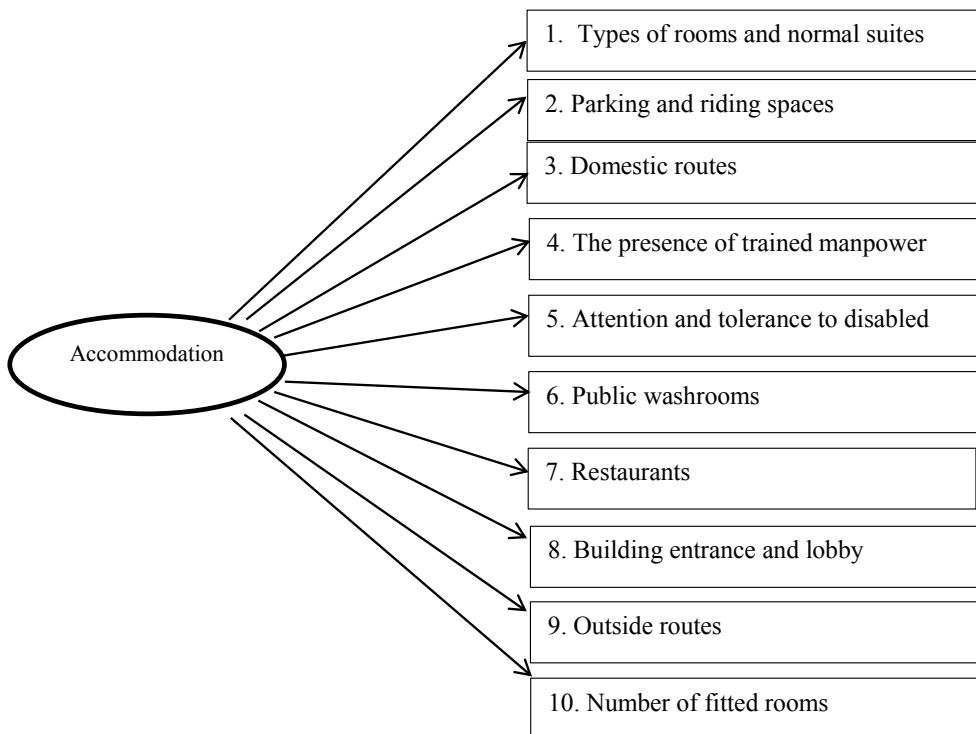
Jedan dio upitnika sastojao se od deset pitanja kojima je trebalo istražiti prilagođavanje potrebama osoba s invaliditetom u turističkom smještaju. Većina odgovora potvrđuje da ne postoje dobra i ispravna rješenja u raznim aspektima smještaja. Samo sâm smještaj (sobe i apartmani) i parking imaju prosječnu razinu prilagođenosti dok je u drugim aspektima situacija ocijenjena kao 'neodgovarajuća' ili 'potpuno neodgovarajuća'. Na kraju, potkategorije smještaja složene su prema stupnju važnosti i faktora kritičkog opterećenja i prikazane na Slici 3.

**Question 2:** To what extent were the principles and fitting standards for people with physical and motor disabilities met in different aspects of accommodation (parking, outside paths, different types of rooms and suites, etc.)?

A part of the questionnaire consisted of ten questions aimed at identifying the extent of fitting in tourism accommodation. Most answers confirm that there are no good and proper solutions in different aspects of accommodation. Only the accommodation itself (rooms and suites) and parking facilities could be said to have the average level of fitting, while in other aspects the situation was evaluated as 'inappropriate' and 'totally inappropriate'. Finally, the accommodation subdivisions were arranged in terms of the highest level of importance and loading factor in Figure 3.

**Slika 3: Stupanj važnosti potkategorija smještaja**



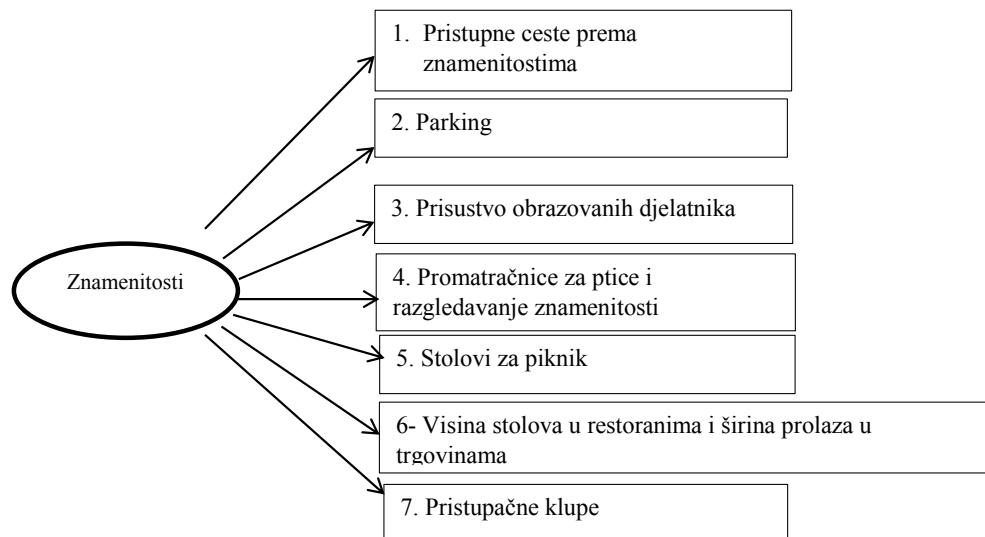
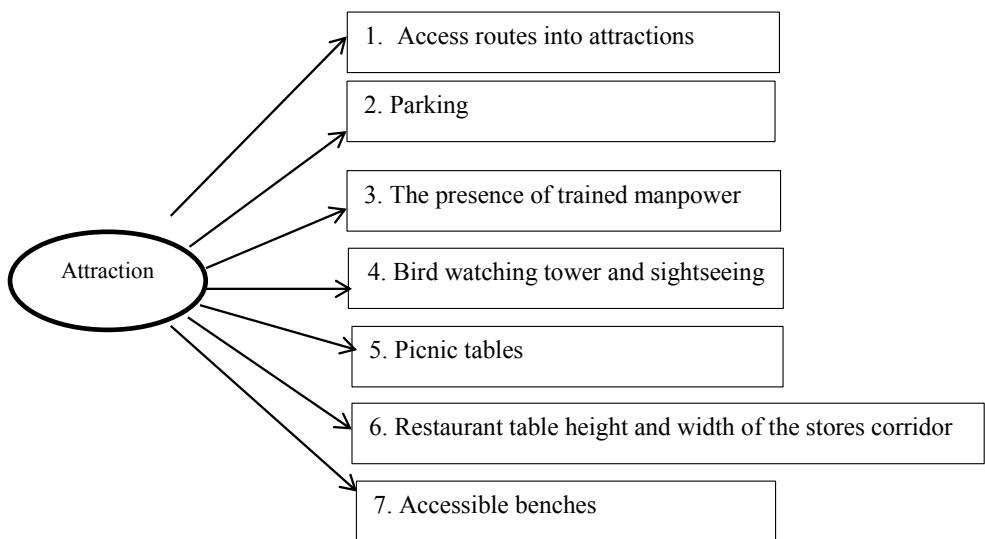
**Figure 3: Accommodation subdivision level of importance**

**Pitanje 3:** U kojoj su mjeri načela i standardi prilagodbi za osobe s invaliditetom i motoričkim poteškoćama poštivani u raznim aspektima i vrstama gradskih znamenitosti?

Jedan dio upitnika sastoji se od sedam pitanja kojima smo nastojali istražiti prilagodbe za osobe s invaliditetom kod turističkih znamenitosti. Prema dobivenim podacima, niti znamenitosti nisu u dobrom stanju po mišljenju osoba s tjelesnim invaliditetom i motoričkim poteškoćama, a odgovori na sva pitanja bili su u rasponu ‘neadekvatnog’. Potkategorije znamenitosti prikazane su na Slici 4 u nastavku redoslijedom prema stupnju važnosti i faktora kritičkog opterećenja:

**Question 3:** To what extent were the principles and fitting standards met in different parts and types of urban attractions for people with physical and motor disabilities?

A part of the questionnaire consisted of seven questions aimed at investigating fitting tourism attractions to the people with disabilities. According to the findings, attractions also proved to be inadequate according to the opinions of the people with physical and motor disabilities, and the answers to all questions were in the ‘inadequate’ range. The attraction subdivisions were arranged in terms of the highest level of importance and loading factor in Figure 4:

*Slika 4: Stupanj važnosti potkategorija znamenitosti**Figure 4: Attraction subdivisions importance level*

**Pitanje 4:** U kojoj se mjeri načela i standardi prilagodbi za osobe s invaliditetom i motoričkim poteškoćama poštuju u turističkom prijevozu u Teheranu?

Jedan dio upitnika sastoji se od sedam pitanja kojima smo nastojali istražiti prilagod-

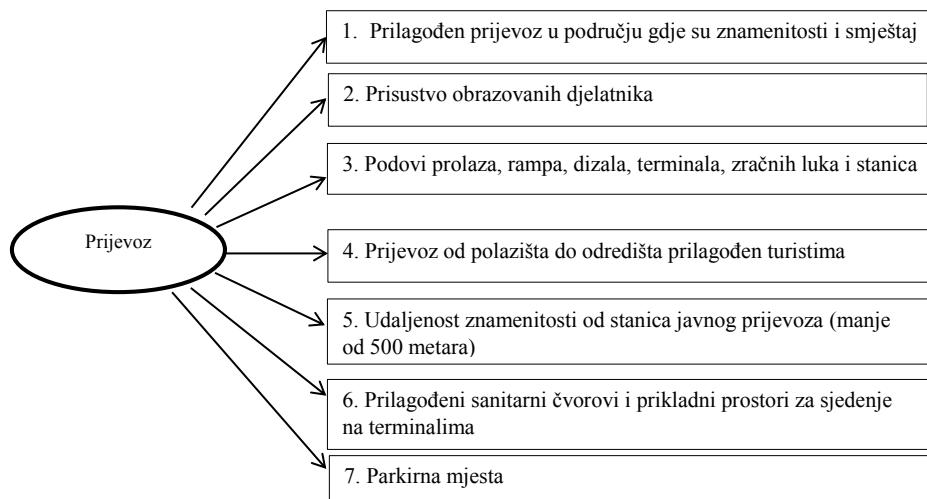
**Question 4:** To what extent were the principles and standards fitting for the people with physical and motor disabilities met in Tehran's tourism transportation?

A part of the questionnaire consisted of seven questions aimed at investigating fitting

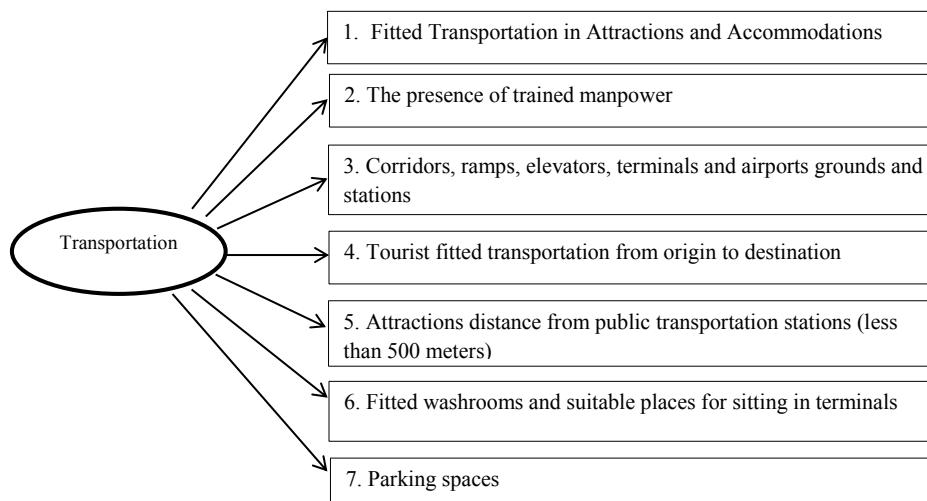
be u turističkom prijevozu. Prema dobivenim rezultatima, većina odgovora potvrdila je da ne postoje dobra ili ispravna rješenja u području prijevoza iz perspektive osoba s tjelesnim invaliditetom i motoričkim potreškoćama, a odgovori se nalaze u rasponu ‘neodgovarajući’ i ‘potpuno neodgovarajući’. Potkategorije prijevoza prikazane su na Slici 5 redoslijedom prema stupnju važnosti i faktoru kritičkog opterećenja.

tourism transportation to the people with disabilities. According to the findings, most of the answers confirmed there are no good and proper solutions in the transportation sector from the perspective of people with physical and motor disabilities and the answers were in the ‘inappropriate’ and ‘totally inappropriate’ range. Finally, the transportation subdivisions were arranged in terms of the highest level of importance and loading factor in the diagram below:

**Slika 5: Potkategorije prijevoza prema razini važnosti**



**Figure 5: Transportation subdivisions level of importance**



**Pitanje 5: U kojoj mjeri uklanjanje prepreka u okolišu za osobe s tjelesnim invaliditetom i motoričkim poteškoćama može pomoći razvoju turizma u Teheranu?**

Jedno od važnih pitanja na koje su ispitanici odgovorili odnosilo se na broj dana koje oni u prosjeku mjesечно provode na putovanjima kako bi se ocijenilo u kojoj mjeri prakticiraju turističke aktivnosti usprkos problemima poput niskih prihoda i ozbiljnog invaliditeta. Većina ispitanika, njih 29,1%, odgovorilo je da putuje na jedan dan, 16,6% uopće ne putuje, 13,1% putuje prosječno dva dana, a 12,6 % tri dana. Neki ispitanici su čak odgovorili da u prosjeku provedu 8 do 10 dana mjesечно na putovanju. Od znamenitosti koje odabiru prilikom turističkih aktivnosti i u slobodno vrijeme 55,8% se odnosi na prirodne znamenitosti, 29,6% na novosagrađene turističke sadržaje (hoteli, restorane, trgovачke centre itd.), a 14,6% na povijesne znamenitosti. Potrebno je ustaviti koje su vrste znamenitosti najzastupljenije te ih učiniti pristupačnijima i prilagoditi ih potrebama osoba s invaliditetom i tako pridonijeti razvoju turizma.

Pristupačni turizam usko je povezan sa sudjelovanjem osoba s tjelesnim invaliditetom i motoričkim poteškoćama u putovanjima i turizmu. Zbog toga je upitnik sadržavao i nekoliko pitanja kojima su ispitanici trebali ocijeniti prepreke u okolišu u sustavu turizma, a potom su smještaj, prijevoz i znamenitosti razmotreni zasebno te su ocijenjene njihove razine prilagođenosti za turiste i posjetitelje s tjelesnim invaliditetom i motoričkim poteškoćama.

Rezultati pokazuju da je 53,3% ispitanika u dobi između 26 i 35 godina, 23,1% između 15 i 25 godina, 19,1% između 36 i 45 godina, a ostali su u dobi iznad 45 godina. Žene čine 48,7% ispitanika, a 51,3% čine muškarci. Rezultati pokazuju da osobe s invaliditetom imaju najniže prihode (62,8% ih ima prihode manje od 190 USD, 2,6% između 190 i 318 USD), a u usporedbi s osobama bez invaliditeta, više ih je nezaposleno. Većina ispitanika

**Question 5: To what extent can removing environmental barriers for people with physical and motor disabilities help the development of Tehran's tourism?**

An important question the respondents answered referred to the average number days/trips per month in order to assess the extent to which they engage in tourism activities despite the problems such as low income and severe disabilities. Most answers were 'one day' – exactly 29.1% while 16.6% did not report any trips, 13.1% travel two days on average, and 12.6% take 3 day trips. Some respondents even reported tourism activities lasting from 8 to 10 days on average. The attractions that they chose for tourism activities and leisure were natural attractions (55.8%), followed by man-made attractions such as hotels, restaurants, shopping centers, etc. (29.6%) and historical attractions (14.6%). Thus, it needs to be identified what types of attractions are most popular and make them more accessible and fitting to the needs of the people with disabilities for tourism development

Accessible tourism is closely related to the participation of the people with physical and motor disabilities in travel and tourism. For this purpose, several questions were designed to assess the environmental barriers in tourism sector and then accommodation, transportation and attraction were reviewed separately, and their fitting condition was evaluated for tourists and visitors with physical and motor disabilities.

According to the results, 53.3% of the respondents were aged 26 to 35, 21.1% 15 to 25, and 19.1% 36 to 45 while the rest were over 45. As many as 48.7% of the respondents were women and 51.3% were men. It was also observed that people with disabilities have the lowest income (62.8% have less than \$190, 20.6% between \$190 and \$318) and compared with their counterparts without disabilities more of them are unemployed. The majority of respondents live in small (46.2%) and medium families (42.2%).

živi u malim (46,2%) i srednje velikim obiteljima (42,2%). Kad je riječ o obrazovanju, najveći udio (33,7%) čine osobe s razinom prvo-stupnika, a 27,1% završilo je diplomsku razinu obrazovanja. Što se tiče stupnja invaliditeta ispitanika, 52,8% ih ima teški invaliditet, 26,1% srednji invaliditet, a 21,1% blagi invaliditet.

U sustavu turizma u kojima osobe s invaliditetom i motoričkim poteškoćama najviše sudjeluju su prijevoz (59,8%) i znamenitosti (24,6%), dok je smještaj (15,6%) manje značajan. Na pitanje o marketinškim aktivnostima vezanim uz znamenitosti i prilagodbama u smještaju, najviše ispitanika ocijenilo ih je ‘posve neodgovarajućima’ (32,2%) i ‘neodgovarajućima’ (31,7%). Na kraju, na pitanje o aktivnostima javnih i privatnih organizacija oko prilagođavanja raznih aspekata turizma osobama s invaliditetom većina (35,2%) ispitanika ocijenila ih je ‘slabima’.

Glavna pitanja u ovom istraživanju odnose se na pristupačnost i prilagodbe smještaja, prijevoza i znamenitosti te ćemo ih u nastavku detaljnije opisati.

#### **Pitanja koja se odnose na smještaj**

Većina ispitanika je načela i standarde prilagodbe parkinga ocijenila kao ‘prosječne’.

Većina ispitanika je vanjske putove, ulaze u zgrade i predvorja, unutarnje prolaze, sanitарне čvorove, restorane, sobe i apartmane i broj prilagođenih soba ocijenila ‘slabima’. Kad je riječ o obučenim djelatnicima i poklanjanju pažnje prostoru i toleriranju osoba s invaliditetom, ispitanici su ih ocijenili ‘potpuno neodgovarajućima’.

Rezultati pokazuju da, s obzirom na prepreke, razni glavni elementi smještaja nisu u poželjnom stanju te je samo stanje parkinga ocijenjeno ‘prosječnim’ dok su uvjeti u drugim dijelovima ocijenjeni kao ‘neodgovarajući’ i ‘potpuno neodgovarajući’.

#### **Pitanja koja se odnose na znamenitosti**

Najviše ispitanika ocijenilo je ‘slabima’ načela i standarde prilagodbe pristupnih cesta, parkinga, visine stolova u restoranima

In terms of education, the highest percentage had bachelor degrees (33.7%), and diplomas (27.1%). The disability level of the respondents includes severe disabilities (52.8%), average disabilities (26.1%) and low disabilities (21.1%).

The parts of tourism in which people with physical and motor disabilities are most engaged in are transportation (59.8%) and attraction (24.6%), while accommodation is less prominent (15.6%). The most responses regarding the question about marketing attractions and accommodation fitting were ‘totally inappropriate’ (32.2%) and „inappropriate“ (31.7%). Finally, most responses to the question on public and private organizations’ operations in fitting the tourism aspects to the people with disabilities, the majority (35.2%) regarded them as ‘weak’.

The main questions in this study related to accessibility and fitting the accommodation, transportation and attractions, and we shall further discuss them.

#### **Questions related to accommodation**

The most respondends observed the principles and fitting standards in parking facilities as ‘average’.

On outside routes; building entrances and lobbies; domestic routes; washrooms; restaurants; rooms and suites and the number of fitted rooms, the most responses were ‘weak’. With reference to trained manpower, and paying attention to space and tolerance of people with disabilities, the answer was ‘totally inappropriate’.

It can be seen that, regarding the barriers, different main elements of accommodation are not in desirable condition and only parking received the ‘average’ evaluation, while the conditions in other aspects were assessed as ‘inappropriate’ and ‘totally inappropriate’.

#### **Questions related to attractions**

Most answers about observing the principles and fitting standards in access routes; parking; table height in restaurants and width

i širine prolaza u trgovinama, vidikovaca i promatračnica, dizajna pristupačnih klupa i stolova za piknik dok su kategoriju obrazovanih djelatnika ocijenili 'potpuno neodgovarajućom'. Potkategorija koja se odnosi na znamenitosti također je pokazala loše rezultate jer su ih osobe s invaliditetom ocijenile 'neodgovarajućima'.

### **Pitanja koja se odnose na prijevoz**

Većina ispitanika je 'neodgovarajući' ocijenila načela i standarde prilagodbe na parkinzima, u prijevozu od polazišta do

of stores corridor; sightseeing and watch towers; designing accessible benches and picnic tables was "weak", while the assessment of trained manpower was evaluated as 'totally inappropriate' from the perspective of respondents. The attractions subcategory also generated poor scores receiving the 'inappropriate' evaluation from the people with disabilities.

### **Questions related to transportation**

The most answers on observing the principles and fitting standards for the disabled were regarded as 'inappropriate' in the areas

**Slika 6: Konačni model istraživanja**



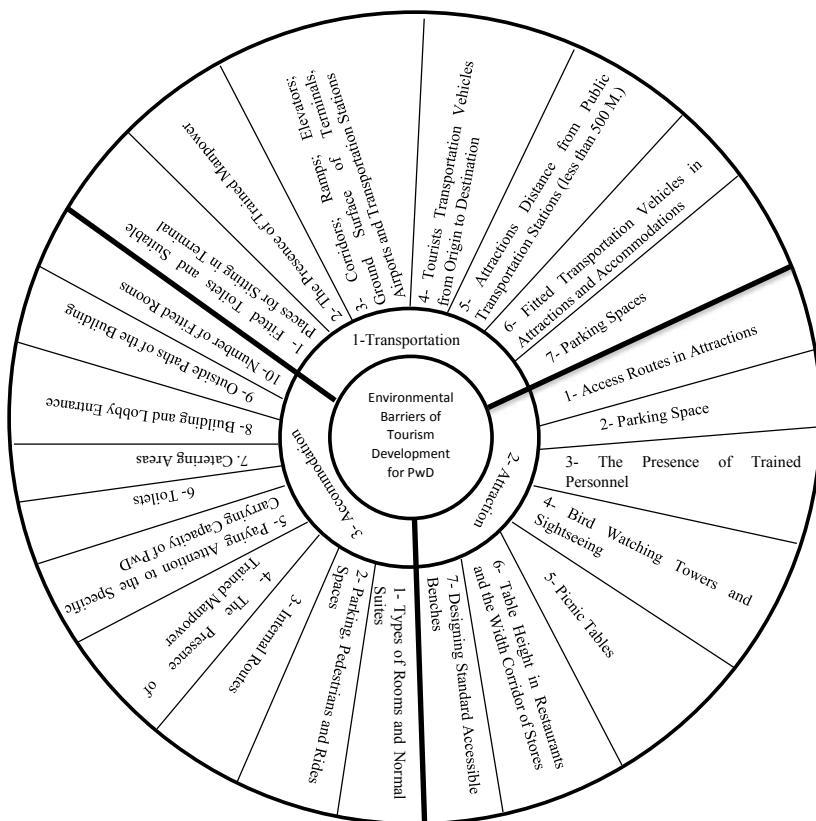
odredišta, na zgradama terminala i zračnih luka (prolaza, rampi, dizala itd.) i na stanicama javnog prijevoza te kod prisutnosti obrazovanih djelatnika. Istovremeno, većina ispitanika je 'potpuno neodgovarajućim' ocijenila prijevoz za osobe s invaliditetom na područjima gdje se nalaze znamenitosti i smještaj, udaljenost znamenitosti i rekreacijskih sadržaja od stanica javnog prijevoza te oblikovanje prikladnih prostora za sjedenje i prilagođenost sanitarnih čvorova na terminalima.

Na kraju, na osnovu rezultata istraživanja, mogli smo oblikovati konačni model i ustanoviti koje to prepreke u okolišu u razvoju turizma postoje za osobe s invaliditetom prema njihovoj važnosti i potrebama.

of parking, transportation for tourists from origin to destination, terminals and airports buildings (corridors, ramps, elevators, etc.) and transportation stations, as well as the presence of trained manpower. Most answers to questions on transportation for people with disabilities in attractions and accommodation, attractions and leisure facilities' distance from public transportation stations, as well as the design of suitable sitting places and fitted washrooms on terminals was assessed as 'totally inappropriate'.

Finally, the research findings produce the final model to indentify the environmental barriers to tourism development for people with disabilities with respect to their priorities and necessities.

**Figure 6: The final research model**



## 6. ZAKLJUČAK

Svi uvjeti navedeni u ovom radu mogu biti razlogom nedovoljnog sudjelovanja osoba s tjelesnim invaliditetom i motoričkim poteškoćama u turističkim aktivnostima i slabe iskoristenosti tog tržišnog segmenta.

Čini se da javne organizacije i privatni sektor nisu poduzeli djelotvorne mјere vezane uz poboljšanje okoliša i prilagođavanje turizma te pomaganje osobama s invaliditetom u turističkom sustavu. Prijevoz predstavlja najvažniji problem i prepreku putovanju i turističkim aktivnostima osoba s tjelesnim invaliditetom i motoričkim poteškoćama. Može se zaključiti da teheranski turizam ima mnogo nedostataka te je 'neodgovarajući' i 'potpuno neodgovarajući' za klijente s invaliditetom. Tržište klijenata s invaliditetom postaje sve važnije i upravljanje njegovim potencijalima postalo je ključnim izazovom za djelatnike u turizmu. Otkrivši važnost tržišta koje čine osobe s invaliditetom, mnoge zemlje ciljaju upravo na taj segment kako bi osvojile njegov što veći dio. Prepreke u okolišu (nedostatak prilagođenog smještaja, turističke znamenitosti i prijevoz) prepoznate su kao glavne prepreke i ograničenja putovanjima za tu skupinu ljudi. Njihovim uklanjanjem pristupačni turizam i putovanja osoba s posebnim potrebama mogu postati značajnom tržišnom nišom i treba ih koristiti u oglašavanju i u odnosima s javnošću. Vlasnici poduzeća koje se bave turizmom mogu privući te skupine turista uvodeći potrebne prilagodbe i tako se istaknuti na tržištu te to iskoristiti kao svoju konkurentsku prednost. Nažalost, ni Iran ni mnoge druge zemlje u planiranju i marketingu još nisu poduzeli potrebne mјere kojima bi iskoristili to potencijalno tržište. Rezultati ovog istraživanja imaju praktične implikacije za menadžere koje zanima privlačenje segmenta turističkog tržišta koji se odnosi na osobe s invaliditetom. Ti rezultati mogu biti važni iz (1) operativne perspektive (poboljšanja ili prilagodbe lokacija potrebama klijenata) i (2) iz perspektive marketinga/promocije (komunikacija s oso-

## 6. CONCLUSION

All conditions listed in the article can account for low participation of people with physical and motor disabilities in tourism activities and the underdevelopment of the market sector.

It seems that public organizations and the private sector have not undertaken effective measures regarding environmental empowering, fitting tourism and enabling people with disabilities in tourism sector. Transportation facilities are the most important problem as a barrier for travel and tourism activities for people with physical and motor disabilities. It can be said that Tehran's tourism has a lot of shortcomings and is inappropriate and totally inappropriate for customers with disabilities. Customers with disabilities market is becoming increasingly important, and operating its potentials has become a key issue for tourism insiders. Recognizing the importance of the market for people with disabilities, many countries have been targeting it to conquer a larger amount of the market share. Environmental barriers (lack of fitted accommodation, tourism sites and transportation) have been recognized as the main obstacles and travel restrictions for these people. By removing them, accessible tourism and travel of people with special needs can be seen as a niche market and should be used in advertising and public relations. Tourism business owners can attract this group of tourists by fitting their facilities and thus distinguishing themselves in the market use it as their competitive advantage. Unfortunately, Iran and many countries have not yet undertaken the planning and marketing measures to use this potential market. These findings have practical implications for managers who are interested in attracting the market sector for people with disabilities in tourism. The findings may be substantial from (1) an operational perspective (improvement or fitting locations according to customers' needs) and (2) from marketing/promotion perspective (communicating

bama s invaliditetom koje turistički objekt može uslužiti). Osobe s invaliditetom trebalo bi potaknuti na sudjelovanje u turističkim aktivnostima kako bi poboljšale kvalitetu svojeg života. Štoviše, trebalo bi ukloniti prepreke ne samo za osobe s invaliditetom, već i za svakoga, uključujući i starije osobe. Na svima nama je odgovornost da poboljšamo kvalitetu života svojih obitelji i, u širem smislu, cijelog društva.

Na osnovu prikupljenih podataka i rezultata ovog istraživanja, moguće je dati neke preporuke u vezi s uklanjanjem prepreka u okolišu u razvoju turizma za osobe s invaliditetom i motoričkim poteškoćama kao i poboljšati uvjete turizma u Teheranu za klijente s invaliditetom. Te preporuke mogu biti korisne za menadžere u turizmu, marketing usluga, donositelje odluka u nacionalnim vladinim i nevladinim organizacijama u Iranu, poput onih u Teheranu; za kulturnu baštinu, zanate i turističke organizacije Irana i Teherana; za državne humanitarne organizacije u Iranu i Teheranu; za turističke agencije u Teheranu itd. One im mogu pomoći pri planiranju prostora te kodificiranju metoda za osiguravanje pristupačnosti te pri kreiranju alata za evaluaciju i pravnih alata u različitim dijelovima turizma; pri kreiranju alata i metoda za izdavanje certifikata i dodjeljivanje oznaka tvrtkama koje nastoje uvesti prilagodbe i ukloniti prepreke u okolišu. Vlada bi trebala poduzeti mјere za razvoj tržišta za klijente s tjelesnim invaliditetom i motoričkim poteškoćama. Institucije i sveučilišta koje se bave turizmom i ugostiteljstvom trebali bi provoditi edukacije o pristupačnom turizmu, a menadžeri i zaposlenici poduzeća u turizmu trebali bi proći kratke tečajeve o potrebama osoba s invaliditetom. U središnjoj i pokrajinskoj Organizaciji za kulturnu baštinu, zanate i turizam trebali bi postojati i posebni odjeli koji bi osobama s invaliditetom pružali potrebne informacije. Oni bi klijentima davali informacije o tome kamo ići, kako doći do tamo, gdje odsjesti i slično. Lokalna poduzeća i internetske stranice turističkih agencija trebale bi davati informa-

with a person with disabilities that the place is ready to serve). People with disabilities should be encouraged to join tourism activities in order to improve their quality of life. Moreover, barriers must be removed not only for people with disabilities but also for everyone including the elderly. We all have a shared responsibility to improve the quality of life of our families and, on a larger scale, the society.

According to the findings and results of this study, some recommendations can be made to remove environmental barriers to tourism development for people with physical and motor disabilities as well as to improve Tehran's tourism conditions for customers with disabilities. These recommendations can be useful for tourism business managers, services marketers, decision-makers in national governmental and non-governmental organizations in Iran like the municipality of Tehran; for cultural heritage, handicrafts and tourism organizations in Iran and Tehran; for state welfare organization of Iran and Tehran; for travel agencies in Tehran, etc. They may assist in physical planning and codifying methods for accessibility, in creating assessment and legislation tools for different parts of the industry; in creating tools and methods for issuing certification and sticking guide labels for firms attempting to fit and removing environmental barriers. The government should take measures to develop the market for customers with physical and motor disabilities. Institutions and universities related to tourism and hospitality should provide training courses on accessible tourism and managers and employees in different tourism sectors should attend specific short-term training courses for serving the needs and wants of the people with disabilities. Separate service units in central and provincial Cultural Heritage, Handcrafts and Tourism Organization should provide information to people with disabilities. The information should include where to go, how to get there, where to stay and so on. Local companies and travel agencies' websites

cije potrebne osobama s invaliditetom koje uključuju mogućnosti putovanja i ugovaranja putnih aranžmana preko Interneta. Turističke agencije i hoteli trebali bi imati vozila za prijevoz osoba s invaliditetom. Uz to, hoteli bi trebali imati pristupačne sobe/apartmane (oko 4% od ukupnog broja soba) i ostale sadržaje za goste, poput prostora za vježbanje i rekreaciju, unutrašnjih bazena, poslovnih centara i pravonika.

Ograničenja ovog istraživanja vezana su uz uzorak na kojemu je ono provedeno. Primjerice, zbog svojeg tjelesnog invaliditeta i motoričkih poteškoća, mnogi ispitanici nisu bili fizički u stanju ispuniti upitnik. U tim slučajevima su istraživači trebali biti uključeni u postupak. Drugo ograničenje bio je nedostatak suradnje između najviše razine menadžera i obrazovnih odjela nekih udruga i ustanova prilikom distribuiranja upitnika i provođenja istraživanja. Zadnje ograničenje bilo je vezano uz dostupnost literature, načito u ovom slabo istraženom području. Nekoliko je prijedloga za daljnja istraživanja, poput istraživanja prepreka u okolišu za ljudе s invaliditetom prema vrsti invaliditeta: tjelesnom, invaliditetom vezanom uz smetnje sluha ili vida, te mentalnom invaliditetu, jer se svaka od navedenih skupina suočava s različitom vrstom prepreka u okolišu; potom istraživanja i proučavanja osobnih i interpersonalnih prepreka kod osoba s invaliditetom u turizmu; utvrđivanja prikladnih oblika putovanja za osobe s posebnim potrebama (osobe s invaliditetom, starije osobe itd.) u različitim gradovima, osobito onim većim, i u turističkim destinacijama.

should provide information necessary for the people with disabilities including travel opportunities and arranging travel packages on their web pages. Travel agencies and hotels should have transportation vehicles for travelers with disabilities. Also hotels should have guestrooms/suites (about 4% of total rooms) and other guest amenities, such as exercise/recreational areas, interior pools, business centers, and guest laundry accessible accessible to people with disabilities.

The limitations of this research are related to the statistical sample. Namely, due to their physical and motor disabilities, many of the respondents did not have the physical ability to fill in the questionnaire. In those cases the researchers had to be involved in the process. Another limitation was the lack of cooperation between top-level managers and educational departments of certain associations and institutions while distributing questionnaires and conducting the research. The final limitation is related to the poor access to literature, especially in this scarcely researched field of study. Future research can also include several suggestions, such as investigating environmental barriers for people with disabilities separately: physical, auditory, visual and intellectual, because each group faces different kinds of environmental barriers; investigating and studying personal and interpersonal barriers for people with disabilities in tourism; determining travel patterns for people with special needs (people with disabilities, the elderly, etc.) in various cities, especially major cities and tourism destinations.

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