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Assessing Sharm El-Sheik Diving Centers' Ability to Provide Services for Tourists with Special Needs

Nesreen Khairy Ali

Aya Mohamed Magdy

Tourism Studies Department- Faculty of Tourism and Hotels- Minia University.

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Abstract

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Disability is an ancient concept that has existed for as long as people have existed. In various fields, tourists with special needs face various challenges and injustices. Recognition of tourists with special needs as a niche tourist market for scuba diving tourism is emerging. The diving activities have a huge impact on improving the quality of life of tourists with special needs. This research aims to determine the diving services provided for tourists with special needs by diving centers in Sharm El-Sheik and identify the obstacles facing diving centers to offer high-quality services for tourists with special needs. Moreover, many recommendations were suggested to improve diving services for tourists with special needs. To achieve this, the quantitative approach in this study depended on questionnaires that were prepared and distributed to all diving centers in Sharm El-Sheik. The questionnaires were analyzed using descriptive statistics, reliability analysis, coefficient analysis with the support of SPSS 25.0. The study presented many findings; a few diving centers in Sharm El Sheikh provide services for tourists with special needs. Furthermore, there is a deficiency in providing diving services to tourists with special needs due to insufficient qualified instructors. On the other hand, there is also a lack of equipped boats. The research recommended that diving centers should pay attention to provide services to tourists with special needs and mitigate the obstacles for them as this market is a promising market that will generate significant income.

1- Introduction

Disability is commonly perceived as a permanent challenge, and tourists with special needs are often seen as individuals affected by unfortunate circumstances regarded as pitiable figures by society. Although there have been significant advancements in medicine, disabilities continue to be prevalent in communities worldwide (Kubicki, 2019).

McKercher et al. (2003) identified multiple obstacles that could restrict the travel of seniors or tourists with special needs. These barriers include architectural hindrances (such as inaccessible accommodations), ecological obstacles and attitude barriers (such as negative attitudes from service providers). Moreover, there are transportation barriers, legal barriers (such as rules or regulations that prohibit tourists with special needs from bringing necessary equipment), and communication and information barriers.

Tourists with special needs encounter a variety of problems, ranging from mental health issues to biological deficiencies and deficiencies in the motor system (Pearson, 2016). The experience of an individual dealing with an illness or disability varies from person to person in their approach to daily life. The attempt to adapt to a new situation is influenced by factors such as the severity and nature of the disability and the individual's personality, family background, and financial situation. Predicting how individuals adapt to a new situation is challenging due to the multitude of factors involved (Henrykowska et al., 2021). It is widely recognized that effective and thorough rehabilitation is crucial for enhancing one's condition and adjusting to a disability.

Recently, diving has gained popularity as a fashionable, prestigious, and highly engaging recreational activity (Musa and Dimmock, 2013). Diving can be regarded as a multifaceted form of therapy conducted in water (Pearson, 2016), enabling individuals with and without disabilities to engage in shared activities (Carin-Levy and Jones, 2007). Rehabilitation entails stimulating the human body through social interactions and participation in classes and influencing the mental and physical aspects. Water-based classes and diving activities facilitate the overcoming of obstacles associated with unfamiliar aquatic environments. These activities promote the restoration of bodily self-awareness and the recognition of one's movements. They also enhance the ability to perceive body positioning and direct movements and foster increased autonomy in water (Kovacs and Walter, 2015).

Muscles can relax in an aquatic environment, which may help with spasticity and improve joint range of motion that is frequently severely restricted in the natural world (Bartels et al., 2016). Essentially, it facilitates the enhancement of movement and coordination in a significantly simpler manner than in a land-based setting. These exercises have a beneficial impact on the respiratory system and blood circulation due to the acquisition of proper breathing techniques (Garcia et al., 2012). Engaging in diving allows individuals to acquire and exhibit self-reliance by ensuring their own safety and the safety of their companions. Diving fosters social interaction, allowing individuals to engage with non-disabled individuals and those with locomotor impairments. This creates a sense of belonging and accountability within the group (Kubicki, 2019).

Moreover, diving has the potential to overcome the restrictions caused by disabilities (Abdelkarem, 2019). It frequently allows tourists with special needs to surpass the capabilities of their able-bodied counterparts, who typically engage in average physical activity levels. Recognizing oneself as a person with special needs and engaging in unconventional activities enhances the sense of uniqueness among individuals with special needs, thereby facilitating the acceptance of their condition (Aganovic, 2019). Nevertheless, it is important to acknowledge the potential perils and dangers associated with scuba diving. In addition to the individual's initial health condition, various factors that can impact the human body during diving include water pressure, breathing gas composition, temperature, diving environment, psychological barriers, and potential equipment issues.

All individuals, regardless of their disabilities, must adhere to the regulations on diving, possess knowledge of potential dangers, and make efforts to overcome any challenges associated with this particular activity (Lucrezi et al., 2018). Furthermore, tourists with special needs must consider their impairments, which could affect their preparations for diving and navigating underwater. Moreover, these dysfunctions can impede the ease of using scuba diving equipment or hinder communication. An effective approach in such circumstances would involve altering and customizing the fundamental equipment to suit the specific requirements of divers with disabilities. Individuals who aid or support in diving activities can also offer significant assistance (Henrykowska et al., 2021). They are accountable for

overseeing the equipment of individuals with special needs and for all the tasks they cannot carry out. In order to interact with the assistants, it is necessary to establish a specific method of communication, which may need to be modified and adjusted according to one's needs (Aganović, 2019).

This study addresses the need to encourage sustainable development goals to enhance accessibility in the tourism sector. Furthermore, considering the significant influence of tourists with disabilities on the potential demand for accessible tourism, it is important to examine the readiness of current scuba diving facilities provided by diving centers.

The Research Problem

Although each society has an average of 10% of people with disabilities, the tourism industry has ignored the lucrative market for tourists with special needs (Bowtell, 2015). Tourists with special needs face various challenges. However diving may help to overcome limitations caused by disability (Henrykowska et al., 2021). Scuba diving can positively affect the physical and psychological well-being of individuals with disabilities (Guntur et al., 2023). Tourists with special needs often have difficulty obtaining appropriate facilities and infrastructure for practicing diving activities (Darcy and Pegg, 2011). Moris et al. (2021) clarified that there is a clear lack of awareness in the tourism industry of accessible tourism.

On the other hand there are insufficient researches related to diving for tourists with special needs. Therefore, the current research problem focuses on assessing to what extent the diving centers in Sharm El-Sheik can provide services to tourists with special needs.

The Research Aim and Objectives

The main aim of the research is to investigate the services provided to tourists with special needs by diving centers in Sharm El-Sheik. Some objectives were set in order to fulfill the research's main aim:

- 1- Determining the diving centers which provided services for special needs in Sharm El-Sheik.
- 2- Identifying the diving services which be provided for special needs by diving centers in Sharm El-Sheik.
- 3- Explaining the diving centers' benefits of providing services to tourists with special needs.
- 4- Clarifying the obstacles which facing diving centers to offer services for tourists with special needs.
- 5- Identifying the suggestions to improve diving services for tourists with special needs in Sharm El-Sheik.

The Research Questions

There are five questions for this research as follows:

- 1- How many diving centers provide services for tourists with special needs?
- 2- What are the services that diving centers provide to tourists with special needs in Sharm El-Sheik?
- 3- What are the diving centers' benefits of providing services to tourists with special needs in Sharm El-Sheik?
- 4- What are the obstacles facing diving centers in offering good services for tourists with special needs?

5- What are the suggestions to improve diving services for tourists with special needs in Sharm El-Sheik?

2- Literature Review

2.1 Scuba Diving

Diving is a type of specialized tourism that is highly appealing but also carries significant risks due to its engagement in an aquatic environment, which differs from land. This environment involves various external factors such as pressure, visibility, temperature, breathing conditions, and underwater orientation. Engaging in diving cultivates self-reliance, accountability, and aptitude for collaboration within a collective setting (Henrykowska et al., 2021). The integration of people with special needs often serves as an opportunity for them to compensate for, or even overcompensate, their disabilities (Patkiewicz, 2015).

Musa and Dimmock (2013) found that diving is a widely favored recreational activity in the marine environment for tourists. Once regarded as a challenging and daring pursuit, it is increasingly considered a less intense form of adventure. This change occurred due to the ongoing development of increasingly efficient and secure equipment. It has experienced exponential growth to captivate many individuals with a keen interest in the ocean, lakes, and rivers.

Scuba diving is a form of underwater diving where the diver relies on self-contained equipment to breathe while submerged, without any reliance on surface supply. Scuba divers transport their breathing gas supply, typically compressed air, which allows them more mobility than other types of dives that rely on direct supply from the surface. Additionally, scuba diving offers longer underwater duration than freediving or breath-holding dives (Guntur et al., 2023). The underwater environment, characterized by denser water compounds than air, is inherently unsuitable for humans. However, the buoyant nature of this environment enables individuals to experience a sensation of weightlessness. The aquatic environment provides significant support for persons with disabilities to improve their physical and mental conditions (Patkiewicz, 2015).

According to Morgan et al., (2019); Professional Association of Diving Instructors, PADI (2021), Scuba refers to "self-contained underwater breathing apparatus". The equipment of Scuba diving are mask to see underwater, regulator to breathe underwater, a wetsuit to allow the body to retain its own heat effectively, dive computer to know how long people can stay at depth and fins. The equipments also include snorkeler to allow tourist to swim at the surface of the water with his face, cylinder to store compressed air to dive 30 minutes to an hour and Buoyancy Control Device (BCD). This BCD is a jacket which forms the heart of gear and holds the air cylinder.

People with physical disabilities can partake in scuba diving, as it offers an experience that transports all participants to a realm of liberation and buoyancy. Engaging in diving can enhance both physical well-being and mental states, providing a tranquil and gratifying experience that uplifts the diver's mood and provides a respite from any constraints. Numerous diving programs are available that can be customized to suit the specific requirements of individuals, enabling those who are interested to achieve professional proficiency (Henrykowska et al., 2021).

2.2 Disability

The effect of disability is increasing in contemporary societies, impacting their functionality. The proportion of people with disabilities in the worldwide population is steadily rising. Approximately 4–7 million people with special needs currently reside in

Poland, with over 3 million possessing disability certificates issued by the relevant authority (Kubicki, 2019). The range of impacts caused by disability is exceedingly wide. These issues encompass not just the physical realm but also the mental and social aspects and can substantially impact one's quality of life (Henrykowska et al., 2022).

Disabilities can be categorized into two distinct types: mental disabilities and physical disabilities. The first refers to a notable decrease in overall intellectual functioning and impairments in adaptive behavior (Bosco et al., 2018). The second category encompasses disabilities related to the locomotor system, such as absence or partial absence of limbs (either due to congenital malformation or amputation resulting from illness or accidents), impairments of the nervous system (such as paraplegia or tetraplegia), abnormal skeletal formation, and joint impairments (caused by conditions like rheumatic diseases or sports-related injuries). Furthermore, it encompasses sensory dysfunctions, such as visual, auditory, and speech impairments, as well as chronic ailments affecting the internal organs (Morgan et al., 2019).

Buhalis et al. (2005) argue that when comparing the medical and social models of disability, there is a noticeable shift in how disability is perceived over time. It is crucial to alter perspectives and acknowledge that only a minority of people are born with disabilities. This recognition will greatly contribute to the elimination of current obstacles.

Tourism for people with special needs is characterized by an increase in spending, as the per capita spending rate is 20-30% higher than that of the average tourist. Thus, it becomes a profitable market. This segment of tourists is characterized by loyalty and frequent visits to the tourist destination if the appropriate environment is available that meets all their needs (European Network for Accessible Tourism, ENAT, 2016).

2.3 Diving for Tourists with Special Needs

In recent years, SCUBA diving has become increasingly popular and prestigious and is now regarded as an engaging recreational pursuit. Both individuals with good health and those with special needs demonstrate an interest in it (Henrykowska et al., 2022). Unlike snorkeling, which involves swimming near the water's surface with a mask and breathing tube, scuba diving enables divers to breathe while submerged underwater comfortably, fully immersing themselves in the ocean's depths (Kubicki, 2019). Diving can serve as an all-encompassing rehabilitation technique. This therapy modality enhances human existence's physical and mental aspects (Morgan et al., 2019).

The aquatic environment offers expanded opportunities for tourists with special needs. Engaging in aquatic exercises, which require mastering proper breathing techniques, can invigorate the respiratory and circulatory systems (McNamara et al., 2013). Aquatic environments enhance the execution of movements that may be greatly restricted on land (Morgan et al., 2019). The aquatic environment facilitates muscle relaxation and enhances the extent of movement. The technology enables tourists with special needs to perceive the location and motion of their bodies and limbs, control their movements, and enhance their sense of autonomy (Henrykowska et al., 2022).

According to Henrykowska et al. (2021), diving can be beneficial in overcoming limitations associated with disabilities. It is not uncommon for people with special needs to outperform their non-disabled peers with average levels of physical activity when engaging in diving. Engaging in unconventional activities can provide a person with a disability a sense of uniqueness, thereby aiding in their acceptance of their condition (Aganović, 2019). Scuba diving has the potential to enhance the involvement of tourists with special needs in physical activity, thereby expanding their participation in social life and exposing them to novel

experiences. According to Bosco et al. (2018); Aganović (2019), it has the potential to decrease anxiety and depression, as well as enhance self-esteem and self-confidence. However, it is important to acknowledge the potential risks and hazards associated with scuba diving. Aside from the initial health condition, various factors that affect the human body include water pressure, breathing gas, temperature, diving environment, mental barriers, and potential equipment issues.

Tourists with special needs are constantly seeking rehabilitation techniques and approaches that can enhance their daily functioning. Given the rising popularity of scuba diving as a trendy and captivating recreational pursuit, it is imperative to ascertain its therapeutic benefits and assess its safety for tourists with special needs (Henrykowska et al., 2022).

Egypt provides numerous accessible destinations and sites well-suited for individuals with physical disabilities. The optimal water temperature, excellent visibility, and pleasant weather make it an ideal diving destination. By selecting a suitable location, ensuring favorable conditions, and adhering to safety protocols, divers with physical disabilities can partake in a remarkable experience provided by diving operators catering to their needs. According to CDWS, Camel Dive Club and Big Blue Diving Center are the most equipped centers which can provide diving services to tourists with special needs in Sharm El-Sheik (Chamber of Diving and Water Sports, CDWS, 2023).

2.4 The Benefits of Scuba Diving for Tourists with Special Needs

The advantages of scuba diving for tourists with special needs are significant. This activity enables individuals to enhance muscle tone, fortify their cardiovascular system, and enhance joint mobility, promoting their mental, physical health and social well-being (Abdelkarem, 2019; Henrykowska et al., 2021; 2022). A study highlighted the rehabilitative advantages of scuba diving, which encompasses a holistic stimulation of the human body through social interaction, restoration of bodily awareness and movement capabilities, and enhancement of water-related self-sufficiency. Utilizing the aquatic environment enables muscle relaxation and frequently enhances joints' extremely restricted range of motion in a natural setting. Engaging in diving fosters social interaction and offers the chance to be part of a diverse group comprising individuals with and without disabilities, leading to a favorable psychological state (Guntur et al., 2023).

Moreover, for certain individuals, it is the sole form of physical activity they can engage in. Significantly, considering that 15 percent of the global population consists of individuals with disabilities (PWD) (World Health Organization, 2015), the concrete and abstract health advantages provided by scuba diving serve as a compelling force that draws interest from the PWD market (Carin-Levy and Jones, 2007; Henrykowska et al., 2021).

2.5 Obstacles and limitations for Tourists with Special Needs in Diving

Tourists with special needs come across additional obstacles and limitations resulting from their type of disability as follows:

2.5.1. Inefficient lower limbs

people who have undergone amputations or have paraparesis experience difficulties with propulsion. They do not employ the fundamental and efficient method of underwater propulsion using fins. Their hands serve as the means of propulsion. Another challenge arises in this context: the manual dexterity required for underwater movement restricts the ability to grasp and manipulate various tools and objects, such as a flashlight, a device, a camera, and other items (Henrykowska et al., 2022). This issue is resolved through the utilization of

various tools such as head torches or torches affixed to the diving equipment, as well as suspended bags, among other options (Moris et al., 2021).

People who propel themselves underwater solely with their hands, without fins on their feet, expend greater energy, particularly when traversing longer distances at a rapid pace or swimming against the current. Consequently, their diving apparatus consumes more breathing gas, reducing diving time. To mitigate such issues, diving apparatus employ bottles with increased capacities or higher pressure of the breathing gas. In addition, specialized subaquatic scooters or motorized wheelchairs equipped with controls are utilized (Bowtel, 2015).

2.5.2. Inefficient Upper limbs

People who have undergone amputations or suffer from upper limb paresis face difficulties in manipulating diving equipment, boarding the boat, communicating underwater, and transporting the diving gear (Bowtel, 2015). For individuals with severe impairments like amputations or paralysis in both upper limbs, the assistance of a trained individual, and occasionally even two individuals, is required to accompany them during diving activities (Henrykowska et al., 2022). They provide assistance and ensure the safety of divers with special needs. They aid in donning and doffing the diving gear, which includes the suit, vest with the diving apparatus, fins, ballast, and mask. Additionally, they assist in equalizing the pressure in the middle ear by pinching the nose in the diving mask and controlling buoyancy through the use of the diver's equalization vest. Additionally, there are challenges associated with grasping a torch or other equipment. Due to limited manual dexterity, individuals communicate with their partner using an alternative system of signs. (Moris et al., 2021).

2.5.3. Transport of Diving Equipment

Physically disabled individuals encounter difficulties with transportation and the handling of diving equipment, particularly the weighty equipment such as diving bottle and ballast belts. Consequently, carriages are employed to transport the equipment, although the assistance of diving partners proves to be the most effective (Moris et al., 2021).

There are ongoing efforts to create inclusive diving programs for tourists with special needs. These programs aim to minimize the need for long-distance diving while wearing complete diving gear and transport divers directly to the diving site. (Henrykowska et al., 2022).

2.6 Practices and Facilities of Diving for Tourists with Special Needs

Handicapped Scuba Association (2021); Big Blue diving center, (2023); Camel Dive Club and Hotel (2023); Chamber of Diving and Water Sports, CDWS, (2023), identified many practices and facilities of diving for tourists with special needs as follows:

2.6.1. As Related to Transfers

A transfer refers to the act of relocating from one place to another. They are employing their upper limbs to elevate themselves from one position to another, or they are being hoisted by individuals from one position to another. These individuals would need help transferring from their wheelchair to the pool or boat deck, and then to another seat using a two-person lift. The instructor should inquire about the individual's preferred mode of transfer. Certain individuals possess special needs and necessitate a distinctive method of transfer. The instructor should refrain from seating individuals on hard surfaces without providing adequate protection, such as cushions.

2.6.2. As Related to Scuba Equipment

The instructor should put the Scuba equipment at the entry point to prevent substantial discomfort for the divers. People facing obstacles can utilize a 'highly flexible wetsuit' or lubricants like baby powder and silicone spray. An option to consider is a "emergency type wet suit", which is a wet suit designed for quick and easy wearing. It has zippers on the legs, hips, torso, and arms that securely fasten the neoprene material into a snug-fitting suit.

2.6.3. As Related to Communication

Instructors are required to maintain constant visual contact with divers in order to promptly interpret nonverbal cues, such as body language and facial expressions like nodding (indicating agreement) or shaking their head (indicating disagreement).

2.6.4. As Related to Accessibility Considerations

Accessibility refers to the ability of a wheelchair user to access and utilize all available amenities without requiring assistance independently and conveniently. It is important for diving centers to be prepared to overcome barriers that may be encountered in environments such as resorts, beaches, boats, and restaurants, as not all of these places are accessible to everyone. Handicapped parking spaces should design to be wider than regular parking spaces in order to accommodate the movement of wheelchairs in and out of vehicles. Accessible parking spaces should be situated in close proximity to building entrances and ramps that provide access to walkways.

2.6.5. As Related to Dive Boats and Crews

Providing guided and private guided trips is essential. Divers can join the main dive group and receive appropriate support both on the surface and underwater, based on their individual needs. Dive boats feature expansive deck spaces and a substantial, low dive platform. These facilitate effortless dive preparation, as well as smooth entry and exit from the water. Boats ought to be equipped with saloon areas that are accessible for people using wheelchairs. Additionally, Marine toilets are conveniently located on the dive deck to provide accessible facilities for people with special needs. Moreover, crew should pay close attention and listen to what individuals need as every disability requires different levels of assistance; a certain amount of planning is required to create the perfect dive trip. Some of dive staff should be certified as a specialized Diving Instructors for tourists with special needs. Ramp onto diving boat is very important and a hoist to lift the divers in and out of the water. Some of dive staff should be certified as a specialized Diving Instructors for tourists with special needs. Ramp onto diving boat is very important and a hoist to lift the divers in and out of the water.

Accessible cabins on the main deck with full wheelchair access around the deck and in the cabin are available. Training courses for the staff on how to deal with physically people with special needs should be provided. Adapted the swimming pools to accommodate wheelchairs, ensuring that divers can receive initial diving training and become familiar with diving equipment.

3. Methodology

This study aimed to determine the diving services which be provided by diving centers for tourists with special needs related to center strategy, transferring and accessibility, boat services, water services and providing training to tourists with special needs. Moreover, it aimed at clarifying the diving centers' benefits of providing services to tourists with special needs in Sharm El-Sheik. On the other hand, this study aimed at identifying the obstacles

which facing diving centers to offer good services for tourists with special needs and the suggestions to improve diving services for tourists with special needs.

The research selected Sharm El-Sheik because it is ranked among the best vacation destinations in the world. Sharm El Sheikh is located on the Gulf of Aqaba, about 300 km from Suez and 19 km from Ras Mohammed National park. The city has unique and diverse environmental and natural potentials, which makes it one of the main destination for attracting international and domestic tourism. In addition to being a global summer and winter destination loved by tourists for fishing, swimming and underwater diving. It has the largest diving centers equipped with the newest equipment. It has been classified as one of the four most beautiful cities in the world for the year 2005. Sharm El-Sheikh has a strong infrastructure of facilities and services, and that is why the city was able to win the UNESCO award for being selected among the five best cities of peace in the world out of 400 cities (South Sinai governorate, 2021).

The research focused on the tourists with physical disabilities as majority of diving centers provide services for physical disabilities more than other disabilities. This may be due to the fact that other types of disabilities require more facilities and experiences in dealing with them. It may also be due to few number of tourists with other disabilities who wants to have diving services.

Collecting data depended on a survey research strategy, utilizing a questionnaire. Saunders et al. (2016) defined the questionnaire as a singular data collection technique, specifically categorized as a mono-method quantitative study. The study investigated the associations among variables, which are quantitatively measured and analyzed using various statistical and graphical methods. The questions are formulated with clarity to ensure uniform comprehension among all participants.

3.1 Population and the Sample of the Research

In this study, the target population consists of diving centers in Sharm El-Sheik. According to Chamber of Diving and Water Sports, CDWS (2023), the total number of diving centers in Sharm El-Sheik is 98 centers. A comprehensive survey of the population was carried out. The questionnaire was distributed to all diving centers in Sharm El Sheikh, with one instructor from each center specializing in diving with tourists with special needs.

Comprehensive survey (census) is a survey that is done on an entire population. When conducting a comprehensive survey, the researcher distribute questionnaire to all the members of a population. Surveys are valuable for identifying the characteristics of a wide population. No alternative research method can offer such extensive capability, guaranteeing a more precise sample for collecting targeted results from which to derive conclusions and make crucial decisions. The largest benefits of comprehensive surveys are Zero sampling error. Sampling error is always a major risk when doing a survey sampling study. Although comprehensive surveys are more popular for large-scale research, they can also be done on smaller scales. On the other hand, the greatest disadvantage of a comprehensive survey is that it can be extremely costly in time and money (Mukherjee, 2011).

3.2 Designing the Instrument of the Study

The quantitative approach in this study depended on questionnaires. Designing the questionnaire was depended on Handicapped Scuba Association (2021); Chamber of Diving and Water Sports, CDWS, (2023) and the practices of Big Blue diving center, (2023); Camel Dive Club and Hotel (2023). These are diving centers which offer services to tourists with special needs in Egypt. The questionnaire was then reviewed by academic professors in the

faculties of Tourism and Hotels. Moreover, it was reviewed by divers specialized in providing services for tourists with special needs to assure the content validity.

The questionnaire aimed at evaluating the ability of diving centers in providing diving services to tourists with disabilities. The questionnaire included three parts; the first part served the aim of collecting data about the diving center. If they provide services for tourists with special needs or not, years of experience in offering services to tourists with special needs, types of tourists' disabilities and the benefits of providing services for this category. While the second part served the purpose of collecting data about services for tourists with special needs in the diving center. These services are center strategy, transeffering and accessibility, boat services, water services and training for tourists with special needs. The evaluating of these services were measured through three point Likert scale ranging from one which stands for disagree to three which stands for agree. The third part of questionnaire included questions needed to evaluate the obstacles which facing diving centers to offer high quality services for tourists with special needs and the suggestions to improve these services.

3.3 Data Collection and Analysis

Questionnaires were distributed to all diving centers in Sharm El-Sheik. The research depended on distributing online questionnaires from July to August 2023. The descriptive analytic approach was employed by the researchers to reach the aim of this study. To handle data statistically, the researchers use the Statistical Package for Social Sciences (SPSS). The treatment comprised a number of statistical methodologies, such as frequencies, percentages, means, and standard deviation (SD). The Cronbach's alpha test were used in the study to evaluate the questionnaire's stability coefficients and the coefficient of stability for each study axis.

4. Results and discussion

4.1.Data Validity and Reliability

4.1.1. Data validity

The researchers distributed the questionnaire to specialized diving instructors for tourists with special needs. To verify the data collection instrument utilized in this study in terms of readability, structure, and capability to assess the study's components. After receiving comments and recommendations from the subject matter experts, the questionnaire instrument was revised and improved. Additionally, the questionnaire instrument's validity was boosted by the experts' interest in it and their interaction with the researchers.

4.1.2. Data Reliability

The instrument's dependability is determined by its level of precision and consistency with whatever it is calculating. Prior to a more in-depth analysis, reliability tests were performed to ensure consistent measurement between the different elements of the questionnaire. The dependability of the measurement shows the instrument's stability and consistency. Thus, the reliability of the research tool is determined by assessing its internal consistency, i.e., the questions (items) of the questionnaire that are regularly offered. According to Livingston (2018), Cronbach's alpha, which assesses this effect, ranges from 0 (no internal consistency) to 1 (maximum internal consistency). A confidence level of 0.7 or more is considered "acceptable" in most social science research settings. Cronbach's alpha reliability was determined for dimensions of the research, as shown in Table 1. The reliability values for all dimensions were 0.862, and the accuracy coefficients were 0.928, suggesting that the instrument is useful.

Table (1) Cronbach's Alpha Value

Section	Variables	No. of Items	Cronbach's Alpha	Validity Coefficient*
Diving services for tourists with special needs	Center strategy	10	.864	.929
	Transferring and accessibility	8	.754	.868
	On boat services	8	.735	.857
	In water services	7	.712	.843
	Training for tourists with special needs	5	.862	.928
	Total	38	0.862	.928

* Validity coefficient= Reliability coefficient

Cronbach's alpha was used to assess internal consistency and dependability. The scales' reliability was assessed, and the Cronbach's alpha varied from 0.712 to 0.864 for all scales in Table 1, and it was 0.862 for all questionnaire questions. When the Cronbach's alpha value is greater than 0.7, this indicates an appropriate Cronbach's alpha value for each field. It can also be noted that the validity coefficient is 92.8%, suggesting that the tested sample is reliable and valid.

4.2.Descriptive Analysis of Research Variables

4.2.1. First Section: Data related to the diving centers

Table (2) Number of Diving Centers Provide Services to Tourists with Special Needs

Items	Freq.	%
Centers provide services	32	23.5
Centers don't provide services	66	67.5
Total	98	100

Total number of diving centers in Sharm El-Sheik is 98 center. In this research, questionnaire was distributed to all diving centers. Table 2 shows number of diving centers which provide services to tourists with special needs in Sharm El- Sheik. It is obvious that only 32 center provide services for this category. This means that there is a shortage in providing diving services to tourists with special needs.

The previous result achieve the first objective of the research as this result determine the diving center that provide services to tourists with special needs in sharm El- Sheik.

Table (3) Obstacles Face Diving Centers that don't Provide Services to Tourists with Special Needs*

Items	Freq.	%
Insufficient number of qualified instructors	50	75.8
Lack in the number of equipped boats	60	90.9
The beaches aren't equipped	45	68.2
Inadequate transferring and accessibility equipment	40	60.6
Scaffolds aren't suitable for tourist movement	20	30.3

* Respondent can choose more than one answer

Table 3 displays the obstacles face diving centers which don't provide services to tourists with special needs. The majority of diving centers suffers from lack in the number of equipped boats (90.9%). There are few boats which have facilities for tourists with special needs. This may be due to its expensive cost or for import laws. Insufficient number of qualified instructors came out on the second rank (75.8%). This means that there is limited training for instructors on how to deal with this category of tourists.

The previous result achieve the fourth objective of the research as this result determine the obstacles that hinder diving centers to provide services to tourists with special needs in sharm El- Sheik.

Table (4) The Center's Years of Experience in Providing Services to Tourists with Special Needs

Years of experience	Freq.	%
less than 3 years	4	12.5
3-5years	10	31.5
more than 5 years	18	56.3
Total	32	100

As shown in table 4, the majority of centers in the years of experience groups (56.3%) have more than 5 years, while 31.5% have from 3 to 5 years of experience. This means that diving centers in sharm El-Sheik which provide sevices to tourists with special needs have experience to deal with this category but there are inadequate equipment to help instructors to provide high quality services according to table 3.

Table (5) Types of Disabilities that have Diving Services

Types of disabilities	Freq.	%
physical disabilities	24	75
Other types of disabilities	8	25
Total	32	100

Table 5 clarifies that diving centers focus on providing services for tourists with physical disabilities (75%). This may be due to the fact that other types of disabilities require more facilities and experience in dealing with them. It may also be due to the small number of tourists who have other types of disabilities.

Diving can get rehabilitation to physical disabilities which involve comprehensive stimulation of the human body through social interaction, regain awareness of one's own body and the movements which tourist can perform, increasing self-reliance in water (Guntur et al., 2023).

Table (6) Diving centers' benefits of Providing Services for Tourists with Special Needs *

Benefits	Freq.	%
Enhancing your brand and reputation	12	37.5
Helping people with special needs to enjoy diving	32	100
Achieving high profit	6	18.8
Targeting a new category of tourists	18	56.3

* Respondent can choose more than one answer

Diving centers' benefits of providing services for tourists with special needs are shown in table (6). All diving centers agreed that helping people with special needs to enjoy diving is the first benefit. The diving can be used as a comprehensive rehabilitation method (Morgan et al, 2019). It is followed by targeting a new category of tourists (56.3%). Tourists with special needs are characterized by an increase in spending and the loyalty to the destination. Thus, it becomes a profitable market (ENAT, 2016).

The previous result achieve the third objective of the research as this result determine the diving centers benefits of providing services to tourists with special needs in sharm El- Sheik.

4.2.2. Section two: Services that diving center provides to tourists with special needs

Table (7) Descriptive Analysis of Center Strategy to offer services to tourists with special needs

Items	Mean	Std. deviation	Rank	attitude
Offering private guided trips is available	3.00	.000	1	Agree
Boats crew has years of experience with clients who have special needs	2.75	.439	3	Agree
The staff pay close attention and listen to what individuals need	3.00	.000	1	Agree
A planning to create perfect dive trip for each disability is provided	2.87	.491	2	Agree
Some of staff are certified as diving instructors for tourist with special needs	2.68	.592	4	Agree
Training courses for the staff on how to deal with tourist with special needs are available	2.32	.603	6	Neutral
A variety of weight systems and sized tanks were offered	2.75	.567	3	Agree
There is a fully equipped class room suitable for disabled tourists	2.56	.715	5	Agree
Tourists with disabilities must provide medical approval to dive from a specialist doctor	2.87	.336	2	Agree
Staff have the ability to make safely scuba dive with disabled tourists, and to solve basic emergencies	3.00	.000	1	
Total mean = 2.70				Agree

Table 7 shows the means and Std. Deviation for the center strategy, which varied from 3.00 to 2.32. In comparison to the overall instrument mean (2.70); the statement "Offering private guided trips is available" and the statement " Staff have the ability to make safely scuba dive with disabled tourists, and to solve basic emergencies" achieved the highest ranking (mean = 3.00, SD = 0.000). Handicapped Scuba Association (2021) clarified that offering private guided trips to tourists with special needs is vital. The item "Training courses for the staff on how to deal with tourist with special needs are available" came out on the last rank (mean = 2.32, SD =0.603).

Table (8) Descriptive Analysis of Transferring and Accessibility

Items	Mean	Std. deviation	Rank	Attitude
tourist with special needs were asked about the best method of moving them	2.93	.245	2	Agree
There is assistance transferring from wheelchair to the deck of a pool	2.93	.245	2	Agree
There is assistance transferring from wheelchair to the deck of a boat	2.81	.535	3	Agree
There are two persons to help disable tourists in transferring from one place to another	2.68	.592	4	Agree
Carriages for the equipment of diving were provided	3.00	.000	1	Agree
Parking spaces are provided near building entrances	1.93	.981	5	Neutral
Ramp system is applied if needed	1.87	.975	6	Neutral
The dive platform is large and low for easy entry and exit	3.00	.000	1	Agree
Total mean = 2.79				Agree

Table 8 provided an overview of the attitudes, means, and Std. Deviation in relation to the descriptive analysis of transferring and accessibility. The overall mean score (2.79) indicated almost positive attitudes about providing transferring and accessibility services to tourists with special needs. Furthermore, the highest mean was for "Carriages for the equipment of diving were provided" and "The dive platform is large and low for easy entry and exit" with a value of 3.00 and Std. Deviation of 0.000. Whereas, the lowest mean value was for "Ramp system is applied if needed" with a low mean value of 1.87 and Std. Deviation of 0.975. According to Moris et al. (2021), carriages for the equipment are used and important, however support of diving partners turns out to be most efficient.

Table (9) Descriptive Analysis of Boat Services

Items	Mean	Std. deviation	Rank	Attitude
Dive boats have spacious rear deck areas	2.68	.592	2	Agree
Boats have wheelchair-accessible saloon areas.	2.06	.913	4	Neutral
Toilets with easy access and entry for disabilities are available on the dive boat	2.18	.895	3	Neutral
There is a padded area to sit on and covering abrasive surfaces	1.66	.931	7	Disagree
Diving boat is equipped with ramp onto it	1.93	.000	5	Neutral
Diving boat is equipped with a hoist to lift the divers in and out of the water	1.00	.913	8	Disagree
Accessible cabins with wheelchair are available on the main deck and around it	1.75	.915	6	Neutral
Suits are usually put on in a convenient place where it is clean and comfortable.	3.00	.000	1	Agree
Total mean = 2.07				Neutral

The boat services which be provided to tourists with special needs are shown in Table (9), together with their means and standard deviations. The means varied from 3.00 to 1.00. The item "Suits are usually put on in a convenient place where it is clean and comfortable" ranked first (mean = 3.00, SD = 0.000). The item "Diving boat is equipped with a hoist to lift the divers in and out of the water" ranked last (mean = 1.00, SD = 0.913). Overall instrument mean (2.07) and this refers that there are inadequate services and equipment on boat.

Table (10) In Water Services Descriptive Analysis

Items	Mean	Std. deviation	Rank	Attitude
Diving equipment is put at the point of entry to the water.	3.00	.000	1	Agree
Tourists with special needs were helped to wear masks and diving equipment	3.00	.000	1	Agree
Communication devices are provided for tourist with special needs	2.06	.981	4	Neutral
Using baby powder and silicone spray over feet and hands is provided to tourists who have problem in wearing wet suit	2.87	.336	2	Agree
An "emergency type wet suit" is available (it is a loose fitting suit with zippers along the legs, hips, torso, and arms) for tourists who have problem in wearing wet suit	1.81	.895	5	Neutral
Webbed gloves are used for surfing for tourists with good upper body strength	2.06	.913	4	Neutral
There are suitable programs which limit diving distance and direct disabled tourists to diving location	2.68	.592	3	Agree
Total mean = 2.50				Agree

Table (10) displays water services means and standard deviations, which varied between 3.00 and 1.81 when compared to the total mean instrument (2.50). The statement "Diving equipment is put at the point of entry to the water" reached the first rank (mean = 3.00, SD = 0.000). The item "An "emergency type wet suit" is available (it is a loose fitting suit with zippers along the legs, hips, torso, and arms) for tourists who have problem in wearing wet suit" reached the last rank (mean = 1.81, SD = 0.895). Camel Dive Club and Hotel (2023) clarified that it is essential to put diving equipment at the point of entry to the water and use baby powder and silicone spray to help tourists who have problem in wearing wet suit.

Table (11) Descriptive Analysis of Training for Tourists with Special Needs

Items	Mean	Std. deviation	Rank	Attitude
Special training is provided to tourists with experienced diving instructors	2.85	.336	5	Agree
Prepping the swimming pools, where divers receive diving training and learn to use diving equipment	2.87	.491	4	Agree
Careful training courses for tourists on how to operate their Buoyancy Control Device are available.	2.89	.245	3	Agree
Careful training courses for tourists on how to control diving equipment are available	3.00	.000	1	Agree
Careful training courses for tourists on how to contact with the diving guide are available	2.93	.245	2	Agree
Total mean = 2.90				Agree

Table 11 provided a summary of the attitudes, means, and standard deviation in relation to the descriptive study of the training for tourists with special needs. The overall mean value of 2.90 showed positive attitudes about the importance of training for tourists with special needs before diving. With a mean of 3.00 and Std Deviation of 0.000, the statement "Careful training courses for tourists on how to control diving equipment are available" received the highest mean.

The previous results in tables 7, 8, 9, 10, 11 achieve the second objective of the research as they identify the provided services to tourists with special needs by diving centers in Sharm El- Sheik.

Table (12) Diving Centers face Obstacles to Provide Services or Not

Items	Freq.	%
Agree	15	47
Neutral	10	31.2
Disagree	7	21.8

Table 12 displays if diving centers which provide services for tourists with special needs have obstacles or not. Large percentage of diving centers has obstacles to provide good services to tourists with special needs (47%). On the other hand, 21.8% of diving centers don't have obstacles in providing services for tourists with special needs. These obstacles will be clarified in table 13.

Table (13) Obstacles face diving centers to provide good services for tourists with special needs*

Items	Freq.	%
Limited training for instructors	14	43.8
Diving equipment is expensive	10	31.3
Dealing with disabled tourists is too difficult	10	31.3
The boats of diving have not enough equipment	20	62.5
Scaffolds aren't suitable for tourist movement	15	46.8

* Respondent can choose more than one answer.

Table 13 provided an overview of obstacles face diving centers to provide good services to tourists with special needs. Large percentage of diving centers suffers from the fact that the boats of diving have not enough equipment (62.5%). Moreover, 46.8 % of diving centers face obstacle that scaffolds aren't suitable for tourist movement. While 43.8% of diving centers suffer from limited training for instructors.

The previous result achieve the fourth objective of the research as this result determine the obstacles facing diving centers which provide services to tourists with special needs in sharm El- Sheik.

Table (14) Diving centers suggestions to improve services provided to tourists with special needs*

Items	Freq.	%
Providing training courses for instructors	13	40.6
Equipping boats with adequate equipment	15	46.8
Equipping boats with suitable toilets and cabins	10	31.3
Suitable scaffolds is vital for tourist movement	12	37.5

* Respondent can choose more than one answer

Table 14 provided a summary of diving centers suggestions to improve services provided to tourists with special needs in Sharm El-Sheik. The first suggestion is providing training courses for instructors (46.8%). Moreover, they suggest that equipping boats with adequate equipment is important (40.6%).

The previous result achieve the fifth objective of the research as this result identify the suggestions to improve diving services provided to tourists with special needs in Sharm El-Sheik.

5. Conclusion and Recommendations

5.1. Conclusion

This research emphasizes the importance of the category of tourists with special needs. The diving activities have a huge impact on improving the quality of life of tourists with special needs. The research aims at determining the diving services which are provided for tourists with special needs by diving centers in Sharm El-Sheik and identify the obstacles which facing diving centers to offer high quality services.

A comprehensive survey of the population was carried out. The questionnaires were distributed to all diving centers in Sharm El-Sheik. The descriptive-analytical approach was used in the research, and the questionnaire instrument was modified to answer research questions. In this regard, the questionnaires were analyzed using descriptive statistics, reliability analysis, coefficient analysis. Hence, the research produced the following findings: there are a few diving centers in Sharm El Sheikh that provide services for tourists with special needs. Furthermore, there is a deficiency in providing diving services to this category due to insufficient number of qualified instructors with experience. On the other hand, there is also a lack in the number of equipped boats.

The majority of diving centers which provide services to tourists with special needs have more than 5 years of experiences and they focused on physical disabilities. This may be due to the fact that other types of disabilities require more facilities and experience in dealing with it. It may also be due to few numbers of tourists with other disabilities need these services. Moreover, the findings displayed that these centers pay a great attention to provide good level of services related to center strategy, transferring and accessibility, water services and training

for tourists with special needs. While there are inadequate services related to boat services. All diving centers agreed that helping people with special needs to enjoy diving and targeting a new category of tourists are the main benefits to provide services for tourists with special needs.

5.2. Research Recommendations

The research recommended many suggestions for diving centers and official tourism authorities as follows:

5.2.1. Recommendations for Diving Centers

- Diving centers should pay great attention to provide services to tourists with special needs and mitigate the obstacles for them.
- It is necessary to have qualified instructors to deal with tourists with special needs.
- It is necessary to have paved corridors and ramp system whenever possible.
- It is necessary to have a parking space for disabled cars next to the entrance door.
- Diving centers should have equipped boats with suitable toilets and cabins.
- Suitable scaffolds are vital to provide services to tourists with special needs.
- Training courses for the staff on how to deal with tourist with special needs are very important.

5.2.2. Recommendations Directed to Official Tourism Authorities

- Supporting the segment of tourists with special needs and raising the slogan of tourism for all.
- Activating cooperation between official and unofficial tourism authorities to encourage tourism for people with special needs.
- Establishing a specialized unit in the Ministry of Tourism and Antiquities to provide all tourism information and services to tourists with special needs.
- Facilitating import methods to obtain equipment and devices for transporting tourists with special needs.
- The related government authorities should offer incentives such as tax exemption, marketing and promotional support, or monetary financing. These incentives would promote greater dedication for them to offer such tourist with special needs-friendly facilities, especially at diving centers and islands.

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تقييم قدرة مراكز الغوص بشرم الشيخ على تقديم الخدمات للسائحين من ذوي الاحتياجات الخاصة

نسرين خيري علي

آية محمد مجدي أحمد

قسم الدراسات السياحية - كلية السياحة والفنادق - جامعة المنيا.

معلومات المقالة	الملخص
<p>الكلمات المفتاحية الإعاقة؛ ذوي الاحتياجات الخاصة؛ مراكز الغوص؛ شرم الشيخ.</p> <p>(JAAUTH) المجلد ٢٥، العدد ٢، (٢٠٢٣)، ص ١٧٧-١٩٧</p>	<p>الإعاقة مفهوم قديم وُجد منذ وجود الإنسان. وفي مختلف المجالات، يواجه السائحين ذوي الاحتياجات الخاصة تحديات ومشاكل مختلفة. بدأ الاعتراف بالسياح ذوي الاحتياجات الخاصة كسوق سياحي متخصص لسياحة الغوص، ولأنشطة الغوص أثر كبير في تحسين نوعية حياة السائحين من ذوي الاحتياجات الخاصة. يهدف هذا البحث إلى تحديد خدمات الغوص المقدمة للسائحين من ذوي الاحتياجات الخاصة من قبل مراكز الغوص في شرم الشيخ والتعرف على المعوقات التي تواجه مراكز الغوص لتقديم خدمات عالية الجودة للسائحين من ذوي الاحتياجات الخاصة. علاوة على ذلك، تم اقتراح العديد من التوصيات لتحسين خدمات الغوص للسائحين ذوي الاحتياجات الخاصة. ولتحقيق ذلك اعتمد المنهج الكمي في هذه الدراسة على الاستبيانات التي تم إعدادها وتوزيعها على جميع مراكز الغوص بمدينة شرم الشيخ. وقد تم تحليل الاستبيانات باستخدام الإحصاء الوصفي، وتحليل الثبات، وتحليل المعاملات بدعم من برنامج SPSS 25.0. وقدمت الدراسة العديد من النتائج؛ يوجد عدد قليل من مراكز الغوص بشرم الشيخ تقدم خدمات للسائحين من ذوي الاحتياجات الخاصة. علاوة على ذلك، هناك قصور في تقديم خدمات الغوص للسائحين من ذوي الاحتياجات الخاصة بسبب عدم كفاية المدربين المؤهلين. ومن ناحية أخرى، هناك أيضًا نقص في المراكب المجهزة. وأوصى البحث بضرورة اهتمام مراكز الغوص بتقديم الخدمات للسائحين من ذوي الاحتياجات الخاصة وتخفيف المعوقات أمامهم لكون هذا السوق من الأسواق الواعدة التي ستدر دخلاً كبيراً.</p>