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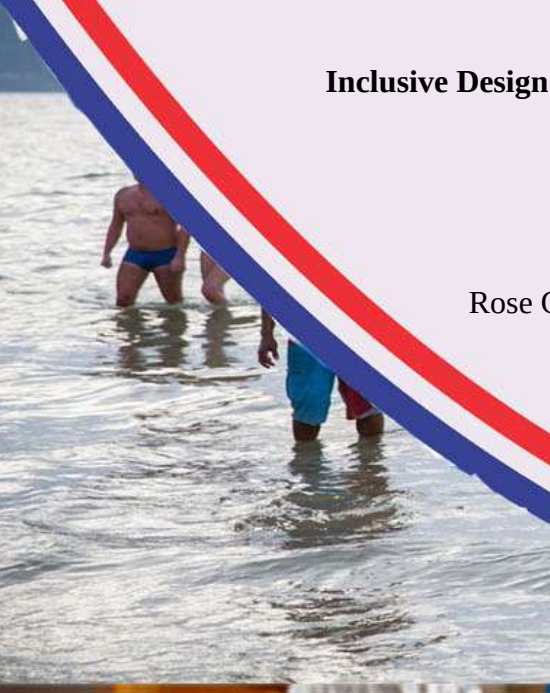

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Inclusive Design in the Aviation Industry for Passengers with Mobility Issues: A Case Study of Wilson Airport, Nairobi County, Kenya

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Abstract

Purpose: To establish the challenges faced by airline passengers who have mobility issues at Wilson Airport.

Methodology: This was by a descriptive qualitative research design. The sample size was 45 participants and comprised of 10 aviation regulators, 10 air operators and 5 officers from the Ministry of Roads and Transport. The study used a combination of focus group discussions, in-depth interviews and observation techniques. Data analysis was conducted by thematic analysis it was used to examine data gathered through focus groups, observation and interviews. The study employed purposive sampling as a method to specifically choose individuals based on their significance to the research goals. The data was presented in the form of a narrative.

Findings: The findings of the study indicated revealed that traveling through airports presents a number of difficulties for airline passengers with mobility impairments. The absence of accessible features including ramps, elevators, and signage at airports was criticized by participants. Participants also emphasized the need for enhanced communication to guarantee a seamless and stress-free travel experience between airport personnel and travelers with impairments. Eight participants who used wheelchairs participated in semi-structured qualitative interviews where the researchers asked them about their experiences traveling by air and provided them with options. The study's main finding demonstrated the significant difficulties encountered when passengers with mobility impairments engaged with the airplane. Concerns concerning airline employees' lack of training on helping customers with mobility challenges were also raised by a number of attendees. According to the findings, the aviation sector in Nairobi County clearly needs to improve the programs and services offered to meet the needs of travelers with mobility impairments. This could entail making investments in upgraded infrastructure, giving employees more training, and putting better communication plans into place to guarantee that every passenger has a more inclusive and accessible travel experience.

Unique Contribution to Theory and Practice and Policy: The report suggests that the Nairobi County aviation sector provide courses to teach airport employees how to properly assist travelers with mobility challenges. The report also recommends making structural upgrades to airport amenities, such adding wheelchair ramps and accessible restrooms. In addition, the study suggests setting up a special customer care desk to cater to travelers with mobility impairments and offer them individualized help and support during their trip. According to the study, forming alliances with regional disability organizations can help gather information and provide more inclusive services for travelers who have mobility problems. All things considered, the proposals are meant to improve the overall travel experience for passengers who have mobility challenges and make sure that airports in Nairobi County, Kenya, give them the assistance and services they require.

Keywords: *Accessibility, Aviation, Design, Disability, Inclusive, Mobility*

JEL Codes of Classification: R4

INTRODUCTION

It is crucial to guarantee inclusivity in air travel, particularly when it comes to Wilson Airport in Nairobi, Kenya's aviation sector. Working together, all parties involved must remove any barriers that stand in the way of accessible travel. Almost one billion people, or 15% of the worlds population, according to the World Health Organization (WHO), live with a handicap. In addition, the proportion of people with disabilities is raising as the population ages. At the (IATA 2019) Annual General Meeting, when IATA members approved a Resolution on Passengers with Disabilities, the organization's dedication to accessible air travel was emphasized. Despite strides in the promotion of inclusive design, Smith and Ouyang (2017) point out that there are still difficulties in airport settings. Problems include poor tactile assistance, inadequate signage, and inadequate training for airport staff members still make it difficult for those with impairments to navigate the facility. Understanding these obstacles is essential to creating focused solutions that meet the particular requirements of airports such as Wilson Airport in Nairobi County, Kenya.

IATA promotes the discovery and removal of transportation-related barriers by incorporating CRPD elements into national regulations. IATA strongly advises ICAO and its member nations to create thorough strategic plans in order to promote a unified and well-coordinated approach to airline policy and maintain service quality. Effective state-to-state coordination mechanisms should be part of these plans, as they will serve as the cornerstone for long-lasting and revolutionary improvements aimed at attaining accessibility in all dimensions of aviation (IATA, 2019).

Throughout history, those who are disabled It has been difficult for people with disabilities (PwDs) to engage in a variety of leisure activities, including travel. But while it's true that "people with disabilities have the same needs and desires for tourism as others," it's also important for their general health and well-being that disabled persons to participate in their favorite leisure activities. Allowing someone with a disability to travel frees them from the stigma of being a "object of care," and it also helps them become more self-assured and promotes social inclusion.

According to Crawford, Jackson, and Godbey (1991), PwDs face three different kinds of hurdles when thinking about traveling: intrapersonal, interpersonal, and structural. Interpersonal barriers mainly originate from service providers, intrapersonal barriers are psychological variables related to an individual's handicap, and structural barriers take the form of material and physical difficulties.

The demand for travel among PwDs is anticipated to increase due to the aging population in the European Union (EU) and the rising wealth proportion among the elderly. This presents a sizable potential revenue stream for the travel industry. By 2020, the European Union is expected to have 120 million disabled citizens, according to the European Commission's 2017 Progress Report on the implementation of the European Disability Strategy (2010-2020). Each year about 10 million PwDs in the EU will need airline help. Take notice that consumers who travel infrequently are a diverse population who are more impacted by personal circumstances than by aviation-specific considerations when deciding not to fly.

The availability of aviation plays a crucial role in motivating PwD(s) to choose for local vacations, particularly when they are unsure of the airport's and airline's capacity to meet their particular travel requirements. According to Darcy's 2012 study with passengers with disabilities, air travel policies would usually be in violation of disability laws (Darcy, 2012).

People without disabilities and those with disabilities alike have a common aspiration: they both want to travel (Yau, 2004). Nonetheless, it has been observed that individuals with disabilities travel 33% less frequently than the general population. This may be because of the various limitations, obstacles, and difficulties that come with traveling by air in a wheelchair. One of the main problems is that wheelchairs are too big for people with impairments, making it difficult for them to navigate small corridors and small onboard restrooms. The literature (Chang, 2011, 2012) has noted the dearth of wheelchair-friendly amenities aboard airplanes, which causes many disabled people to forgo flying because of the insufficient services.

Although airlines are legally required to offer help and equipment to passengers with disabilities (EC, 2007), the existing offers are inadequate and should be improved. Interestingly, the wheelchairs that are provided frequently do not fit into the small facilities on short-haul flights, since accessible restrooms are only required on long-haul flights for people with impairments. Regarding the issue of using the restroom, travel blogs recommend that passengers with disabilities use methods like fasting, using incontinence pads, or catheterization in order to minimize the discomfort and humiliation that come with handling a wheelchair while using the restroom (Davies & Christie, 2017). These difficulties demonstrate how urgently the aviation sector has to take inclusive design into account, particularly when it comes to Wilson Airport in Nairobi County, Kenya's amenities and services that are intended to meet the needs of passengers with disabilities.

Statement of the Problem

Accessing and utilizing airport amenities remains a challenge for people with disabilities. Poor infrastructure at the Wilson airport is a challenge especially to passengers with mobility issues. Physical impediments, a lack of knowledge and training on the part of airport staff, and insufficient information are a few examples of these hurdles. Lack of proper signage with regards to information for the travelers especially those with mobility issues. Regarding Wilson Airport, it is necessary to evaluate the current level of inclusivity and pinpoint certain issues that can make it more difficult for every traveler to have a smooth trip. It is critical to comprehend these obstacles in order to solve the issue and promote an inclusive aviation environment. Due to this challenges, Wilson Airport needs to adopt inclusive design principles to enable them accommodate all persons regardless of whether they have mobility issues or not. This will enhance a better and enjoyable passenger experience.

Objective

To assess the existing measures and services provided by the Aviation Industry in Airports, Nairobi County, Kenya, to cater to the needs of airline passengers with mobility issues.

Research Question

How does the Aviation Industry cater for airline passengers who have mobility issues at the Wilson Airport, Nairobi County, Kenya?

LITERATURE REVIEW

When thinking about the passenger experience, it is important to recognize that comfort and discomfort are two different categories, each with its own set of factors. Furthermore, as Greghi et al. (2013) pointed out, the activity more precisely, the capacity to undertake acts or lack thereof is the intermediary factor between comfort and discomfort and can have a substantial influence on this relationship. The World Health Survey's functionality and disability model further emphasizes the importance of activity, showing that participation in society or lack thereof is a function of personal and environmental factors that are integrated by the activity itself, as described by Greghi et al. (2013).

According to the International Air Transport Association (2019), air travel plays a critical role in facilitating connectivity both domestically and internationally, which is essential for the world's economic development. There are still few studies on the experiences of people with disabilities using air travel, as noted by Poria et al. (2010), despite the sector's significant growth, particularly in emerging markets, as reported by the National Civil Aviation Agency of Brazil (ANAC), which saw an astounding 188% increase in demand for air travel between 2003 and 2012 and an 11% increase in domestic demand from 2011 to 2012. In addition, the past studies have clearly shown that there is lack of research on inclusive design in the aviation industry. Researchers need to conduct more studies on passengers with mobility issues in the aviation industry with an emphasis on inclusive design.

According to Poria et al. (2010), considering the sizeable number of people with disabilities and their economic significance, this lack of research is remarkable. Furthermore, given the projected rise in the senior population and the high incidence of disabilities, as reported by the World Health Organization, it is imperative to comprehend the experiences of this demographic when traveling by air.

According to the Turkey People with Disabilities Survey (2002), being "disabled" is losing some degree of one's physical, mental, spiritual, or social capacities as a result of an accident, illness, or congenital condition. A further definition linked to the notion of disability concerns those who, because of physical, mental, or health issues, are unable to undertake activities that their peers take for granted. It is important to remember that the variety of viewpoints found in the literature makes it difficult to come up with a definition of disability that is universally acknowledged. The state where a person is unable to execute duties independently yet is expected to do so because of their disability is classified as a disability in the United Nations Declaration of the Rights of Persons with Disabilities, disability is defined as the state in which a person has any defect and is unable to do duties that are required of them independently.

Research Gap

There is a recognized research shortage in the unique context of the aviation business, notably within the African environment and at smaller airports like Wilson airport in Nairobi County,

Kenya, despite the growing global focus on inclusive design and accessibility in numerous industries. The extant body of work on inclusive design in aviation has predominantly concentrated on major international airports and prominent airlines, frequently disregarding the distinct obstacles and prospects encountered by smaller regional airports.

Furthermore, although the value of inclusive design is becoming more widely acknowledged in terms of improving the travel experience for a variety of passenger demographics, there is a dearth of empirical data regarding the implementation and results of inclusive design initiatives at Wilson Airport in particular. This research gap offers a chance to investigate the state of inclusive design at the local level in the aviation sector and to pinpoint opportunities for innovation and improvement to guarantee accessibility and inclusivity for all passengers.

Assistive Technology in Aviation

Assistive technology in aviation has come a long way, using the technical innovations covered by Biehl and Sorensen (2020), we can see how assistive technology can be integrated at Wilson Airport. We can also examine the ways in which technology, such as navigation systems and applications, might improve accessibility and inclusivity for travelers with different abilities. With this regard the overall passenger experience is likely to be greatly improved and this will lead to more users at the airport. According to Brockman (2018), Individuals with disabilities connected to mobility who depend on assistive devices face unique problems, particularly when traveling to and from the airport, as well as when boarding and disembarking from aircraft. These particular problems highlight the need for more creativity in solving accessibility-related problems. As such, any innovation seeking to increase the inclusiveness of the aviation business needs to carefully consider the specific impairment they plan to address.

In a similar study conducted by Yau et al. (2004), established that the difficulties encountered by people with disabilities were present at every stage of the process, underscoring the significance of personal assistive technology. Many travelers experience the sad commonplace of misplaced or mishandled luggage, but passengers with disabilities also have to deal with the added worry of possibly missing or discovering broken wheelchairs when they arrive. These worries are echoed by Darcy (2012), who highlights the limitations on the usage of service animals and assistive technology on board in addition to the fact that certain planes do not have wheelchairs available for use on board, hence further research needs to be conducted and the researchers have to bear in mind the importance of inclusive design in each of the studies. Although there have been studies on the problem of air transportation for elderly and disabled passengers, none specifically focused on Brazil. Moreover, there is a dearth of research on passenger devices and how they affect aircraft design in the literature now in publication. Although the majority of research on assistive technology focuses on items for the elderly and others with impairments, there is a noticeable lack of information linking these products to possible applications in aviation. In order to inform and support future discussions on airplane cabin design, especially in the context of inclusive design at Wilson Airport in Nairobi County, Kenya, this study attempts to understand assistive technology trends and how they can also be implemented in Wilson airport and how they would improve the passenger experience.

METHODOLOGY

This study used a qualitative descriptive research design, concentrating on the topic of inclusive design in the aviation sector and analyzing Wilson Airport in Nairobi County, Kenya. When dealing with unresolved issues, qualitative research is helpful, as demonstrated by the scenario that prompts above. The goal of gathering qualitative data is to obtain meaningful information that will aid in the exploration of research topics, capture the essence of the phenomenon being studied, and take into consideration the complex interweaving of human experiences and contextual nuances. A purposive sampling technique was employed to select 45 participants. The sample included 20 airline passengers with mobility issues, 10 aviation regulators, 10 air operators, and 5 officers from the Ministry of Roads and Transport. The purpose of this selection process was to guarantee that important parties directly involved in or in charge of airport operations would be represented. The study employed purposive sampling as a method to specifically choose individuals based on their significance to the research goals. This methodology guarantees the inclusion of persons possessing particular knowledge and experience pertaining to inclusive design in the aviation sector in the study. To collect rich and diverse data, the study used a combination of focus group talks, in-depth interviews, and observation techniques. To obtain individual viewpoints, in-depth interviews with airline passengers, aviation regulators, air operators, and ministry officers would be held. Focus group talks made it easier to explore common experiences and group insights. Observation is used in the airport environment to record the tangible elements of inclusive design. Focus groups, which are held in a group environment, can offer a forum for understanding shared experiences and viewpoints, according to Paradis (2016). The focus groups offered a space for candid conversations and idea generation around possible ways to enhance inclusivity and accessibility at the airport. The focus group participants were chosen on the basis of their pertinence to the research subject and their capacity to offer insightful commentary.

RESULTS AND DISCUSSIONS

Response Rate

Twenty airline customers with mobility challenges, ten participants from each of the aviation regulations and air operators' sectors, and five officials from the Ministry of Roads and Transport made up the 45 participants in this study, which was carried out at Wilson Airport. For the purpose of the study, five focus group discussions were held. Three of the FDGs involved seven participants in two groups and six participants in one, all of which were airline passengers with mobility challenges. The Ministry of Roads and Transport Officials, Aviation Operators, and Aviation Regulator made up the remaining two groups. There were eight participants in one of the FDGs: one woman and seven men. The second FDG comprised of seven participants, also having one female and six male participants. Each interview lasted for about thirty minutes each. The study conducted a total of 10 In-depth unstructured interviews. Two female Air regulators and 8 male operators were interviewed on a one-on-one basis. The interviews lasted about twenty minutes each.

Age of Participants

Among the participants interviewed 31 were male and 14 were female. The mean age of the participants was 25 years old, with the mean age of male participants being 34 years, and the mean age of the female participants was also 34 years.

Education Level

Majority of the participants in the study were 31 males and 14 females. The participants between the age of 18 and 50 showed that the highest level of education attained was a PhD and the lowest was college education.

The Assessment of the Existing Measures and Services Provided by the Aviation Industry in Airports, Nairobi County, Kenya, to Cater to the Needs of Airline Passengers With Mobility Issues

Although some airports have basic amenities like wheelchair-accessible restrooms and ramps, the survey discovered that there are insufficient specialist services and support available for travelers with more severe mobility limitations. The survey also made clear that greater attention has to be paid to making airports more inclusive and accessible for all travelers, as well as better training for employees on how to help travelers with mobility challenges.

There were 3 focus groups the first had 5 females and 5 males. The second focus group had 2 females and 2 males while the third had 4 males and 2 females who had used Wilson Airport more than 3 times meaning they were frequent airline travelers. Majority of the participants in this 3 focus group discussions were in agreement that the Aviation Industry has not catered efficiently for the needs of airline passengers with mobility issues.

Airline participant 3

“Accessing the Wilson Airport is not easy for someone with mobility issues”

Airline participant4

“My first-time experience as an airline passenger with mobility issues was quite traumatizing, getting a ramp for my wheelchair was quite a challenge”.

Additionally, the study found that there was a lack of awareness among passengers with mobility issues about the services and resources available to them at airports in Nairobi County. Overall, the findings indicate that there is a significant gap in the services provided by the aviation industry in Nairobi County to cater to the needs of airline passengers with mobility issues.

Airline passenger 6

“Most of us passengers with mobility issues are not aware of the services and resources that are available to them at the airport”.

Findings from the Focus Group Discussions

The Assessment and the Existing Measures and Services Provided by the Aviation Industry in Airports, Nairobi County, Kenya, to Cater to the Needs of Airline Passengers with Mobility Issues

The results of the focus groups revealed that traveling through airports presents a number of difficulties for airline passengers with mobility impairments. The absence of accessible features including ramps, elevators, and signage at airports was criticized by participants.

Participants also emphasized the need for enhanced communication to guarantee a seamless and stress-free travel experience between airport personnel and travelers with impairments. These results are consistent with exploratory research on wheelchair users' experiences as passengers on airplanes carried out in the United Kingdom by Davies and Christie (2017). Eight participants who used wheelchairs participated in semi-structured qualitative interviews where the researchers asked them about their experiences traveling by air and provided them with options. The study's main finding demonstrated the significant difficulties encountered when passengers with mobility impairments engaged with the airplane. Concerns concerning airline employees' lack of training on helping customers with mobility challenges were also raised by a number of attendees.

According to the findings, the aviation sector in Nairobi County clearly needs to improve the programs and services offered to meet the needs of travelers with mobility impairments. This could entail making investments in upgraded infrastructure, giving employees more training, and putting better communication plans into place to guarantee that every passenger has a more inclusive and accessible travel experience.

CONCLUSION AND RECOMMENDATIONS

Conclusion

The study's data collection covered a range of elements related to the airport environment, services, and policies that are in place for travelers with mobility impairments. By use of observational techniques and interviews, insightful information about Wilson Airport's current inclusivity status was obtained.

The review of the airport's strategy for serving travelers with mobility impairments found both areas of strength and room for development. It was mentioned that current policies like reserved parking spots and mobility assistance are good first steps toward inclusiveness. However, difficulties like poor signage, a lack of infrastructure with accessible features, and staff training gaps were found to be obstacles to a completely inclusive experience for passengers with mobility impairments.

In addition, the data analysis made clear how crucial it is to implement inclusive design principles in order to successfully handle these difficulties. It was determined that improvements were needed in the areas of infrastructure, signage, employee training, and general service delivery in order to make the atmosphere more welcoming and accessible for all travelers, irrespective of their level of mobility.

Recommendations

The report suggests that the Nairobi County aviation sector provide courses to teach airport employees how to properly assist travelers with mobility challenges. The report also recommends making structural upgrades to airport amenities, such adding wheelchair ramps and accessible restrooms.

In addition, the study suggests setting up a special customer care desk to cater to travelers with mobility impairments and offer them individualized help and support during their trip. According to the study, forming alliances with regional disability organizations can help gather information and provide more inclusive services for travelers who have mobility problems.

All things considered, the proposals are meant to improve the overall travel experience for passengers who have mobility challenges and make sure that airports in Nairobi County, Kenya, give them the assistance and services they require.

Suggestions for Further Studies

The value and advantages of inclusive design in the aviation sector have been illustrated by the case study of Wilson Airport in Nairobi County, Kenya. The airport has been able to improve accessibility and create a more inviting atmosphere for all travelers, including those with special needs or impairments, by putting inclusive design concepts into practice. This has enhanced the traveler experience in general and enhanced the airport's standing as a pioneer in inclusive practices.

Other airports and aviation facilities must address the requirements of all passengers and acknowledge the importance of inclusive design. The aviation sector can make travel more inclusive and equitable for everyone by keeping an emphasis on accessibility, safety, and convenience for all people. Wilson Airport is an excellent model for upcoming aviation projects worldwide and a shining example of how inclusive design can benefit both travelers and airport managers.

REFERENCES

Chang, Y & Chen, C., (2011). *Identifying mobility service needs for disabled air passengers*. Retrieved from: https://www.sciencedirect.com/science/article/abs/pii/S0261517710002190

Crawford, D. W., Jackson, E. L, & Godbey, G. (1991). *The hierarchical model of leisure constraints, proposed*. Retrieved from: https://www.researchgate.net/figure/Hierarchical-model-of-leisure-constraints-Crawford-et-al-1991-p-316_fig1_267397022

Darcy, S. (2016). *Flying With Impairments: Improving Airline Practices by Understanding The Experiences of People with Disabilities. Travel and Tourism Research Association*: Advancing Tourism Research Globally. Retrieved from: https://scholarworks.umass.edu/ttra/2007/Presented_Papers/47

Davies, A & Christie, N. (2017). *An exploratory study of the experiences of wheelchair users as aircraft passengers' implications for policy and practice*. Retrieved from: 1-s2.0-S0386111217300493-main.pdf

EC., (2007). *The regulation (EC) No 1107/2006 on the rights of disabled persons and persons with reduced mobility when travelling by air*. Retrieved from: https://www.accessibletourism.org/resources/edf_toolkit_eu_reg_1107_2006_rights_disabl_travelling_air_en.pdf

EU European Union (2017). *Persons with disabilities.* Retrieved from: https://ec.europa.eu/social/main.jsp?catId=1137

Greghi, Marina F. & Rossi, Talita N. & de Souza, Jerusa B.G. & Menegon, Nilton L., 2013. "*Brazilian passengers' perceptions of air travel: Evidences from a survey,*" Journal of Air Transport Management, Elsevier, vol. 31(C), pages 27-31. Retrieved from: https://ideas.repec.org/a/eee/jaitra/v31y2013icp27-31.html

IATA (2019). *Air Travel Accessibility for Passengers with Disabilities*. Retrieved from: file:///C:/Users/HP/Desktop/Tourism%20and%20Aviation/download.pdf

IATA (2019). *Air Travel Accessibility*. Retrieved from: https://www.iata.org/en/programs/passenger/accessibility/#:~:text=There%20is%20no%20universal%20definition,efficient%20and%20safe%20air%20transport.

Paradis, E., O'Brien, B., Nimmon, L., Bandiera, G., & Martimianakis, M. A. (2016). Design: Selection of Data Collection Methods. *Journal of graduate medical education*, *8*(2), 263–264. https://doi.org/10.4300/JGME-D-16-00098.1

Poria, Y, (2010). The Flight Experiences of People with Disabilities: An Exploratory Study. Retrieved from: https://journals.sagepub.com/doi/abs/10.1177/0047287509336477

Turkey Disability Survey (2002). Disability data collection though surveys https://unstats.un.org/unsd/demographic-social/meetings/2017/kazakhstan--disability-meeting/070617/Session%205/Surveys/Turkey.pdf

Yau, M,. (2004). *Traveling with a disability: More than an Access Issue*. Retrieved from. https://www.researchgate.net/publication/223844518_Traveling_with_a_disability_More_than_an_Access_Issue