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Provision of Physically Disabled-Friendly Public Facilities at Recreation Park with a Case Study

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ABSTRACT

The design of accessible public facilities for persons with disabilities (PWD) is crucial, especially in recreational park areas. This aligns with sustainable urban and community planning goals, which aim to provide well-being for all individuals without prejudice. The provision of PWD-friendly public facilities in recreational parks is often overlooked. This study aims to identify PWD's perceptions regarding the effectiveness of the design of PWD-friendly recreational parks. The research methodology adopts a quantitative approach, involving 47 respondents. The findings indicate that the state of public facilities in the study area requires significant improvement and renovation to enhance comfort for users with disabilities. Recommendations for providing accessible facilities for PWD in the study area aim to improve accessibility and user comfort while upholding their social rights

Keywords: Public Facilities; Persons with Disabilities; Recreational Parks

INTRODUCTION

The planning and design of public parks require a universal design approach, taking into account the specific needs and abilities of users. However, currently, many are still designed only for able-bodied individuals (Shahraki, 2021). Universal design refers to a comprehensive design solution that includes buildings, equipment, and environments suitable and effective for everyone, including Persons with Disabilities (PWD).

Universal design must adhere to seven (7) fundamental principles, namely achieving an equitable level of use; flexibility in choice and ease of use; simplicity and clarity; informative and communicative; tolerance for error or accidents; using physical effort minimally; and providing user-friendly size and space. Generally, the adoption of universal design in public parks has been widely accepted worldwide because it aims to minimize barriers and provide facilities for all segments of the population. Indirectly, it also offers accessibility opportunities for PWDs, allowing them to engage in recreational activities in public parks alongside the rest of the community (Shahraki, 2021).

The development of urban planning in developed countries currently places great emphasis on the implementation of appropriate and suitable adaptations in terms of land use, building standards, and development requirements (Salmela, 2019). Countries in Scandinavia, such as Sweden, have a high awareness of the importance of urban design and planning for persons with disabilities. All local authorities in those countries must comply with the design standards required by persons with disabilities to avoid discrepancies between design and their needs.

Therefore, the need to identify the adaptability of recreational areas to the needs of the special needs community, especially those with physical disabilities, is crucial. In Malaysia, persons with disabilities still face barriers to recreation in parks due to a lack of accessibility factors and the facilities themselves. There are not many public parks that provide facilities according to the specifications of persons with disabilities (Çetişli Korkmaz et al., 2021). Although facilities such as benches are provided in parks, persons with disabilities still cannot use them because there is no continuity from the pedestrian path to the benches. Now is the time for local authorities to be concerned about this issue so that persons with disabilities can also enjoy recreational facilities comfortably (Wazani et al., 2021a).

Since the outbreak of World War, many individuals with disabilities have resided in urban areas facing issues related to buildings and urban development (Shahraki, 2021). Persons with Disabilities (PWD) are an integral part of society; thus, they have equal rights and opportunities to lead lives similar to other community members. A rights-based approach and reasonable accommodation are employed to ensure the interests and well-being of PWDs.

According to the Persons with Disabilities Act 2008, the definition of a person with disabilities is *"someone who has a long-term impairment of physical, mental, intellectual, or sensory function, which, in interaction with various barriers, may hinder their full and effective participation in society."*

rightfully have equal opportunities in all aspects, similar to individuals without disabilities. This is because PWD are integral parts of society and thus, they possess the right to equality and opportunities to lead a life like other community members. This perspective is grounded in the belief that all individuals, regardless of their abilities or disabilities, gender, social status, economic standing, cultural background, ethnic origin, or religion, have an equal right to a good quality of life. Therefore, it is crucial to create various facilities for PWDs to ensure they do not feel marginalized.

Currently, efforts have been made to establish various accessibility facilities in public spaces. However, these accessibility features need further improvement, as many do not meet the specified standards and are not PWD-friendly. Therefore, relevant authorities need to take action to address these issues.(Terashima & Clark, 2021)

The objectives of this study are to identify the perceptions of Persons with Disabilities regarding the effectiveness of public facilities provided in recreational parks. The second objective is to propose design suggestions for public facility components that are disability-friendly.

METHODS OF RESEARCH

This study employs a descriptive survey methodology to identify and examine the perceptions of persons with disabilities (PWD) regarding the public facilities for PWD provided in Taman Jubli Emas, Alor Setar. The research design utilizes a survey approach by distributing online questionnaires to 48 targeted respondents in the vicinity of Alor Setar. The findings of the study are analyzed using the Statistical Package for Social Sciences (SPSS) version 20 software to obtain systematic and accurate summaries. Additionally, the study employs an observational method to assess the existing recreational facilities.

The case study is situated in Taman Jubli Emas, Alor Setar, Kedah, Malaysia. It was built to commemorate the 27th Golden Jubilee celebration of Sultan Kedah, Sultan Abdul Halim Mu'adzam Shah, and was inaugurated by him on September 9, 2008. The park showcases the uniqueness of the Kedah state for the past 1,000 years and operates from seven in the morning until ten in the evening. The Golden Jubilee Monument in the park is surrounded by five keris sculptures symbolizing the 50-year reign of Sultan Abdul Halim. Additionally, Taman Jubli Emas features a fish pond in the centre and offers various activities for youth and teenagers, such as go-karting, skateboarding, parasailing, horse riding and a playground.

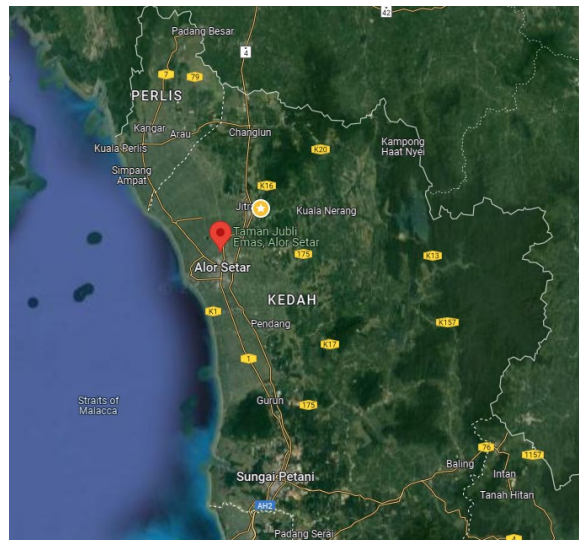


Diagram 1 : Case Study Area

The questionnaire has been distributed online using "Google Forms." This questionnaire utilizes a 4-point Likert scale and has been pre-tested in a pilot study before being distributed to the actual respondents. The questionnaire consists of three sections: Part A, B, and C. Part A covers respondent demographics, Part B focuses on the effectiveness level of public facilities provided in recreational parks, and Part C is about suggestions for improving components of public facilities that are disability-friendly.

The findings obtained from the questionnaire have revealed several essential aspects that the researcher needs to achieve the study objectives. This data is processed using statistical software, namely the Statistical Package for the Social Sciences (SPSS), and the results obtained will be presented in tabular form based on mean, frequency, and standard deviation. The type of data analysis used is descriptive analysis only. Descriptive analysis is used to characterize the features of variables such as respondent backgrounds, types of facilities for Persons with Disabilities (PWD), and so on.

The sample size was determined based on Krejcie and Morgan's table (1970), with a sample size of 30 for the survey conducted on the study subjects, which corresponds to the total population size of the study, i.e., 52 individuals. However, the researcher took the entire sample of 47 respondents, considering the sampling error, as stated by Cohen (1977).

The type of measurement scale in this questionnaire is the Likert scale, used by Chua (2010) and Likert (1932). This scale is employed because it is easy to manage and use, the items are easily answered by respondents, and the collected data has high reliability (Chua, 2014). Each question related to perception is on a 4-point Likert scale. A 4-point Likert scale is used for testing perception because it has a discriminative trend and higher reliability values (Vate-U-Lan & Masouras, 2018). Table 1 refers to the interpretation of the 4-point Likert scale used in the study.

Table 1. Likert Scale Measure Categories

Scale	Description
1	Strongly Disagree
2	Disagree
3	Agree
4	Strongly Agree

Table 2. Score Range and Interpretation

Score	Interpretation
1.00-1.99	Low
2.00-2.99	Moderate
3.00-3.99	High

DATA ANALYSIS AND FINDINGS

The data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 20. The results of this study will be presented descriptively, and the descriptive data will be explained in terms of mean and percentages.

Table 3. Result

No	Item	Mean	Interpretation
1	Provision of Good Pedestrian Paths for PWD	1.85	Low
2	Provision of Clear Signboards to Help PWD Navigate Accurately	1.28	Low
3	Provision of Comfortable Chairs and Tables for PWD	1.19	Low
4	Provision of Special Parking Spaces for PWD	1.19	Low
5	Provision of Comfortable Gazebos for PWD	1.21	Low
6	Provision of Safe Playground for PWD	1.28	Low
7	Provision of Ramps and Ramp Steps for PWD	1.02	Low
8	Provision of Adequate Lighting for PWD Vision	1.87	Low
9	Provision of Comfortable Surau for PWD	1.77	Low
10	Provision of Safe Guiding Blocks for PWD	1.47	Low
11	Provision of Handrails with Braille Writing for Visually Impaired PWD	1.77	Low

The study findings indicate that overall, the public facilities in the study area are not very friendly for persons with disabilities (PWD). All evaluated items are at a low level. The provision of ramps and ramp steps for PWD showed the lowest mean score, with an average of 1.02. This is followed by the provision of chairs and tables, which do not meet suitable specifications and are not PWD-friendly, with an average mean of 1.19. Additionally, there is no special parking space provided for PWD in the study area, also with an average mean of 1.19. This is followed by the conditions of gazebos, pedestrian paths, lighting, and resting chairs, all in poor condition with an average mean of 1.21.

Moreover, the absence of clear signboards indicating directions makes it difficult for PWD with speech and hearing impairments to navigate the study area, with an average mean of 1.28. The provision of playgrounds is also found to be less safe and PWD-friendly, with an average mean of 1.28.

Furthermore, a lack of safe guiding blocks and handrails with Braille writing for visually impaired PWD, with an average mean of 1.47. The provision of *surau* (prayer room) is also found to be less comfortable for PWD, with an average mean of 1.77. The handrails with Braille writing for visually impaired PWD also have a mean score of 1.77. Regarding pedestrian paths, it only obtained an average mean of 1.85. This is due to uneven surfaces and inadequate safety features, especially for wheelchair users. As for the lighting aspect, it obtained the highest average mean of 1.87 among all items.

These findings raise concerns among PWD users when engaging in recreational activities in the study area. Therefore, society must prioritize the needs of PWD users, ensuring that they do not feel marginalized during recreational activities due to their physical limitations

CONCLUSION

The study concludes that the facilities for Persons with Disabilities (PWD) provided in the recreational park are still in low condition and require improvement and restoration to align with the needs and usability of users. Therefore, a conducive design for recreational parks plays a crucial role in enabling

PWDs to engage in recreational activities effectively. As a result, the findings of this study can serve as a guide for Local Authorities and stakeholders involved to take proactive steps in providing more suitable designs and facilities for PWD. This is essential because they also have inclusive rights to engage in recreational activities in the park. User-friendly facility designs for PWD will attract interest and encourage users to visit the recreational park.

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