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ACCESSIBILITY AND INCLUSIVITY OF PLAYGROUNDS FOR CHILDREN WITH DISABILITIES IN MALAYSIA

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Abstract

Playing is one of the most crucial physical activities for children's development worldwide. Due to the unsuitability of the playground's design and the available play equipment, children with disabilities (CwDs) frequently experience difficulties when playing, especially at public playgrounds, amusement parks, and other recreational areas. They have consistently been mistreated and ignored in several ways. When designing and developing a playground, the accessibility and inclusivity of the space are crucial factors that should be considered. in preparing playgrounds for Children with Disabilities (CwDs). Two objectives are highlighted in this study, 1) to determine the criteria of accessible and inclusive playgrounds for disabled children in Malaysia and 2) to investigate the current accessibility and inclusivity of playgrounds for children with disabilities in Malaysia. The research methodology used is the qualitative method by using semi-structured interviews with caregivers of disabled children. The findings from the study conclude that most of the public playgrounds designed in Malaysia (even including inclusive playgrounds for Children with Disabilities (CwDs)) have still not met the needs of children with disabilities. The findings from this study hopefully will ensure that disabled children in Malaysia have the accessibility to play in inclusive playgrounds happily in the future.

Keywords: playgrounds, disabilities, accessible, inclusive

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INTRODUCTION

A playground can be categorised as an open space which is an area or territory that accommodates human outdoor activities (Kusumo Dewi et al., 2017). A playground needs to be accessible to welcome every child. However, an accessible playground is not always inclusive for children of all physical and mental abilities (No Fault, 2018). According to Talay et al. (2010) children with disabilities, have limited accessibility and usability to the playground and they do not support interaction with others. This means that playground designs overlook or pay less attention to the requirements of children with impairments. Soltani et al. (2012) stated that children with disabilities are often faced with problems in public areas and one of the problem areas is in public playgrounds.

Datuk Fatimah Abdullah, Sarawak Welfare, Women and Community Wellbeing Minister, stated that local government authorities should make cities and towns more accessible to handicapped people. (Lai, 2017). Soltani et al. (2012) urged responsible parties to take care of this issue and no longer discriminate against the needs of disabled children. In Malaysia, there has been no study on the need for proper public playgrounds for children with disabilities (Soltani et al., 2012). Besides, Jabatan Landskap Malaysia (2010) realized that recreational parks and playgrounds are still not friendly to disabled people because of accessibility and facilities factors.

Islam (2015) also shared the same opinion, saying that public convenience and environment are not user-friendly due to the lack of infrastructure support from the government and the low awareness among the public. These are challenges for this community to socialize and be independent. The following goals have been established, which are to develop the standards of accessible and inclusive playgrounds for the use of children with disabilities and to examine the present accessibility and inclusiveness of playgrounds for children with disabilities.

LITERATURE REVIEW

Accessible Playground

A playground needs to be accessible in order to welcome all kids (Gutierrez Jr. et al., 2007). A playground that is easily accessible is one in which everyone can go around without difficulty. Accessibility is about easy to travel, to move, to approach or to entry. Accessible is the interpretation that if a child is in a wheelchair, the child is able to access some of the facilities in the playground environment (Michael Siu et al., 2015).

Accessibility in the built environment is becoming increasingly important in Malaysia, not just to prepare for an ageing population and CwDs, but also for the general populace (Jaafar et al., 2017). Based on Talay et al. (2010), several barriers were identified with the normal playground. They are parking lot, accessible entry point, pedestrians' ways, ramps, ground surfaces,

playground equipment, transportation/mobility and safety, The playground needs to be accessible to welcome every child including children with disabilities (No Fault, 2018). According to Wazani et al., (2020), children with Disabilities has limitation to participate in activities in inaccessible environment. Hussein & Mohd Yaacob (2012) interpreted accessible as a situation where even children who are on a wheelchair are able to access the playground environment easily. The Americans with Disabilities Act of 1990 (ADA) accessibility rules require playground designers to adhere to the standards. The standards regarding accessibility mentioned:

- i) The playground must have clear paths and pathways leading to the play equipment.
- ii) Every child should be able to travel freely on smooth pathways and slopes, as well as use grasp bars with ease.
- iii) Every child should be able to move securely between pieces of play equipment.
- iv) On an accessible route, the playground must provide at least one of each kind of ground-level play equipment.
- v) Half of the playground's play equipment must be in an easily accessible path.
- vi) Handrails on both sides of the ramp are required.
- vii) To protect the safety of users, playgrounds must utilise ADA-compliant safety surface and undergo regular inspections and maintenance.

Inclusive Playground

Inclusive playgrounds are intentionally created to offer a secure environment for children of all abilities to play together, as well as to be developmentally suitable for children with and without disabilities (Luk and Au, 2015). The concept of inclusive first emerged as a strategy to guarantee that all children, regardless of aptitude, are integrated into the community. Today, inclusiveness is commonly viewed as a method for ensuring that everyone feels included, participated, and connected. Inclusive playgrounds are those that are particularly intended to allow children of varying abilities to play together rather than merely beside one another (Fernelius and Christensen, 2017). Inclusive playgrounds are also described as “Playgrounds for all Abilities” or “Playgrounds for children with disabilities.” (Luk and Au, 2015).

An inclusive playground means that the user can interact with every aspect of the playground whether they are confined to a wheelchair or not. A playground that is inclusive it not only accessible, but it encourages and facilitates children's interaction with other users. According to Kaplan (2013), there are eight keys to inclusion based on the Inclusive Play Design Guide.

- i) The playground needs to include all different types of play equipment.
- ii) Each type of physical play equipment must provide multiple challenge levels.
- iii) In the playground, a module structure must be supplied so that children who do not slide or climb can play on each deck or level.
- iv) Place comparable types of equipment in the same location to promote similar play at different ability levels.
- v) Separate activities into pods to make the playground easier for the user.
- vi) Make wheelchairs and strollers simpler to access and manoeuvre by using appropriate surfaces.
- vii) Identify the most engaging play equipment and make sure the play space is accessible and useable for all children.
- viii) Passage routes around and through the playground and adjacent areas are broad enough for people and wheelchairs to pass.

Children with Disabilities (CwDs) and Playground

Disabilities come from the word ‘disable’ which covers the definition of impairments, activity limitations, and participation restrictions. According to WHO (2018), an impairment is an issue with the physical structure or function by an individual and it limits an activity when carrying out a task or action. “A child with disabilities is a child evaluated as having mental retardation, a hearing impairment, a speech or language impairment, a visual impairment, a serious emotional disturbance, an orthopaedic impairment, autism, traumatic brain injury, another health impairment, a specific learning disability, deaf-blindness, or multiple disabilities, who needs special care and extra attention, special education, and related services.” (Baxter, 2007). Nevertheless, McArthur et al. (2007) stated that there are 5 general types of disabilities which are blindness, deafness, physical disabilities, mental health disabilities and intellectual or learning disabilities.

The Persons with Disabilities Act 2008 (Act 685) (PWDA) defines PWDs as those who have long-term physical, mental, intellectual, or sensory disabilities that prevent them from fully participating in the community or public life (Kaur et al., 2015). According to statistics from Jabatan Kebajikan Masyarakat (2016), the total number of people with disabilities was about 409,269 people in Malaysia and Selangor has the greatest amount of disabled persons. The data shows that the highest number of categories of disabilities is learning disabilities, followed by physical disabilities. Meanwhile, as stated by UNICEF (2013), the total number of disabled children under the age of 18 years old was about 114,933 children. Humanium (2019) found that this group is most

often separated from other children by being kept in special institutions and away from their families.

RESEARCH METHODOLOGY

In order to explore the accessibility and inclusivity of a playground designed for disabled children, a qualitative method has been used for this study. The study has been divided into three phases.

Phase 1: Literature review

The process starts with gathering information through reading on the related topic based on past dissertations, journals, articles and books. It is then followed by writing the literature review related to the study.

Phase 2: Data collection

The qualitative method has been conducted through semi-structured interviews to gather accurate data (Creswell, 2013). Semi-structured interviews contain structured and unstructured interview elements. In semi-structured interviews, the interviewer crafts a set of identical questions that all interviewees must respond to. The interviews with eight (8) caregivers/parents and caregivers from Care Centres for Children with Disabilities were conducted face-to-face and online. Purposive sampling was used throughout these interviews.

Due to the broad scope of the topic and the time constraint, the interview has been limited to caregivers in identified playgrounds suitable for children with disabilities in Kuala Lumpur, Shah Alam and George Town, Penang. Four (4) identified playgrounds that are partly or fully designed especially for Children with Disabilities have been identified through interviews with local authorities and parties related with disable children. The information has been thoroughly studied and it was agreed that these (4) four playgrounds which are Titiwangsa Lake Park Kuala Lumpur, Aman Park Petaling Jaya Selangor, Elmina Park Shah Alam Selangor and Youth Park George Town Penang was the best sample for this research and represent the playground specifically design for Disable Children in Malaysia.

Phase 3: Data analysis

Thematic analysis was used for analysing the interview result. The steps start with familiarising the collected data, assigning preliminary codes to the data, searching for patterns in codes/keywords across the different interviews, reviewing patterns, defining and naming the pattern and producing a report.



Figure 1: Titiwangsa Lake Park Kuala Lumpur



Figure 2: Aman Park Petaling Jaya Selangor



Figure 3: Elmina Park Shah Alam Selangor



Figure 4: Youth Park George Town Penang

DATA ANALYSIS

The data have been collected from eight (8) interviewees at four (4) identified playgrounds. The playgrounds are:

- i. Titiwangsa Lake Park Kuala Lumpur - (TLPKL)
- ii. Aman Park Petaling Jaya Selangor - (APPJ)
- iii. Elmina Park Shah Alam Selangor - (EPSA)
- iv. Youth Park George Town Penang - (YPGT)

The interviewees are coming from various backgrounds, and it makes the data collected more reliable. Three (3) of eight (8) interviewees are caregivers at the Children with Disabilities Care Centre. The disabilities of the children under their supervision are varied compared to the caregiver/ parent with the children of one disability.

Table 1: Demographic of Interview Participant

Code	Age	Sex	Location	Position
<i>iv1</i>	38 years	Female	TLPKL	Parents / Caregiver
<i>iv2</i>	43 years	Female	TLPKL	Caregiver
<i>iv3</i>	29years	Male	APPJ	Parents / Caregiver
<i>iv4</i>	39 years	Female	APPJ	Parents / Caregiver
<i>iv5</i>	45 years	Female	EPSA	Caregiver
<i>iv6</i>	44 years	Male	EPSA	Parents / Caregiver
<i>iv7</i>	33 years	Female	YPGT	Parents / Caregiver
<i>iv8</i>	50 years	Female	YPGT	Caregiver

Table 2: Type of Disabilities for Children with Disabilities (CwDs)

Code	Types of disability (for CwDs only)				
	Learning	Physical	Mental	Visual	Speech
<i>iv1</i>		√			
* <i>iv2</i>	√	√	√	√	√
<i>iv3</i>			√		
<i>iv4</i>	√				
* <i>iv5</i>	√	√	√		√
<i>iv6</i>		√			
<i>iv7</i>	√				
* <i>iv8</i>	√	√	√	√	√

Most of the interviewees agreed that children with visual disabilities are the most difficulty accessing the playground. No special route with visual

disabilities equipment is provided for them. Only Aman Park Petaling Jaya provided the route for children with visual disabilities. Meanwhile, accessibility for physical disabilities is only fully provided at Youth Park George Town. Aman Park Petaling Jaya, Elmina Park Shah Alam and Youth Park George Town provided ramps and berms to make sure the playground is more accessible for wheelchairs and mobility devices users, but Titiwangsa Lake Park Kuala Lumpur has still not provided enough ramps and berms. The interviewee also agreed that most of the playgrounds are free from deterrents (i.e., slopes or narrow paths) and it makes the playground more accessible for all.

In many of the playgrounds, children with disabilities cannot move around or are free to play around. Results from this study showed that the new parks like Elmina Park Shah Alam and Youth Park George Town have ample space for children with disabilities to move around and can easily reach to play with the equipment. The design of the playground already took notes on the need for accessibility and inclusivity for Children with disabilities.

Most of the playground provided a levelled, smooth path and was safe for children to move around. Only Aman Park at Petaling Jaya needs to consider the condition of the path. Most of the paths in the playground are slippery and very dangerous to all users of the playground. Signage is very important, especially in a playground that is used by Children with Disabilities.

Enough signage was provided to help CwDs at two of the playgrounds, Aman Park and Youth Park George Town Penang. Meanwhile, another two playgrounds still need additional signage. Means of access for CwDs specifically for physically disabled children from the parking lot to the playground should be the first concern in creating an accessible playground. Only parking at Youth Park Penang is accessible to all users compared to other playgrounds. Aman Park provided the nearest parking in the back area, but the user needs to enter the playground from the back entrance.

Table 3: Accessibility of Playground for Children with Disabilities (CwDs)

Item	Accessibility of playground	Responses							
		√=Yes x=No xx= Not really 0=Not enough							
		iv1	iv2	iv3	iv4	iv5	iv6	iv7	iv8
		TLPKL		APPJ		EPSA		YPGT	
1	Children with visual disabilities can easily access the playground.	xx	xx	√	√	x	x	xx	xx
2	Children with Physical Disabilities can easily access the playground.	xx	√	xx	√	√	xx	√	√
3	Ramps, berms or other ways are provided with handrails to make it more accessible for children with disabilities, wheelchairs and mobility devices user.	0	0	√	√	√	√	√	√
4	There are deterrents (i.e., slopes or narrow paths) making accessibility difficult.	xx	xx	xx	x	x	x	x	x
5	Children with all disabilities can easily move around the playground .	x	√	xx	xx	√	√	√	√
6	Children with all disabilities can easily reach and play with all the playing equipment.	xx	x	x	xx	√	√	√	√
7	Paths are levelled, smooth and safe for children to move around	√	√	x	x	√	√	√	√
8	Enough signage is provided to help CWDs.	0	0	√	√	0	0	√	√
9	The location of the parking is near the playground.	x	x	√	√	x	x	√	√

Three analytical issues on the inclusivity of playgrounds from the four playgrounds are identified. The first issue is that some of the public playgrounds such as Aman Park Playground and Youth Park are not designed according to the intended user or age group. It limits the user and makes the playground not inclusive to all. The second one is Titiwangsa Lake Park and Aman Park does not provide enough play equipment suitable for all children's abilities. Most of the equipment and activities are only suitable for normal children and it makes

children with disabilities (CwDs) feel not inclusive with the environment and this creates the third issue, where children cannot play together side by side.

Most of the playgrounds do not fully meet the criteria of inclusive playgrounds. Only Youth Park George Town meets the criteria but the playground is not catered for all ages, only for children below 12 years old.

Table 4 : Inclusivity of Playground for Children with Disabilities (CwDs).

Item	Condition of inclusivity of playground	Responses √=Yes x=No xx= Not really 0=Not enough							
		iv1	iv2	iv3	iv4	iv5	iv6	iv7	iv8
		TLPKL		APPJ		EPSA		YPGT	
1	Playground is suitable for all ages.	x	x	√	√	√	√	x	x
2	All playground users can enter by using the same route.	xx	√	xx	xx	√	√	√	√
3	Every child can play side by side without differentiating their abilities	xx	xx	xx	xx	√	√	√	√
4	Inclusive play equipment and activities are provided enough for normal children and Children with Disabilities	0	0	0	0	0	0	√	√
5	Activities offered appeal to all children's senses - textures, a mix of shapes and sounds.	√	√	√	√	√	√	√	√
6	The rest of the areas are suitable for children and caregivers to sit side by side without differentiating the abilities.	xx	xx	√	√	√	√	√	√

CONCLUSION

This study investigated the current situation of playgrounds for children with disabilities in Malaysia and the investigation has concentrated on the accessibility and inclusivity of the playground. The study concludes that most of the public playgrounds designed in Malaysia (even including inclusive playgrounds for Children with Disabilities (CwDs) have still not met the needs of children with disabilities. The entire playground should offer accessibility and inclusivity to every child whether disabled or not. The Local Authorities or parties related to Children with Disabilities should stress the guideline that the playground specially made for Children with Disabilities needs to fulfil.

The enforcement should be applied to the playground too. The playgrounds need many improvements, the local authority, playground provider and designer need to design an accessible and inclusive playground that every

child in the community will enjoy. A further study on the importance of accessibility and inclusivity of playgrounds should be done to make sure the community realised the importance of inclusive playgrounds to all.

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REFERENCES

- Americans with Disabilities Act 1990
- Baxter, P. (2007). Disabled child or child with a disability? *Developmental Medicine & Child Neurology* 49(11):803.
- Creswell, J. W. (2013). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Research design Qualitative quantitative and mixed methods. London: SAGE Publications.
- Fernelius C. L. & Christensen K.M. (2017) Systematic Review of Evidence-Based Practices for Inclusive Playground Design. *Children, Youth and Environments*, 27(3), 78-102.
- Gutierrez Jr, A. Hale, M.N. Gossens-Archuleta, K. & Sobrino-Sanchez, V. (2007). Evaluating The Social Behavior Of Preschool Children With Autism In An Inclusive Playground Setting. *International Journal of Special Education*, 22(3), 26-30.
- Humanium. (2019). Disabled children - Humanium. Online: <https://www.humanium.org/en/disabled-children/>. Accessed: 1 February 2022.
- Hussein, H & Mohd Yaacob, N. (2012). Development of Accessible Design in Malaysia, *Social and Behavioral Sciences*, 68 (2012), 121 – 133.
- Islam, M. R. (2015) Rights of the People with Disabilities and Social Exclusion in Malaysia. *International Journal of Social Science and Humanity*, 5(2), 171-177.
- Ja'afar, N. H., Abdul Rahim, A., Abd. Samad N. A., & Che Rahim, C. R. (2017). Sidewalk Accessibility at Melaka's Traditional Streets for People With Disabilities (PwDs) . *Journal of the Malaysian Institute of Planners*, 15(1), 389 – 396.
- Jabatan Kebajikan Masyarakat. (2016). Laporan Statistik Jabatan Kebajikan Masyarakat. Online: <http://www.jkm.gov.my/>. Accessed 1 February 2022.
- Jabatan Landskap Negara. (2010). Panduan reka bentuk sejagat (universal design) kemudahan rekreasi taman awam. Online: <http://jln.kpkt.gov.my/index.php/pages/view/69>. Accessed 27 January 2022.
- Kaur, G., Leong, T. P., Yusof, J. M. & Singh, D. (2015). Perception of People with Disability in Creating Sustainable Public Policy. *Social and Behavior Sciences*, 168, 145-155.
- Kusumo Dewi D. I., Rakhmatulloh A.R & Amadea, D. (2017). Indicators of Open Space Quality For Children In High- Density Settlements. *Journal of the Malaysian Institute of Planners*, 18(1), 172 – 180.
- Lai, A. (2017). Make things more OKU-friendly. Online: <https://www.thestar.com.my/metro/>. Accessed: 28 January 2022.

- Luk C.W. & Au K. C. K. (2015). Inclusive playground for children of special needs - July 2015. *11th World Congress Design & Health, International Academy of Design & Health*. At: Hong Kong Affiliation: Association of Universal Accessibility Hong Kong
- MacArthur, J. Sharp, S., Gaffney, M., & Berni, K. (2007). Does It Matter That My Body Is Different? *Journal of the Children's Issues Centre*, 11(2), 25-30.
- Michael Siu, K. W., Wong, Y. L. & Lam, M. S. (2017). Inclusive Play in Urban Cities: A Pilot Study of the Inclusive Playgrounds in Hong Kong. *Procedia Engineering*, 198, 169-175.
- No Fault. (2018). Accessible or Inclusive? Playgrounds for Everyone Go Beyond ADA – No Fault. Online: <http://nofault.com/2018/04/accessible-or-inclusive-playgrounds-for-everyone-go-beyond-ada>. Accessed: 2 February 2022.
- Persons with Disability Act (1995)
- Persons with Disability Act 2008 (Act 685)
- Soltani, S. H. K., Abbas, M. Y., & Awang, M. (2012). Disabled children in public playgrounds: A pilot study, *Asian Journal of Environment-Behaviour Studies*, 3(8), 15-26.
- Talay, L., Akpınar, N. & Belkayali, N. (2010). Barriers to playground use for children with disabilities: A case from Ankara-Turkey. *African Journal of Agricultural Research*. 5(9), 848-855.
- Wazani, I. A., Mohamad, D. & Jaafar, M. (2021). Accessibility for Persons with Disabilities in Built Environment of Urban Area: Case Study of George Town, Penang. *Journal of the Malaysian Institute of Planners*, 19 (5), 53 – 65.
- WHO. (2018) *World report on disability*. Online http://www.who.int/disabilities/world_report. Accessed: 2 February 2022.

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