

Accessibility for Disabled Individuals at Shopping Centers in Surakarta

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Abstract

The purpose of this study was to evaluate the availability and accessibility levels for disabled individuals at shopping centers in Surakarta. The objects of the research were three shopping centers in Surakarta. The research used a qualitative method. The data were obtained from observations described through words by comparing the standard Regulation of Minister of Public Works Number 30 Year 2006 on Technical Guidance of Facility and Accessibility on Building and Environment. The data analysis was done by using statistical description by comparing field data with standard provisions. The results showed that there was no accessible parking space for disabled individuals. Among the total data, shopping centers in Surakarta were between 48% -76% with the number of fulfilled indicators of 14-22 indicators from 29 accessible indicators. SS had an accessibility rate of 48%, SGM of 76%, and HM of 66%. SGM had the highest level of accessibility in the term of ramp and elevator. Meanwhile, HM had a higher level of accessibility in the terms of toilets.

Keywords : Accessibility, Difable, Shopping Centre

I. INTRODUCTION

Surakarta city has several nicknames, one of them is a disabled friendly city. Disabilities or people with different ability is the term which is used for individuals who have special needs. According to the World Health Organization, individuals with disabilities are people who have no barriers in the term of physical, cognitive, mental, sensory, emotional and multiple disorders (Barbotte, 2011).

Each individual with disabilities has equal opportunity in all aspects of life and environment that support disabled individuals so that they can live normally in the society. Provision of accessibility intends to create circumstances and environment that support disabled individuals so that they can live fully in the community. Provision of accessibility is a fundamental requirement for disabled individuals to achieve social justice in all areas, including access to public facilities, buildings, transportation, education, technology,

recreation, and shopping centers (Hussein and Yaacob, 2012)

In 2005, it was noted, total number disabled individuals in Indonesia reached 10 million and will continue to increase in subsequent years (Purwanta, 2002, p.105). More specifically, by 2014, in Surakarta, it was recorded that 1238 residents are disabled individuals. The amount is 0.23% of the population in Surakarta. Percentage of disabled individuals in Surakarta is relatively small, but it does not mean accessibility to disabled individuals in public facilities is ignored (Wardani, 2017).

Accessibility according to Minister of Public Works Regulation number 30 In 2006, an amenity provided for everyone, including individuals with disabilities and the elderly in order to achieve equality of opportunity in all aspects of life and livelihood. Facilities and Accessibility have four principles that need to be considered, namely safety and ease of usability. Swaine, et al (2014), explained that the principle in an accessibility regulation of America uses Universal Design (UD). In the UD principle, product and service results should be used by most individuals with disabilities. Improved quality and accessibility of creating quality of life are good opportunities for individuals with disabilities to participate in society (Bashiti and Rahim, 2016).

Accessibility needs to be applied all over the place, including shopping centers. The shopping center is considered more of a place to sell goods, as it can also be a place for recreation and entertainment community, including people with disabilities (Swaine et al, 2014). Shopping center management must ensure the comfort and safety of individuals with disabilities in accordance with accessibility standards so that existing facilities can be enjoyed by citizen, including people with disabilities (Hashim et al, 2012). Studies on accessibility in the shopping center have done a lot to improve accessibility to individuals with disabilities, but it still lacked of awareness (Kamarudin, 2012).

In a similar earlier study, Firdaus and Iswahyudi (2010) said that the accessibility of individuals with disabilities still has some physical, sensory, and intellectual barriers. According to Mujimin (2007), Gede Market Surakarta City Hall already has a fairly complete accessibility as their ramps, handrails, and guiding block. Meanwhile, Thohari (2014) said that almost all public facilities in Malang are not yet accessible and only a small portion has been providing accessible facilities. From some research on accessibility for people with disabilities, no one has done research on the accessibility of parking areas, ramps, elevators and toilets at a shopping center in Surakarta.

Based on the explanation above, the purpose of this study was to evaluate the availability and accessibility level for individuals with disabilities at shopping centers in Surakarta.

II. LITERATURE REVIEW

According to Law no. 4 Year 1997 About Persons with Disabilities, Individuals with disabilities are everyone with physical and / or mental disabilities who may interfere with or constitute obstacles and obstacles for him / her to perform activities appropriately. This is in accordance with the opinion of Riyadi (2012, p.293), that individuals with disabilities are individuals who have problem of physical, mental, or a combination of physical and mental barriers.

Accessibility comes from the English (accessibility), which means easy. Accessibility is the convenience provided for individuals with disabilities to be able to develop itself as a compensation of the non-functioning of the body parts of people with disabilities. Accessibility is divided into 2, namely physical and non-physical accessibility. In Surakarta City Regulation no. 2 Year 2008 on Disability Equality, physical accessibility includes services related to the planning and designation of urban developments and public facilities. Accessibility in non-physical areas of education and employment for disabled persons has equal opportunities. Understanding of officials, Department of Social Welfare and Social Organization for accessibility for people with disabilities is indispensable for the realization of public facilities accessible for the disabled (Wirawan, 2007).

A shopping center is an area consisting of one or more vertically or horizontally constructed buildings that is either sold or leased to a business actor or self-managed to conduct good trading activities (Presidential Regulation No. 112 of 2007 on the Management and Development of Traditional

Markets, Shopping centers and Modern Stores). In addition, the shopping center is one of the public buildings in which contains trade activities and also as a means of recreation (Irrakhmawati, et al, 2013). Shopping centers are also a space for sharing experiences, services, and meeting places where life, emotions and interactions occur (Poldma, 2013)

III. RESEARCH METHODOLOGY

This research approach used qualitative research method by using descriptive methods. Bogy and Tylor in Moleong (2005, p.4) said that a qualitative approach is a research procedure that produces descriptive data in the form of written or oral words of people and behavior that can be observed. The objects of the research are three shopping centers in Surakarta.

Data were collected by observation techniques using instruments in the form of a checklist created by the standards of Regulation of the Minister of Public Works of the Republic of Indonesia No. 30 Year 2006 on Technical Guidelines and Accessibility Building and Environment, supported by documentation in the form of photographs.

Data analysis techniques in this study used descriptive statistics. The data obtained were presented in the table and described further. In addition, the researcher made an assessment by comparing data on accessibility accessibility at 3 shopping centers in Surakarta with Ministerial Regulation no. 30 Year 2006.

IV. RESULT AND DISCUSSION

Shopping centers that were the objects of research were Solo Square (SS), Solo Grand Mall (SGM), and the Hartono Mall (HM). The three shopping centers are located in Surakarta. Here are the observations made in 3 shopping centers in Surakarta:

A. Parking Area

The first aspect observed was the parking area. Parking spaces in shopping centers in both SS, SGM and HM have not provided individual disabled parking areas. According to Ministerial Regulation no. 30 of 2006, at 1-25 the number of available parking areas, there is at least 1 accessible parking area for disabled individuals.



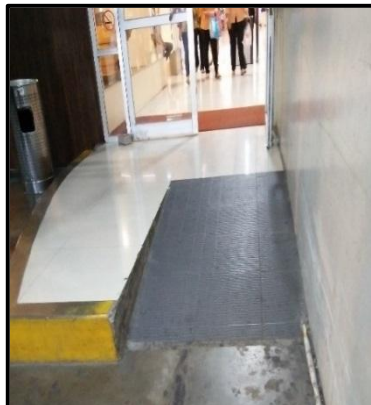
Picture 1. Solo Square Parking Area

B. Ramp

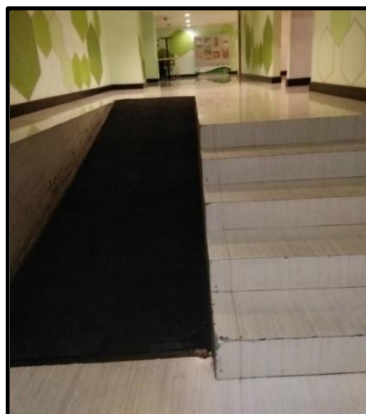
The second aspect of observation that *ramp*. Referring to Regulation of Minister of Public Works no. 30 of 2006, there are 9 indicators to note:

1) *The Slope of the Ramp in the Room Up To 7°*

The slope of the *ramp* in the third shopping centers was not yet qualified. One shopping center does not have a *ramp* in the room. Meanwhile, two of which exceed the maximum, examples 9° and 30°.



Picture 2.1. Ramp Indoors



Picture 2.2. Ramp Indoors

2) *The slope of the Ramp Outdoors Maximum of 6°*

The slope of the *ramp* in the third shopping center, one of which has been qualified, example a

maximum of 6°. However, two shopping centers do not have an outdoor ramp.



Picture 3.1 Ramp Outdoors



Picture 3.2 Ramp Outdoors

3) *The maximum ramp of 900cm*

Slope of the *ramp* in the third shopping centers was qualified, example less than 900cm.

4) *Ramp Width with no Safety Edge of 95cm*

The width of the *ramp* was without a safety edge. The second shopping center which had a ramp without a safety edge had been qualified, which was less than 95cm.

5) *Ramp Width with Maximum Safety Edge of 120cm*

The width of the ramp with a safety edge in one shopping center which had a ramp with a safety edge had been qualified at less than 120cm.

6) *Prefix and Suffix Minimum Ramp 160cm*

Prefix and suffix third *ramp* shopping centers had been qualified, example at least 160cm.

7) *Prefix and Textured Ramp Endings*

Prefix and suffix *ramp* one shopping center had been qualified, that was textured. However, two other shopping centers have not been accessible.



Picture 4. Prefix Textured Ramp

8) **Rip Safety Edge 10cm**

The width of the ramp with a safety edge in one shopping center which had a ramp with a safety edge had been qualified, which was 10 cm.

9) **The Holding Height of 65-80cm**

Altitude grip vines in one shopping center which had a ramp with a safety edge was not eligible because it had a height of 95cm.

To make the explanation above clearer, the following table is the indicators used as an instrument to observe the ramp by Regulation of the Minister of Public Works No. 30 Year 2006.

Table 1. Indicators Obsersvasi Ramp

| No | Indicator | Shopping Center | | |
|-------------------|--|-----------------|------------|------------|
| | | SS | SGM | HM |
| 1 | The slope of the ramp in the room up to 7° | x | x | x |
| 2 | The slope of the ramp outdoors maximum of 6° | x | √ | x |
| 3 | Slope of the ramp up to 900cm | √ | √ | √ |
| 4 | The width of the ramp without a safety edge max 95cm | √ | x | √ |
| 5 | The width of the ramp with a safety edge max 120 cm | x | √ | x |
| 6 | Prefix and suffix ramp min 160cm | √ | √ | √ |
| 7 | Prefix and suffix textured ramp | x | √ | x |
| 8 | Width 10cm ramp safety edge | x | √ | x |
| 9 | The height of the 65-80 cm creep handled | X | x | x |
| Percentage | | 33% | 67% | 33% |

C. **Elevator**

The third aspect observed was the lift. Referring to Regulation of Minister of Public Works no. 30 of 2006, there are 12 indicators to note:

1) **Differences Face Floor Elevator with Floor Space Face up to 1.25cm**

Differences face floor elevator to a third floor facing room shopping center has been eligible, which is a maximum of 1.25cm

2) **Width of the Waiting Room Enters the Elevator at Least 185cm**

The width of the waiting room enter the elevator of the three shopping centers have been eligible, which is at least 185cm



Picture 5. Waiting Room Entering The Elevator

3) **The Keypad and Display Screen are Easy to See and Reach**

The buttons and display screens of all three shopping centers are eligible, which are easy to see and reach.



Picture 6. Screen Display

4) **The Outer (lift) Elevator Panel Has a Height of 90-110cm**

The second elevator (button) elevator of both shopping centers was eligible, which was 90-110cm tall, but one of them was not eligible because the elevator outer panel had a height of 120cm.

5) **The Inner Panel (button) of the Elevator has a Height of 90-120cm**

The inner panel (button) of the three lifts shopping center had been qualified, example height of 90-120cm.

6) **The Panel has Braille**

Panel one shopping center had been qualified, which was equipped with Braille. However, both shopping centers were not equipped with braille.



Picture 7. Braille Brace Elevator Button

7) **There is a Sound Indicator**

The three shopping centers had not qualified from the audio side, because the elevator had not been equipped with sound.

8) **There is a Visual Indicator**

The three shopping centers had been qualified from the visual side, because the elevator had been equipped with visual indicators.

9) **Minimum Net Width of Elevator 140x140cm**

The net width of the three shopping mall lifts was eligible, which was at least 140x140cm.

10) **There is a Vine Grip on Both Sides**

One of the shopping centers had been qualified because it had a vine grip on either side of the elevator. However, the other two shopping centers did not have a velocity held on both sides.



Picture 8.1 The Creeper Inside the Elevator



Picture 8.2 Handles In The Elevator

11) **The Surface of the Wall Can Reflect Shadows**

Both shopping centers had been qualified, example the elevator wall could reflect shadows. However, one of the shopping centers had not been qualified because it did not reflect the shadow.

12) **Minimum Lifts Door Minimum 3 Seconds**

The minimum time for elevator to open the doors in shopping centers had been eligible, example at least 3 seconds.

To make the explanation above clearer, the following table is the indicators used as an instrument to observe the lift by Regulation of the Minister of Public Works No. 30 Year 2006.

Table 2. Indicators of Lift Observation

| No | Indicator | Shopping Center | | |
|----|---|-----------------|-----|----|
| | | SS | SGM | HM |
| 1 | Differences face floor elevator with floor space face up to 1.25 cm | √ | √ | √ |
| 2 | Wide waiting room entrance, elevator min 185 cm | √ | √ | √ |
| 3 | Button and the display screen, easy to see and reach | √ | √ | √ |

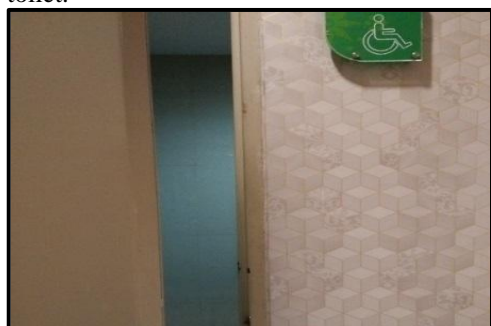
| | | | | |
|-------------------|--|------------|------------|------------|
| 4 | The outer panel (button) of the elevator has a height of 90-110 cm | x | √ | √ |
| 5 | The inner panel (button) of the elevator has a height of 90-120 cm | √ | √ | √ |
| 6 | The panel has braille | x | √ | X |
| 7 | There is a sound indicator | x | x | X |
| 8 | There is a visual indicator | √ | √ | √ |
| 9 | Minimum net width of elevator 140 x 140 cm | √ | √ | √ |
| 10 | There is a vine grip on both sides | x | √ | X |
| 11 | The surface of the wall can reflect shadows | x | √ | √ |
| 12 | Minimum lift door minimum time min. 3 seconds | √ | √ | √ |
| Percentage | | 58% | 92% | 75% |

D. Toilet

The last aspect observed was the toilet. Referring to Regulation of Minister of Public Works no. 30 of 2006, there are 8 indicators to note:

1) There is a Symbol for People with Disabilities on the Outside

One shopping center had a disability symbol on the outside. In addition, there was also a room for changing diapers for infants so that it had accessible qualifications. However, the other two shopping centers were not eligible, as there was no symbol of people with disabilities on the outside of the toilet.



Picture 9.1 Disabled Person Symbol



Picture 9.2 Disabled Person Symbol

2) Has Enough Space for Wheelchair Users

The space for wheelchair users in both shopping centers had been eligible, because it had enough room for movement. However, one of them was not eligible for the lack of space.

3) Elevation of Toilet Seat 45-50cm

Elevation of the toilet seat of those three shopping centers had been eligible, which was as high as 45-50cm.



Picture 10. High Closet

4) There is a Vine Grip

The three shopping centers did not have a vine grip so that they were not fully qualified.

5) The Location of Tissue, Water Taps, Soap Place, Hand Dryer Can be Reached by People with Disabilities

The location of tissue, water faucet, soap place, hand dryer of three shopping centers have fulfilled the requirement that could be reached by persons with disabilities.

6) The Faucet is Fitted with a Lever System on the Sink

One of the shopping centers has used a lever system on the sink faucet so it qualifies. However, the two shopping centers were not eligible for using a turntable system and a tap system on the sink faucet.



Picture 11.1 Washbasin Lever



Picture 11.2 Welding Fans

7) *The Sink Has a Space Under it*

The third sink of the shopping center had been qualified, which had a space below it.



Picture 12.1 Wigroom Under The Sink



Picture 12.2 Wigroom Under The Sink

8) *The Door is Easy to Open and Close*

The doors of those three shopping centers had been qualified, which was easy to open and close.

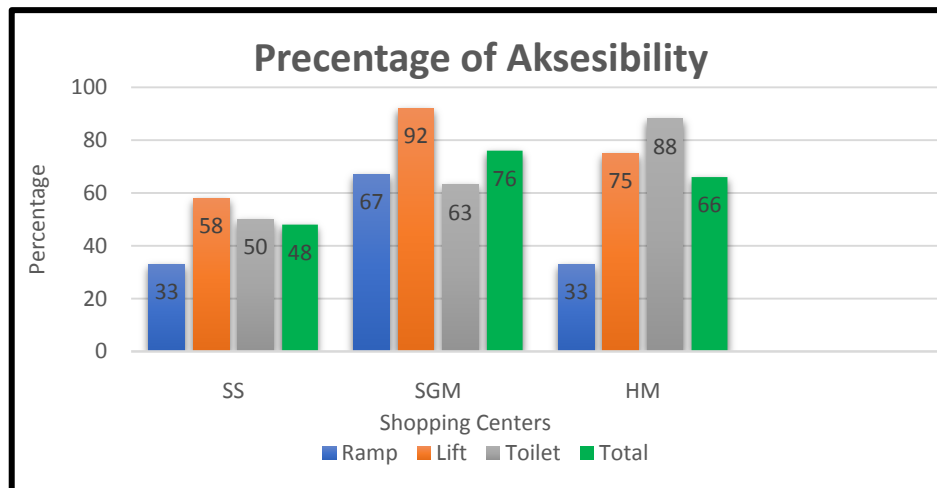
To make the explanation above clearer, the following table is the indicators used as an instrument to observe *the lift* by Regulation of the Minister of Public Works No. 30 Year 2006.

Table 3. Toilet Obsure Indicator

| No | Indicator | Shopping Center | | |
|-------------------|--|-----------------|------------|------------|
| | | SS | SGM | HM |
| 1 | There is a symbol for "people with disabilities" on the outside | x | x | √ |
| 2 | Having enough space for wheelchair users | X | √ | √ |
| 3 | Elevation of toilet seat 45-50 cm | √ | √ | √ |
| 4 | There is a vine grip | X | x | x |
| 5 | The location of tissue, water tap, soap place, hand dryer can be reached by people with disabilities | √ | √ | √ |
| 6 | The faucet is fitted with a lever system on the sink | x | X | √ |
| 7 | The sink has space underneath | √ | √ | √ |
| 8 | The door is easy to open and close | √ | √ | √ |
| Percentage | | 50% | 63% | 88% |

Based on the table above, it can be seen that overall percentages of the level of accessibility to the shopping centers in Surakarta were between 48%-76% in the number of indicators met 14-22 of 29 accessible indicators. Access level of the SS shopping center was 48% with 14 accessible indicators; SGM was 76% with 22 accessible indicators; and the last was HM, an accessible level of 66% with 19 accessible indicators.

The percentage of each shopping center is presented in the following graph.



V. CONCLUSION

Based on the results of this study, it can be concluded that the levels of accessibility to the shopping center in Surakarta with the best graphics were SGM, HM, and SS. SGM had a high level of the most accessible in the term of *ramp*, *elevator*. Meanwhile, HM had the higher accessibility in the case of the toilet.

SGM and HM had an average accessibility rate of over 50%, while the SS still did not meet the average, as it only met 48% of the accessibility level. Therefore, it is necessary to improve gradually on the aspects of accessibility as a whole and in all public facilities in Surakarta, not just at the shopping center.

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