

Adaptive Behaviour of Children with Intellectual Disability in using Public Transportation

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Abstract— This study aims to describe the behaviour of children with intellectual disability when using public transportation by busway. This type of study is descriptive research. The subjects of this study were children with intellectual disability in SMALB XI in Yogyakarta. The techniques used in this study include observation, interviews, and documentation. Data analysis used in this study was descriptive statistics. The collected data was reduced, then the data was displayed, and finally the conclusions were drawn up. The results of this study show that the behaviours of children with intellectual disability when using public transportation by busway still need improvement. This is indicated by the behaviour of children with intellectual disability who have not been able to queue when buying tickets, waiting for a bus, entering the bus in order, and asking questions to the officers. Based on the results of the study, the expectation is that school can provide educational services related to the use of public transportation that is appropriate to the condition of children with intellectual disability and improve learning strategies so that they can understand better in using public transportation. In addition, the government also needs to improve accessibility so that children with intellectual disability can easily use public transportation.

Keywords— *intellectual disability, public transportation, busway, adaptive behaviour*

I. INTRODUCTION

Mobility is one of the basic human needs that must be fulfilled [1]. Mobility activities can be carried out by utilizing available facilities that is public transportation. Various types of public transportation modes can be used to travel including buses and trains. Every day many passengers use public transportation to take them to their destination. Before using public transportation, passengers buy tickets in advance as travel costs. With the large number of passengers, they will usually queue when they want to buy a ticket and when entering the vehicle. If the passengers are having difficulty finding out the route to be used, they can ask the officer.

Besides the general public, children with intellectual disability can also use public transportation to do mobility. The results show that children with intellectual disability succeeded in using public transportation modes like buses with the help of GPS [2]. They managed to travel with a new route for the first time and got off the bus in a location previously unknown. Although this study has not been discussed about the safety and social problems of the children while on the bus, we can find out that actually children with intellectual disability can access public transportation in the surroundings if they are given training.

In fact, based on the results of interviews with SLB teachers in Klaten, most of the children with intellectual disability at the SMALB level were still unable to perform mobility independently. Although the access to public transportation in the surroundings was quite adequate, they claimed they still had difficulty in using it. Furthermore, the behaviour shown by children with intellectual disability when they were in public places such as passive, naughty, difficult to follow the rules and needed to get special attention. This is supported by research on investigations on the difficulties experienced by children with special needs in accessing public transportation [3]. The results show that significant obstacles experienced by children with special needs are related to the transit system and the treatment (behaviour) experienced when using public transportation. Changes to the physical environment, system and behaviour are needed to provide equal access and opportunities in public transportation.

From the results of this study, it can be seen that the behaviour factor becomes one of the obstacles when using public transportation. Considering that one of the characteristics experienced by children with intellectual disability is that apart from experiencing limited intelligence abilities, they also experience obstacles to adaptive behaviour [4]. Adaptive behaviour is the ability to adjust to the demands of the environment and apply skills that are already known to the situation [4],[5]. Difficulties in adaptive behaviour cause children with intellectual disability to experience barriers to meet development and sociocultural standards to obtain personal freedom and social responsibility [6]. If obstacles in adaptive behaviour are not addressed, it will cause negative stigma from the community towards the lives of children with intellectual disability. Therefore, it is necessary to observe the adaptive behaviour of children with intellectual disability when using public transportation. This is needed so that the services provided related to behaviours shown by children with intellectual disability when using public transportation can be appropriate with their needs.

The rest of this paper is organized as follow: Section II describes the literature review. Section III describes the material and proposed method. Section IV presents the obtained results and following by discussion. Finally Section V concludes this work.

II. LITERATURE REVIEW

This section presents the literature review.

A. Public Review

Transportation is the activity of moving goods (cargo) and humans from one place to another [7], [8]. Transportation requires supporting tools to ensure the smooth process of moving goods or people from the place of origin to the destination in accordance with the desired time. There are three modes of transportation or transportation systems that can be used for the movement of people and goods; land, sea and air transportation [9]. The existence of transportation equipment now provides convenience for everyone in moving from one place to another. In addition, the existence of transportation equipment also provides a smooth activity in moving goods so that production goods can be marketed to all regions easily.

In the Republic of Indonesia Government Regulation Number PM 108 of 2017 concerning the operation of transportation of people by non-route public transportation, explains that the public transportation equipment is a vehicle used to transport goods or people at a charge. The regulation also mentions non-route public transportation, those are public passenger cars and public buses in certain urban areas and / or regions or from one place to another, having origin and destination but not having a fixed track and time. The purpose of public transportation according to Republic of Indonesia Transportation Government Regulation Number PM 108 of 2017 is to accommodate accessibility for the community and encourage national economic growth. Transportation is used to facilitate people in carrying out daily activities. Transportation has enormous benefits including saving operating costs, saving time, saving energy, and improving the economy of an area [10].

B. Children with Intellectual Disability

Children with intellectual disability are individuals with developmental barriers characterized by limitations on intellectual function and adaptive behaviour [11,12]. Limitations on intellectual function are limitations in cognitive, academic learning, problem solving, assessment, and learning from experience. Intellectual limitations can be confirmed through clinical assessment and individual testing of standard intelligence capabilities.

According to the Diagnostic and Statistical Manual of Mental Disorder or DSM-5 [13]. children with intellectual disability have intelligence scores below 70. The score shows that the intellectual ability of children with intellectual disability is below average so that they need more help when learning than children with other average IQs. Besides showing scores, the results of intelligence tests are used to determine the strengths and weaknesses of each child. Test results can be used as a reference in determining the services to be provided, especially in academic matters and vocational skills that are appropriate to the needs and conditions of the children with intellectual disability. The right service aims to train children so that they can be more independent in living their lives [6].

C. Adaptive Behavior of Children with Intellectual Disability

Adaptive behaviour is the ability to adjust to new situations and apply skills that are already known to the situation [5]. Adaptive behaviour shows a person's ability to adapt to the demands of his environment [4]. Adaptive behaviour is very important to be owned by everyone, including children with intellectual disability because this behaviour is needed in solving everyday problems. According to Smith & Tyler [6] children with intellectual disability experience difficulties in adaptive behaviour because they do not have the skills needed to deal with different situations or in certain situations.

Difficulties in adaptive behaviour cause children with intellectual disability to experience obstacles in meeting development and sociocultural standards to obtain personal freedom and social responsibility. The scope of adaptive behaviour according to Greenspan [4] consists of social intelligence and practical intelligence. Social intelligence refers to the ability to interpret individuals and social interactions, such as understanding a situation when someone is angry and not easily deceived by others. While practical intelligence is related to the ability to overcome problems in everyday life, such as preparing food, using transportation, and making choices. Children with intellectual disability have at least one limitation of the scope of the adaptive function so that they need continuous support in carrying out their adaptive activities.

According to the American Association on Intellectual and Developmental Disability / AAIDD [14] besides intellectual barriers and adaptive functions that occur during development, there is still one component that is systems of supports to describe and define children with intellectual disability. Support related to resources and strategies to improve one's development, education, interests and individual functions [14]. Children with intellectual disability experience obstacles to the system of support, so they need support from their closest people. The support system is a network of people around the child's life, who work with social institutions or the government to help manage the implementation of activities in meeting children's daily needs [6]. According to Kirk, *et al.* in [15] support for children with intellectual disability can be in the form of health, social, and education. In addition, support is also needed to assist children in understanding the information obtained. Giving support does not have to be done every time, but it depends on the conditions and needs of the children with intellectual disability.

III. MATERIAL & METHODOLOGY

This study used a qualitative approach, with a type of descriptive research. The research subjects used were children with intellectual disability SMALB grade XI. This study was carried out in Yogyakarta. Data collection techniques used were observation and interview. Observation was used to collect data about behaviours of children with intellectual disability when using public transportation. Supporting data was obtained through interviews with classroom teachers and children with intellectual disability. Analysis of the data used consists of

several stages, namely data reduction, data display and conclusion. Data reduction in this study is the process of selecting data whether it is necessary or not to facilitate the researchers in collecting further data. The next stage is the data display by compiling previous selected data so that the structure is easy to understand and can be analyzed in depth. The last step is to conclude the data that has been analyzed.

IV. RESULTS AND DISCUSSION

This section presents the results obtained and following by discussion.

TABLE I. OF OBSERVATION RESULTS OF CHILDREN WITH INTELLECTUAL DISABILITY WHEN USING PUBLIC TRANSPORTATION BY BUSWAY

No	Activities	Subject PH			Subject KH			Subject DW			Subject SF			Subject DI			Subject BN		
		1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
1	The child's behaviour seeing the queue for buying a ticket.	√					√		√			√			√		√		
2	The child's behaviour when asking the officer to buy a ticket.	√				√		√				√			√		√		
3	The child's behaviour when paying a travel ticket.		√			√		√				√			√		√		
4	The child's behaviour when waiting for public transportation to come.	√				√		√				√			√		√		
5	The child's behaviour when getting on the public transportation.		√				√		√			√			√			√	
6	The child's behaviour when looking for a seat in public transportation.		√			√		√				√			√			√	
7	The child's behaviour in the public transportation.		√			√		√				√			√			√	
8	The child's behaviour when seeing other people require a seat.		√			√		√				√			√			√	
9	The child's behaviour when telling the officer of where they are going to go.		√			√		√				√			√			√	
10	The child's behaviour when getting off from the public transportation.		√			√		√				√			√			√	
Total		17			22			13			20			20			14		

A. Results

Based on the Table I, observations on the behaviours of six children in grade XI of SMALB when using public transportation, the following data was obtained. This study observed the behaviours of intellectual disability children when using public transportation. Behaviour aspects observed were attending a queue, buying a ticket, waiting for public transportation, behaviour in the public transportation, asking information to officers, and getting off from public transportation.

a) Queuing

In the Table I below three children show their willingness to join the queue but not in order, two children do not want to follow the queue, and one child want to queue in order.

b) Buying Tickets

In the table above four children show of being able to buy tickets but not in order and the other two children show of being unable to buy tickets.

c) Waiting for the Public Transportation

In the table above three children show of being able to wait for the coming of public transportation and the other three children show of being unable to wait the coming of public transportation.

d) On Public Transportation

In the Table I below, when the children get on the public transportation, five children can get on but not in order and one child is able to get on public transportation in order. In looking for a place to sit, five children can find a seat and one child cannot be able to find a seat in public transportation. During the travel, the six children show good behaviours and keep calm with other passengers. Furthermore, when there are other passengers need a seat, four children show a good behavior by giving a seat and two children do not share seat.

e) Asking Information from the Officer

In the table above when the children buy tickets, three children can ask the officers and three children are not able

to ask the officers. In addition, when telling the officer about the destination, four children can tell where they are going, and two children are not able to tell the destination to the officer.

f) *Complete in using Public Transportation*

In the table above five children can get off from the public transportation but not in order and one child is not able to get off from public transportation himself.

B. *Discussion*

Behavior is one aspect that must be possessed by everyone, including children with intellectual disability. Some behaviors shown by children with intellectual disability when using public transportation are not fit with norms in society. When you want to buy a ticket there are still children who do not want to line up in the queue. There are still some children do not want to sit in a chair waiting in proper manner when waiting for the arrival of transportation. When they are on the bus, there are some children do not want to share their seats when somebody else need it more. Some behaviors shown by the child are caused by their conditions. Intellectual limitations cause them having difficulties in social interactions such as information processing, emotional expression, and social participation [16]. Based on the results of the study, intellectual disability children have difficulty in adapting to the surrounding environment. This is in accordance with what described by Smith & Tyler [6] that intellectual disability children have difficulties in adaptive behavior because they do not have the skills needed to deal with different situations or in certain situations. The condition of intellectual disability children who have deficits in adaptive behavior can be overcome by providing support to them. Support provided can be through education at school or at home related to how to use public transportation. As stated by Kirk, *et al.* in [15] support for intellectual disability children can be support in health, social, and education. In addition, support is also needed to help children understand the information obtained. Giving support does not have to be done every time, but it depends on the conditions and needs of the children with intellectual disability.

V. **CONCLUSION**

The results showed that the behaviors of children with intellectual disability when using public transportation still need improvement. This can be seen from the behavior of children who have not been able to queue in buying tickets, waiting for the bus in proper manner, being on the bus, and asking the officer. Those behaviors shown because children with intellectual disability has deficits in adaptive behavior.

Some recommendations given are providing educational services related to how to use public transportation, improving learning strategies / methods in delivering public transportation material so that children with intellectual disability will get better understanding how to use public transportation, and increasing accessibility for children with intellectual disability to make it easier for them in using public transportation.

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REFERENCES

- [1] Mumpuniarti and Pujaningsih. "*Pembelajaran Akademik Fungsional dalam Konteks Pendidikan Khusus Orientasi Budaya*", 2017.
- [2] Davies, D.K., Stock, S.E., Holloway, S., and Wehmeyer, M.L. "Evaluating a GPS-based transportation device to support independent bus travel by people with intellectual disability" *Intellectual and Developmental Disability*, 48(6), 454-463 (2010).
- [3] Bezyak, J.L, Sabella, S.A., and Gattis, R.H. "Public Transportation: An Investigation of Barriers for People With Disability" *Journal of Disability Policy Studies*, 28(1) 52– 60 (2017).
- [4] Hallahan, D.P., Kauffman, J.M., & Pullen, P.C. "*Exceptional learners: an introduction to special education* (9th ed.)", 2012.
- [5] Chen, C.K. "*Adapting early childhood curricula for children with special needs*", 2014.
- [6] Smith, D. D., & Tyler, N.C. "*Introduction to special education making a difference* (7th ed.)", 2010.
- [7] Andriansyah "*Manajemen transportasi dalam kajian dan teori.*" Fakultas Ilmu Sosial dan Ilmu Politik Universitas Prof. Dr Moestopo Beragama, 2015.
- [8] Bowersox, C. "*Introduction to Transportation.*" Macmillan Publishing Co, Inc, 1981.
- [9] Salim, A. "*Manajemen transportasi*". PT Grafindo Persada, 2013.
- [10] Adisasmita, S.A. "*Transportasi dan Pengembangan Wilayah.*" Graha Ilmu, 2011.
- [11] Dunn, J.M & Leitschuh, C.A. "*Special physical education.*" Kendall / Hunt Publishing Company. 2012.
- [12] Rosnawati, A. & Kemis. "*Pendidikan ABK tunagrahita.*" Luxima Metro Media, 2013.
- [13] American Psychiatric Association. "*Diagnostic and statistical manual of mental disorder: DSM-5* (5th ed.)" American Psychiatric Association, 2013.
- [14] American Association on Intellectual and Developmental Disabilities. "*Intellectual disability: definition, classification, and system of supports/ The AAIDD Ad Hoc Committee on Terminology and Classification* (11th ed.)" American Association on Intellectual and Developmental Disabilities, 2010.
- [15] Kirk, S., Gallagher, J., & Coleman, M. R. "*Educating Exceptional Children* (Ed 14th)." Cengage Learning, 2015.
- [16] Peltopuro, M, *et al.* Borderline intellectual functioning: a systematic literature review. *Intellectual And Developmental Disabilities*, 52(6), (2014).