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**RELIABILITY OF INSTRUMENTS FRIENDSHIP ACTIVITY
OBSERVATIONAL TEST AND ADJECTIVE OBSERVATIONAL TEST
FOR INTELLECTUAL DISABILITY FOR UNIFIED SPORTS**

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Abstract: Reliability in psychometric instruments is essential in the development of instruments. The purpose of this research is to develop and validate the instruments of Friendship Activity Observational Test (FAOT) and Adjective Observational Test (AOT). The draft instrument that has been compiled is then tested to see its consistency. Instrument testing by three trainers who observed five intellectual disability athletes in unified sports. The analysis of quantitative data using intraclass correlation coefficients (ICC) with rodents proposed by Fernandes, the provision of reliability value has consistency and high stability if above 0.80. The result of ICC processing comparison of each athlete's bleeder got the value of instrument reliability ranges FAOT of 0.916 to 0.958 and AOT of 0.920 to 0.962. The results of reliability test on FAOT and AOT instruments for intellectual disability children in unified sports were obtained reliable results, so that instrument has consistency and high stability to be used as a psychosocial tool for children with disability in unified sports.

Keywords: Adjective, Friendship Activity, Reliability, Unified Sports

1. INTRODUCTION

Evaluation has an important role to know the success rate of the program has been given. The evaluation process requires measuring instruments with various forms according to the phenomenon to be measured, whether in the form of tests, questionnaires, interviews, and observation. Therefore, an evaluation cannot be separated from the availability of the instrument as a measuring instrument. An instrument is a tool used to measure the phenomena in nature and society that will be observed by the meter and adapted to certain characteristics. Instruments as a measuring tool in sports are important because they are used to gather information about the abilities, interests, and motivations of students or athletes to be measured.

Instruments as measuring tools also need to be adapted to certain characteristics. The instruments that have been developed are not necessarily valid and reliable elsewhere. In addition to referring to the location of use, the instrument must also consider aspects in the psychometric for its preparation. Hinkin (2005: 166) revealed that the compilation of the instrument must pay attention to the number of items or items. Crocker & Algina (2008: 45) explains that the value of the scale is the numbers that appear after the scaling rules are determined and the number has been assigned to each element of the data system.

Kothari (2004: 68); Kimberlin & Winterstein (2008: 2276), Instruments have the function of disclosing the facts into data (processed) so that the instrument that will be used has adequate quality and has the reliability. The data will be in accordance with actual facts or circumstances in the field. An instrument can be said reliably if the test results show consistency. Consistent meaning is that the instrument when used several times to measure the object, will show the same result. The consistency of a measuring instrument can be achieved when using the right approach. Atmojo (2012: 42) explains that the instrument is said to have high reliability with the provision of reliability coefficient value is

more than 0.80 (high reliability ≥ 0.80). The coefficient value is obtained through the stages of reliability testing in advance with a customized approach of instrument characteristics. Mardapi (2012: 52) mentions several reliability approaches such as internal consistency (one-time measurement approach), stability (retest approach/retest test), and inter-assessor (approach through rater observation).

Measurement of something phenomena is needed in various fields, including in sports. The development of sports encompasses children with special needs including child intellectual disability (intellectual disability). Kauffman and Hallahan (2011: 176) explained that the intellectual disability children based on intelligence are divided into three categories, namely mild category (IQ 70-61), 60-51 category of moderate, and severe category (IQ <50). Intellectual disability is impaired during a period of development that includes intellectual and adaptive function deficits. The grouping of children with intellectual disability is not only based on IQ since measurements based on IQ are less valid so that grouping is based on conceptual domain, social domain, and practical domain for mild, moderate, severe, and profitable categories (American Psychiatric Association, 2013: 34-36).

Sport intellectual disability children in the International shaded by Special Olympic which is now based on unified sports. Unified Sports is an inclusive sports activity for children with mild intellectual disability and non-intellectual disability. Hassan (2012: 1275) describes his findings revealing his positive impact on integration and inclusion domains for athletes who follow the Unified Sports program with trainers involved in preparing athletes for the purpose of competition through training. The progress of the sport of intellectual disability (ATG) children is experiencing rapid development in the world. United States of America (USA) is the country trigger special Olympic international (SOI) for children intellectual disability.

Waters (2017: 2) explains that individuals involved in special Olympics display more speech changes, parts of problem-solving, and involvement in self and group regulation for task completion. The answers to interview questions reflect a heightened awareness to pay attention to diet and be physically active. This suggests that participation in team activities can create awareness of social processes that transcend sports.

Unified sports create unique team compositions and provide new experiences not encountered in other sports. The experience creates an inclusive culture and fosters understanding in schools and communities. The purpose of sport unified is described by Rector (2013: 7) including friendships, nature, self-esteem improvisation of children, and positive changes to attitudes, behaviors, and performance of children who experience barriers (problems). Types of sports included in Unified Sports Soccer are basically soccer, basketball, bocce, tennis, golf, badminton, and bowling.

The literature study was carried out by researchers and obtained information that the instrument of friendship and adjectives of children with intellectual disability in the world was first developed by Siperstein (1980) in Boston USA in the form of friendship activity scale (FAS) and adjective checklist (ACL). The FAS and ACL Instruments of Siperstein (1980) were re-validated by Nalbant, et.al. (2011: 523) in the Turkish version for the sport of child intellectual disability. A review of friendship activity for children with intellectual disability is necessary for accuracy as a literature for the development of the instrument of friendship activity mentioned. Siperstein (1980: 11) through the development research on friendship activity which is still used as an instrument to date by Nalbant, et.al. (2011, 523-530), described the friendship activities held by the child's intellectual disability generally includes five factors: Helping Behavior, Sharing Behavior, Physical Proximity, Common Activities, and Intimacy Level.

The adjective study for the child's intellectual disability is required for accuracy as a literature for the development of the adjective instrument. Siperstein

(1980: 12) explains that nature is the basis of behavior, including the child's intellectual disability. An adjective in child intellectual disability include:

- a. **Positive Factor:** healthy, clever, alert, cheerful, honest, neat pretty, proud, bright, helpful, friendly, careful, glad, smart, happy, kind, dan alright.
- b. **Negative Factor:** sloppy, crazy, greedy, cruel, dumb, stupid, careless, dishonest, mean, dan ugly.
- c. **Negative Affect Factor:** slow ashamed lonely, weak, bored, sad, dan unhappy.

Nalbant, et.al. (2011, 523) validated and revalidated against the Siperstein's FAS and ACL instruments (1980) and then used the following year for the mentally retarded child in Turkey. The study indicates that the instrument requires adjustment to be applicable to the location of different subjects. This is in accordance with Park's research (2013: 57) confirms that the scale of psychological measurements should be refined for measurements tailored to the condition of the subject.

Snyder & Mitchell (2006: 7) explains that culture is influenced by physical development and social processes. Each child with disabilities is a group of ethnicity, race, and gender who have their own cultural identity. Each region has different ways to provide good treatment such as psychological support or special services for them or it is discriminatory to the disabled child (Henderson and Bryan, 2012: 193). In Turkey has a distinct socio-cultural condition, by the countries of the middle east and European countries. These conditions lead to the acculturation of Muslim culture (middle east) and already blend with European culture so that the emergence of different physical and psychological characteristics. The majority of Turks have physical conditions such as Europeans, Turks are taller than middle easterners and their (psychic) behavior majority still carries middle-eastern culture including religious (Sari, 2012: 200-203).

In relation to the characteristics of the State of Turkey, certainly different from Indonesia with the characteristics of Asia in general as the physical average height is not too high compared to Europe. The development of the instrument of friendship activity and adjective in Indonesia is adjusted to the intellectual disability of children in Indonesia and the improvement of relevant instruments previously.

The Siperstein (1980) and Nalbant (2011) studies for FAS and ACL were performed by the child's intellectual disability. Looking at the concept is already contrary to the concept that develops today. Based on the findings of Gorbainuk (2014: 311), it has been argued that historically big five and big six modern theories have measured personality-related perspective perspectives such as adjectives giving greater emphasis on peer-rating and observer-rating compared with self-rating. The adjustment raises an instrument of friendship activity and an adjective based on the Observational Test.

Newly developed instruments need to go through the stages of reliability testing. Testing reliability is important to know the consistency and stability-bag instrument that has been developed. It is therefore also important to seek the Reliability of the Friendship Activity Observational Test Instrument and the Adjective Observational Test for Intellectual Disability in Unified Sports.

2. METHOD

2.1. Participants

The instrument is tested by three trainers. The trainer observed five athletes playing with partners in unified sports. The athlete is a mild category intellectual disability child evidenced by psychological testing and the partner is a non-intellectual disability athlete. The results of the observations were then analyzed to determine the value of the instrument's reliability.

2.2. Data Collection Procedures

Testing test reliability using intraclass reliability approach. A reliability study involving a rater is usually called by an inter-rater agreement with the ICC (Intraclass Correlation Coefficients) approach. Reliability-between rater that tested consistency is the rater. So the grain position is replaced with the person or rater position (Cohen, 1968: 213). Inter-rater agreement will be achieved when each of the raters has the same perception of an object that is judged and observed. Therefore, the observation guidance should be clear and operational with sufficient training to the rater before entering the field to assess, will certainly help in obtaining high inter-agreement value. Testing reliability in this study using three people who are trainers trainer sport intellectual disability children.

2.3. Data Analysis Techniques

Methods in the estimation of reliability between rater is used by involving more than two people judging the individual through observation using a validated instrument that will produce ordinal data. The coefficient of the ICC will give the right results when using three or more rater and the reliability scoring result score indicates consistency.

Manual counting using intraclass correlation formula (Fernandes: 1983), as follows.

$$\rho = \frac{MSRrs - MSe}{MSr + (k-1)MSe} \frac{MSRrs - MSe}{MSr + (k-1)MSe}$$

Information:

MSrs: the mean of squares between rows, each row is one person

MSe: mean square of residua tau error;

K: number of columns or number of appraiser (rater)

The results of Intraclass Correlation Coefficients calculations, conducted interpretation so as to know the level of stability between the rater. Streiner, et.al (2015: 8) states that stability is said to be high referring to ICC results between measurements greater than 0.80 (high stability ≥ 0.80). The stable instrument shows a high consistency of its use.

3. RESULTS AND DISCUSSION

3.1. Reliability Test Results of Friendship Activity Observational Test

Calculation of Intraclass Correlation Coefficients instrument of FAOT (Friendship Activity Observational Test) was obtained from the comparison of athletes' observation by rater 1, rater 2 and rater 3 with details as follows.

Table 1. Result ICC (*Intraclass Correlation Coefficients*) instrument FAOT

No	Initial Name	ICC	Information (ICC ≥ 0.80)
1	ARS	0.930	<i>high stability</i>
2	GAP	0.916	<i>high stability</i>
3	MF	0.924	<i>high stability</i>
4	BS	0.952	<i>high stability</i>
5	MFAN	0.958	<i>high stability</i>

3.2. Reliability Test Results of Adjective Activity Observational Test

Based on the Intraclass Correlation Coefficients calculation the Adjective Observational Test instrument is obtained from the comparison of athletes' observation by rater 1, rater 2 and rater 3 with the following details.

Table 2. Result ICC (*Intraclass Correlation Coefficients*) instrument AOT

No	Initial Name	ICC	Information (ICC \geq 0.80)
1	ARS	0.962	<i>high stability</i>
2	GAP	0.925	<i>high stability</i>
3	MF	0.962	<i>high stability</i>
4	BS	0.920	<i>high stability</i>
5	MFAN	0.923	<i>high stability</i>

4. DISCUSSION AND CONCLUSION

4.1. Discussion

Babiker and Herbert (1996: 240) state that good psychological instruments meet the requirements of which can be used over and over again. The consistency of the measuring instrument refers to the relative reliability of an instrument in measurement. Kothari (2004: 73), the instrument serves to reveal facts into data (processing) so that a good instrument has reliability.

Reliability testing of this instrument using intrarater reliability. Kaplan and Saccuzo (2012: 120) mentioned that reliability testing for behavioral observation is using intrarater reliability with ICC analysis (Intraclass Correlation Coefficients). Based on the results of ICC processing per-comparison of each athlete obtained the value of instrument reliability range of the Friendship Activity Observational Test of 0.916 s / d 0.958 and Adjective Observational Test of 0.920 s / d 0.962. These results meet reliable standards, in accordance with ICC requirements of Streiner, et.al (2015: 8) that ICC results between measurements

greater than 0.80 (high stability ≥ 0.80) fall into the category of high-reliability stability. Under these provisions, the ICC's results reflect the instrument's reliable standards for the stability of re-use with different users of instruments to measure the variables of friendship activity and adjectives.

Based on the results of reliability testing in the field, it is known that athletes intellectual disability mild raises the characteristics of friendship activity is mutual help between friends and partners, sharing, the emergence of proximity when the game and when relaxed, and the intimacy between players and partners in the game and after the game . The adjective side of the emergence of the dominant positive properties of the athlete, although some athletes give rise to negative traits. Therefore, field findings show that unified sports are not only a motor activity but as one program that can be used effectively to develop psychosocial aspects of friendship activity and adjective.

This is in accordance with Ozer, et.al (2012: 229) explains that the unified sports program positively influences psychosocial behavior among others behavior, friendship activity and adjective in children with intellectual disability and intellectual disability. Based on the research findings, friendship activity includes factors: helpful behavior, sharing behavior, physical closeness, general activity, level of intimacy. Adjective includes positive nature factor, negative nature, and negative properties effect.

4.2. Conclusion

The findings of the reliability test show that the instruments of friendship activity observational test and adjective observational test are consistent and stable as a measure of friendship activity and adjective so that they can be used for intellectual disability in unified sports. The results shown in the ICC obtained average instrument reliability values that were subjected to high stability for both instruments of friendship activity observational test and adjective observational

test. Referring to reliability is essential to the development of psychometric instruments, the findings reinforce that the instrument is worthy of use because of its high consistency and stability.

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