

JUARA : Jurnal Olahraga

E-ISSN 2655-1896 ISSN 2443-1117 https://doi.org/10.33222/juara.v8i2.3430



Motor Ability of Deaf and Scientific Children

Sufitriyono^{1*}, Wawan Sundawan Suherman², Cerika Rismayanthi³, Muhammad Akbar Syafruddin⁴ ^{1,2,3} Universitas Negeri Yogyakarta, Jl. Colombo Yogyakarta No.1, Karang Malang, Caturtunggal, Kec. Depok, Kabupaten Sleman, Daerah Istimewa Yogyakarta 55281, Indonesia ⁴ Department of Physical Education, Health and Recreation, Universitas Negeri Makassar, Jl. AP. Pettarani Makassar, Sulawesi Selatan, 90222 Indonesia

*e-mail: sufitriyono.2022@student.uny.ac.id

Info Artikel	Abstrak
Article History.	This research is descriptive research using a survey method with test
Received 29 M arch 2023	techniques. The sample was taken purposively as a sample of 16 children
Approved 25 July 2023	with special needs who were deaf and mentally retarded. Research data
Published 28 July 2023	consisted of a test for walking on a straight line for 5 meters, a test for
Keywords:	- running to avoid 5 obstacles for a distance of 15 meters, a test for standing on one leg for 10 seconds, a test for jumping from a high beam. 15 cm, and
Gross Motor Skills, Hearing Impaired, Intellectually Impaired.	sprint 40 meters. From the gross motor skills test of deaf and mentally retarded children in Makassar City, the results obtained were that the gross motor skills of deaf and mentally retarded children were in the medium category, namely 8 students or 88.9% and 7 students or 100% respectively. From this, researchers can conclude that the gross motor skills of deaf and mentally retarded children in Makassar City are in the medium category.

© 2023 Sufitriyono, Wawan Sundawan Suherman, Cerika Rismayanthi, Muhammad Akbar Syafruddin Under the license CC BY-SA 4.0

🖾 Alamat korespondensi : JI. Colombo Yogyakarta No.1, Karang Malang

E-mail : sufitriyono.2022@student.uny.ac.id

INTRODUCTION

The world of education cannot be separated from a person's various strengths and weaknesses, academic knowledge and physical abilities are the basis for each person in carrying out an activity. Someone who is physically and intellectually normal will undergo general education in accordance with regulations made by the government, children who have deficiencies in terms of intellectual level and physical abilities often receive different treatment from other people. Decree of the Minister of State for Women's Empowerment and Child Protection of the Republic of Indonesia Number 5 of 2011 concerning the policy of fulfilling children's rights to education highlights several general rights and opportunities that children have to develop naturally and appropriately in accordance with their potential. First, every child has the right to receive education and teaching in the context of personal development and level of intelligence in society (Syafruddin et al., 2022).

In educational terms, it is also known as a disabled child or a child with special needs. Children with Special Needs are children whose condition and growth experience deviations from a physical, mental, social and emotional perspective. Children with special needs are categorized into two large groups, namely temporary ABK and permanent ABK (Rezieka et al., 2021). Disabilities are usually categorized into various physical conditions, such as speech impairment, mental impairment, and visual impairment (Fakhiratunnisa et al., 2022). Among the behavioral and emotional disorders including hyperactivity, autism, and indigo are examples of intellectual disabilities. One of the main problems in children's development, whether they are healthy children or children with special needs, is difficulty in motor skills (Khoeriyah, 2022). Depending on the type of disability the child has, each child's motor skill problems will be unique. According to Law of the Republic of Indonesia no. 8 of 2016 concerning Persons with Disabilities, persons with disabilities are anyone who has long-term physical, intellectual, mental, sensory or other limitations that prevent them from interacting fully with their environment. This makes it difficult for them to participate fully and effectively with other citizens on the basis of equal rights.

According to (Putri & Damri, 2020), mental retardation is a condition where a person has intellectual function that is below average. The prevalence of intellectual disability in Indonesia is currently estimated at around 6.6 million people (Najmah, 2022). According to data from the Central Statistics Agency (BPS) in 2006, it shows that the population of mentally retarded children is at the highest rate. large compared to the number of children with other disabilities. According to Widati and Murtadlo in (Najmah, 2022), mentally retarded children face obstacles to internal motor development, which causes them to struggle in a number of areas, including sensorimotor abilities, body balance abilities, environmental awareness capacity, coordination abilities, and mobility.

The inability of a person's hearing organs to work normally is known as deafness (SLEMAN, n.d.). Thus, from a pedagogical perspective, special educational or guidance services are required. In addition, special exercises and activities are required for physiological reasons. Apart from that, pedagogically, deafness can be understood as a person's inability to learn knowledge orally, thus requiring special guidance and services while at school. So that deaf people can develop well and be responsible in everyday life, emphasis is placed on developing their personal potential optimally (Asniarno, 2010).

From childhood to adulthood, motor skills will improve, and this will be the starting point for children to build good motor skills. By learning it, one of the motor skills will be acquired. Children will change in various ways as they develop, one of which is their gross motor skills (IRAWAN, n.d.). Apart from being a more complex developmental process involving many large muscles, the development of children's gross motor skills is very important for their social development. A child's quality of life is greatly influenced by their gross motor skills because these abilities help children develop their cognitive abilities, contribute to daily activities, help fine motor skills experience proper development, and help children develop more advanced sports skills (Iswantiningtyas & Wijaya, 2015). The level of intelligence, precision, strength, and efficiency of movements all increase as motor skills improve (Agusriani, 2015).

Physical disabilities, which can be caused by disease, infection, or accident,

interfere with a person's ability to move normally and require special education programs (Nisa et al., 2018). According to data from social protection programs and services, there were 263,879 children with disabilities in Indonesia in 2012 (Utami et al., 2018). Gross motor skills such as walking, climbing stairs, mobility and coordination will be more difficult to develop in children with disabilities (Purnamasari et al., 2022). After preliminary studies and observations, it was found that studies comparing levels of motor abilities were needed.

In Indonesia, the number of people with disabilities is significant and continues to increase. According to observations made at a number of special schools in Makassar City, each school has a different set of learning resources and facilities. Some schools concentrate solely on academic development during the learning process, while others have several learning initiatives that include teaching students how to be independent.

This study will help special schools achieve educational goals, one of which is improving children's gross motor skills. Understanding and focus on motor skills in mentally retarded and deaf children needs to be improved. Adequate services for children with disabilities will maximize the potential of each child so that they can live independently and adapt to their environment. With this research, it is hoped that every child will get the right help to meet their needs. Children with disabilities are individuals with distinctive personalities who generally also have deep abilities to balance the disorders they suffer from. So with these various explanations, the author is interested in finding out more about "Gross Motor Ability Levels of Deaf and Intellectually Impaired Children in Makassar City".

METHODS

Descriptive survey methods and test and measurement techniques were used to collect data for this research. (Soendari, 2012) A test is a collection of questions, tasks, or other tools used to find out how knowledgeable, skilled, and capable a person is. In this study, the sample group consisted of 16 children, consisting of 9 deaf children and 7 mentally retarded children. The sample used was purposive sampling. Subjects are chosen not based on layers, randomness, or area, but on known goals. Children are given a test which includes: (1) walking straight for 5 meters, (2) running while avoiding five obstacles up to a distance of 15 meters, (3) standing on one leg for 10 seconds, (4) jumping from a 15 cm high beam, and (5) sprint 40 meters to measure speed. The tools above are intended to measure various parts of a child's gross motor skills. The information that has been collected is entered into a table, then a movement skill frequency distribution table is displayed. The test results are divided into 3 categories, namely good, moderate and poor (Azmi, 2014).

Table 1. Raw motor ability scores

No.	Interval	Category
1.	1-5	Low
2.	6-10	Currently
3.	11-15	High

FINDINGS AND DISCUSSION

how well the student can move. A description of the motor skills of each group is as follows:

After getting the data from each test, each test item is put into a category that shows

Table 2. Test results for walking straight for 5 meters

Score	Deaf		Mentally disabled	
50010	Frequency	Percentage (%)	Frequency	Percentage (%)
3	0	0	0	0
2	9	100	6	85.7
1	0	0	1	14.3
Total	9	100	7	100

Based on the table above, it appears that the results of the 5 meter straight walking test

for deaf children were all in the moderate category, namely 9 students or 100%.

Meanwhile, for the test results for walking straight for 5 meters for mentally retarded children, 6 students were in the good category or 85.7%, and 1 person was in the poor category or 14.3%.



Figure 1. Graph of test results for walking straight for 5 meters

Table 3. Running while avoiding five obstacles up to a distance of 15 meters

Score	Deaf		Mentally disabled	
Score	Frequency	Percentage (%)	Frequency	Percentage (%)
3	0	0	0	0
2	5	55.6	5	71.4
1	4	44.4	2	28.6
Total	9	100	7	100

Based on the table above, it appears that the results of the running test while avoiding five obstacles up to a distance of 15 meters for deaf children were in the moderate category, namely 5 students or 55.6%, 4 students were in the poor category or 44.4%. Meanwhile, for the results of the running test while avoiding five obstacles up to a distance of 15 meters, 5 students with mental retardation were in the good category or 71.4%, and 2 people were in the poor category or 28.6%. For more details, see the following graph.

Figure 2. Graph of running test results to avoid obstacles as far as 15 meters



Sufitriyono^{1*}, Wawan Sundawan Suherman², Cerika Rismayanthi³, Muhammad Akbar Syafruddin⁴/ JUARA: Jurnal Olahraga 8 (2) (2023)

Score	Deaf		Mentally disabled	
	Frequency	Percentage (%)	Frekuensi	Persentase (%)
3	1	11.1	2	28.6
2	8	88.9	5	71.4
1	0	0	0	0
Total	9	100	7	100

Table 4. Test results standing on one leg for 10 seconds

Based on the table above, it appears that the results of the test for standing on one leg for 10 seconds for deaf children are in the good category, namely 1 student or 11.1%, and those in the moderate category are 8 students or 88.9%. Meanwhile, for the test results of standing on one leg for 10 seconds, 2 students with mental retardation were in the good category or 28.6%, and 5 students were in the moderate category or 71.8%. For more details, see the following graph.

Figure 3. Test results of standing on one leg for 10 seconds



Table 5. Jumping from a 15 cm high beam

Score	Deaf		Mentally disabled	
	Frequency	Percentage (%)	Frekuensi	Persentase (%)
3	1	11.1	0	0
2	8	88.9	7	100
1	0	0	0	0
Total	9	100	7	100

Based on the table above, it appears that the test results for jumping from a 15 cm high beam for deaf children were in the good category, namely 1 student or 11.1%, and those in the medium category were 8 students or 88.9%. Meanwhile, the test results for jumping from a 15 cm high beam for mentally retarded children were all in the medium category,

namely 7 students or 100%. More details can be

seen in the following graph.



Figure 4. Graph of jumping from a 15 cm high beam

Table 6. Sprint a distance of 40 meters to measure speed

Score	Deaf		Mentally disabled	
	Frequency	Percentage (%)	Frekuensi	Persentase (%)
3	0	0	0	0
2	6	66.7	4	57.1
1	3	33.3	3	42.9
Total	9	100	7	100

Based on the table above, it appears that the results of the sprint test with a distance of 40 meters to measure the speed of deaf children are in the medium category, namely 6 students or 66.7%, and those in the poor category are 3 students or 33.3%. Meanwhile, for the results of the sprint test with a distance of 40 meters to measure the speed of mentally retarded children, 4 students were in the moderate category or 57.1%, and 3 students were in the poor category or 42.9%. More details can be seen in the following graph.

Figure 5. Graph of 40 meter running test results



Sufitriyono^{1*}, Wawan Sundawan Suherman², Cerika Rismayanthi³, Muhammad Akbar Syafruddin⁴/ JUARA: Jurnal Olahraga 8 (2) (2023)

Score	Deaf		Mentally disabled	
	Frequency	Percentage (%)	Frekuensi	Persentase (%)
3	1	11.1	0	0
2	8	88.9	7	100
1	0	0	0	0
Total	9	100	7	100

Table 7. Results of gross motor skills

Based on the table above, it appears that overall the gross motor skills test results of deaf children are in the good category, namely 1 student or 11.1%, and those in the medium category are 8 students or 88.9%. Meanwhile, the overall test results for the gross motor skills of mentally retarded children were all in the medium category, namely 7 students or 100%. For more details, see the following graph.

Figure 6. Graph of gross motor ability test results



Deaf children in Makassar City have movement skills that are in the moderate category. Most deaf children in Makassar City have the same movement skills as deaf children their age. From the information collected, it is clear that the physical condition of deaf children does not make them look different from other children and does not slow down their gross motor development. The biggest obstacle for deaf children is their inability to hear, so it will be difficult to get as much information as possible, but they can use their other abilities, such as their eyesight. Lani Bunawan and Maria C. Susila Yuwati in (Azmi, 2014) said that from several studies on motor performance in deaf children, the following can be learned that deaf children are not left behind from normal children when talking about things like sitting. , walking, and other motor skills, and deaf children are also not left behind in terms of hand-eye coordination (manual dexterity).

Meanwhile, based on the results of tests on mentally retarded children in Makassar City, all 7 (100%) of the students had moderate motor skills. This means that their motor skills are in a sufficient range. (Monicha, 2020) says that gross motor skills are the ability to move the body with large muscles. Most or all of the body's gross motor skills are needed so that children can sit, kick, run, go up and down stairs, and so on. This is because, as we know, mentally retarded children face barriers to internal motor development, which causes them to have difficulty in sensorimotor abilities, body balance abilities, environmental awareness capacity, coordination abilities, and mobility, so that they often experience difficulty in carrying out several physical activities properly.

This is where both teachers and parents need to have patience and patience in dealing with children with special needs. If you treat deaf and mentally retarded children with more care and patience, they will be able to grow and develop to the maximum and achieve good personal independence. Gross motor skills include things like walking, running, and jumping. These skills are made possible by the brain, nerves and muscles. Movement begins when external stimuli send messages to the movement coordination center in the brain, which then sends messages to the motor muscles. The muscles then move because the nerves send them messages. When children are deaf and mentally retarded, they have difficulty digesting the various information provided, of course it will make it difficult for them to carry out various activities, especially those related to

gross motor movements. Because the child's ability to hear sounds is poor and understand the movements that will be made, the child takes longer to move. However, in general, when signals come and are received and understood well, deaf children do not have the same problems with gross motor skills as mentally retarded children. The directions for the motor skills test are clear enough for mentally retarded children to understand, so they can provide good motor responses. As for placing some deaf children in the moderate group, this is because they prefer to remain silent during tests, feel embarrassed, and are usually passive when taking each test to measure gross motor skills.

CONCLUSION

Based on the results of research on the level of gross motor skills of deaf children, it is in the medium category, while the level of motor skills of children with intellectual disabilities is in the medium category.

REFERENCES

- Agusriani, A. (2015). Peningkatan kemampuan motorik kasar dan kepercayaan diri melalui bermain gerak. Jurnal Pendidikan Usia Dini, 9(1), 33–50.
- Asniarno, F. (2010). Pengaruh gerak dasar pada pendidikan jasmani adaptif dalam meningkatkan kemampuan motorik anak tuna rungu di slb b/c yayasan pembina sekolah luar biasa (YPSLB) Kartasura tahun 2009.
- Azmi, A. (2014). Tingkat Kemampuan Motorik Kasar Anak Tunarungu Di SLB B Karnnamanohara Sleman. Skripsi Tidak Diterbitkan. Fakultas Ilmu Pendidikan Universitas Negeri Yogyakarta: Yogyakarta.

Sufitriyono^{1*}, Wawan Sundawan Suherman², Cerika Rismayanthi³, Muhammad Akbar Syafruddin⁴/ JUARA: Jurnal Olahraga 8 (2) (2023)

- Fakhiratunnisa, S. A., Pitaloka, A. A. P., & Ningrum, T. K. (2022). Konsep Dasar Anak Berkebutuhan Khusus. MASALIQ, 2(1), 26–42.
- IRAWAN, B. (n.d.). PENGARUH MODEL PERMAINAN DENGAN ASPEK KEMANDIRIAN TERHADAP KEMAMPUAN MOTORIK KASAR ANAK TUNARUNGU DI.
- Iswantiningtyas, V., & Wijaya, I. P. (2015). Meningkatkan Kemampuan Motorik Kasar Anak Usia Dini Melalui Permainan Tradisional Gobak Sodor. PINUS: Jurnal Penelitian Inovasi Pembelajaran, 1(2).
- Khoeriyah, S. M. (2022). PENGARUH METODE BERMAIN BOLA BASKET TERHADAP KEMAMPUAN MOTORIK KASAR PADA ANAK DISABILITAS USIA 10-12 TAHUN DI SEKOLAH LUAR BIASA. Jurnal Kesehata Karya Husada, 10(1), 39–46.
- Monicha, N. (2020). Peningkatan Kemampuan Motorik Kasar Melalui Permainan Sirkuit. Jurnal Cikal Cendekia, 1(1).
- Najmah, I. (2022). Perbandingan Tingkat Kemampuan Motorik Kasar Antara Anak Autisme, Tunagrahita Dan Tunadaksa D Kota Makassar= Comparison of Gross Motor Skills Levels Between Children with Autism With Tunagrahita and Tunadaksa in Makassar City. Universitas Hasanuddin.
- Nisa, K., Mambela, S., & Badiah, L. I. (2018). Karakteristik dan kebutuhan anak berkebutuhan khusus. Jurnal Abadimas

Adi Buana, 2(1), 33–40.

- Purnamasari, N., Afifah, N., & Hardianto, Y. (2022). Hubungan Peran Keluarga dengan Kemampuan Motorik Kasar Anak Disabilitas Intelektual. Jurnal Fisioterapi Dan Rehabilitasi, 6(1), 9–15.
- Putri, N. E., & Damri, D. (2020). Efektivitas Permainan Lompat Katak untuk Meningkatkan Kemampuan Motorik Kasar bagi Siswa Tunagrahita Ringan. Tarbawi: Jurnal Ilmu Pendidikan, 16(2), 120–125.
- Rezieka, D. G., Putro, K. Z., & Fitri, M. (2021). Faktor Penyebab Anak Berkebutuhan Khusus Dan Klasifikasi Abk. Bunayya: Jurnal Pendidikan Anak, 7(2), 40–53.
- SLEMAN, S. L. B. B. K. (n.d.). TINGKAT KEMAMPUAN MOTORIK KASAR ANAK TUNARUNGU DI.
- Soendari, T. (2012). Metode penelitian deskriptif. Bandung, UPI. Stuss, Magdalena & Herdan, Agnieszka, 17.
- Syafruddin, M. A., Jahrir, A. S., Yusuf, A., & others. (2022). PERAN PENDIDIKAN JASMANI DAN OLAHRAGA DALAM PEMBENTUKAN KARAKTER BANGSA. Jurnal Ilmiah STOK Bina Guna Medan, 10(2), 73–83.
- Utami, E. O., Raharjo, S. T., & Apsari, N. C. (2018). Aksesibilitas Penyandang Tunadaksa. Prosiding Penelitian Dan Pengabdian Kepada Masyarakat, 5(1), 83– 101.