



Level of Sports Development Assessed Through the Sport Development Index in Deli Serdang Regency

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Abstract

The aim of this research is to evaluate the success of local governments in development in the sports sector in terms of the availability of open space, community participation, sports resources and community fitness levels (Sport Development Index). Therefore, this research approach is evaluative research. The sampling technique uses stratified random sampling and cluster sampling. The basic characteristics of the population used include; differences in the level of progress of a region, gender differences between men and women, differences in the ages of children aged 8-13 years, teenagers aged 14-18 years and adults aged 18-41 years, while the basic clusters used are sub-district and village or sub-district areas. The research results show that the open space index is in the low category (0.170), the human resources index is in the medium category (0.551), the community participation index is in the medium category (0.582), and the fitness index is in the low category (0.477). Overall, the Sports Development Index for Deli Serdang Regency in the year was in the low category, 0.387.



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INTRODUCTION

Sport Development Index (SDI) is a new term in Indonesian sports. Sport Development Index (SDI) as an instrument to measure the results of sports development in a region (Pradhana, 2016). This is a kind of measurement method which is claimed to be a new alternative for measuring the progress of sports development. Sports development is a process that allows humans to have more access to physical activity. It must enable everyone to have the opportunity to grow and develop, whether physically, spiritually or socially, in a complete way. In the field of sports, development is not only based on the acquisition of medals in multi-event competitions, but also the contribution of the community in exercising and also the level of physical fitness which is part of the Sport Development Index.(Desi Natalia, Sugiyanto, 2016). (Setiawan et al., n.d.) SDI is a composite index that reflects the success of sports development based on four basic dimensions: (1) open space available for sports, (2) human resources or sports personnel involved in sports activities, (3)) participation of community members in doing sports regularly and (4) the degree of physical fitness achieved by the community.

According to (Rosyid et al., 2019)to measure the level of community sports development is not only done with one indicator, namely the acquisition of medals, but can be done by measuring Indonesia's sports development through SDI (Sport Development Index). Sport Development Index (SDI) is a new concept that comes after the publication of human development reports in all countries issued by the UNDP (United National Development Programme), which is one of the UN organisations in charge of development. Indicators of development results in a country are seen

from the HDI (Human Development Index) (Tarigan et al., 2018). If concluded, then SDI can be translated into IPO (Sports Development Index) (N et al., 2019; Setiawan et al., 2019a).

The Indonesian Sports Development Index states that the condition of sports culture in Indonesia is still low which can be seen from the level of progress in Indonesia's sports development which only reached 0.345 or 34% (Sport Development Index) (Navi & Khasanah, 2023). This index is calculated based on participation index numbers, open space, human resources and fitness. The low opportunity for sports activities is caused by the decreasing number of fields and facilities for sports, weak coordination between institutions in terms of providing public facilities for fields and sports facilities for the general public and residential areas (Setiawan et al., 2019b). Public awareness of the importance of sport as a basis for maintaining the quality of health as well as awareness of sports culture is still low, namely around 85%, while 15% are people who are aware of exercising (Akhmad, 2016; Mustafa & Dwiyo, 2020). Meanwhile, the 2006 SDI data shows the fitness condition of our society: 1.08% is in the very good category; 4.07% good; 13.55% moderate; 43.90% less; and 37.40% very less.

From a glance at the description above, we can see that the sports system in our country is currently in a poor condition. For this reason, in restructuring sports conditions, there are several reviews as alternatives that have been used as benchmarks by experts to develop sports conditions in our country (Cahyono et al., 2021; Eriko & Febriyanti, 2014; Kurnia & Or, n.d.; Raibowo et al., 2023). Therefore, the Sport Development Index is considered a parameter for developing sports in Indonesia.

In various references, sport is defined differently depending on the perspective used. Sport is any systematic activity to encourage, foster, and develop physical, spiritual, and social potential (UURI, 2005). Sport is an important thing in society, which is integral in the guidance and development of sports which is more directed towards physical, mental and spiritual fitness and the formation of a social personality (Hardiyono, B., Nurkadri, N., Pratama, B. A., & Laksana, 2019). According to WHO, sport is all forms of movement activities carried out every day including work, recreation, exercise and sports activities (Dewi et al., 2021; Dewi & Faridah, 2022; Dewi & Verawati, 2021; Studi PKO & Olahraga dan Kesehatan, 2019). Sports development in Indonesia must be based on a strong sports policy. The power of sports policy can be stated in the 2004 Yogyakarta Declaration (Kemenpora) and Law no. 3 of 2005 (National Sports System/SKN) which states that sport is any systematic activity to encourage, develop and develop physical, spiritual and social potential. This is in line with the aim that sport can improve and maintain health and fitness, achievement, human quality, instill moral values and noble character, sportsmanship, discipline, strengthen and foster national unity and unity, strengthen national resilience and elevate dignity and honor. nation. From the description above, we can see that there are four basic concepts taken in sports, namely: (1) physical activity, (2) perseverance, (3) the search for perfection, and (4) the courage to take risks. Thus, sport is done not only for pleasure, but as an instrument for achieving perfection in life, both physically, mentally and socially.

Sports development in Indonesia, especially in Deli Serdang Regency, can be seen through 4 aspects contained in the Sport Development Index (SDI) namely

(1) Open Space, (2) Human Resources, (3) Sports Participation, and (4) Sports Fitness. These four aspects will help assess how sports development is in Hamparan Perak District. The open space indicator is one of the indicators that is a pillar in sports development. Deli Serdang District, which has a fairly large area, must of course have open space as infrastructure for the community to carry out sports. The next indicator is human resources supporting sports development. Competent human resources in the world of sports are very important in sports development. The quality and competence of human resources who handle sports must be able to support sports coaching and development (Sinaga et al., 2022) (Akhmad et al., 2024). The third indicator is sports participation, participation is needed for sports progress. Participation in sports also plays an important role. If participation in sports activities is lacking then it is certain that sports activities will not run smoothly. The last indicator of sports development is fitness, this is indeed an important reference in sports development. Physical fitness is defined as a person's ability to perform an activity continuously without feeling excessive fatigue and still be able to perform various other activities called physical fitness activities (Rohmah & Muhammad, 2021). Fitness obtained from physical activity is very necessary. Indirectly, fitness plays an important role in society in carrying out daily activities.

METHODS

This research focuses on measuring the sports development index in Deli Serdang Regency. The results of this research are expressed in the form of an index in the form of numbers so that this research is classified as a quantitative type of research. Because the aim of this

research is to evaluate the success of Kab. Deli Serdang in development, especially in the sports sector, an evaluative research approach was carried out. The sampling techniques used were stratified random sampling and cluster sampling. The sampling technique uses stratified random sampling and cluster sampling. The basic characteristics of the population used include; differences in the level of progress of a region, gender differences between men and women, differences in the ages of children aged 8-13 years, teenagers aged 14-18 years and adults aged 18-41 years, while the basic clusters used are sub-district and village or sub-district areas.

The data sources for this research consist of primary data and secondary data. Primary data includes community participation, availability of open space, human resources in the field of sports, and community physical fitness. Meanwhile, secondary data includes population, area and sports potential. Thus, data collection was carried out using several sampling techniques: 1) Observation, used to obtain information about; area, population, sports potential, human resources and open space; 2) Questionnaire, used to obtain information about; community participation in sports; 3) Tests, used to obtain information about; the level of physical fitness of the community, namely by carrying out the Multistage Fitness test (MFT); 4) Interviews, used to obtain deeper information from credible and related informants.

RESULT

The availability of open space that can be utilized by the community for sports activities in two sub-districts, Hamparan Perak and Percut Sei Tuan sub-districts, is classified as inadequate,

this can be seen from the results which can be seen in the following table:

Table. 1. The Result of the Post Hoc Tukey Test

Aspect	Perak District	Percut Sei Tuan District	SDI
Open Space	0.178	0.162	
Average			0.170

The results of analysis data from two sub-districts in Deli Serdang district show an SDI value of 0.170 in the poor category, this is because the fields or open spaces in these two sub-districts are in very poor condition for sports to be carried out by the local community. The availability of human resources in the two sub-districts, such as sports coaches, sports teachers and fitness instructors, is in the medium category, this can be seen in table 2 as follows:

Table. 2. Human Resource Index Analytical Results

Aspect	Perak District	Percut Sei Tuan District	SDI
Human Resource	0.549	0.553	
Average			0.551

The results of the data analysis show that the capacity of human resources in the two sub-districts is classified as moderate, this is because the human resources are quite good who are competent in certain sports fields, but many of the people are farmers and fishermen so the sports carried out are classified as less structured. well. In terms of public participation in sports in the two sub-districts, it can be seen in table 3 as follows:

Table. 3. Community Participation Index Analytical Results

Aspect	Perak District	Percut Sei Tuan District	SDI
Public Participation	0.582	0.582	
Average			0.582

From the results of the data analysis in table 3, it can be seen that the community that carries out sports activities (public participation) is classified as in the medium category. It can be seen from the results of the data analysis that the figure is 0.582 in the medium category. This must be improved to build a sports development index to prepare public participation in sports, and provide education regarding the importance of a healthy living culture through public or community participation in playing sports. Based on the physical fitness results in the two sub-districts, researchers conducted a bleep test (MTF) which was carried out to measure people's physical fitness. The test results can be seen in table 4 as follows:

Table. 4. Physical Fitness Index Analytical Results

Aspect	Perak District	Percut Sei Tuan District	SDI
Physical Fitness	0.476	0.478	
Average			0.477

Based on table 4 above, it shows that the weak physical fitness of the people in the two sub-districts is caused by several factors including: (1) almost 40% of the people work as fishermen, (2) low public awareness about the importance of maintaining diet and rest patterns, (3) society has not made sport a necessity to improve physical fitness. Several factors cause low physical fitness in society.

DISCUSSION

Sports development in Indonesia, especially in Deli Serdang Regency, can be seen through 4 aspects contained in the Sport Development Index (SDI) namely (1) Open Space, (2) Human Resources, (3) Sports Participation, and (4) Sports Fitness. These four aspects will help assess how sports development is in Hamparan Perak District. The open space indicator is one of the indicators that is a pillar in sports development. Deli Serdang District, which has a fairly large area, must of course have open space as infrastructure for the community to carry out sports. The next indicator is human resources supporting sports development. Competent human resources in the world of sports are very important in sports development. The quality and competence of human resources who handle sports must be able to support sports coaching and development (Akhmad et al., 2024b; Sinaga et al., 2022). The third indicator is sports participation, participation is needed for sports progress. Participation in sports also plays an important role. If participation in sports activities is lacking then it is certain that sports activities will not run smoothly. The last indicator of sports development is fitness, this is indeed an important reference in sports development. Physical fitness is the ability or capability possessed by a person to do work efficiently without experiencing significant fatigue, and can still enjoy leisure time properly (Permanasari, H. A., & Sunarto, 2011). Fitness obtained from physical activity is very necessary. Indirectly, fitness plays an important role in society in carrying out daily activities.

Community physical fitness must start from PJOK teachers, especially in elementary schools, as a driving force for the quality of human resources. It is felt that the PJOK KKG in Hamparan Perak District is able to answer challenges related

to physical fitness, especially for elementary school age children. PJOK teachers should be able to implement Sport Development Index which is a measure of physical fitness, especially in elementary schools, the Service Team is trying to create a technology-based application where the application implemented in partner groups aims to see the level of physical fitness of elementary school students through assistance in using the application Sport Development Index. Apart from that, the results of the physical fitness test will be uploaded online by KKG PJOK, Hamparan Perak District, where the results can be seen online so that the database of Sport Development Index can be stored well.

Deli Serdang Regency is located between 2°57" - 3°16" North Latitude and 98°33' - 99°27" East Longitude and is part of a region in a cross position in the West Pacific Trench area with an area of 2,497.72 Km² (2.49, 772 Ha) or constitutes 3.34% of the area of North Sumatra Province. Administratively, it consists of 22 sub-districts and 394 villages/sub-districts (380 villages and 14 sub-districts), with a population of 1,738,431 people (Deli Serdang in Figures 2008). The Deli Serdang Regency area is located on the east coast of North Sumatra Province with the following boundaries: In the The north borders Langkat Regency and the Strait of Malacca; In the To the south it borders Karo and Simalungun Regencies; In the East borders with Serdang Bedagai Regency; And In the The west borders Langkat Regency and Karo Regency.

The number of public education facilities in Deli Serdang Regency in 2012 was around 1,197 schools consisting of 772 elementary schools, 213 junior high schools, 113 high schools and 99 vocational high schools. The largest educational facilities are in Percut Sei Tuan District, namely 163 school units. Meanwhile, the smallest educational

facilities are in Gunung Meriah District, namely 8 school units. With the large area in Deli Serdang district it should make people more active in doing sports, but in reality sport has not yet become a widespread community among the people, this needs to be carried out frequently in providing outreach to the community to provide a complete understanding of the importance of sports and sports in the community and socializing it. sport.

CONCLUSION

The conclusion in this research is that the overall sports development index in Deli Serdang district is in the low category, however with the PON event being held in several regional locations in Deli Serdang it will be a special legacy for the people of Deli Serdang to maintain, care for and use the facilities and equipment. and sports infrastructure in Deli Serdang Regency.

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REFERENCES

- Akhmad, I. (2016). Standar kompetensi mata pelajaran pjok. Kemendikbud Direktorat Jenderal Guru Dan Tenaga Kependidikan, 1–8.
- Akhmad, I., Suharjo, Lubis, A. P., Destya, M. R., Nurkadri, Helmi, S., Hardiyono, B., Muslimin, & Fikri, A. (2024). The Relationship between Physical Activity and Physical Fitness of Elementary

- School Students. *International Journal of Human Movement and Sports Sciences*, 12(1), 229–237. <https://doi.org/10.13189/saj.2024.120124>
- Cahyono, D., Ramli Buhari, M., & Jupri, J. (2021). Pelatihan Pemanduan Bakat dan Minat Olahraga Berbasis Teknologi Sport Search Pada Guru Penjas di Daerah Penajam Paser Utara. *Jurnal Pengabdian Masyarakat Indonesia*, 1(5), 195–202. <https://doi.org/10.52436/1.jpmi.43>
- Desi Natalia, Sugiyanto, K. (2016). Partisipasi Masyarakat Dan Tingkat Kebugaran Jasmani Bagian Dari Pembangunan Olahraga Kabupaten Wonogiri. *Media Ilmu Keolahragaan Indonesia*, 6(2), 41–46.
- Dewi, R., Akhmad, I., & Supriadi, A. (2021). Pendampingan penyusunan bahan ajar pjok berbasis online bagi kkg penjas sd kecamatan hampan perak. *Jurnal Pengabdian Kepada Masyarakat*, 27(2), 161–164.
- Dewi, R., & Faridah, E. (2022). Method and Motivation in Teaching Elementary School Students to Throw and Catch the Ball. *AL-ISHLAH: Jurnal Pendidikan*, 14(3), 3507–3516. <https://doi.org/10.35445/alishlah.v14i3.1635>
- Dewi, R., & Verawati, I. (2021). The Effect of Manipulative Games to Improve Fundamental Motor Skills in Elementary School Students. *International Journal of Education in Mathematics, Science and Technology*, 10(1), 24–37. <https://doi.org/10.46328/ijemst.2163>
- Eriko, N., & Febriyanti, I. (2014). Perbandingan Tingkat Kebugaran Jasmani Antara Mahasiswa Pendidikan Olahraga Dengan Mahasiswa Pendidikan Kepelatihan Olahraga. *Jurnal Pendidikan Olahraga Dan Kesehatan*.
- Hardiyono, B., Nurkadri, N., Pratama, B. A., & Laksana, A. A. N. P. (2019). The effect of the dominant muscle strength and self confidence on the results climb of the rock climbing's athlete. *Jurnal SPORTIF : Jurnal Penelitian Pembelajaran*. https://doi.org/10.29407/js_unpgri.v5i1.12857.
- Mustafa, P. S., & Dwiyoogo, W. D. (2020). Kurikulum Pendidikan Jasmani, Olahraga, dan Kesehatan di Indonesia Abad 21. *JARTIKA Jurnal Riset Teknologi Dan Inovasi Pendidikan*, 3(2), 422–438. <https://doi.org/10.36765/jartika.v3i2.268>
- N, N., Kusuma, I. J., & Festiawan, R. (2019). Sport Development Index of Banyumas Regency. *Jurnal Pendidikan Jasmani Dan Olahraga*, 4(2), 193–197. <https://doi.org/10.17509/jpjo.v4i2.19181>
- Navi, R., & Khasanah, atul. (2023). Indonesian journal of research in physical education, sport, and health. *Development of learning*

- media for physical education, sports, and health on basic football techniques based on articulate storyline application. *Indonesian Journal of Research in Physical Education*, 1(1).
- Permanasari, H. A., & Sunarto, S. (2011). Gunung Merapi : Studi Kasus di Desa Umbulharjo , Sleman Community Preparedness Facing Mount Merapi Disaster : Case Study in Umbulharjo Village , Sleman. *Kesmas. Jurnal Kesehatan Masyarakat Nasional*, 6(1), 42–48.
- Pradhana, A. (2016). Analisis Sport Development Index Kecamatan Ngronggot Kabupaten Nganjuk. *Jurnal Kesehatan Olahraga. Jurnal Kesehatan Olahraga*, 4(4), 2–7.
- Raibowo, S., Fajar Fathoni Pendidikan Jasmani Kesehatan, A., Sugihartono, T., Eko Nopiyanto, Y., Prabowo, A., & Barnanda Rizky, O. (2023). Pelatihan Penggunaan Aplikasi Sport Health Connection Sebagai Market Place Bagi Para Guru PJOK Menjadi Pelatih Olahraga. *Jurnal Inovasi Pengabdian Masyarakat Pendidikan*, 3(2), 118–128.
- Rohmah, L., & Muhammad, H. N. (2021). Tingkat Kebugaran Jasmani dan Aktivitas Fisik Siswa Sekolah. *Jurnal Universitas Negeri Surabaya*, 09(01), 511–519. <https://ejournal.unesa.ac.id/index.php/jurnal-pendidikan-jasmani/article/view/38199>
- Rosyid, A. G., Sugiyanto, S., & Kristiyanto, A. (2019). Sports Development in Karanganyar Regency Indonesia In terms of sports development index (Evaluation Study On Open Space, Human Resources, Sports Participation, And Physical Fitness For The People In Karanganyar Regency). *International Journal of Multicultural and Multireligious Understanding*, 6(1), 209. <https://doi.org/10.18415/ijmmu.v6i1.560>
- Setiawan, W., Septa, B., & Triaditya, M. (2019a). Tingkat Pembangunan Olahraga Ditinjau Melalui Sport Development Index (SDI) di Kecamatan Banyuwangi. *Prosiding Seminar Nasional IPTEK Olahraga*.
- Setiawan, W., Septa, B., & Triaditya, M. (2019b). Tingkat Pembangunan Olahraga Ditinjau Melalui Sport Development Index (SDI) di Kecamatan Banyuwangi. *Prosiding Seminar Nasional IPTEK Olahraga*.
- Setiawan, W., Septa, B., Triaditya, M., Pendidikan, P., Kesehatan, J., & Rekreasi, D. (n.d.). Tingkat Pembangunan Olahraga ditinjau melalui Sport Development Index (SDI) di Kabupaten Banyuwangi. *Journal Power Of Sports*, 3(1), 18–26. <http://e-journal.unipma.ac.id/index.php/JP-OS>
- Sinaga, F., Reza Destya, M., Negeri, S., Dairi, K., & Kepelatihan Olahraga, P. (2022). Giving Sports Burden to Behavior of Students of the Faculty

of Sports Science, Universitas Negeri Medan. East Asian Journal of Multidisciplinary Research (EAJMR), 1(8), 1519–1526. <https://journal.formosapublisher.org/index.php/eajmr/index>

Studi PKO, P., & Olahraga dan Kesehatan, F. (2019). Kesegaran jasmani siswa 10-12 tahun se-kota gorontalo physical fitness students 10-12 years, gorontalo city Syarif Hidayat. Jambura Journal of Sports Coaching, 1(1).

Tarigan, B. S., Sugiyanto, S., & Purnama, S. K. (2018). Result of Government Public Policies Related to Development of Sports in the Metro City Based on the Sport Development Index. International Journal of Multicultural and Multireligious Understanding, 5(5), 49. <https://doi.org/10.18415/ijmmu.v5i5.294>

UURI. (2005). Sistem Keolahragaan Nasional. Presiden RI, 1, 1–53.