

Sport Development Index as a Parameter of Sport Achievement Developmental Program

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Abstract

The sport development within sport development index refers to four main dimensions: community participation, public space of sport, physical fitness, and the availability of human resources that are interconnected. This study aims at analysing the dimensions of sports development index in Salatiga, Central Java Province. This study involved 300 JHS students aged 12 to 15 years consisting of 150 boys and 150 girls. This study was conducted in one stage of series, and using the instrument SDI using the formula: 0.25 (Participation Index) + 0.25 (Public Space Index) + 0.25 (Fitness Index) + 0.25 (HR Index). The results indicate the value of public space index of Salatiga 0.51, participation 0.41, HR 0.06 and fitness 0.46. This shows that Sports Development Index in Salatiga is 0.35 or 35%, and considered to be low category.

Keyword: systemic review; sports development

1. Introduction

The United Nations (UN) through the 2003 58/5 resolution charter mentions that sport has become a prominent tool for demonstrating the power of the nation in the international community (Hartmann and Kwauk, 2013). The development of sport has an important position and become one of the human development goals in almost all countries that we are familiar with sport for development (SFD). Sports development is not just about medals or achievements; sports should be aimed at the welfare of society at large. The development of sport refers to four main dimensions: community participation, public space of sport, physical fitness, and the availability of human resources (HR) that are interconnected.

Development is an effort that aims at achieving a better standard of living. In the perspective of sports, the national sports development is an effort of sports development and development activities which is part of efforts to improve the quality of human resources (HR) in the field of sports (Hadjarati, 2009). The development of sports can give enhancement to economic, social, and community participation initiatives (Walters et al., 2018; Setiawan and Herman, 2011). In addition, it can also increase the diversity potential of each region (Aryanto, 2014), therefore sports development should be carried out continually (Wibasana, 2013).

Based on preliminary research results found that the planning program that has been developed by Salatiga City Government of Central Java Province has a policy in designing sports development system. However, in the real implementation there are still many obstacles which in the end have not been able to increase the acceleration of physical and non-physical infrastructure development. Salatiga city is only ranked 7 in the Provincial Sports Week (PORPROV) in 2013 which followed by 35 cities / regencies throughout Central Java. It was noted that Salatiga City won 30 gold medals, 22 silver medals and 39 bronze medals, it shows that Salatiga was still under development of sport.

Morakinyo and Aluko (2008) elaborated that management policies and skills contribute to the development of sports. Policies in this case are functional and effective, while management consists of: (1) managers who have professional qualifications; (2) participatory to sports events. Natalia et. al. (2016) illustrated that based on two indicators of sports development index (SDI) showed the numbers in the range 0.000-0.499 where the development of sports Wonogiri District is still in the low category. This is in line with the general view of sports development in Wonogiri Regency still focused on achievement accomplishment. Hence, it is necessary to develop sports that focus on the very basic of the availability of public space or

field, human resources, community participation that has quantity and quality, and the level of public health.

The purpose of this study is to analyse how the development of sports in Salatiga City Central Java Province through SDI, based on four basic dimensions, namely: participation, public space, fitness, and human resources. This research is useful practically and scientifically since it reveals the actual and factual information about various things that might be factors causing the occurrence of obstacles in the system of sports development in Central Java.

2. Methods

The subjects in this study were 300 middle school age students (SMP) aged 12 to 15 years consisting of 150 men and 150 women in four sub-districts: Argomulyo, Tingkir, Sidomukti, and Sidorejo Kota Salatiga Central Java Province in May 2018. The data collection was carried out in a series of stages, and uses observational instruments, questionnaires, Mustistage Fitness Test (MFT) and documents. Bangun (2013) stated that the data analysis guidelines used the parameter development sports development index (SDI) using the formula: $0.25 (\text{participation index}) + 0.25 (\text{public space index}) + 0.25 (\text{fitness index}) + 0.25 (\text{HR index})$. The final assessment of the SDI uses the following norms: 1) 0.800-1 (High category); 2) 0.500-0.799 (Medium category); and 3) 0.499 (low category).

3. Results and Discussion

1. Public space Sports

Calculating the index of the Public Space dimension, it is necessary to know the number of population, the number of population aged 12 to 15 years and the area of public space of Kota Salatiga in 2018 to get the actual value of public space before being processed using the SDI formula to obtain the public space index.

Based on the data table 1, the actual value of each district can be obtained by calculating the width of public space divided by the number of people aged 12 to 15 years. So from the actual value can be known index of public space of each District with the formula SDI. Then the public space index of each district is as follows table 2.

Table 1. Total Population and Area of Public space

Districts	Total Population	12-15 years old	Gender		Large of Public space
			Male	Female	
Argomulyo	44.069	6.743	3.857	2.886	18.526 km ²
Tingkir	43.468	6.583	3.388	3.195	10.549 km ²
Sidomukti	42.474	6.382	2.695	3.687	11.459 km ²
Sidorejo	56.409	7.182	4.036	3.146	16.247 km ²
Total	186.420	26.890	13.976	12.914	56.781 km²

Source: Central Bureau of Statistics of Kota Salatiga Year 2018.

Table 2 Results of Salatiga City Public Space Index

Districts	Actual Value	Minimal Score	Maximal Score	Public space Index	Public space Result Index of Salatiga City
Argomulyo	2.18	0	3.5	0.62	0.51
Tingkir	1.73	0	3.5	0.49	
Sidomukti	2.00	0	3.5	0.58	
Sidorejo	1.48	0	3.5	0.43	

2. Community Sports Participation

Calculating the sports participation dimension index, it is necessary to spread the questionnaire in order to get the actual value of participation from the community who exercise at least 3 or more times a week. So from the actual value can be seen index of sports participation from each District with the formula SDI. Thus the participation index of each district is as follows:

Table 3 Results of Salatiga City Sport Participation Index

Districts	Actual Value	Minimal Score	Maximal Score	Sport Participation index	Result Index of Participation in Salatiga
Argomulyo	9	0	100	0.30	0.41
Tingkir	13	0	100	0.43	
Sidomukti	11	0	100	0.41	
Sidorejo	15	0	100	0.50	

3. Human Resources (HR) Sports

Human resource figures are measured by the ratio between the number of trainers, instructors and physical education teachers with a population aged 12 to 15 years. To calculate the Human Resource dimension index, it is necessary to know the population, the number of population aged 12 to 15 years and the amount of Human Resources (HR) Sports Town Salatiga 2018, namely:

Table 4. Number of Population and Number of Sports Human Resources

Districts	Population Total	12 until 15 years Old	Gender		HR Total
			Male	Female	
Argomulyo	44.069	6.743	3.857	2.886	83
Tingkir	43.468	6.583	3.388	3.195	148
Sidomukti	42.474	6.382	2.695	3.687	72
Sidorejo	56.409	7.182	4.036	3.146	303

Based on the data table 4, the actual value of each sub-district was obtained by calculating the amount of sports HR divided by the number of people aged 12 to 15 years. Hence, from the actual value can be known *SDM* index of each District with the formula *SDI*. Then the human resource index of each district is as follows:

Table 5. Results of *SDM* Index of Kota Salatiga

Districts	Actual Value	Minimal Value	Maksimal Value	HR Index	HR result Index of Salatiga city
Argomulyo	0.001	0	0.0283	0.03	0.06
Tingkir	0.002	0	0.0283	0.07	
Sidomukti	0.002	0	0.0283	0.07	
Sidorejo	0.003	0	0.0283	0.10	

4. Public Fitness

MFT test is used to get the actual value of public fitness, then from the actual value can be known fitness index of each District with the formula *SDI*. So the fitness index of each district is as follow:

Table 6. Results of Public Fitness index of Salatiga

Districts	Actual Value	Minimal Value	Maksimal Value	Sport Fitness Index	Sport fitness result Index of Salatiga city
Argomulyo	31.05	20.1	40.5	0.44	0.06
Tingkir	30.94	20.1	40.5	0.48	
Sidomukti	30.73	20.1	40.5	0.45	
Sidorejo	32.56	20.1	40.5	0.47	

5. Value of *SDI* Index of Salatiga City

The overall results of the sports development index of Salatiga City using Sport Development Index (*SDI*) as shown in table 7 below:

Table 7. Result of Sports Development Index

SDI Components	Index Result of Salatiga City	
	Index	Criteria
Public space	0.51	Medium
Participation	0.41	Low
Human Resources	0.06	Low
Fitness	0.46	Low
<i>SDI</i> of Salatiga City	0.35	Low

Based on the result of *SDI*, it can be defined that the value of public space index of Salatiga City is classified as medium criterion with value 0,51, while the value of human resource index of Kota Salatiga is low only with 0,06 and value of participation index of public sport of Salatiga with 0 , 41 who are low-diverted and the fitness of Salatiga City with a value of 0.46, so the value of *SDI* Kota Salatiga is only 0.36 and included into the low category. The results of this study correlate with research Kristiyanto (2008) *SDI* become standard instrument in accordance with the needs of national sports development policy with a centralized to decentralist patterns in order to promote the development of sports.

The low *SDI* of Kota Salatiga is seen from low human resources with enough or moderate public spaces to be not maximally utilized, thus affecting the low level of sports and community participation in Salatiga City. Medium criteria of public space sports in Salatiga must also be balanced with the moderate criteria of sports or even high human resources, so that the public space is much more leverage because of good or high human resources who became the driving field of sports and responsible for sports development and then affect to the level the participation of public sports is becoming increasing as well as affecting the fitness of the community. The results of this study are very relevant to the research of Dharmawan et. al. (2017) implementation of sports development policy as supported by several things: planning, policy, availability of infrastructure, realization. Therefore, the role of government is vital in the supply of human resources, public spaces and budget policy.

Development of sports will be more visible if these four dimensions are maximized in the implementation because the four dimensions of sports development are closely related to each other, so it will be easier to get more achievements in sports if they have a good base such as public space and sport facilities as well as qualified human resources

to manage all the things maximally so that people's participation in sport is well increased. Moreover, it is also expected that the sports development has to give benefit not only for athletes but also for general society. It should be kept in mind that good athletes derive from healthy community. It means that if we want to have good athletes we also need to more concern about the public fitness.

Based on the results of the research and the final discussion, it can be summarized that the assessment of SDI in a region is closely related to the four main components: 1) public spaces that can be accessed for public sports activities; 2) Community participation, showing indicators of the extent of active community involvement of a region to sports activities; 3) The human resources (SDM) in the field of sports can be used by a region for the advancement of sport; and 4) Physical fitness is one of the encouragements of community productivity and potential labor providers.

4. Conclusion

Salatiga City's public sports area is in the moderate category with a score of 0.51 or 51%. Salatiga community sports participation is in the low category with a value of 0.41 or 41%. Human resources (SDM) Kota Salatiga is in the low category with a value of only 0.06 or 6%. Salatiga people's health is in the low category with a value of 0.46 or 46%. The value of Sport Development index (SDI) of Salatiga City from public space of sports 0.51, sport participation 0.41 and human resources 0.06 and public fitness 0.46 so that it becomes 0.36 or 36% which is in the low category.

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