

The Analysis of Nutritional Status of The Kadirejo Village
Community as A Supporting Factor for The Sports Development
Index of Semarang Regency

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Article Info	Abstract
Article History	Nutritional status is one of the important factors that affect the level of fitness and community participation in sports activities. This study aims to find out how the nutritional status of the people of Kadirejo Village plays a supporting factor in increasing the Sports Development Index (IPO) of Semarang Regency. This study uses a quantitative descriptive method with a cross-sectional approach. The sample in this study is the people of Kadirejo Village as many as 29 people who were selected by purposive sampling technique. The research instruments include a scale to measure weight, a microtoice to measure height and a formula (BMI) to measure nutritional status. The results of the study showed that there were 14 respondents with normal nutritional status (48.28%), nutritional status of more than 9 people (31.03%), lack nutritional status of 4 people (13.79%) and obesity 2 people (6.90%). The conclusion of this study is that most of the people of Kadirejo Village have normal nutritional status. Which supports factors in the increase in the Sports Development Index (IPO) of Semarang Regency.
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Introduction

The development of high-quality human resources is highly dependent on the health and fitness levels of the community. However, the optimization of regional sports potential is often hindered by a lack of up-to-date data regarding the physical and health conditions of people at the village level. A primary issue is the imbalance in nutritional status—including both undernutrition and overnutrition—which directly results in lower community participation in physical activities. Without accurate monitoring of nutritional status, efforts to increase the Sports Development Index (SDI) in a region will be difficult to achieve sustainably. Nutrition is a crucial factor closely linked to physical activity. This is because optimal physical activity requires effective nutritional management (Amin, 2018).

Regional sports development is not only determined by facilities, infrastructure, and policies, but also by the quality of community health and nutrition. Ministry of Youth and Sports Ministry of Youth and Sports of the Republic of Indonesia (2023) through the Sports Development Index (SDI) emphasizes the importance of public health and fitness factors as one of the main indicators of national sports progress. Therefore, monitoring the nutritional status of the community is strategic in supporting the increase in SDI at the district and national levels.

Kadirejo Village, which is located in Pabelan District, Semarang Regency, is an area with fairly high community activity but does not have the latest data on the nutritional condition of its residents. This analysis of the nutritional status of the village community is expected to provide an overview of the readiness and contribution of the community to the development of regional sports. Thus, this study aims to analyze the nutritional status of the Kadireno Village community as one of the supporting factors for increasing the Semarang Regency Sports Development Index.

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Methods

This study uses a quantitative descriptive approach, which aims to describe the nutritional status of the people of Kadirejo Village factually and systematically. The research location is in Kadirejo Village, Pabelan District, Semarang Regency, with a implementation time of October 2025. The research population is the entire productive age community (10-60 years) in Kadirejo Village, while the sample was taken by purposive sampling as many as 29 respondents representing one sub-district. The research instruments include scales to measure weight, microtoice to measure height. BMI measurement is carried out by the formula body weight (kg) divided by height squared (m²), then categorized based on WHO (World Health Organization, 2020) standards.

The data obtained were then analyzed using percentage descriptive analysis to determine the proportion of people with undernourished, normal, and excess nutritional status. The results of the analysis were then associated with the level of community participation in sports activities as a supporting indicator of the Ministry of Youth and Sports' Sports Development Index (2023).

Results and Discussion

The data collection of research data was carried out directly on respondents at the Kadirejo Village Hall. The active participation of people with various age ranges is a form of real support for local initiatives, especially in providing data to improve the Semarang Regency Sports Development Index. Further explanation of the results of the research is as follows.

Table 1. Characteristics of Respondent

Variable (N=29)	Min	Max	Mean $\pm$ SD
Aged (years)	13	59	32.4 $\pm$ 13.6
Weight (kg)	31	81	56.4 $\pm$ 11.6
Height (cm)	139	171	155.7 $\pm$ 9.3

Base on table 1 above, it can be interpreted that respondents have an age in the category of adolescents to adults, ranging from 13 - 59 years old. Thus, based on the age vulnerability, the distribution of respondents is varied. Likewise, weight and height have a variety of susceptibility according to their age.

Table 2. Analysis of Nutritional Status of The Respondent

Classification	Total	Percent (%)
Underweight	4	13.79
Normal	14	48.28
Overweight	9	31.03
Obesity	2	6.9

Based on the table 2, it can be found that the Normal category recorded the highest proportion, which was 48.28%. Meanwhile, overweight nutritional status was found in 31.03% of respondents. The proportion of respondents with Underweight status was recorded at 13.79%, and the data showed a value of 6.90% for the obesity category. These results show that the nutritional condition of the community in general is relatively good. So that it has the potential to support the increase of the regional Sports Development Index (SDI). Individuals with a normal nutritional status tend to be more active in village sports activities such as morning exercises, volleyball, and soccer (Ka et al., 2019). Conversely, groups with underweight or overweight nutritional statuses tend to have lower levels of sports participation.

The results of this study are consistent with the research conducted by Hudain et al (2023) , titled “Overview of the Nutritional Status of Syarif Hidayatullah State Islamic University Students (cohorts study in 2012, 2013, and 2017).” That study showed that the majority of respondents had a nutritional status classified as normal. This study is also supported by Cahyadi (2023) with the title The Effect of Nutritional Status on Learning Outcomes of Physical Education, Sports and Health. And it is also supported by research by with the title The Relationship between Nutritional Status and Sports Activities and Physical Fitness Level. In addition, a study by Maulana (2023) titled “The Contribution of Nutritional Status and Physical Activity to the Endurance of Semarang City Handball Athletes” also supports this research. This study also draws on a study by Aenih (2025) titled “The Relationship of Physical Activity and Lifestyle with Nutritional Status among Female Students at SMP Negeri 4 Purwadadi, Subang Regency, in 2025.” Furthermore, a study by Simbolon (2023) titled “Relationship of Nutrition Knowledge and Macronutrient Intake With Nutrition Status of Athletes” also contributes to the findings of this study. This study was also supported by Muh Adnan Hudain (2023) titled “Investigation of Nutritional Status, VO2max, Agility, Speed, and Strength: A Cross-sectional Study in Basketball Athletes.” It was further supported by

Artharini (2025) titled “The Relationship Between Physical Activity and Body Mass Index (BMI) in Adolescents.

In general, the results of this study show that the people of Kadirejo Village have great potential to support regional sports development. However, there is a need for further efforts in the form of balanced nutrition education and the promotion of regular physical activity so that the proportion of people with under- or over-nourished people can be suppressed, so that the degree of health and fitness of the community continues to improve sustainably.

Conclusion and Recommendations

The conclusion of this study is that most of the people of Kadirejo Village have normal nutritional status conditions of 14 people (48.28%), nutritional status of more than 9 people (31.03%), malnutrition status of 4 people (13.79%) and obesity of 2 people (6.90%). With these results, the people of Kadirejo Village became a supporting factor in increasing the Sports Development Index (IPO) in Semarang Regency.

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