Anthropometric Profile of Student Judo Athletes in the City of Bandung Based on Height and Body Weight

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Introduction

Anthropometry is an important component of athlete development because it provides information about athletes' physical characteristics. In judo, height and body weight are essential due to the weight-category competition system. Anthropometric assessment helps coaches monitor athletes' physical growth, develop appropriate training programs, and support talent identification. However, information regarding the anthropometric profile of student judo athletes in Bandung City is still limited. Therefore, this study aimed to describe the anthropometric profile of student judo athletes in Bandung City based on height and body weight.

Introduction

- Previous studies have mainly examined the relationship between anthropometric characteristics and sports performance or physical capacity.
- Studies describing the anthropometric profile of student judo athletes in Indonesia, particularly in Bandung City, are still limited.
- Baseline anthropometric data are needed to support athlete monitoring and evidence-based training programs.

- To describe the anthropometric profile of student judo athletes in Bandung City based on height and body weight.
- Provides baseline anthropometric data for student judo athletes.
- Supports athlete development, physical monitoring, talent identification, and training program planning.

Methods

This study employed a quantitative approach using a descriptive method with a cross-sectional design. The participants consisted of 46 student judo athletes in Bandung City, including 23 males and 23 females aged between 12 and 18 years. Participants were selected using purposive sampling based on predetermined inclusion criteria. Anthropometric data, including height and body weight, were collected using a respondent data collection form. The collected data were analyzed using IBM SPSS Statis Version 25 through descriptive statistical analysis, including frequency, percentage, minimum, maximum, mean, and standard deviation, to describe the anthropometric profile of the athletes.

Results

Table 1. Characteristics of Respondents

Characteristic	Category	Frequency	Percentage (%)
Gender	Male	23	50.0
	Female	23	50.0
Education Level	Junior High School (SMP)	20	43.5
	Senior High School (SMA)	26	56.5
Total		46	100

This study involved 46 student judo athletes in the city of Bandung, consisting of 23 male athletes (50.0%) and 23 female athletes (50.0%). Based on educational level, 20 athletes (43.5%) were junior high school (SMP) students, while 26 athletes (56.5%) were senior high school (SMA) students. These respondent characteristics indicate that the study involved athletes from various age groups and educational levels who are still in a period of growth.

Table 2. Descriptive Statistics of Height and Body Weight of Student Judo Athletes

Variable	N	Minimum	Maximum	Mean	Standard Deviation
Height (cm)	46	140	180	159.72	10.80
Body Weight (kg)	46	32	87	54.39	12.73

The descriptive analysis the athletes' height ranged from 140 cm to 180 cm, with a mean of 159.72 cm and a standard deviation of 10.80 cm. The athletes' body weight ranged from 32 kg to 87 kg, with a mean of 54.39 kg and a standard deviation of 12.73 kg. The standard deviation values for both variables indicate variation in anthropometric characteristics among the respondents.

Results

The findings indicate that student judo athletes have diverse anthropometric characteristics. These differences are influenced by age, sex, and the physical growth process during adolescence. The variation in body weight also reflects the weight-category system applied in judo competitions. Although anthropometric characteristics provide important information for athlete monitoring and training program planning, they should not be considered the sole determinants of athletic performance, because performance is also affected by technical, physical, tactical, and psychological factors.

Conclusion

In conclusion, this study showed that student judo athletes in Bandung City have diverse anthropometric characteristics. The average height was 159.72 ± 10.80 centimeters, while the average body weight was 54.39 ± 12.73 kilograms. These variations reflect differences in age, sex, and the adolescent growth process. The findings provide baseline information that can support physical monitoring, training program development, talent identification, and athlete development. Future research should inv larger samples and additional anthropometric variables to provide a more comprehensive understanding of young judo athletes.

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