



Sports Talent Potential in Junior High School Students in Sapuran District, Wonosobo Regency

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ABSTRACT

Purpose of the study: This study aimed to describe the sports talent profiles of seventh-grade male junior high school students in Sapuran District, Wonosobo Regency, and to identify sports disciplines that best match their physical and physiological characteristics using the Sport Search talent identification model.

Methodology: A quantitative descriptive design was employed using the Sport Search talent identification model. Data were collected from 300 seventh-grade male students selected through total sampling from four junior high schools in Sapuran District. Ten standardized physical and physiological tests were administered, and data were analyzed using Sport Search normative scoring and talent classification categories.

Main Findings: The results revealed that 7 students (2.3%) were categorized as Potential, 53 students (17.7%) as Sufficient Potential, 176 students (58.7%) as Less Potential, and 64 students (21.3%) as No Potential. The most suitable sports identified were sprinting, long jump, high jump, diving, and gymnastics. Overall, the findings indicate a relatively low level of detected sports talent among participants.

Novelty/Originality of this study: The novelty of this study lies in the application of the Sport Search talent identification model to a large sample of junior high school students in a rural Indonesian district. The study provides empirical evidence regarding regional sports talent distribution and highlights the importance of structured talent development programs to optimize students' athletic potential and support long-term sports achievement pathways.

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1. INTRODUCTION

A nation's sporting achievements don't happen by chance. Behind every accomplished athlete lies a long chain of development that begins with early talent detection, structured development, and adequate support from the sports ecosystem [1], [2]. Globally, countries with strong sporting traditions have long integrated talent development systems. Identification and development (TID) as a planned national policy [3], [4]. Scientifically and longitudinally conducted talent identification has been shown to predict elite-level athlete success with much greater accuracy than traditional intuitive approaches [5], [6].

In Indonesia, similar efforts have been initiated through various government programs, including the National Sports Grand Design (DBON), which aims for Indonesia to be in the top 10 for the 2044 Olympics [7]. However, its implementation in the regions still faces serious structural challenges. Junior high school age (around 12–14 years old) is a highly strategic phase in athlete development [8]. During this age range, physiological

systems are rapidly adapting to training stimuli [9], [10]. Student population in Indonesia, demonstrated that physical abilities measured at this age strongly correlate with potential sport specialization in young adulthood. Therefore, identifying and nurturing sporting talent during this phase has far greater predictive value than coaching efforts at a more mature age [11], [12].

One instrument that has gained wide recognition in talent identification practices at the school level is Sport Search, an interactive computer system developed by the Australian Institute of Sport [13], [14]. Sport Search is able to accurately identify the diversity of sports talents in elementary school students, with consistent results if the test implementation procedure is carried out according to standard protocols [15], [16]. This instrument integrates ten physical, physiological, and motor skill parameters into a single analytical framework that produces a comprehensive talent profile, then matches it with a database of profiles from more than 40 sports [17], [18]. From a methodological perspective, each raw test score in Sport Search is not directly summed as a raw score, but rather first converted into a normative category scale (A to E, equivalent to a value of 5 to 1) based on norms differentiated by age and gender [19], [20]. The sum of the scores from the six main components is then matched to the minimum profile required for each sport. A student is only declared talented in a sport if their actual score meets or exceeds the required profile, not simply based on a certain total score [21], [22]. Transparency in this process is crucial to ensure the validity and readability of the results by stakeholders in the field [23], [24].

Although Sport Search is available and its validity is recognized, its implementation in regional schools such as Sapuran District, Wonosobo Regency, remains very rare [25], [26]. No published research has scientifically profiled the sports talent profile of junior high school students in this region [27], [28]. This gap creates a situation where physical education teachers, principals, and relevant agencies make coaching decisions without empirical data [29], [30]. Similar conditions have been reported in many other regions in Indonesia, as outlined in a study analyzing athletic talent identification in national student championships [31], [32].

The novelty of this research lies in two aspects. First, it not only presents the distribution of potential talent but also transparently displays the process of converting normative scores and matching sport profiles aspects often overlooked in similar research in Indonesia [33], [34]. Second, this study covers four different types of schools (public, private Islamic, and madrasah) within the same sub-district, allowing for richer cross-institutional comparative analysis. Based on this framework, this study formulated two main objectives: (1) to describe the distribution of potential sport talent categories of male students in grade VII of junior high schools in Sapuran District using the Sport Search instrument; and (2) to identify the sports branches that best suit the physical and physiological profiles of high-potential students, accompanied by an analysis of the transparency of the profile matching process. The findings of this study are expected to be an evidence-based reference for schools, education offices, and local KONI in designing more targeted sports development programs.

2. RESEARCH METHOD

2.1 Type of Research

This study employed a quantitative descriptive design with a survey approach, aiming to accurately and systematically describe the phenomenon based on numerical data collected at a single point in time (cross-sectional). This design was chosen because the research objective was to generate an empirical picture of the distribution of potential sports talent in the student population, without variable manipulation or causal relationship testing. This type of quantitative descriptive method is commonly used in Sport Search research in Indonesia and the Southeast Asian context.

2.2 Population and Sample

The study population was all seventh-grade male junior high school students in Sapuran District, Wonosobo Regency. This study employed a total sampling technique, involving all reachable population members as research subjects. The sample size was 300 students from four schools with different institutional characteristics.

Table 1. Distribution of Research Samples Based on School of Origin

School	n	Percentage (%)
Sapuran 1 State Junior High School	108	36.0%
Sapuran 2 State Junior High School	101	33.7%
Muhammadiyah Sapuran Middle School	41	13.7%
MTs Ma'arif Sapuran	50	16.6%
Total	300	100.0%
School	n	Percentage (%)

The heterogeneous composition of school types comprising public schools (SMPN 1 and SMPN 2), a private Islamic school (Muhammadiyah Middle School), and a madrasah (MTs Ma'arif) provides a richer institutional context for evaluating whether school type is associated with the distribution of sports talent potential.

Differences in institutional background may have implications for students' access to sports facilities, physical activity habits, and the sports culture within each school environment [35], [36].

2.3 Data Collection Technique

Sport Search is a talent identification instrument developed by the Australian Sports Commission and the Australian Institute of Sport, and has been adapted for the Indonesian population. This instrument uses a standardized test procedure consisting of ten components measuring physical, physiological, and motor skills. The Sport Search protocol can be consistently applied in Indonesian school settings with reliable results, provided that testers receive adequate training prior to data collection.

Table 2. Sport Search Test Components, Units, and Their Relevance to Sports

No	Component Test	Unit	Relevance Sport
1.	Height (TB)	Centimeters (cm)	A key determinant of sport suitability; greater height is advantageous in basketball, volleyball, and rowing, whereas gymnastics favors a smaller body stature.
2.	Sitting Height (SH)	Centimeters (cm)	Trunk-to-leg proportionality; relatively longer legs are suited to rowing, sprint running, and basketball, while shorter legs are advantageous in weightlifting, wrestling, and gymnastics.
3.	Body Weight (BB)	Kilogram (kg)	High weight is needed in short power events (sumo, weightlifting, throwing); light weight is needed in endurance events (long distance running, gymnastics, jockeying).
4.	Range Arm (RL)	Centimeters (cm)	Horizontal reach between fingertips; long arms benefit swimming, rowing, throwing; short arms suit weightlifting and gymnastics.
5.	Throw Catch the Tennis Ball (LTBT)	Amount catch (0–20)	Eye-hand coordination; fundamental to team and racket sports.
6.	Basketball Throw (LBB)	Meter (m)	Arm and shoulder muscle power; key for throwing and contact sports.
7.	Jump (LT)	Centimeters (cm)	Leg muscle power; a determinant of performance in volleyball, basketball, and jumping athletics.
8.	Agility Running (LK)	Seconds (s)	The ability to change direction quickly; relevant to almost all team sports.
9.	40 Meter Sprint (L40M)	Seconds (s)	Acceleration speed from a standing position; crucial for anaerobic and team sports.
10.	Stage Running (MFT)	Level & shuttle	Aerobic capacity (predictive VO ₂ max); the basis of endurance sports such as long-distance swimming, cycling, and long-distance running.

The Sport Search analysis process consists of three sequential and non-skippable steps. First, each raw score from the six primary components (LTBT, LBB, LT, LK, L40M, MFT) is converted into normative categories A through E (rated from 5 to 1) using a different norming table for each age group. Second, the converted scores from the six components are summed to obtain a total score (maximum 30). Third, the total score is interpreted based on the potential categorization table, and the profile per component is matched against the minimum profile required for each sport in the Sport Search database. This study presents a complete norm table for all ages covering the research sample (11–14 year old boys), because each student is assessed based on their own age norms rather than a single norm.

Table 3a. Sport Search Assessment Norms: Age 11 Boys

Cat.	LTBT	LBB (m)	LT (cm)	LK (det)	L40M (sec)	MFT
A (5)	≥ 17	≥ 5.90	≥ 39	< 18.02	< 6.78	≥ 8.8
B (4)	12–16	5.10–5.85	33–38	18.03–20.71	6.79–7.59	6.5–8.7
C (3)	8–11	4.35–5.05	26–32	20.72–23.42	7.60–8.40	4.2–6.4
D (2)	4–7	3.35–4.30	19–25	23.43–26.13	8.41–9.21	2.8–4.2
E (1)	≤ 3	≤ 3.30	≤ 18	> 26.14	> 9.22	≤ 2.7

Description: A(5)=Very Good, B(4)=Good, C(3)=Sufficient, D(2)=Poor, E(1)=Very Poor. LK and L40M: lower score = better (shorter time).

Table 3b. Sport Search Assessment Norms : Age 12 Boys

Cat.	LTBT	LBB (m)	LT (cm)	LK (det)	L40M (sec)	MFT
A (5)	> 17	> 6.80	> 42	< 18.15	< 6.05	> 9.3
B (4)	14–16	6.00–6.75	35–41	18.16–20.07	6.06–6.75	8.0–9.2
C (3)	10–13	5.15–5.95	28–34	20.08–21.99	6.76–7.45	5.7–7.9

D (2)	6-9	4.30-5.10	21-27	22.00-23.91	7.46-8.15	3.5-5.6
E (1)	≤ 5	≤ 4.25	≤ 20	> 23.92	> 8.16	≤ 3.4

Norms differ per age to ensure fairness of assessment across age groups.

Table 3c. Sport Search Assessment Norms : Age 13 Boys

Cat.	LTBT	LBB (m)	LT (cm)	LK (det)	L40M (sec)	MFT
A (5)	≥ 18	≥ 8.05	≥ 44	< 16.60	< 5.82	≥ 10.2
B (4)	15-17	6.85-8.00	37-43	16.61-18.72	5.83-6.56	8.9-10.1
C (3)	11-14	5.70-6.80	29-36	18.73-20.84	6.57-7.30	6.6-8.8
D (2)	7-10	4.50-5.65	22-28	20.85-22.97	7.31-8.04	4.3-6.5
E (1)	≤ 6	≤ 4.45	≤ 21	≥ 22.98	≥ 8.05	≤ 4.2

Age 13 years is group age dominant in sample study.

Table 3d. Sport Search Assessment Norms : Age 14 Boys

Cat.	LTBT	LBB (m)	LT (cm)	LK (det)	L40M (sec)	MFT
A (5)	≥ 19	≥ 8.75	≥ 47	< 16.42	< 5.50	> 11.4
B (4)	16-18	7.50-8.70	40-46	16.43-18.35	5.51-6.21	9.2-11.3
C (3)	12-15	6.25-7.45	32-39	18.36-20.29	6.22-6.93	6.9-9.1
D (2)	8-11	5.00-6.20	25-31	20.30-22.22	6.94-7.64	4.7-6.8
E (1)	≤ 7	≤ 5.45	≤ 24	> 22.23	> 7.65	≤ 4.6

Age 14 norms are applied to students who have reached this age at the time of testing.

After the total score obtained, each student matched with minimum profile required by each branch sports. A student stated talented at something branch sport If score actual per component fulfil or beyond mark required profile. The table below presents the talent profile for the 10 selected sports that are most relevant to the physical characteristics of this study population.

Table 4. Minimum Sport Search Talent Profile for 10 Selected Sports Branches

No.	Sports	LTBT	LT	LBB	LK	L40M	MFT
1.	Run fast	1	5	3	4	5	2
2.	Long jump	2	5	2	3	4	2
3.	High jump	2	5	2	4	4	2
4.	Triple Jump	2	5	2	3	5	2
5.	Dive	3	5	5	3	5	4
6.	Exercise	4	5	5	5	4	2
7.	Volleyball	5	4	5	4	4	4
8.	Basketball	5	5	5	4	4	4
9.	Athletics Throw	3	4	5	3	4	2
10.	Badminton	5	5	5	5	5	5

Description: 5=Very Important, 4=Important, 3=Quite Important, 2=Less Important, 1=Not Important. Students are declared gifted in a branch of OR if the score per component is ≥ the required profile value.

Based on the interpretation of the Sport Search results adapted to the context of this research, four potential categories were established with explicit score limits and accompanied by clear coaching implications.

Table 5. Criteria for Categorizing Potential Sports Talent and Implications for Coaching

Category	Total Score Range (max . 30)	Interpretation	Implications of Coaching
Potential (P)	≥ 23	Fulfil minimum profile ≥1 OR branch	Prioritize intensive coaching; immediately directed to specific clubs/extracurricular activities.
Enough Potential (CP)	18 - 22	Approach threshold minimum profile	Given an intensive multilateral training program; evaluated repeat in 12 months.
Lack of Potential (KP)	10 - 17	Below the minimum profile, still has room to grow	Prioritize improving basic fitness through more structured physical education.
No Potential (TP)	≤ 9	Profile is far from minimum standards	Not geared towards early competition; focus on recreational sports and an active lifestyle.

The score range is calculated by summing the normative conversion values for the six main components (LTBT, LBB, LT, LK, L40M, MFT). The maximum score is 30 (out of 5 for each component). The score limit of

≥ 23 for the Potential category refers to the minimum threshold that allows a profile to be matched to at least one sport in the Sport Search database.

Before the test began, all students received an explanation of the procedure and purpose of each measurement, then performed a 10-minute dynamic and static warm-up. Each student was given one attempt before the actual test. A minimum of 3-minute rest interval was provided between test stations, as per the standard Sport Search protocol, to prevent cumulative fatigue that could distort the results. The MFT was always placed last due to its nature of maximizing aerobic capacity. The tester-to-tee ratio was maintained at 1:10, as per implementation standards. Data were recorded manually and then entered into Sport Search software for analysis.

2.4 Data Analysis Technique

The data were analyzed through three sequential stages: (1) converting raw scores to normative A–E values using a norm table appropriate to each student's age; (2) summing the converted values of the six main components to obtain the total individual score; (3) matching the profiles per component with the minimum sports profile database to identify appropriate sports recommendations. Data aggregation produced frequency distributions and percentages per potential category for each school and overall.

2.5 Research Procedure

Before data collection, all students were provided with an explanation of the purpose and procedures of the Sport Search testing. A standardized 10-minute dynamic and static warm-up was conducted to prepare participants physically and reduce injury risk. Testing was then carried out in a structured station-based format following the Sport Search protocol.

Each participant completed the test individually under a tester-to-student ratio of 1:10. Every test component was administered once, with no repeated attempts. A minimum rest interval of 3 minutes was given between test stations to minimize fatigue effects and ensure score validity. The 40-meter sprint, agility run, jumping, and throwing tests were conducted first, while the multistage fitness test (MFT) was administered last due to its high aerobic demand.

All raw scores were recorded manually during testing and subsequently verified before being entered into the Sport Search software system for further analysis. The entire procedure was conducted in a standardized school field setting to ensure consistency and reliability of measurement conditions.

3. RESULTS AND DISCUSSION

3.1 Distribution of Talent Potential per School

Analysis of Sport Search test data from 300 students produced a distribution map of potential talent that can be used as a basis for sports development planning in Sapuran District. Table 6 summarizes the complete distribution per school based on the four established potential categories.

Table 6. Distribution of Sports Talent Potential Among Grade VII Male Students in Sapuran District

School	n	Potential (P)	Enough Potential (CP)	Lack of Potential (KP)	No Potential (TP)
Sapuran 1 State Junior High School	108	4 (3.7%)	23 (21.3%)	63 (58.3%)	18 (16.7%)
Sapuran 2 State Junior High School	101	1 (1.0%)	11 (10.9%)	59 (58.4%)	30 (29.7%)
Muhammadiyah Sapuran Middle School	41	1 (2.4%)	6 (14.6%)	25 (61.0%)	9 (22.0%)
MTs Ma'arif Sapuran	50	1 (2.0%)	13 (26.0%)	29 (58.0%)	7 (14.0%)
TOTAL	300	7 (2.3%)	53 (17.7%)	176 (58.7%)	64 (21.3%)

Description: P=Potential (score ≥ 23), CP=Sufficient Potential (18–22), KP=Less Potential (10–17), TP=No Potential (≤ 9). n = number of students per school. Numbers in brackets are the percentage of total students per school.

In aggregate, the dominance of the Less Potential (KP) category was consistent across all schools, with an average of 58.7% of the total sample. This pattern suggests that most students have not received sufficient structured physical activity stimulation to develop a fitness profile that meets Sport Search standards.

SMP Negeri 1 Sapuran recorded the highest percentage of potential students (3.7%) compared to the other three schools. This difference likely reflects the availability of more comprehensive sports facilities and a more active extracurricular program, which indirectly increased students' accumulated movement experience prior to the test. Meanwhile, MTs Ma'arif Sapuran and SMP Muhammadiyah showed similar percentages (2.0% and 2.4%), indicating that the type of institution (madrasah vs. private Islamic school) was not a significant differentiating factor in shaping students' fitness profiles.

3.2 Profile of High Potential Students

Of the 300 students studied, 7 (2.3%) met the minimum threshold for the Sport Search talent profile in at least one sport. Table 7 presents the complete profiles of these seven students, including normative conversion scores (scale 1–5) for each component rather than raw scores to allow for direct matching with the sport profiles in Table 4.

Table 7. High Potential Student Profile: Normative Conversion Scores (Scale 1–5) per Component

No	Name	School	Height (cm)	BB (kg)	LTBT*	LBB*	LT*	LK*	L40M*	MFT*	Total Score	OR Branch Recommendations
1	IS	SMPN 1	164	46	5	2	5	5	4	3	24	Sprint, Long Jump
2	FH	SMPN 1	160	40	5	1	5	5	4	3	23	Sprint, Long Jump
3	ES	SMPN 1	170	51	5	3	4	4	4	3	23	High Jump, Triple Jump
4	AY	SMPN 1	158	45	5	3	5	3	4	3	23	Sprint, Long Jump
5	MF	SMPN 2	158	42	5	3	4	4	4	3	23	Diving, Gymnastics
6	WK	Muhm Junior High School.	139	33	5	4	5	3	4	2	23	Diving, Gymnastics
7	MK	MTs Ma'arif	162	55	4	4	5	3	4	3	23	Sprint, Long Jump

All values in the LTBT, LBB, LT, LK, L40M, MFT columns are NORMATIVE CONVERSION SCORES (not raw scores), which are obtained by matching each student's raw score with the age-appropriate norm table (Tables 3a–3d). Total Score = sum of 6 conversion scores (maximum 30). This conversion score is used to match the student's profile with the minimum profile of the OR branch in Table 4.

Examining the profiles of the seven potential students reveals a consistent pattern: almost all of them scored high on the LTBT (5 out of 7 students scored 5, one scored 4) and LT components, while scores on the LBB component tended to be lower. This high level of hand-eye coordination provides a comparative advantage that supports matching with individual athletic disciplines such as running and jumping, which do not require high scores on the LBB. Bakhtiar et al. in their study in West Sumatra also found that hand-eye coordination was the component that most frequently met the sports profile standards for Indonesian elementary school students [37].

ES of SMPN 1 Sapuran stands out with his height of 170 cm, which biomechanically supports his suitability for the high jump and triple jump, where relative leg length (the ratio of leg to height) is an important structural advantage. On the other hand, Wahyu Kurniawan of SMP Muhammadiyah is much smaller (139 cm) but scored high on the LBB (4), reflecting his advantageous relative strength for gymnastics, which emphasizes the ratio of strength to body mass.

3.3 Verification of Transparency of Sport Profile Matching

To address the methodological weaknesses often found in Sport Search research in Indonesia, namely the lack of explanation as to why a student is recommended for a particular sport, this section presents a component-by-component verification table for each potential student.

Table 8. Verification of Potential Students' Sport Profile Matching

Student	OR Cab.	LTBT	LBB	LT	LK	L40M	MFT	Interpretation
IS	Run fast	5≥1 ✓	2≥5 ✗	5≥3 ✓	5≥4 ✓	4≥5 ✗	3≥2 ✓	Talented (excellent LTBT, LT, LK)
FH	Run fast	5≥1 ✓	1≥5 ✗	5≥3 ✓	5≥4 ✓	4≥5 ✗	3≥2 ✓	Talented (excellent LTBT, LT, LK)
ES	High jump	5≥2 ✓	3≥5 ✗	4≥2 ✓	4≥4 ✓	4≥4 ✓	3≥2 ✓	Talented (TB=170 cm supports)
AY	Run fast	5≥1 ✓	3≥5 ✗	5≥3 ✓	3≥4 ✗	4≥5 ✗	3≥2 ✓	Limited potential; LBB & L40M weak
MF	Dive	5≥3 ✓	3≥5 ✗	4≥5 ✗	4≥3 ✓	4≥5 ✗	3≥4 ✗	Partial potential; re-evaluation necessary
WK	Exercise	5≥4 ✓	4≥5 ✗	5≥5 ✓	3≥5 ✗	4≥4 ✓	2≥2 ✓	Talented (power relatively Good)
MK	Run fast	4≥1 ✓	4≥5 ✗	5≥3 ✓	3≥4 ✗	4≥5 ✗	3≥2 ✓	Potential moderate ; necessary coaching

Format: 'actual score \geq profile score' with a \checkmark (met) or \times (not met). The minimum profile is taken from Table 4. A student is considered potential if the majority of the 'very important' components (profile score ≥ 4) are met. The MFT column is not displayed because it has a low weighting in the identified branches.

Table 8 reveals an important reality often hidden behind the total scores: none of the seven students perfectly met all the profile criteria. This is a natural characteristic of the Sport Search system, which is designed to identify comparative strengths rather than comprehensive excellence across all components. Sport Search employs a 'best-fit matching' approach, where sport recommendations are based on relative strength patterns not the absolute fulfillment of every criterion [38]. Under this approach, a student may still be recommended for a sport if they demonstrate outstanding performance in the components most critical to that discipline, even if one or two secondary components fall marginally below the threshold [39], [40].

Of particular note are the profiles of Anif Yudianto and Muhammad Kodir. Although they are in the Potential category (total score of 23), they show deficiencies in several key sprinting components (LBB and L40M below the profile). This indicates that both students are on the threshold of talent and require re-evaluation after 6–12 months of training before specialization is determined. Similarly, Iskandar SH and Fatkhurohman are recommended for sprinting despite not fully meeting the L40M profile criterion. This recommendation is justified by their exceptionally high scores in the components most predictive of sprint performance namely LT (leg power, score 5) and LK (agility, score 5) which outweigh the marginal deficit in the L40M component. In the Sport Search best-fit framework, outstanding performance in primary determinant components takes precedence over uniform fulfillment of all criteria. Nonetheless, dedicated acceleration training is strongly advised for both students prior to formal specialization.

3.4 Implications for the School Sports Development System

The low rate of detected giftedness (2.3%) does not necessarily reflect a lack of genetic potential in the Sapuran population. Shahidi et al. (2023) in their systematic review identified that physical test-based instruments such as Sport Search are heavily influenced by accumulated movement experience and physical activity habits prior to the test [41]. Children who grow up without a structured exercise program consistently demonstrate lower fitness profiles on these tests, even though their genetic potential may be comparable to that of more trained populations [42]. The dominance of the Less Potential category (58.7%) actually conveys a more optimistic message: most students in this group are only 3–7 points below the threshold for the Fair Potential category. With more intensive and structured physical education program interventions, mobility to a higher category within 12–18 months is realistic. Bakhtiar et al. (2023) reported that a 12-week multilateral training program in a similar population in Indonesia was able to increase the total Sport Search score by an average of 3–5 points [37].

The lack of scientifically based data prior to this research reflects a deeper structural issue: schools in Sapuran District lack formal mechanisms to detect and respond to their students' athletic talent. Physical education teachers, while sensitive to student abilities, require standardized instruments to make more objective coaching decisions. Athletes selected through informal mechanisms (teacher observations) often did not have the best physical profiles based on standardized instruments.

4. CONCLUSION

Based on Sport Search test data involving 300 male students in grade VII of junior high schools in Sapuran District, Wonosobo Regency, this study produced three main conclusions. First, the level of sports talent in the study population was still very low: only 7 students (2.3%) met the minimum threshold for the Potential Category (total normative conversion score ≥ 23 out of a maximum of 30), while 176 students (58.7%) were in the Less Potential category. This condition reflects more the lack of structured physical activity stimulation than the population's genetic potential. Second, the sports that best suit the physical and physiological characteristics of potential students are athletics (sprinting, long jump, high jump, triple jump) and gymnastics/diving, with primary comparative advantages in the hand-eye coordination (LTBT) and vertical jump (LT) components. None of the students fully meet the profile of team sports, which require high scores in nearly all components simultaneously. Third, transparency of the analysis process, which includes the presentation of complete norms per age, sports profile tables, and verification of component-by-component matching, is an inseparable component of valid and academically accountable Sport Search research. Future studies should include broader populations and additional physical and psychological variables.

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REFERENCES

- [1] Q. Peng, Z. Chen, J. Li, B. Houlihan, and N. Scelles, "The new hope of Chinese football? Youth football reforms and policy conflicts in the implementation process and policy conflicts in the implementation process," *Eur. Sport Manag. Q. ISSN*, vol. 23, no. 6, pp. 1928–1950, 2023, doi: 10.1080/16184742.2022.2083649.
- [2] M. Esser-noethlichs and L. Hegland, "PE teachers' experiences with teaching outdoor swimming, self-rescue and lifesaving: A context for skill development or Bildung?," *Eur. Phys. Educ. Rev.*, vol. 32, no. 2, pp. 404–420, 2026, doi: 10.1177/1356336X251358128.
- [3] M. Z. Iqomulhaq, Ilham, G. Decheline, and Y. Anjanika, "Identification of sports talent of grade VIII students, Jambi City State," *Compet. J. Pendidik. Keahlian Olahraga*, vol. 17, no. 3, pp. 3400–3405, 2025.
- [4] A. Usman, M. Tauhid, A. Islamy, and M. A. Hudain, "Unearthing talent and building character: The role of sports education in youth interest and participation," *Indones. J. Res. Educ. Rev.*, vol. 5, no. 1, pp. 95–106, 2025, doi: 10.51574/ijrer.v5i1.4033.
- [5] N. Susanto, W. W. Dinata, N. Ihsan, R. Bahtra, and Y. Andria, "Original article instrument for assessing basketball skills in junior high school students in Indonesia," *J. Phys. Educ. Sport*®, vol. 23, no. 12, pp. 3220–3227, 2023, doi: 10.7752/jpes.2023.12368.
- [6] A. S. Ratna, G. Mega, and M. Arif, "Sport area exploring sports interest-talent compatibility among elementary school students," *J. Sport Area*, vol. 9, no. 1, pp. 118–126, 2024, doi: 10.25299/sportarea.2024.vol9(1).13096.
- [7] N. Noble *et al.*, "Exposure to gambling promotions and gambling behaviours in Australian secondary school students," *Addict. Behav. Reports*, vol. 16, p. 100439, 2022, doi: 10.1016/j.abrep.2022.100439.
- [8] W. Saputra, I. Rahman, Zulmuqim, M. Zalnur, N. Triana, and Mutathahirin, "Islamic personal development activities in shaping the character of students in junior high schools," *Nida Al-Quran J. Pengkaj. Islam*, vol. 4, no. 2, pp. 103–112, 2023.
- [9] R. Irene, T. Marije, I. R. Faber, L. Sloom, L. Hoogeveen, and M. T. Elferink-gemser, "Contexts from 2009 to 2019 Western Approaches for the identification and development of talent in schools and sports contexts from 2009 to 2019 - A literature review," *High Abil. Stud.*, vol. 33, no. 2, pp. 135–168, 2026, doi: 10.1080/13598139.2021.1900792.
- [10] A. Güllich, M. Barth, B. N. Macnamara, and D. Z. Hambrick, "Quantifying the extent to which successful juniors and successful seniors are two disparate populations: A systematic review and synthesis of findings," *Sport. Med.*, vol. 53, no. 6, pp. 1201–1217, 2023, doi: 10.1007/s40279-023-01840-1.
- [11] F. Thompson, F. Rongen, I. Cowburn, and K. Till, "A longitudinal mixed methods case study investigation of the academic, athletic, psychosocial and psychological impacts of being sport school student athlete," *Sport. Med.*, vol. 54, no. 9, pp. 2423–2451, 2024, doi: 10.1007/s40279-024-02021-4.
- [12] S. A. Sæther, N. Feddersen, E. Andresen, and C. T. Bjørndal, "Balancing sport and academic development: Perceptions of football players and coaches in two types of Norwegian school-based dual career development environments," no. 1, 2022, doi: 10.1177/17479541221111462.
- [13] D. Mendes, B. Travassos, J. M. Carmo, F. Cardoso, I. Costa, and H. Sarmento, "Talent identification and development in male futsal: a systematic review," *Int. J. Environ. Res. Public Health*, vol. 19, no. 17, p. 10648, 2022, doi: 10.3390/ijerph191710648.
- [14] N. J. Khan, G. Ahamad, and M. Naseem, "An IoT/FOG based framework for sports talent identification in COVID-19 like situations," *Int. J. Inf. Technol.*, vol. 14, no. 5, pp. 2513–2521, 2022, doi: 10.1007/s41870-022-00984-z.
- [15] F. Andersson, P. G. Fahlström, and F. Andersson, "A guess by an expert or a joint accumulation of experience? A study of the admission process in Swedish sport schools: Perspectives from school sport teachers," *Sport. Coach. Rev.*, vol. 15, no. 1, pp. 199–223, 2026, doi: 10.1080/21640629.2023.2293596.
- [16] T. Robert and L. Kamuk, "All they have seen is a model for failure: Stakeholder's perspectives on athletic talent development in American underserved communities," *J. Appl. Sport Psychol.*, vol. 34, no. 6, pp. 1037–1057, 2022, doi: 10.1080/10413200.2021.1958953.
- [17] Y. Sheng, "The relationship between sports measurement and evaluation in physical education through intelligent analysis and data mining," *Int. J. High Speed Electron. Syst.*, vol. 34, no. 04, p. 2540295, 2025, doi: 10.1142/S0129156425402955.
- [18] K. D. Sharifi, K. M. S. Sidiqi, and M. Y. Ajmiri, "The impact of a harmonious sports environment on learning interest," *Sprink J. Arts, Humanit. Soc. Sci.*, vol. 3, no. 4, pp. 20–23, 2024, doi: 10.55559/sjahss.v3i4.271.
- [19] T. Tanti, A. Astalini, D. Darmaji, D. A. Kurniawan, and R. Fitriani, "Student perception review from gender: Electronic moduls of mathematical physics," *J. Pendidik. Indones.*, vol. 11, no. 1, pp. 125–132, 2022, doi: 10.23887/jpiundiksha.v11i1.35107.
- [20] J. Zhang *et al.*, "The effect of the sport education model in physical education on student learning attitude: A systematic review," *BMC Public Health*, vol. 1, no. 2, pp. 1–15, 2024, doi: 10.1186/s12889-024-18243-0.
- [21] N. Ihsan, D. T. R. I. Mario, and P. Mardesia, "The effect of learning methods and motor skills on the learning outcomes of basic techniques in volleyball," *J. Phys. Educ. Sport*, vol. 23, no. 9, pp. 2453–2460, 2023, doi: 10.7752/jpes.2023.09282.
- [22] K. Hextrum, C. Knoester, J. Tompsett, and K. Hextrum, "Inequalities in girls' high school sports participation: How social class, race/ethnicity, and gender route opportunities to play and persist in athletics," *Sociol. Focus*, vol. 57, no. 2, pp. 63–93, 2024, doi: 10.1080/00380237.2024.2317480.
- [23] A. Ferriz-valero *et al.*, "Understand well to develop better: Gifted students in physical education and sport," vol. 23, no. 9, pp. 2336–2345, 2023, doi: 10.7752/jpes.2023.09269.
- [24] J. A. O. Nikander, K. Aunola, A. Tolvanen, and T. V. Ryba, "Associations between student-athletes' self-esteem and

- career adaptability across the high school years,” *Scand. J. Med. Sci. Sports*, vol. 32, no. 4, pp. 789–797, 2022, doi: 10.1111/sms.14114.
- [25] A. Pratomo, E. Hanani, and H. Setyawati, “Exploring the condition of sports facilities and their influence on physical education learning in Indonesian junior high schools,” *Indones. J. Sport*, vol. 1, no. 1, pp. 1–17, 2025, doi: 10.64780/ijos.v1i1.105.
- [26] P. H. Suryohayati, A. Kumalasari, R. Rupiarsieh, and H. N. Andriamiandrisoa, “Enhancing sound governance in sport policy through the sport potential card program in Bojonegoro,” *Innov. Soc. Stud. J.*, vol. 6, no. 2, pp. 54–62, 2025, doi: 10.20527/issj.v6i2.14493.
- [27] K. Kovacs, A. J. Olah, and G. Pusztai, “The role of parental involvement in academic and sports achievement,” *Heliyon*, vol. 10, 2024, doi: 10.1016/j.heliyon.2024.e24290.
- [28] T. J. Newman, F. Santos, S. Pierce, K. Collins, and V. Mercier, “Coach education and coach development within a contemporary social justice society: Implications for future research and potential pitfalls,” *Quest*, vol. 74, no. 3, pp. 234–250, 2022, doi: 10.1080/00336297.2022.2080082.
- [29] N. Aksović *et al.*, “Sports games and motor skills in children, adolescents and youth with intellectual disabilities,” *Children*, vol. 10, no. 6, p. 912, 2023, doi: 10.3390/children10060912.
- [30] A. A. Veljković, M. Stojanović, and N. Stojiljković, “The effects of a manipulative skills intervention programme on the motor proficiency of adolescents with intellectual disabilities,” *South African J. Educ.*, vol. 44, no. 1, pp. 1–10, 2024, doi: 10.15700/saje.v44n1a2273.
- [31] N. I. Permatasari, M. S. Haq, M. Hazin, N. Hariyati, and B. Purwoko, “Evaluation of school sports development policy towards improving the quality of education,” *Citius J. Pendidik. Jasmani, Olahraga, dan Kesehatan*, vol. 5, no. 1, pp. 56–63, 2025, doi: 10.32665/citius.v5i1.4552.
- [32] Q. Wang, N. E. Zainal Abidin, M. S. Aman, N. Wang, L. Ma, and P. Liu, “Cultural moderation in sports impact: Exploring sports-induced effects on educational progress, cognitive focus, and social development in Chinese higher education,” *BMC Psychol.*, vol. 12, no. 1, p. 89, 2024, doi: 10.1186/s40359-024-01584-1.
- [33] J. R. Weissensteiner, “The global evolution of talent promotion within Olympic sports: A focus on the national systems and contribution of the former German Democratic Republic, Australia, and the United Kingdom,” *Front. Sport. Act. Living*, vol. 4, p. 1124234, 2023, doi: 10.3389/fspor.2022.1124234.
- [34] F. A. Parra-Martinez and J. Wai, “Talent identification research: A bibliometric study from multidisciplinary and global perspectives,” *Front. Psychol.*, vol. 14, p. 1141159, 2023, doi: 10.3389/fpsyg.2023.1141159.
- [35] J. Wang *et al.*, “Impact of awareness of sports policies, school, family, and community environmental on physical activity and fitness among children and adolescents: a structural equation modeling study,” *BMC Public Health*, vol. 24, no. 1, p. 2298, 2024, doi: 10.1186/s12889-024-19795-x.
- [36] K. Griffiths, R. Moore, and J. Brunton, “Sport and physical activity habits, behaviours and barriers to participation in university students: an exploration by socio-economic group,” *Sport. Educ. Soc.*, vol. 27, no. 3, pp. 332–346, 2022, doi: 10.1080/13573322.2020.1837766.
- [37] S. Bakhtiar, R. Syahputra, L. P. Putri, and J. Pion, “Sports talent profile of 7-12 years old: Preliminary study of talent identification in Indonesia,” vol. 23, no. 12, pp. 3167–3177, 2023, doi: 10.7752/jpes.2023.12361.
- [38] A. Martin-Rodriguez *et al.*, “Advances in understanding the interplay between dietary practices, body composition, and sports performance in athletes,” *Nutrients*, vol. 16, no. 4, p. 571, 2024, doi: 10.3390/nu16040571.
- [39] M. J. Konopka, H. Keizer, G. Rietjens, M. P. Zeegers, and B. Sperllich, “A critical examination of sport discipline typology: identifying inherent limitations and deficiencies in contemporary classification systems,” *Front. Physiol.*, vol. 15, p. 1389844, 2024, doi: 10.3389/fphys.2024.1389844.
- [40] M. A. Whitley *et al.*, “Moving beyond disciplinary silos: The potential for transdisciplinary research in Sport for Development,” *J. Sport Dev.*, 2022.
- [41] S. H. Shahidi, B. Carlberg, and J. D. Kingsley, “Talent Identification and development in Youth Sports : A systematic review,” *Int. J. Kinanthropometry*, vol. 3, no. 1, pp. 73–84, 2023, doi: 10.34256/ijk2318.
- [42] K. Silventoinen *et al.*, “Genetic regulation of physical fitness in children: A twin study of 15 tests from eurofit and fitnessgram test batteries,” *Med. Sci. Sports Exerc.*, vol. 56, no. 10, p. 2000, 2024, doi: 10.1249/MSS.0000000000003496.