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# PHYSICAL FITNESS FACTORS AND VOLLEYBALL SKILLS TEST OF STUDENTS

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**Abstract:**
This study determined the relationship between sex, physical fitness factors, and volleyball skills among junior high school student-athletes from the Davao Association of Catholic Schools (DACs) in Davao City. Using a descriptive-correlational design, the study involved 60 volleyball players selected through purposive sampling. Data were analyzed using the mean, standard deviation, and Chi-square test of independence. Results revealed that both physical fitness and volleyball skills were at a moderate level, with males showing slightly higher performance than females. Among the physical fitness factors, speed and agility were very high, power and reaction time were high, while balance and coordination were low. Similarly, underarm serve and forearm pass were moderate, whereas overhand serve, smash, and blocking were low. A significant relationship was found between sex, physical fitness, and volleyball skills, indicating performance variation due to biological and physiological factors. Based on the findings, a Volleyball Fitness and Skill Enhancement Training Plan (VFSETP) was developed to address weak areas through a structured, gender-responsive, and progressive training approach anchored on Simpson's Psychomotor Domain Theory and Ericsson's Theory of Deliberate Practice.

**Keywords:** education, physical fitness, volleyball skills, student-athletes, training plan, Davao City, Philippines

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## 1. Introduction

Volleyball is a dynamic sport that demands a combination of technical skill, physical conditioning, and rapid decision-making. To perform effectively, athletes must possess well-developed agility, speed, balance, coordination, power, and reaction time, attributes that directly influence the accuracy and consistency of volleyball-specific skills such as serving, passing, spiking, and blocking. However, despite the availability of structured skill assessments, several international and national reports highlight persistent gaps in standardized evaluation practices. Global assessments such as the Volleyball Performance Index show that less than one-third of players meet benchmark performance measures, indicating inconsistencies in training, testing, and skill development (AVCA, 2015). The Fédération Internationale de Volleyball (FIVB) has likewise emphasized the absence of uniform testing protocols across countries, limiting the capacity to objectively evaluate athlete readiness and developmental needs.

In the Philippines, similar challenges exist. Although Filipino athletes often demonstrate competitive anthropometric profiles, their motor-fitness and aerobic capacities remain below international standards, underscoring the need for comprehensive conditioning programs (Valleser *et al.*, 2018; Pituk & Cagas, 2019). Private and public school athletes in Mindanao, including those from the Davao Association of Catholic Schools (DACs), face additional barriers such as limited facilities, equipment constraints, and inconsistent coaching support—factors that directly influence fitness and skill acquisition (Gumasing *et al.*, 2023; Amit & Malabarbas, 2020). These conditions are evident during local sporting events such as DAPRISA, DAVRAA, and DACs competitions, where performance variability highlights gaps in foundational fitness and technique.

Physical fitness and volleyball-specific skills are widely understood to be intertwined. Athletes with higher levels of agility, speed, power, and coordination tend to exhibit better ball control, more accurate service mechanics, and more efficient defensive and offensive responses (Hammami *et al.*, 2024). However, Philippine-based studies rarely examine these attributes conjointly. Most local research focuses either on physical fitness levels alone or on skill performance in isolation, leaving a gap in understanding how fitness factors collectively influence technical execution, especially among junior high school athletes from private Catholic institutions in Davao City. Additionally, there is limited evidence that connects these relationships to the development of structured, data-driven training programs tailored to student-athlete performance needs.

Given these gaps, this study investigates the relationship between physical fitness factors and volleyball skill performance among junior high school student-athletes from three DACs-affiliated private schools in Davao City. By identifying strengths and weaknesses across both fitness and skill domains, the study aims to generate empirical data that can support the creation of a Volleyball Fitness and Skill Enhancement Training Plan (VFSETP). This initiative seeks to improve athlete performance through progressive,

gender-responsive, and scientifically grounded training strategies suited to the developmental needs of young players.

## 2. Literature Review

Physical fitness plays a foundational role in sports performance, influencing athletes' capacity to execute technical skills with precision and efficiency. Core fitness components such as agility, speed, coordination, power, balance, and reaction time determine an athlete's ability to respond to dynamic play conditions, maintain stability during rallies, and generate forceful movements essential in volleyball. Agility and speed enable rapid directional changes and effective court coverage, which are critical for both offensive transitions and defensive recoveries (Ross *et al.*, 2016; Gabbett *et al.*, 2018). Power supports explosive skills such as spiking, serving, and vertical jumping, while reaction time facilitates split-second adjustments during serve receptions or fast rallies (Cronin *et al.*, 2017; Wilkerson *et al.*, 2019). Conversely, limited balance and coordination are associated with postural instability, inconsistent ball control, and movement inefficiency, all of which hinder technical volleyball performance (Sousa *et al.*, 2020; Smith *et al.*, 2020).

Volleyball skill performance is commonly evaluated through standardized tests that measure proficiency in serving, passing, smashing, and blocking. High test scores are linked to refined motor control, strong upper-body mechanics, and consistent technical execution (Alnedral *et al.*, 2020; Chen *et al.*, 2021). Athletes with lower skill levels often struggle with hand positioning, timing, movement sequencing, and ball-trajectory control, resulting in decreased accuracy and reduced effectiveness in both offensive and defensive play (Garcia & Martinez, 2019; Taylor & Nguyen, 2021). Serving accuracy, in particular, is influenced by coordination, upper-body strength, and repetitive technical practice, while efficient passing requires synchronized lower- and upper-body mechanics to stabilize the platform and guide ball direction (Johnson & Lee, 2020; Hernandez *et al.*, 2021).

A growing body of research consistently demonstrates a positive association between physical fitness and volleyball skills. Athletes with strong fitness profiles tend to show superior performance across serving, smashing, blocking, and passing because enhanced strength, agility, and reaction time enable more effective execution of complex motor tasks (Hammami *et al.*, 2024; García-de-Alcaraz *et al.*, 2020). Meanwhile, athletes with moderate or low fitness profiles often display inconsistent skill outcomes, suggesting that both conditioning and technical practice are necessary to achieve high-level volleyball performance (Roberts *et al.*, 2019; Harris *et al.*, 2020). These findings reinforce the principle that volleyball proficiency is not solely dependent on technique but rather on the interplay between motor fitness, neuromuscular coordination, and sport-specific skill development.

Beyond physical attributes, the broader performance environment, particularly the quality of coaching, also influences skill outcomes. Recent evidence highlights that athletes perform more effectively when guided by coaches who possess strong management and leadership capabilities. Juezan *et al.* (2022) emphasize that effective

coaching management enhances athletes' skill execution and overall athletic performance by fostering structure, providing clear guidance, and creating supportive training environments. This implies that even physically fit athletes may struggle to maximize their volleyball proficiency without appropriate instructional strategies and well-managed training conditions.

In addition to coaching and fitness factors, athlete lifestyle behaviors also contribute to performance readiness. Emerging evidence shows that nutrition and recovery behaviors substantially influence athletic functioning. Juezan and Poralan (2025) noted that proper dietary behavior serves as a strong predictor of athletes' recovery-stress balance, highlighting that adequate nutrition supports physical readiness, neuromuscular function, and overall skill execution. This suggests that performance is not only shaped by physical fitness and technical skills but also by athletes' adherence to proper recovery behaviors that sustain training quality and competition performance.

Despite numerous international studies validating the link between fitness and volleyball skills, Philippine research, particularly within Mindanao, often examines these variables separately. Limited local studies investigate how fitness components influence volleyball skill performance among junior high school athletes in private Catholic institutions. Most available studies focus either on conditioning programs or on skill proficiency, resulting in a gap in understanding the integrated fitness–skill relationship within the academic-athletic context unique to Philippine private schools. Given training resource limitations, differences in facility access, and varying levels of coaching specialization, examining these variables together is crucial for developing evidence-based and context-responsive training programs.

## 3. Material and Methods

This study employed a quantitative descriptive–correlational design to determine the relationship between physical fitness factors and volleyball skill performance among junior high school student-athletes. This design allowed the researcher to describe existing levels of agility, speed, balance, coordination, power, reaction time, and volleyball-specific skills while examining possible associations with sex. A comparative component was incorporated to determine whether significant differences existed between male and female athletes. The study was conducted in three private secondary schools under the Davao Association of Catholic Schools (DACs) in Davao City, Philippines. These institutions, all established Catholic schools with active participation in regional sports events, were selected due to their organized volleyball programs and their known challenges in implementing standardized training and assessment practices. The respondents were 60 junior high school volleyball players, composed of 30 males and 30 females, all of whom participated in the 2024 DACs Volleyball Competition as members of non-winning teams. A purposive–complete enumeration approach was used to include all athletes who met the criteria: enrolled junior high school students during the academic year, participants in the DACs volleyball competition, physically fit, and

with parental consent and personal assent. Athletes from winning teams, those from non-DACs institutions, non-participants in the competition, and students lacking consent were excluded. Because respondents were minors, ethical safeguards were ensured throughout the research process.

Two validated instruments were utilized for data collection. The first was the Physical Fitness Test adapted from the Revised Physical Fitness Test Manual (DepEd Order 034, s. 2019), which measured agility, speed, balance, coordination, power, and reaction time using standardized test protocols. Scores were interpreted on a descriptive scale ranging from Very Low to Very High. The second instrument was the Volleyball Skills Test developed by Alnedral, Zonifa, and Yendriza (2020), which assessed five essential volleyball skills, overhand serve, underarm serve, forearm pass, smash, and blocking. This tool demonstrated excellent reliability ($r = 0.973$) and required athletes to perform five attempts per skill, with scoring based on accuracy and ball landing zones. Both instruments underwent expert validation to ensure clarity, appropriateness, and relevance to the target population.

Data collection followed ethical procedures approved by the University of the Immaculate Conception Research Ethics Committee (UIC-REC) under protocol GS ER 01 25 0151. Permissions were obtained from the Graduate School Dean, DACs leadership, and the participating school administrators. Informed consent from parents and assent from athletes were secured before data collection. All participants were briefed regarding voluntary participation, confidentiality, withdrawal rights, and safety protocols. The researcher conducted the physical fitness and volleyball skill assessments onsite, ensuring uniform administration across schools. Warm-up activities were provided before testing, and volleyball skill performances were video-recorded to enhance scoring accuracy. Collaboration with physical education teachers, coaches, and school medical personnel ensured that testing remained safe and consistent throughout the process. All data were encoded, anonymized, and securely stored in compliance with the Data Privacy Act of 2012.

For statistical analysis, descriptive statistics such as mean and standard deviation were utilized to determine the levels of physical fitness and volleyball skill performance. The Chi-Square Test of Independence was applied to examine whether sex had a significant association with the physical fitness factors and volleyball skills. Results from these analyses served as the foundation for designing the Volleyball Fitness and Skill Enhancement Training Plan (VFSETP), which aimed to address identified weaknesses and enhance the athletes' physical and technical performance.

## 4. Results and Discussion

This section presents the findings on the physical fitness levels, volleyball skill performance, and the association between sex and the measured variables. Results are interpreted based on descriptive statistics and the chi-square test of independence, followed by an integrated discussion grounded in related literature.

**Table 1:** Physical Fitness Levels of Student-Athletes (n = 60)

| Physical Fitness Factor | Female Mean | Male Mean | Category Mean | Description |
|---|---|---|---|---|
| Agility | 4.37 | 4.63 | 4.50 | Very High |
| Speed | 4.80 | 4.83 | 4.82 | Very High |
| Balance | 1.50 | 2.40 | 1.95 | Low |
| Coordination | 1.03 | 1.00 | 1.02 | Very Low |
| Power | 3.73 | 4.30 | 4.02 | High |
| Reaction Time | 3.40 | 3.43 | 3.42 | High |
| **Overall Mean** | **3.14** | **3.43** | **3.29** | **Moderate** |

### 4.1 Physical Fitness Levels

The student-athletes demonstrated an overall moderate level of physical fitness (M = 3.29), indicating that their fitness attributes were only sometimes evident during performance. Males (M = 3.43) scored higher than females (M = 3.14), suggesting stronger physical preparedness.

Agility (M = 4.50) and speed (M = 4.82) registered very high levels for both sexes, reflecting well-developed neuromuscular responsiveness essential to rapid directional changes and transition plays. This aligns with Gabbett *et al.* (2018), who asserted agility as a strong predictor of volleyball court efficiency.

Power (M = 4.02) and reaction time (M = 3.42) fell within the high category, consistent with Cronin *et al.* (2017), who found that explosive strength enhances spiking and blocking mechanics. These results suggest the athletes possess sufficient force production and decision-making speed.

However, balance (M = 1.95) and coordination (M = 1.02) were notably low, indicating instability in posture and difficulties synchronizing movements. This finding confirms Sousa *et al.* (2020), who noted that inadequate balance limits ball control and defensive play. Such weaknesses may negatively affect serving accuracy, receiving stability, and blocking form—core skills necessary for competitive volleyball.

Overall, the fitness profile suggests strong speed-related attributes but glaring deficiencies in stability- and skill-related components, warranting structured training interventions.

**Table 2:** Volleyball Skills Performance of Student-Athletes

| Volleyball Skill | Female Mean | Male Mean | Category Mean | Description |
|---|---|---|---|---|
| Overhand Serve | 1.37 | 2.29 | 1.83 | Moderate |
| Underarm Serve | 2.10 | 2.58 | 2.34 | Moderate |
| Forearm Pass | 1.90 | 2.63 | 2.26 | Moderate |
| Smash | 1.40 | 1.57 | 1.48 | Low |
| Blocking | 0.77 | 1.03 | 0.90 | Low |
| **Overall Mean** | **1.49** | **2.02** | **1.75** | **Moderate** |

### 4.2 Volleyball Skills Performance

The overall volleyball skill performance was moderate (M = 1.75). Males (M = 2.02) performed better than females (M = 1.49), indicating more consistent execution of technical skills.

The overhand serve was rated moderate (M = 1.83), with females at a low level. This mirrors findings from Garcia & Martinez (2019), suggesting that serving accuracy is heavily dependent on upper-body strength and coordination—two areas where female respondents scored lower.

The underarm serve (M = 2.34) and forearm pass (M = 2.26) also fell within the moderate level, indicating that basic foundational ball-handling skills are developing but lack precision and consistency.

In contrast, smash (M = 1.48) and blocking (M = 0.90) received low ratings, demonstrating limited offensive and defensive proficiency. These results suggest that the athletes struggle with explosive vertical movements, timing, and hand positioning, particularly in the blocking phase. Similar findings were noted by Taylor & Nguyen (2021), who pointed out that poor coordination and insufficient lower-body strength reduce spike velocity and block success.

Overall, the athletes show emerging skill capacity but require structured drills to enhance technique, accuracy, and tactical execution.

**Table 3:** Chi-Square Results: Relationship Between Sex, Physical Fitness, and Volleyball Skills

| Variable Pairing | $\chi^2$ Value | p-value | Interpretation |
|---|---|---|---|
| Sex × Physical Fitness | Significant | $p < .05$ | Reject Ho |
| Sex × Volleyball Skills | Significant | $p < .05$ | Reject Ho |

### 4.3 Relationship Between Sex and Performance Variables

The chi-square analysis revealed a significant relationship between sex and (a) physical fitness and (b) volleyball skills ($p < .05$). This implies that male and female athletes differ significantly in their performance across fitness and skill domains.

Biological and physiological differences likely explain these results. Males naturally possess greater muscle mass and force production, contributing to higher power, speed, and skill execution—consistent with findings by Hammami *et al.* (2024). Females' lower outcomes, particularly in strength-dependent skills (overhand serve, smash, blocking), align with Fernandez *et al.* (2021), who found gender disparities in explosive volleyball actions.

These findings justify the development of a gender-responsive training plan to address specific weaknesses such as balance, coordination, and net-play skills among both groups.

### 4.4 Training Proposal (Paragraph Form with Summary Table)

Based on the results of the study, a Volleyball Fitness and Skill Enhancement Training Plan (VFSETP) was developed to address the specific weaknesses identified among the junior high school student-athletes. The training program is grounded on Simpson's Psychomotor Domain Theory, which emphasizes progressive motor learning from foundational movements to complex skill performance, and Ericsson's Theory of Deliberate Practice, which underscores structured, repetitive, and feedback-driven training as necessary for skill mastery. Findings revealed that while agility and speed

were at very high levels, the athletes demonstrated notably low performance in balance and coordination, as well as low to moderate proficiency in critical volleyball skills such as smashing, blocking, and serving accuracy. These results highlight the need for a systematic and targeted training program that strengthens their stability, technical precision, and power-dependent volleyball actions.

The VFSETP is designed as an eight-week program delivered three times per week for 90 minutes per session. Each training session consists of a warm-up, physical fitness enhancement, volleyball skill development, and a cool-down period. A major component of the program focuses on improving balance through activities such as single-leg stance routines, dynamic balance walking, and core stabilization drills. Coordination, which was identified as the lowest among all fitness factors, is improved through structured ladder footwork, wall-ball accuracy drills, multitask movements, and partner exchange activities that reinforce synchronization between visual cues and motor responses. Although power and reaction time were already rated high, they remain essential to improving smash and blocking performance; thus, plyometric jumps, approach-jump repetitions, and medicine ball throw variations are incorporated to further develop explosive force and timing.

Skill development activities concentrate on addressing low performance in smash and blocking and moderate outcomes in serving and passing. Serving accuracy is strengthened through target-zone drills, progressive distance serving, and technique breakdown sessions focused on toss mechanics and follow-through. Passing skills, particularly the forearm pass, are improved through wall-passing drills, moving target receptions, and structured triangle passing to reinforce platform stability and footwork. Smash improvement focuses on refining arm-swing mechanics, approach footwork, and directional hitting, while blocking training emphasizes timing, hand penetration, and vertical jump control. The latter includes shadow-block routines, wall-block drills, and coordination with setter–attacker timing to enhance game-readiness.

The training plan is divided into progressive phases. Weeks 1 and 2 emphasize rebuilding coordination and balance and strengthening foundational passing and serving skills. Weeks 3 and 4 integrate power development, approach footwork for smash, and more demanding serve mechanics. Weeks 5 and 6 introduce advanced blocking drills and multi-skill integration for transitions. Weeks 7 and 8 focus on tactical application, full-game simulation, and refinement of execution under pressure. Throughout the program, performance logs, video monitoring, and pre-post fitness testing are used to monitor improvement. Ultimately, the VFSETP aims to elevate stability-related fitness components, improve technical precision in fundamental volleyball skills, and prepare athletes for competitive gameplay with enhanced performance capacity.

**Table 4:** VFSETP: Sex-Responsive Fitness and Volleyball Skills Training Plan (Junior High School Volleyball Athletes)

| Training Component | Objectives | Core Drills | Male Training Load | Female Training Load | Frequency | Duration |
|---|---|---|---|---|---|---|
| Balance & Coordination | Improve postural stability and movement control | Balance board, single-leg stance, ladder patterns | 3–4 sets × 30 reps | 2–3 sets × 20 reps | 3×/week | 20–25 min |
| Agility & Reaction Time | Enhance quick direction changes and responsive movement | Shuttle runs, mirror drills, T-test, reaction ball | 4 sets × 30–40 reps (higher speed) | 3 sets × 20–25 reps (controlled pace) | 3×/week | 25 min |
| Power Development | Build explosive jumping and hitting strength | Box jumps, plyometric throws, jump squats | 3 sets × 10–12 high-intensity reps | 3 sets × 6–8 low-impact reps | 2×/week | 30 min |
| Underarm Serve | Improve accuracy & trajectory consistency | Target serving, toss-and-contact drills | 4 sets × 25 balls | 3 sets × 15–18 balls | 3×/week | 20 min |
| Overhand Serve | Develop control, ball flight, and power | Toss-height drills, wall-serve accuracy | 4 sets × 20 balls (power emphasis) | 3 sets × 15 balls (accuracy emphasis) | 3×/week | 20 min |
| Forearm Pass | Enhance platform angle control and stability | Partner passing, wall rebounds | 4 sets × 30 passes | 3 sets × 20 passes | 3×/week | 20 min |
| Smash (Spike) | Improve timing, arm swing, and force | Approach jumps, arm-swing mechanics, target spiking | 3–4 sets × 12 spikes (full approach) | 3 sets × 8–10 spikes (controlled approach) | 3×/week | 25 min |
| Blocking | Enhance timing, vertical jump, and anticipation | Wall block, footwork timing, and reaction block drills | 4 sets × 10–12 blocks (higher net) | 3 sets × 8–10 blocks (modified height) | 3×/week | 20 min |

## 5. Recommendations

Based on the conclusions of the study, it is recommended that coaches and physical education teachers implement targeted training drills that address the specific weaknesses identified among the student-athletes. Particular attention should be given to improving balance and coordination through activities such as balance board

exercises, single-leg stance routines, ladder footwork patterns, cone movement drills, and reaction ball activities. At the same time, strengths in speed, agility, power, and reaction time should be maintained through shuttle runs, T-test agility drills, box jumps, and medicine ball throws using sex-appropriate loading as detailed in the VFSETP.

To further enhance volleyball-specific skills, coaches and PE teachers are encouraged to conduct focused technical drills that develop accuracy, timing, and execution. These include target serving, toss-and-hit repetitions, approach jump and arm-swing mechanics practice, wall blocking drills, and reaction-based blocking activities. Foundational skills, particularly the underarm serve and forearm pass, should be reinforced through partner passing and wall rebound exercises to ensure consistency and proper technique.

Since the study confirmed a significant positive relationship between physical fitness and volleyball skills, it is strongly recommended that student-athletes consistently participate in conditioning programs that strengthen the physical attributes necessary for volleyball performance. Coaches and trainers should integrate physical conditioning with skill-based drills to simultaneously develop both fitness components and technical proficiency, thereby improving overall athletic ability.

Finally, because a structured training plan was developed through this research, coaches and physical education teachers are encouraged to adopt and implement the proposed program. This plan directly targets weaker areas such as balance, coordination, overhand serve, smash, and blocking, while also sustaining existing strengths in speed, agility, power, and reaction time. Systematic implementation of this training program can significantly enhance the performance and competitiveness of student-athletes in volleyball.

## 6. Conclusion

The study concluded that the student-athletes demonstrated only a moderate level of physical fitness, meaning their fitness attributes were sometimes evident during performance. Although they showed adequate speed, agility, power, and reaction time, the athletes displayed notable weaknesses in balance and coordination. These deficiencies suggest the need for targeted training interventions to enhance stability and motor control, which are essential for efficient movement in volleyball.

In terms of volleyball skills, the study found that the athletes performed at a moderate level, indicating inconsistent skill execution. While they demonstrated adequate ability in basic skills such as the underarm serve and forearm pass, further improvement is required in more technical and power-based skills, specifically the overhand serve, smash, and blocking. These findings highlight the importance of structured skill development to strengthen technique and performance accuracy.

Furthermore, the results revealed a significant difference between physical fitness and volleyball skills, showing that variations in fitness levels corresponded with differences in skill performance. This supports the Psychomotor Domain Theory, which asserts that physical capacities influence the execution, control, and refinement of sport-

specific skills. The relationship found in this study confirms that improving physical fitness can lead to enhanced volleyball skill performance.

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**Conflict of Interest Statement**
The authors declare no conflicts of interest.

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## Appendix:

Name (Optional) _____ Sex: Male (___) Female (__)
Age: _____ Name of School: School 1

**Dear Respondent,**

This instrument is designed to determine the **PHYSICAL FITNESS FACTORS AND VOLLEYBALL SKILLS TEST OF STUDENTS**. Rest assured that your response to each question will be held with strict confidentiality.

**The researcher**

**PART I - PHYSICAL FITNESS TEST SCORE CARD**

**PART 1: HEALTH-RELATED FITNESS TEST**
**A. BODY COMPOSITION: Body Mass Index (BMI)**

| Height (meters) | Weight (kilograms) | BMI | Classification |
|---|---|---|---|
| | | | |

| | |
|---|---|
| Below 18.5 | Underweight |
| 18.5 – 24.9 | Normal |
| 25.0- 29.9 | Overweight |
| 30.0- ABOVE | Obese |

**B. CARDIOVASCULAR ENDURANCE: 3-Minute Step**

| Heart Rate per minute | |
|---|---|
| Before the Activity | After the Activity |
| | |

**C. STRENGTH**

**1. Push-up** **2. Basic Plank**

| Number of Push-ups | Time |
|---|---|
| | |

***Push-up Boys and Girls Secondary***

| Score | Standard | Interpretation |
|---|---|---|
| 5 | 33 and above | Excellent |
| 4 | 25-32 | Very Good |
| 3 | 17-24 | Good |
| 2 | 9-6 | Fair |
| 1 | 1-8 | Needs Improvement |
| 0 | 0 | Poor |

**2. Basic Plank Scoring:** record the time in the nearest seconds/minute. Maximum of 90 seconds for Boys and Girls

| Score | Standard | Interpretation |
|---|---|---|
| 5 | 51 seconds and above | Excellent |
| 4 | 46- 50 seconds | Very Good |
| 3 | 31- 45 seconds | Good |
| 2 | 16- 30 seconds | Fair |
| 1 | 1- 15 seconds | Needs Improvement |

**D. FLEXIBILITY**

**1. Zipper Test**

**2. Sit and Reach**

| Overlap/Gap (centimeters) | | Score (centimeters) | | |
|---|---|---|---|---|
| Right | Left | First Try | Second Try | Third Try |
| | | | | |

Scoring- record zipper test to the nearest 0.01 centimeter.

| Score | Standard | Interpretation |
|---|---|---|
| 5 | Fingers overlapped by 6 cm. and above | Excellent |
| 4 | Fingers overlapped by 4- 5.9 cm. | Very Good |
| 3 | Fingers overlapped by 2- 3.9 cm. | Good |
| 2 | Fingers overlapped by 0.1- 1.9 cm. | Fair |
| 1 | Just touched the fingers | Needs Improvement |
| 0 | Gap of 0.1 or wider | Poor |

Sit and reach:

Scoring- record the farthest distance between the two trials to the nearest 0.1 centimeters

| Score | Standard | Interpretation |
|---|---|---|
| 5 | 61 cm and above | Excellent |
| 4 | 46- 60.9 cm | Very Good |
| 3 | 31- 45.9 cm | Good |
| 2 | 16- 30.9cm | Fair |
| 1 | 0- 15.9 cm | Needs Improvement |

**PART 2: SKILL-RELATED FITNESS TEST**

**A. COORDINATION Juggling** Score: _____

Scoring: Record the highest number of hits the performance has done.

| Score | Standard | Interpretation |
|---|---|---|
| 5 | 41 and above | Excellent |
| 4 | 31- 40 | Very Good |
| 3 | 21- 30 | Good |
| 2 | 11- 20 | Fair |
| 1 | 1- 10 | Needs Improvement |

**B. AGILITY: Hexagon Agility Test**

| Clockwise (00:00) | Counterclockwise (00:00) | Average |
|---|---|---|
| | | |

Scoring: Add the time of the two revolutions and divide by 2 to get the average. Record the time in the nearest minutes and seconds.

| Score | Standard | Interpretation |
|---|---|---|
| 5 | 5 seconds and below | Excellent |
| 4 | 6- 10 seconds | Very Good |
| 3 | 11- 15 seconds | Good |
| 2 | 16- 20 seconds | Fair |
| 1 | 21- 25 seconds | Needs Improvement |
| 0 | Over 25 seconds | Poor |

**C. SPEED : 40-meter Sprint** Time: _____

Scoring: Record the time in nearest minutes and seconds.

| Standard Norms in Seconds | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Boys | | | | Girls | | | |
| Age | 9-12 | 13-14 | 15-16 | 17 and above | 9-12 | 13-14 | 15-16 | 17 and above |
| Excellent | <6.0 | <5.0 | <4.5 | <4.0 | <7.0 | <6.5 | <5.5 | <4.5 |
| Very Good | 6.1-7.7 | 5.1-6.9 | 4.6-5.4 | 4.1-5.4 | 7.1-8.4 | 6.6-7.6 | 5.6-6.1 | 4.6-5.9 |
| Good | 7.8-8.5 | 7.0-8.0 | 5.5-7.0 | 5.5-6.5 | 8.5-9.5 | 7.7-8.8 | 6.2-7.2 | 6.0-7.0 |
| Fair | 8.6-9.5 | 8.1-9.1 | 7.1-8.1 | 6.6-7.5 | 9.6-10.5 | 8.9-9.5 | 7.3-8.5 | 7.1-8.1 |
| Needs Improvement | >9.6 | >9.2 | >8.2 | >7.6 | >10.6 | >9.6 | >8.6 | >8.2 |

**D. POWER: Standing Long Jump**

| Distance (centimeters) | |
|---|---|
| First Trial | Second Trial |
| | |

Scoring: Record the best distance in meters to the nearest 0.1 centimeters.

| Score | Standard | Interpretation |
|---|---|---|
| 5 | 201 cm. and above | Excellent |
| 4 | 151 cm. – 200 cm. | Very Good |
| 3 | 126 cm. – 150 cm. | Good |
| 2 | 101 cm. – 125 cm. | Fair |
| 1 | 55 cm. – 100 cm. | Needs Improvement |

**E. BALANCE : Stork Balance Stand Test**

| Right Foot (00:00) | Left Foot (00:00) |
|---|---|
| | |

Scoring: Record the time taken on both feet in nearest seconds and divide the score to two (2) to get the average percentage score.

Scoring: Add the time of the two revolutions and divide by 2 to get the average. Record the time in the nearest minutes and seconds.

| Score | Standard | Interpretation |
|---|---|---|
| 5 | 5 seconds and below | Excellent |
| 4 | 6- 10 seconds | Very Good |
| 3 | 11- 15 seconds | Good |
| 2 | 16- 20 seconds | Fair |
| 1 | 21- 25 seconds | Needs Improvement |
| 0 | Over 25 seconds | Poor |

**C. SPEED : 40-meter Sprint** Time: _____

Scoring: Record the time in nearest minutes and seconds.

| Standard Norms in Seconds | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Boys | | | | Girls | | | |
| Age | 9-12 | 13-14 | 15-16 | 17 and above | 9-12 | 13-14 | 15-16 | 17 and above |
| Excellent | <6.0 | <5.0 | <4.5 | <4.0 | <7.0 | <6.5 | <5.5 | <4.5 |
| Very Good | 6.1-7.7 | 5.1-6.9 | 4.6-5.4 | 4.1-5.4 | 7.1-8.4 | 6.6-7.6 | 5.6-6.1 | 4.6-5.9 |
| Good | 7.8-8.5 | 7.0-8.0 | 5.5-7.0 | 5.5-6.5 | 8.5-9.5 | 7.7-8.8 | 6.2-7.2 | 6.0-7.0 |
| Fair | 8.6-9.5 | 8.1-9.1 | 7.1-8.1 | 6.6-7.5 | 9.6-10.5 | 8.9-9.5 | 7.3-8.5 | 7.1-8.1 |
| Needs Improvement | >9.6 | >9.2 | >8.2 | >7.6 | >10.6 | >9.6 | >8.6 | >8.2 |

**D. POWER: Standing Long Jump**

| Distance (centimeters) | |
|---|---|
| First Trial | Second Trial |
| | |

Scoring: Record the best distance in meters to the nearest 0.1 centimeters.

| Score | Standard | Interpretation |
|---|---|---|
| 5 | 201 cm. and above | Excellent |
| 4 | 151 cm. – 200 cm. | Very Good |
| 3 | 126 cm. – 150 cm. | Good |
| 2 | 101 cm. – 125 cm. | Fair |
| 1 | 55 cm. – 100 cm. | Needs Improvement |

**E. BALANCE : Stork Balance Stand Test**

| Right Foot (00:00) | Left Foot (00:00) |
|---|---|
| | |

Scoring: Record the time taken on both feet in nearest seconds and divide the score to two (2) to get the average percentage score.