International Multidisciplinary Journal of
Research for Innovation, Sustainability, and Excellence (IMJRISE)
Online ISSN: 3028-032X | Print ISSN: 3028-0370
Published by RISEJOURNALS.ORG
Volume no. 3, Issue no. 1, Page 271

Physical Activity Level and Skill-related Fitness among Junior High School Students

Christine Mae Q. Perez
La Consolacion College Bacolod
pchristinemae130@gmail.com

Abstract:
Despite the presence of national policies promoting physical activity among Filipino youth, a substantial number of students remain physically inactive. Physical activity and skill-related fitness are essential components of students' physical, cognitive, and socio-emotional development. This study aimed to determine the physical activity levels and skill-related fitness of Junior High School students at La Consolacion College–Bais City during School Year 2023–2024 and to examine the relationship between these two variables. A quantitative descriptive–correlational research design was employed. Data were gathered from 118 Junior High School students using standardized assessment tools for physical activity level and skill-related fitness. Descriptive statistics, including mean and standard deviation, were used to describe the variables, while Spearman's rho correlation was utilized to determine the relationship between physical activity level and skill-related fitness. Results revealed that the overall physical activity level of the students was moderate. When grouped according to sex and grade level, physical activity levels likewise remained moderate. However, notable differences emerged when students were classified by socioeconomic status: those from low-income families demonstrated a very low level of physical activity, middle-income students exhibited a high level, and students from high-income families showed a moderate level. In terms of skill-related fitness, the overall level was good, indicating adequate motor competence among the students; however, when analyzed by socioeconomic status, skill-related fitness levels were only fair. A significant relationship was found between physical activity level and skill-related fitness, suggesting that increased engagement in physical activity is associated with improved motor skills, reduced risk of injury, enhanced performance, and better overall well-being. The study concludes that physical activity and skill-related fitness play a vital role in the development of motor skills, critical thinking, teamwork, sportsmanship, and positive values among students. It is therefore recommended that physical activities be integrated not only within MAPEH but also across other academic subject areas to support holistic development and lifelong learning. Furthermore, collaborative partnerships among MAPEH teachers, other subject teachers, parents or guardians, local government units, non-government organizations, and school stakeholders are strongly encouraged to strengthen students' physical activity participation and skill development both in school and at home.

Keywords: *physical activity level; skill-related fitness; grade level; socioeconomic status*

Introduction:

Physical activity level describes the amount of physical activity in which individuals engage, reflecting both the frequency and intensity of movement across daily life. In its broader sense, physical activity is defined as any bodily movement produced by skeletal muscles that results in energy expenditure (Caspersen et al., 1985). This definition encompasses not only structured and planned physical exercise but also routine activities such as household chores, active transportation, and recreational play. As such, physical activity is a multidimensional construct that contributes significantly to physical health, functional capacity, and overall well-being.

Closely linked to physical activity is skill-related fitness, which refers to the ability to learn and perform motor skills involving agility, balance, coordination, power, reaction time, and speed. Skill-related fitness is considered vital in inspiring sustained participation in physical activity and in promoting health and well-being across the lifespan (Lubans et al., 2010). These skills are developed progressively from early childhood through adulthood and include agility, strength, balance, reflexes, hand–eye coordination, accuracy, strategy, intuition, and patience (Gallahue et al., 2012; Payne & Isaacs, 2017). Such competencies are commonly cultivated through the reinforcement, adaptation, and progression of recreational activities and games (Gallahue et al., 2012). When adequately developed, these skills form the foundation for lifelong engagement in physical activity and physical competence (Lubans et al., 2010).

Globally, the Performance and Fitness (PERF-FIT) test battery for children has emerged as a valid and reliable assessment tool for measuring motor skill-related physical fitness among children aged 5 to 12 years, particularly those living in low-income settings. The PERF-FIT reliably evaluates fundamental motor skills such as throwing, bouncing, catching, jumping, hopping, balance, power, and agility across diverse contexts, making it a useful tool for clinicians and educators monitoring children's physical development. Although the causal pathways linking physical inactivity to chronic disease are complex, substantial evidence highlights the importance and potential impact of increasing physical activity levels as part of broader public health efforts to improve health and well-being (Kohl et al., 2013).

Empirical studies further demonstrate that physical activity plays a crucial role in the healthy development of children and adolescents. A study conducted among high school students in Krakow revealed that physical activity is an essential factor supporting proper developmental processes and that engagement in physical activity is influenced by family socio-economic status (Jurczak et al., 2021). The study demonstrated a predictive role of socio-economic indicators, showing that students from families with higher socio-economic status tended to exhibit higher levels of physical activity. These findings underscore the influence of social and environmental factors on adolescents' activity behaviors.

In Asia, physical activity and physical strength have been described as interlinked in a reciprocal relationship. Increased engagement in physical activity leads to improvements in physical strength, while regular aerobic exercise enhances cardiovascular endurance, lowers blood pressure, and reduces the risk of metabolic diseases such as cardiovascular disease and type 2 diabetes (Pinckard et al., 2019).Conversely, declining physical strength may lead to reduced physical activity, emphasizing the need to establish a virtuous cycle, particularly among vulnerable populations (Pinckard et al., 2019). For older adults, maintaining physical strength is critical to reducing disease risk and mortality and to extending life expectancy, as physical strength is strongly associated with chronic disease outcomes and mortality rates (Ruiz et al., 2008).

Context-specific barriers to physical activity have also been identified. In Malaysia, adolescents aged 13 to 17 years participated in photo-elicitation activities to contextualize and identify factors influencing physical activity. Findings revealed that poor maintenance of natural resources, lack of pedestrian infrastructure and road safety, limited physical activity facilities, and negative perceptions of ancestral agricultural activities constrained adolescents' participation in physical activity. These constraints were found to potentially affect physical performance across other Malaysian communities (Saimon et al, 2015).

In the Philippines, national policies such as the *Philippine Physical Activity Guidelines for Children and Adolescents* and initiatives under the Department of Education's school-based health programs aim to promote regular physical activity among students (Department of Health [DOH], 2017; Department of Education [DepEd], 2018). Despite these efforts, most Filipino children and adolescents still fail to meet the recommended daily physical activity levels (Cagas et al., 2022). This situation points to a disconnect between policy formulation and actual implementation, particularly within school settings where structured opportunities for physical activity and skill-related fitness are most accessible (Kohl et al., 2013). Moreover, while existing research underscores the importance of physical activity and skill-related fitness in youth development, limited attention has been given to how these are fostered in private Catholic basic education institutions—contexts that often operate under distinct academic structures, priorities, and resource allocations.

Additionally, a notable gap exists in the literature, as many studies examine physical activity level or skill-related fitness independently, without exploring how these dimensions interact or vary according to sex, grade level, and socio-economic status (Kljajević et al., 2021). There is also a persistent lack of school-specific fitness programs that are sustained, measurable, and responsive to students' diverse needs, compounded by issues such as inadequate equipment and limited teacher support.

Given these gaps, examining both physical activity levels and skill-related fitness among Junior High School students in a private Catholic basic education institution is warranted. Understanding students' current status in these domains can provide evidence-based insights necessary for developing responsive physical fitness programs aligned with

students' needs. This study therefore seeks to determine the physical activity level and skill-related fitness of Junior High School students during School Year 2023–2024, contributing to the growing body of literature that informs school-based health promotion and physical education initiatives.

Review of Related Literature

Achievement Motivation Theory (AMT), originally articulated by John Atkinson, explains an individual's tendency to approach or avoid achievement-related activities as a function of three interacting factors: the motive for success (Ms), the probability of success (Ps), and the incentive value of success (Is) (Atkinson, 1957, 1964). According to Atkinson, individuals are more likely to engage in tasks when they possess a strong desire to succeed, perceive a reasonable likelihood of success, and attach meaningful value to the outcome of that success. The theory was later expanded and refined through the foundational works of Murray (1938), McClelland, et al (1953), and Atkinson, Clark, and McClelland (1961), who collectively emphasized that achievement-oriented behavior results from a dynamic interaction between personal dispositions and situational demands.

Within this theoretical framework, motivation to achieve is influenced by a combination of internal factors, such as willingness, determination, punctuality, and personal drive, as well as external or environmental factors, including expectations, pressures, goals, and standards set by institutions, family members, and society at large (McClelland, 1961; Murray, 1938). These internal and external forces interact to shape an individual's readiness to engage in achievement-related tasks and persist in the face of challenges.

In the context of physical activity level and skill-related fitness, Achievement Motivation Theory provides a useful lens for understanding how students approach participation in physical activities. Students with a high motive for success may be more inclined to engage in physical tasks when they believe they can perform well and when success is perceived as rewarding (Atkinson, 1964; Hagger & Chatzisarantis, 2007). Conversely, low perceptions of success or limited incentive value may discourage participation. From this perspective, students' engagement in physical activity and their development of skill-related fitness can be understood as outcomes of motivational processes shaped by personal beliefs, perceptions of competence, and contextual influences such as school programs, cultural expectations, and available interventions (Bandura, 1997; Weiss & Amorose, 2008).

Applying AMT to physical education suggests that well-designed interventions and programs can enhance students' motivation by increasing perceived competence, creating achievable challenges, and reinforcing the value of success in physical activities (Atkinson, 1964; Ntoumanis, 2001). Such approaches may encourage sustained participation in physical activity and support the development of skill-related fitness components.

Existing literature underscores the importance of examining physical activity level and skill-related fitness among students when considered as a whole and when analyzed according to demographic variables such as sex, grade level, and socioeconomic status (Stalsberg & Pedersen, 2010; Kljajević et al., 2021). These characteristics are consistently identified as influential factors in students' physical development and participation in physical activities. Differences in access to resources, social expectations, developmental stages, and environmental support systems may contribute to variations in both activity levels and fitness outcomes across student groups (Gidlow et al., 2006; Jiménez-Pavón et al., 2010).

Skill-related fitness, which includes agility, balance, power, reaction time, coordination, and speed, is widely recognized as essential for effective performance in physical tasks and for fostering continued engagement in physical activity (Gallahue et al., 2012; Lubans et al., 2010). Higher levels of skill-related fitness may increase students' confidence and willingness to participate in physical activities, while regular engagement in physical activity can further enhance these skills, suggesting a mutually reinforcing relationship between the two constructs.

The literature supports a bidirectional relationship between physical activity level and skill-related fitness. On one hand, the development of skill-related fitness can motivate greater participation in physical activities by improving competence and reducing perceived barriers. On the other hand, frequent participation in physical activities provides opportunities for practice and skill acquisition, thereby strengthening fitness-related competencies (Dollman et al.,

2005; Gea-García et al., 2020). This reciprocal relationship aligns with the principles of Achievement Motivation Theory, which emphasizes the role of perceived success and incentive value in sustaining engagement.

In school settings, particularly within private Catholic basic education institutions, understanding these relationships is crucial for designing effective physical education programs. Integrating physical activity with the systematic development of skill-related fitness can contribute to improved health and well-being among students and promote the adoption of lifelong healthy behaviors (Kohl et al., 2013). Moreover, recognizing the influence of demographic factors allows educators to tailor interventions that are responsive to students' diverse needs.

The reviewed literature highlights the relevance of Achievement Motivation Theory in explaining students' engagement in physical activity and the development of skill-related fitness. It also emphasizes the need for context-specific, evidence-based physical fitness programs that address motivational, developmental, and environmental factors within the school setting. The findings of related studies provide a strong foundation for developing a proposed physical fitness program aimed at enhancing physical activity levels and skill-related competencies among students in private Catholic basic education institutions.

Methodology

This chapter presents and describes the research methodology employed in the study, including the research design, locale, respondents, data-gathering instruments, validity and reliability procedures, data-gathering process, statistical treatment, and ethical considerations.

This study aimed to assess the physical activity level and skill-related fitness of Junior High School students of a private educational institution during School Year 2023–2024. A quantitative descriptive–correlational research design was utilized. Descriptive–correlational research describes variables and measures the extent of relationships that exist between and among them (Creswell & Creswell, 2018; Quaranta, 2017). This design was deemed appropriate as it allowed the researcher to describe the physical activity level and skill-related fitness of the students and to determine whether a significant relationship exists between these two variables.

The study was conducted in a private Catholic basic education institution located in Bais City, Negros Oriental. The school served as the research locale due to accessibility and relevance to the study, as the researcher is currently employed in the institution.

The respondents of the study were the Junior High School students of the said Catholic basic education school. A total of one hundred eighteen (118) students participated in the study, consisting of 31 Grade 7 students, 17 Grade 8 students, 26 Grade 9 students, and 44 Grade 10 students. Due to the limited size of the student population, complete enumeration was employed. In complete enumeration, information is obtained from every unit of the population, ensuring accuracy and minimizing sampling error (Guatan, 2020). This approach addressed potential issues related to generalizability that may arise from a small sample size and assured more reliable and error-free results.

The study utilized two primary research instruments: the Physical Activity Questionnaire for Adolescents (PAQ-A) and the Philippine Physical Fitness Test. The PAQ-A, a slightly modified version of the PAQ-C with the "recess" item removed, is a self-administered 7-day recall instrument developed to assess general levels of physical activity among high school students. It consists of eight items rated on a 5-point Likert scale and can be administered in a classroom setting to generate a composite physical activity score. The Philippine Physical Fitness Test is a standardized set of measures designed to assess students' skill-related physical fitness, particularly agility, balance, power, coordination, reaction time, and speed, as prescribed in the Department of Education curriculum.

A survey questionnaire was used to gather data from the respondents. The questionnaire was divided into two parts. The first part gathered demographic information, including sex, grade level, and socioeconomic status. The second part assessed the students' physical activity level and skill-related fitness. For interpretation, the physical activity level and skill-related fitness scores followed the same mean range and verbal interpretation: 4.20–5.00 (Very High), 3.40–4.19 (High), 2.60–3.39 (Moderate), 1.80–2.59 (Low), and 1.00–1.79 (Very Low). The questionnaire was adapted from

the Physical Activity Questionnaire for Adolescents Manual, while the physical fitness assessment was adapted from the Department of Education Physical Fitness Test.

In terms of validity and reliability, the PAQ-A has been widely used across various countries and has demonstrated strong psychometric properties. Biddle et al. identified 89 scales intended to measure physical activity in young people, and after rigorous screening based on demonstrated reliability and validity, only the PAQ-A (along with the PAQ-C) and two other instruments were endorsed by an expert panel. The Philippine Physical Fitness Test has likewise undergone extensive validity assessment by education professionals and is widely implemented throughout the Philippines. Given its established validity and national utilization, the instruments were no longer subjected to panel validation. To establish reliability, a test–retest procedure was conducted involving thirty (30) Junior High School students who were not part of the actual respondents. The interval between the two administrations was two weeks, and the results were analyzed using the Pearson product–moment correlation coefficient.

The data-gathering procedure was carefully planned and systematically implemented. Prior to data collection, formal communication detailing the objectives and methodology of the study was sent to the school president, and approval to conduct the study was secured. Informed consent was obtained from both the students and their parents, ensuring that all participants were fully aware of the study's purpose, procedures, and their rights, including confidentiality and anonymity. The researcher also coordinated with the school nurse to ensure compliance with existing health and safety protocols set by the Department of Health.

During the data collection, the researcher explained the purpose and benefits of the study to the respondents. The students were given sufficient time to complete the survey questionnaire and perform the required physical fitness activities. Confidentiality of responses was emphasized, and assistance from colleagues was requested to facilitate the efficient distribution and retrieval of questionnaires. After data collection, all accomplished questionnaires were forwarded to a statistician for tabulation and analysis using Microsoft Excel. Only the researcher and the statistician had access to the data, in strict observance of confidentiality. All 118 questionnaires were successfully distributed, retrieved, tallied, and tabulated, forming the basis for statistical analysis and interpretation.

Appropriate statistical tools were employed to address the research problems. Mean and standard deviation were used to determine the level of physical activity and skill-related fitness of the students. To determine whether a significant relationship exists between physical activity level and skill-related fitness, the Shapiro–Wilk test was utilized.

Ethical considerations were strictly observed throughout the conduct of the study. The researcher adhered to the ethical principles of respect for persons, justice, and integrity. The social value of the study lies in its potential to serve as a foundation for future research and for the development of programs aimed at enhancing students' physical activity levels and skill-related fitness. Informed consent was secured prior to participation, and respondents were informed that participation was voluntary and that they could withdraw at any time without consequence.

The vulnerability of the research participants was addressed by ensuring anonymity and confidentiality of all responses. No form of coercion was employed, and no abuse of human rights occurred during the study. Risks were minimized by ensuring that respondents were properly hydrated, wore appropriate physical education attire, and were allowed to change clothing as needed for comfort during physical activities. Adequate time was provided for completing the questionnaire and performance tasks.

Privacy and confidentiality were upheld in accordance with the Data Privacy Act of 2012. All collected data were treated with strict confidentiality, used solely for research purposes, and disposed of properly after analysis to prevent unauthorized access. Justice was observed through fair selection of respondents and the absence of any conflict of interest. Transparency was maintained by clearly disclosing the purpose, risks, and benefits of the study to all participants. The researcher affirmed that no monetary or administrative benefit was derived from conducting the study.

Results

The findings of this study are presented according to the research problems and describe the physical activity level and skill-related fitness of Junior High School students for School Year 2023–2024, both as an overall group and when classified by sex, grade level, and socioeconomic status. The results likewise include the component-level outcomes of skill-related fitness and the test of association between physical activity level and skill-related fitness.

In terms of physical activity level, the student group as a whole obtained a moderate level (M = 2.633, SD = 0.687). When disaggregated by sex, both groups remained within the same interpretation: males recorded a moderate level of physical activity (M = 2.863, SD = 0.630), while females also demonstrated a moderate level (M = 2.319, SD = 0.639). A similar pattern was observed across grade levels, where all year levels consistently fell under a moderate interpretation. Grade 7 posted the highest mean (M = 2.915, SD = 0.582), followed by Grade 9 (M = 2.779, SD = 0.780) and Grade 8 (M = 2.735, SD = 0.761), while Grade 10 reflected the lowest mean among the groups (M = 2.307, SD = 0.542). A clearer differentiation emerged when respondents were grouped by socioeconomic status: the low-income group registered a very low physical activity level (M = 1.677, SD = 0.322), the middle-income group yielded a high physical activity level (M = 3.026, SD = 0.570), and the high-income group returned to a moderate level (M = 2.205, SD = 0.489).

With regard to skill-related fitness, the overall result for the respondents indicated a good level (M = 3.233, SD = 0.848). Sex-based results were comparable, as both males (M = 3.344, SD = 0.826) and females (M = 3.084, SD = 0.863) were interpreted as good. Differences became more evident when skill-related fitness was examined by grade level: Grade 7 (M = 3.511, SD = 0.844) and Grade 8 (M = 3.490, SD = 0.567) reached a very good level, whereas Grade 9 (M = 2.968, SD = 0.881) and Grade 10 (M = 3.095, SD = 0.864) remained at a good level. When grouped according to socioeconomic status, the low socioeconomic group obtained a good result (M = 2.833, SD = 0.358), the middle socioeconomic group achieved a very good result (M = 3.844, SD = 0.490), while the high socioeconomic group obtained a fair result (M = 2.484, SD = 0.572).

A closer examination of the specific components of skill-related fitness provides a more detailed profile of student performance. For agility, the respondents recorded an overall very good level (M = 3.890, SD = 1.364). Males achieved an excellent agility rating (M = 4.118, SD = 1.287), compared with females who remained very good (M = 3.580, SD = 1.416). By grade level, Grades 7 (M = 4.065, SD = 1.289) and 8 (M = 4.235, SD = 1.033) performed at an excellent level, while Grades 9 (M = 3.885, SD = 1.306) and 10 (M = 3.636, SD = 1.542) maintained a very good level. In socioeconomic groupings, the middle group registered an excellent performance (M = 4.734, SD = 0.648), followed by the low group at very good (M = 3.750, SD = 0.957), and the high group at good (M = 2.820, SD = 1.320).

For balance, the overall interpretation was likewise very good (M = 3.873, SD = 1.424). Males again posted an excellent level (M = 4.000, SD = 1.316), while females scored very good (M = 3.700, SD = 1.416). Grades 7 (M = 4.452, SD = 1.555) and 8 (M = 4.706, SD = 0.686) attained excellent outcomes, whereas Grades 9 (M = 3.077, SD = 1.647) and 10 (M = 3.614, SD = 1.573) were interpreted as very good. Across socioeconomic strata, the middle group again obtained an excellent balance outcome (M = 4.625, SD = 0.807), the high group reached very good (M = 3.020, SD = 1.464), and the low group recorded good performance (M = 2.500, SD = 1.915).

In terms of power, respondents achieved an overall very good level (M = 3.432, SD = 1.297). Males obtained a very good interpretation (M = 3.882, SD = 1.191), while females were interpreted as good (M = 2.820, SD = 1.190). When grouped by grade level, Grades 7 (M = 3.452, SD = 0.925), 8 (M = 3.824, SD = 1.286), and 10 (M = 3.545, SD = 1.372) sustained very good power scores, whereas Grade 9 obtained a good rating (M = 2.962, SD = 1.483). Differences also appeared by socioeconomic status: the middle group achieved a very good level (M = 4.016, SD = 1.076), while both the low group (M = 2.500, SD = 1.732) and high group (M = 2.760, SD = 1.170) were rated good.

For reaction time, the pattern was notably stable, with an overall interpretation of very good (M = 3.483, SD = 0.985). Males (M = 3.500, SD = 1.113) and females (M = 3.460, SD = 0.788) remained essentially comparable, both falling under very good. This same interpretation held across grade levels, including Grade 7 (M = 3.871, SD = 0.619), Grade 8 (M = 3.412, SD = 0.939), Grade 9 (M = 3.423, SD = 1.362), and Grade 10 (M = 3.273, SD = 0.899). When classified by socioeconomic status, the low group obtained a very good mean (M = 4.000, SD = 0.000), the middle group also

remained very good (M = 3.859, SD = 0.814), while the high group recorded a good interpretation (M = 2.960, SD = 0.989).

In contrast, coordination emerged as a relative weakness in the overall skill-related fitness profile, yielding a fair overall interpretation (M = 2.593, SD = 1.228). Males obtained a fair score (M = 2.426, SD = 1.137), while females performed slightly higher with a good rating (M = 2.820, SD = 1.320). At the grade level, Grades 7 (M = 3.032, SD = 1.449) and 9 (M = 2.731, SD = 1.041) were rated good, whereas Grades 8 (M = 2.529, SD = 0.874) and 10 (M = 2.227, SD = 1.198) remained fair. A similar spread was seen across socioeconomic groups: the low group (M = 2.750, SD = 1.258) and middle group (M = 3.156, SD = 1.171) achieved good ratings, while the high group registered a fair interpretation (M = 1.860, SD = 0.881).

A comparable pattern appeared in speed, which registered an overall fair level (M = 2.127, SD = 1.424). Both males (M = 2.132, SD = 1.392) and females (M = 2.120, SD = 1.480) remained under the fair category, and all grade levels similarly reflected fair interpretations: Grade 7 (M = 2.194, SD = 1.470), Grade 8 (M = 2.235, SD = 1.522), Grade 9 (M = 1.731, SD = 1.041), and Grade 10 (M = 2.273, SD = 1.546). Socioeconomic grouping, however, revealed meaningful divergence: middle-income students obtained a good rating (M = 2.672, SD = 1.574), whereas both low-income (M = 1.500, SD = 0.577) and high-income students (M = 1.480, SD = 0.886) fell under needs improvement.

Finally, the test of relationship between physical activity level and skill-related fitness indicated a statistically significant association, as shown by the reported p-value of < .001, indicating a significant relationship between the two variables. This result suggests that the physical activity level of the respondents is significantly related to their skill-related fitness outcomes, reflecting that variations in engagement in physical activity correspond with variations in skill-related fitness performance within the sample.

Discussion and Analysis

This section presents an integrated discussion and analysis of the findings, drawing connections between the results of the present study and existing literature on physical activity level and skill-related fitness among adolescents. The discussion is anchored on the study objectives and framed within established empirical and theoretical perspectives.

The overall moderate level of physical activity observed among Junior High School students aligns with national and international findings indicating that adolescents, despite policy initiatives, often fail to meet recommended physical activity levels (Cagas et al., 2022; Bull et al., 2020). The similarity in physical activity levels between males and females, both interpreted as moderate, contrasts with earlier findings suggesting that males are consistently more active than females across age groups (University of Exeter, 2009). This convergence may reflect changing school environments where physical education requirements and structured activities provide relatively equal opportunities for participation regardless of sex. However, the slightly higher mean among males still mirrors trends noted in earlier research.

Across grade levels, the consistently moderate physical activity level—with a gradual decline from Grade 7 to Grade 10—suggests that engagement in physical activity may decrease as students progress academically. This pattern is consistent with evidence showing that increased academic demands, reduced play time, and lifestyle changes during adolescence contribute to declining activity levels (Kohl et al., 2013). The lower mean among Grade 10 students may reflect competing academic priorities and reduced participation in organized school-based physical activities.

Socioeconomic status emerged as a differentiating factor in physical activity participation. The very low physical activity level among low-income students supports previous findings that physical activity is not equally distributed across social classes, with disadvantaged groups often engaging in less exercise during adolescence (Stalsberg et al., 2010; Gidlow et al., 2006). Limited access to facilities, financial constraints, and competing household responsibilities may restrict opportunities for regular physical activity. Conversely, the high physical activity level among middle-income students suggests that balanced access to resources, parental support, and school engagement may facilitate participation. Interestingly, students from high-income families demonstrated only a moderate activity level, which supports arguments that financial capacity does not necessarily translate into higher physical activity, especially when

sedentary alternatives such as gadgets and private transportation are readily available (Musić-Milanović et al., 2021; Gerber et al, 2021; Yang-Huang, 2020).

In terms of skill-related fitness, the overall good performance indicates that students possess a functional level of motor competence necessary for effective participation in physical activities. The comparable results between males and females suggest that both sexes are developing essential fitness skills at similar rates within the school context. This finding supports the premise that structured physical education programs can mitigate sex-based disparities in skill development, particularly during adolescence.

Grade-level differences in skill-related fitness revealed that Grades 7 and 8 attained very good levels, while Grades 9 and 10 remained at good levels. This trend mirrors developmental research indicating that early adolescence is a critical period for motor skill acquisition, supported by frequent exposure to physical education activities and extracurricular sports. As students advance in grade level, reduced participation opportunities and shifting priorities may limit continued improvement in these skills.

The influence of socioeconomic status on skill-related fitness was particularly notable. Middle-income students achieved a very good level, while high-income students recorded only a fair level. This pattern supports findings by Bohr et al. (2013), who noted that socioeconomic status can differentially influence physical fitness outcomes, particularly through variations in daily activity patterns and leisure behaviors. The relatively lower performance of high-income students may reflect increased sedentary behaviors, while middle-income students may benefit from both structured school activities and active leisure routines.

Component-level analysis provides deeper insight into these patterns. Agility and balance emerged as strengths, particularly among males, lower grade levels, and middle-income students. These findings are consistent with studies indicating that males tend to demonstrate faster agility and movement efficiency than females (Dos Santos et al., 2018; Sekulic et al., 2013; Spiteri et al., 2014), and that motor control improves with maturation and practice. The strong performance of younger students may also reflect higher engagement in dynamic games and sports commonly embedded in physical education curricula.

The socioeconomic patterns observed in agility and balance align with research suggesting that children's leisure activities are shaped by their social environment. Middle-income students often participate in both informal and organized physical activities, fostering diverse motor experiences. In contrast, children from higher socioeconomic backgrounds may engage more in structured but less frequent physical activities, while those from lower socioeconomic backgrounds rely on unstructured play with limited equipment (Jayanthi et al, 2018; Bürgi et al., 2016; Draper et al., 2017; Cook et al., 2019).

For power, the superior performance of males supports physiological explanations related to androgen hormones, which contribute to greater muscle strength. The very good performance of Grades 7, 8, and 10 further highlights the role of consistent participation in school-based activities. The relatively lower power among low-income and high-income students reflects the complex interaction between lifestyle, responsibilities, and sedentary behavior, consistent with WHO assertions that lifestyle accounts for a substantial proportion of health-related outcomes.

Reaction time was uniformly very good across sex and grade levels, indicating that this component may be less sensitive to demographic variation during adolescence. The slightly lower performance among high-income students aligns with literature linking excessive screen time and reduced physical engagement to slower response patterns (Aranha et al., 2015). Early identification of reaction time deficits is critical given its relevance to both physical and cognitive functioning.

In contrast, coordination and speed emerged as relative areas of concern, with overall interpretations of fair. These findings are consistent with studies emphasizing that coordination requires sustained practice and varied motor experiences (Lopes et al., 2013; Lubans et al., 2010). The lower scores among higher grade levels and high-income students may reflect reduced exposure to diverse movement tasks. Similarly, the fair performance in speed across

most groups supports findings that socioeconomic factors and parental occupation influence speed and agility development (Bala & Katić, 2009).

Finally, the significant relationship between physical activity level and skill-related fitness confirms the reciprocal association widely documented in the literature. Consistent with findings by Gea-García et al. (2020) and earlier studies (Dollman et al., 2005), the results support the notion that higher physical activity participation enhances physical fitness, while better fitness, in turn, promotes greater engagement in physical activity. This bidirectional relationship underscores the importance of addressing both constructs simultaneously in school-based interventions.

Overall, the findings highlight the need for targeted, sustained, and context-sensitive physical education programs that account for differences in grade level and socioeconomic background. Strengthening physical activity opportunities and skill-related fitness development within private Catholic basic education settings may contribute significantly to improved health outcomes and the promotion of lifelong active lifestyles.

Conclusion

Based on the findings of the study on the physical activity level and skill-related fitness of Junior High School students, several conclusions were drawn.

The overall physical activity level of the respondents was found to be moderate, indicating that while students are generally engaged in physical activities, their participation may not be sufficient to consistently meet recommended levels for optimal health and fitness. This moderate level persisted when students were grouped according to sex and grade level, suggesting that these variables alone do not substantially differentiate physical activity engagement within the school context. However, socioeconomic status emerged as a critical influencing factor, as students from low-income families demonstrated a very low level of physical activity, while those from middle-income families exhibited a high level. Students from high-income families showed only a moderate level of physical activity, highlighting that greater financial resources do not automatically translate to higher physical activity participation.

In terms of skill-related fitness, the students demonstrated an overall good level, indicating that most possess adequate motor abilities necessary for participation in physical tasks and sports. When grouped by sex, both male and female students achieved good levels of skill-related fitness, reflecting relatively balanced development of motor skills within the school's physical education environment. Differences were more pronounced across grade levels, with Grade 7 and Grade 8 students exhibiting very good skill-related fitness, while Grade 9 and Grade 10 students showed good levels. This suggests that younger adolescents may benefit more from frequent exposure to structured physical education activities, while older students may experience reduced opportunities or engagement.

Socioeconomic status also influenced skill-related fitness outcomes. Students from middle-income families attained very good levels of skill-related fitness, whereas those from low-income families showed good levels, and students from high-income families demonstrated only fair levels. These findings imply that balanced access to physical activity opportunities and active daily routines may be more conducive to skill development than either resource scarcity or excessive reliance on sedentary alternatives.

An analysis of the individual components of skill-related fitness revealed that agility, balance, power, and reaction time were generally strong among the respondents, with overall very good interpretations. In contrast, coordination and speed emerged as areas of relative weakness, with overall fair interpretations across most groupings. This indicates a need for targeted interventions focusing on coordination and speed development within physical education programs.

Most importantly, the study established a significant relationship between physical activity level and skill-related fitness, confirming that these two constructs are closely linked. Increased engagement in physical activity contributes to improved skill-related fitness, while enhanced motor skills facilitate more effective and confident participation in physical activities. This reciprocal relationship underscores the importance of addressing both physical activity participation and skill development simultaneously.

In conclusion, physical activity level and skill-related fitness significantly impact students' physical, cognitive, emotional, and social development. Regular participation in physical activity not only enhances physical health and motor competence but also supports critical thinking, teamwork, sportsmanship, and overall well-being, while reducing the risks associated with sedentary lifestyles. The findings highlight the necessity for school-based physical fitness programs that are inclusive, sustained, and responsive to differences in grade level and socioeconomic status, thereby promoting lifelong engagement in physical activity and holistic student development.

Recommendations

Based on the findings of the study on the physical activity level and skill-related fitness of Junior High School students, a comprehensive Physical Activity and Skill-Related Fitness Program is strongly recommended to address the identified needs and gaps.

First, it is recommended that the school institutionalize a structured and sustained physical activity and skill-related fitness program within the MAPEH curriculum. Given that students demonstrated a generally moderate physical activity level and only good skill-related fitness—with coordination and speed emerging as weaker areas—regular, progressive, and well-planned physical activities should be implemented. These activities should deliberately target agility, balance, power, reaction time, coordination, and speed through age-appropriate and engaging sports and movement-based tasks.

Second, teachers handling MAPEH are encouraged to differentiate activities according to students' physical activity levels (low, moderate, and high) and socioeconomic backgrounds. Students from low-income and high-income groups, who showed lower physical activity levels and fair performance in certain skill-related fitness components, should be given additional opportunities for inclusive, school-based activities that do not require financial resources. Free, accessible, and enjoyable activities such as basketball, volleyball, soccer, jumping rope, dancing, and track-and-field drills should be emphasized to ensure equity in participation.

Third, the findings support the recommendation that skill-related fitness activities be integrated consistently across weekly schedules, with a frequency of two to three times for low activity levels, four to five times for moderate levels, and six to seven times for high levels. Activities such as basketball, volleyball, and soccer for agility; walking, squats, and dancing for balance; jumping, sprinting, and throwing for power; badminton, table tennis, and softball for reaction time; rope jumping, dribbling, chess, and archery for coordination; and tennis and track-and-field for speed should be systematically incorporated. This structured frequency allows gradual progression while preventing overexertion and injury.

Fourth, it is recommended that stakeholder involvement be strengthened. Coaches, subject teachers, advisers, and parents or guardians should work collaboratively in supporting students' physical activity participation both in school and at home. Parental encouragement and involvement, especially during weekends and non-school days, can reinforce positive habits and reduce sedentary behavior, particularly excessive gadget use.

Fifth, schools should prioritize capacity-building for MAPEH teachers through training and professional development focused on designing skill-based fitness activities, monitoring student progress, and addressing individual differences in motor development. This will enable teachers to identify students who need additional support, particularly in coordination and speed, and to apply appropriate instructional strategies.

Sixth, the school administration is encouraged to provide and maintain adequate facilities, equipment, and safe spaces for physical activities. Even simple and low-cost equipment can significantly enhance students' engagement and skill acquisition when used creatively and consistently.

Finally, it is recommended that the proposed program be periodically evaluated and refined using student performance data and feedback. Continuous assessment will ensure that the program remains responsive to students' evolving needs and aligned with curriculum goals. Future studies may also be conducted to assess the long-term impact of the program on students' physical activity levels, skill-related fitness, academic performance, and overall well-being.

Overall, implementing a comprehensive, inclusive, and sustainable physical activity and skill-related fitness program is essential in promoting lifelong healthy habits, improving physical competence, enhancing confidence and self-esteem, and fostering teamwork, discipline, and sportsmanship among Junior High School students.

References:

Aranha, V., Samuel, A., Joshi, R., Sharma, K., & Kumar, S. (2015). Reaction time in children by ruler drop method: A cross-sectional study protocol. *Pediatric Education and Research, 3*, 61–66. https://doi.org/10.21088/per.2321.1644.3215.3

Atkinson, J. W. (1957). Motivational determinants of risk-taking behavior. *Psychological Review, 64*(6), 359–372.

Atkinson, J. W. (1964). *An introduction to motivation*. Van Nostrand.

Atkinson, J. W., Clark, R. A., & McClelland, D. C. (1961). *The achievement motive*. Appleton-Century-Crofts.

Bala, G., & Katić, R. (2009). Sex differences in motor abilities of preschool children. *Collegium Antropologicum, 33*(1), 173–180.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. W. H. Freeman.

Bohr, A. D., Brown, D. D., Laurson, K. R., Smith, P. J., & Bass, R. W. (2013). Relationship between socioeconomic status and physical fitness in junior high school students. *Journal of School Health, 83*(8), 542–547. https://doi.org/10.1111/josh.12063

Bull, F. C., Al-Ansari, S. S., Biddle, S., Borodulin, K., Buman, M. P., Cardon, G., Carty, C., Chaput, J.-P., Chastin, S., Chou, R., et al. (2020). World Health Organization 2020 guidelines on physical activity and sedentary behaviour. *British Journal of Sports Medicine, 54*(24), 1451–1462. https://doi.org/10.1136/bjsports-2020-102955

Bürgi, R., Tomatis, L., Murer, K., & de Bruin, E. D. (2016). Spatial physical activity patterns among primary school children living in neighborhoods of varying socioeconomic status: A cross-sectional study using accelerometer and GPS. *BMC Public Health, 16*, 1–12. https://doi.org/10.1186/s12889-016-3712-9

Cagas, J. Y., Reilly, J. J., Tremblay, M. S., & Katzmarzyk, P. T. (2022). Physical activity surveillance and policy implementation challenges among children and adolescents in the Philippines. *Journal of Physical Activity and Health*, 19(9), 700–728.

Caspersen, C. J., Powell, K. E., & Christenson, G. M. (1985). Physical activity, exercise, and physical fitness: Definitions and distinctions for health-related research. *Public Health Reports, 100*(2), 126–131. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1424733/

Cook, C. J., Howard, S. J., Scerif, G., Twine, R., Kahn, K., Norris, S. A., & Draper, C. E. (2019). Associations of physical activity and gross motor skills with executive function in preschool children from low-income South African settings. *Developmental Science, 22*(5), e12820. https://doi.org/10.1111/desc.12820

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.

Department of Education. (2018). *Policy and guidelines on the implementation of school-based health and nutrition programs*. Department of Education, Philippines. https://www.deped.gov.ph

Department of Health. (2017). *Philippine physical activity guidelines for children and adolescents*. Department of Health, Philippines. https://doh.gov.ph

Dollman, J., Norton, K., & Norton, L. (2005). Evidence for secular trends in children's physical activity behaviour. *British Journal of Sports Medicine, 39*(12), 892–897.

Dollman, J., Olds, T., & Norton, K. (2005). Secular trends in body composition and physical fitness of children and adolescents. *Sports Medicine, 35*(6), 485–505.

Dos Santos, T., Thomas, C., Comfort, P., & Jones, P. A. (2018). The effect of angle and velocity on change of direction biomechanics: An angle–velocity trade-off. *Sports Medicine, 48*(10), 2235–2253. https://doi.org/10.1007/s40279-018-0968-3

Draper, C. E., Tomaz, S. A., Stone, M., Hinkley, T., Jones, R. A., Louw, J., Twine, R., Kahn, K., & Norris, S. (2017). Developing intervention strategies to optimize body composition in early childhood in South Africa. *BioMed Research International, 2017,* 1–13. https://doi.org/10.1155/2017/5283457

Gallahue, D. L., Ozmun, J. C., & Goodway, J. D. (2012). *Understanding motor development: Infants, children, adolescents, adults* (7th ed.). McGraw-Hill.

Gea-García, G. M., González-Gálvez, N., Espeso-García, A., Marcos-Pardo, P. J., González-Fernández, F. T., & Martínez-Aranda, L. M. (2020). Relationship between the practice of physical activity and physical fitness in physical education students: The integrated regulation as a mediating variable. *Frontiers in Psychology, 11*, 1910. https://doi.org/10.3389/fpsyg.2020.01910

Gerber, M., Lang, C., Beckmann, J., Degen, J., du Randt, R., Gall, S., & Walter, C. (2021). Associations between household socioeconomic status, car ownership, physical activity, and cardiorespiratory fitness in South African primary schoolchildren living in marginalized communities. *Journal of Physical Activity and Health, 18*(8), 883–894.

Gidlow, C., Johnston, L. H., Crone, D., Ellis, N., & James, D. (2006). A systematic review of the relationship between socioeconomic position and physical activity. *Health Education Journal, 65*(4), 338–367.

Guatan, G. P. (2020). *Practical research methods for education and social sciences*. Mutya Publishing House.

Hagger, M. S., & Chatzisarantis, N. L. D. (2007). *Intrinsic motivation and self-determination in exercise and sport*. Human Kinetics.

Jayanthi, N. A., Holt, J. D. B., LaBella, C. R., & Dugas, L. R. (2018). Socioeconomic factors for sports specialization and injury in youth athletes. *Sports Health, 10*(4), 303–310. https://doi.org/10.1177/1941738118778510

Jiménez-Pavón, D., Ortega, F. B., Ruiz, J. R., España-Romero, V., García-Artero, E., Moliner-Urdiales, D., & Castillo, M. J. (2010). Socioeconomic status influences physical fitness in European adolescents. *Journal of Sports Sciences, 28*(8), 805–814.

Jurczak, A., Gorner, K., & Makuch, R. (2021). Family socio-economic status versus physical activity level of Cracow high school students. *Journal of Kinesiology and Exercise Sciences, 31*(94), 23–29.

Kljajević, V., Stanković, M., Đorđević, D., Trkulja-Petković, D., Jovanović, R., Plazibat, K., Oršolić, M., Čurić, M., & Sporiš, G. (2021). Physical activity and physical fitness among university students: A systematic review. *International Journal of Environmental Research and Public Health, 19*(1), 158. https://doi.org/10.3390/ijerph19010158

Kohl, H. W., III, Cook, H. D., Committee on Physical Activity and Physical Education in the School Environment, Food and Nutrition Board, & Institute of Medicine. (2013). *Educating the student body: Taking physical activity and physical education to school*. National Academies Press. https://nap.nationalacademies.org/catalog/18314

Lopes, L., Santos, R., Pereira, B., & Lopes, V. P. (2013). Associations between gross motor coordination and academic achievement in elementary school children. *Human Movement Science, 32*(1), 9–20.

Lubans, D. R., Morgan, P. J., Cliff, D. P., Barnett, L. M., & Okely, A. D. (2010). Fundamental movement skills in children and adolescents: Review of associated health benefits. *Sports Medicine, 40*(12), 1019–1035. https://doi.org/10.2165/11536850-000000000-00000

McClelland, D. C. (1961). *The achieving society*. Van Nostrand.

McClelland, D. C., Atkinson, J. W., Clark, R. A., & Lowell, E. L. (1953). *The achievement motive*. Appleton-Century-Crofts.

Murray, H. A. (1938). *Explorations in personality*. Oxford University Press.

Musić-Milanović, S., Buoncristiano, M., Križan, H., et al. (2021). Socioeconomic disparities in physical activity, sedentary behavior, and sleep patterns among 6- to 9-year-old children in Europe. *Obesity Reviews, 22*(S2), e13209. https://doi.org/10.1111/obr.13209

Ntoumanis, N. (2001). A self-determination approach to the understanding of motivation in physical education. *British Journal of Educational Psychology, 71*(2), 225–242.

Payne, V. G., & Isaacs, L. D. (2017). *Human motor development: A lifespan approach* (9th ed.). Routledge.

Pinckard, K., Baskin, K. K., & Stanford, K. I. (2019). Effects of exercise to improve cardiovascular health. *Frontiers in Cardiovascular Medicine, 6*, 69. https://doi.org/10.3389/fcvm.2019.00069

Quaranta, R. (2017). *Quantitative research methods in education*. Rex Book Store.

Reilly, J. J., Aubert, S., Brazo-Sayavera, J., Liu, Y., Cagas, J. Y., & Tremblay, M. S. (2022). Surveillance to improve physical activity of children and adolescents. *Bulletin of the World Health Organization, 100*(12), 815–824.

Ruiz, J. R., Sui, X., Lobelo, F., Morrow, J. R., Jackson, A. W., Sjöström, M., & Blair, S. N. (2008). Association between muscular strength and mortality in men: Prospective cohort study. *BMJ, 337*, a439. https://doi.org/10.1136/bmj.a439

Saimon, R., Choo, W. Y., Chang, K. H., Ng, C. J., & Bulgiba, A. (2015). *Physical activity among adolescents in an East Malaysian rural indigenous community: Exploring the influence of neighborhood environmental factors*. *Asia Pacific Journal of Public Health, 27*(8 Suppl), 33S–40S. https://doi.org/10.1177/1010539515582220

Sekulic, D., Spasic, M., Mirkov, D., Cavar, M., & Sattler, T. (2013). Gender-specific influences of balance, speed, and power on agility performance. *Journal of Strength and Conditioning Research, 27*(3), 802–811. https://doi.org/10.1519/JSC.0b013e31825c2cb0

Spiteri, T., Hart, N. H., & Nimphius, S. (2014). Offensive and defensive agility: A sex comparison of lower-body kinematics and ground reaction forces. *Journal of Applied Biomechanics, 30*(4), 514–520. https://doi.org/10.1123/jab.2013-0259

Stalsberg, R., & Pedersen, A. V. (2010). Effects of socioeconomic status on physical activity in adolescents: A systematic review of the evidence. *Scandinavian Journal of Medicine & Science in Sports, 20*(3), 368–383.

University of Exeter. (2009, January 8). *Lifelong gender difference in physical activity revealed*. ScienceDaily. https://www.sciencedaily.com/releases/2009/01/090107202439.htm

Weiss, M. R., & Amorose, A. J. (2008). Motivational orientations and sport behavior. In T. S. Horn (Ed.), *Advances in sport psychology* (3rd ed., pp. 115–155). Human Kinetics.

Yang-Huang, J., van Grieken, A., Wang, L., Jansen, W., & Raat, H. (2020). Clustering of sedentary behaviours, physical activity, and energy-dense food intake in six-year-old children: Associations with family socioeconomic status. *Nutrients, 12*(6), 1722. https://doi.org/10.3390/nu12061722