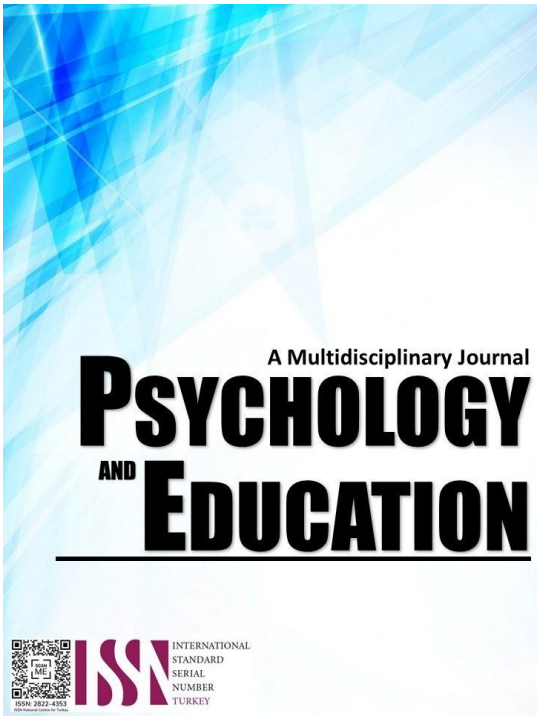
COMPETENCE IN PHYSICAL EDUCATION SKILLS, KNOWLEDGE ASSESSMENT, AND PROFICIENCY IN PHYSICAL EDUCATION OF FIRST YEAR COLLEGE STUDENTS



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Research Article

Competence in Physical Education Skills, Knowledge Assessment, and Proficiency in Physical Education of First Year College Students

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Abstract

This study assessed the competence of first-year college students in Physical Education (PE) using the Physical Education Skills and Knowledge Assessment and Proficiency in Physical Education as variables of the study. It examined the competence of students in physical education skills, knowledge assessment, and proficiency in physical education across different education degree programs. Using a survey-correlational design, the findings revealed that while students demonstrated strong proficiency in PE, their skills integration remained at a developing level, and knowledge assessment showed minor gaps. Significant relationships were found between skills integration and proficiency, highlighting the greater impact of practical skills over theoretical knowledge. The study recommends enhanced experiential learning and balanced assessment strategies to improve student competency.

Keywords: *physical education, student competence, skills integration, knowledge assessment, proficiency*

Introduction

Exercise is well known to be an essential factor in general health and fitness, but most contemporary life scenarios underestimate it deeply. PE, a subject well covered in the curriculum, is a way through which schools bridge this because it involves activities about health, fitness, and the development of motor skills. An example of this concerted action is PATHFIT 2 symbolizes Exercise-based Fitness Activities across various domains, focusing on enhancing cardiovascular endurance, muscular strength, muscular endurance, flexibility, and body composition through structured physical activities and personalized fitness programs. While existing studies have explored physical education (PE) competence, knowledge, and proficiency separately, there is limited research examining how these three components interact among first-year college students. Most studies focus on K-12 populations or PE teachers rather than assessing college beginners' transition into higher education PE.

The World Health Organization (WHO) describes physical activity as any skeletal muscle-driven movement of the body that demands energy use. The exercise involves any locomotion for fun or business, to and from various places, or as needed within one's business or home assignments, known as physical activity. A range of health gains is associated with both moderate and vigorous PA. Examples of fun ways that people of all ages and abilities can be active are walking, cycling, using wheelchairs, playing sports, playing games, and engaging in physical activity (Topothai et al., 2020; World Health Organization: WHO, 2024).

Physical Education subjects has been mandated in school curricula, according to Commission on Higher Education (CHED) Memorandum order Number 39 series of 2021; In compliance with the outcomes-based quality assurance system described in CMO 46 s. and the pertinent sections of Republic Act (RA) No. 7722, also referred to as the "Higher Education Act of 1994," In 2012, the Commission adopted and put into effect the following policies, standards, and guidelines (PSGs) by means of en banc Resolution No. 095-2019, dated February 26, 2019. These were put in place to improve and expedite physical education in the nation while guaranteeing that it is competitive internationally. This support action meets the requirements outlined in Article XIV, Section 19 of the Philippine Constitution, which mandates state backing of sports leagues along with amateur tournaments and physical education programs, including international competition preparation. The initiative aims to develop excellence alongside self-control and teamwork in order to establish a healthy and engaged population. The frequent hosting of sporting events becomes mandatory for institutions throughout the nation to organize with athletic clubs and additional relevant groups.

This research studies first-year college students' Physical Education competencies through evaluations conducted using Physical Education Skills and Knowledge assessments while examining their overall subject performance. This study analyzes how students merge their PE skills with theoretical knowledge and fitness components through questionnaires designed as assessment methods. Students exhibit competence in Physical Education Skills and Knowledge Assessment through skill execution and knowledge comprehension while studying at the College of Education, as the research classifies these factors for analytical purposes. Student performance in Physical Education Skills and Knowledge Assessment and their demonstrated ability within its assessed components serve as the dependent variables of the study. The study investigates these variables to reveal learning strengths and weaknesses of students so they can better enhance PE teaching and achievement results.

Specifically, it investigates two key independent variables: competence in physical education skills and Knowledge Assessment. These variables represent how well students integrate and apply motor skills, fitness practices, and theoretical knowledge gained from their PE classes.

The dependent variable in this study has proficiency in Physical Education, which refers to the overall performance of the students and ability to demonstrate physical fitness, skill execution, and conceptual understanding within the subject. Through carefully designed

assessment tools, this study explores how the integration of physical skills and theoretical knowledge relates to proficiency of students in PE.

By identifying strengths and weaknesses in these areas, the research aimed to support improved teaching strategies and enhance student outcomes in PE. It also contributes to the development of more comprehensive and effective assessment methods that capture the multifaceted nature of physical education learning.

Research Questions

Physical education in first-year college students entails composite elements of competence in physical education skills, Knowledge Assessment and overall Proficiency in Physical Education but little is known about the relationship between them. Moreover, it has not been determined whether much variation can be recognized and the inter-correlation between these variables. Specifically, this study sought answers to the following questions:

1. What is the level of competence in physical education skills of first-year college students?
2. What is the level of knowledge assessment of first-year college students?
3. What is the level of proficiency in physical education of first-year college students?
4. Is there a significant difference in proficiency in physical education among the levels of competence in physical education skills of first-year college students?
5. Is there a significant difference in proficiency in physical education among the levels of knowledge assessment of first-year college students?
6. Are there significant relationships among competence in physical education skills, knowledge assessment, and proficiency in physical education of first-year college students?

Methodology

Research Design

The research evaluated Physical Education competencies among first-year college students enrolled at the College of Education by implementing the Physical Education Skills, and Knowledge Assessment.

This study evaluated performance of students using Physical Education Skills and Knowledge Assessment to recognize their strengths and weaknesses in PE abilities, fitness skills, and theoretical concept comprehension. The research findings helped strengthen educational practices for physical education to deliver complete student development regarding physical capability and academic performance. The study assessed whether students' competencies exhibited meaningful differences across their degree programs so the results could guide better curriculum planning and assessment enhancement.

The research supported continuous PE education improvement by developing a structured assessment framework. The collected study results enabled teachers to create more efficient learning methods that properly supported student needs, leading to improved physical education results.

The research employed a survey-correlational method to examine first-year college performance of students in PE. A structured survey, utilizing the Physical Education Skills and Knowledge Assessment tool, was administered to gather data on motor skills, fitness levels, and theoretical knowledge of students. This survey component provided a comprehensive evaluation of strengths and weaknesses of students. Additionally, the study analyzed the relationships between PE competency and degree programs of students within the College of Education, determining whether significant performance differences existed across courses.

This study used quantitative research methods for data collection. The standardized assessment tool evaluated how students integrated different skills, while the written test evaluated their mastery of PE concepts. Students' semestral grades measured professional physical education abilities.

The research project established a data collection process by gathering responses from randomly selected first-year PE students who were current course members. The analysis employed statistical methods for data evaluation to reveal patterns between different degree programs such as the mean, standard deviation, One-way ANOVA, and Pearson r. Findings advanced both evaluation methods in PE and improved teaching methods, thus ensuring better physical education outcomes for student learning.

Respondents

The primary participants of this study were first-year college students of different degree programs under the College of Education, namely Bachelor of Elementary Education, Bachelor of Secondary Education, and Bachelor of Technical Vocational Livelihood Education, who were taking PATHFIT 2 with the course title Exercise-based Fitness Activities.

The target population of the study was sampled using Slovin's formula with an alpha error probability of 0.05. This formula helped the researcher establish the right sample size to use when undertaking sampling to achieve the required level of accuracy. According to Slovin's formula, the researcher was able to determine the amount of sample size needed to get reliable and accurate results (Ellen,

2020).

Upon using the formula, the calculated sample size was 160 out of 266 first-year college students from the College of Education. The proportionate stratified sampling and simple random sampling methods came next. Each stratum's sample size in proportionate stratified sampling was determined by its population share (Frost, 2023). The most fundamental and common sampling technique utilized in scientific and quantitative social science research was simple random sampling, which came next. Every member of the population had an equal chance of being selected for the study, which was the primary advantage of the simple random sample. Accordingly, it ensured that the sample represented the population and was chosen impartially (Crossman, 2020).

Instrument

In order for this research to draw its findings, the researcher-made questionnaire had three parts. The first part was the Personal Data Sheet that gathered basic information of the student. The second part was the Knowledge Assessment. And lastly, the third part was the Skills Integration Rubric. These parts of the questionnaire are discussed below:

Personal Data Sheet. The following demographic profile was needed in the study: Name (optional); sex – male and female; College Program – BSED, BEED, and BTVTED. Additionally, it contained the average grade of the students for their proficiency in Physical Education and followed the West Visayas State University grading system.

Knowledge Assessment. The Knowledge Assessment in the framework aimed to identify the level of comprehension within the cognitive domain of Physical Education college students about knowledge of fitness, motor skills, and health. This was in the form of multiple choice, true/false, and situational assessments to ensure richness of the evaluation of the students with 50 items. This test was one of the tools for data collection instruments for the study employed to enhance and make the assessment complete and valid. Scoring was straightforward, with one point awarded for each correct answer and no points for incorrect responses.

Skills Integration Rubric. This rubric evaluated students' ability to design, demonstrate, and present a fitness program based on four key criteria: Program Design & Structure, Demonstration of Exercise Plan, Creativity & Practicality, and Overall Presentation & Explanation. Each criterion was scored across four performance levels: Excellent (100), Proficient (75), Basic (50), and Needs Improvement (25).

A panel of Physical Education experts evaluated the Knowledge Assessment to confirm its validity based on face validity standards, ensuring that the items properly assessed fitness knowledge and both motor skills and health elements. The assessment experts evaluated each question to confirm its clearness and contextual value while validating the test's suitability for the college-level Physical Education cognitive domain. The test received comments from test-takers who helped researchers improve its accuracy for student comprehension assessment.

The internal consistency of the KAT was examined using Cronbach's alpha to evaluate the reliability of its test items. A Cronbach's alpha reliability analysis on Physical Education students delivered a 0.80 score from the KAT testing. The study benefits from dependable test results because this measurement tool accurately approaches knowledge recognition through multiple-choice as well as true/false and situational assessment questions. The strong reliability and validity of the knowledge assessment support its effectiveness as a tool for comprehensive and valid assessment in the Physical Education Skills and Knowledge Assessment framework.

Procedure

A letter of request for permission to use first-year College of Education students of West Visayas State University – Lambunao Campus as participants for both the pilot test and the main study was written, and upon approval, participants were selected using a simple random sampling technique. The consent letter was given to the students, outlining their willingness to participate in the research study and retaining a minimum of personal details pertinent to the study's objectives. Another, a formal invitation was sent to selected expert validators/raters to review the Skills Integration rubric, given their field credentials. Each participant was told to educate him or herself about the reading materials forwarded to all the participants to make the data collection process as smooth, transparent, and ethical as possible. Additionally, the researcher also gathered their proficiency in physical education represented by the final grade in the subject.

Data privacy and confidentiality rights were respected throughout the study. Data collected from participants were used strictly for academic analysis and research, and all the participants were ensured anonymity. The names of the participants were omitted from the final analysis of the findings, and the data collected was only available to the researcher and the faculty involved in the project. Participation was voluntary in all the studies, and the participants were informed before engaging in any research activity. All data collected for this study had been receptive to the existing law for the Data Privacy and Freedom Act of 2012 (Republic Act No. 10173), which was complied with throughout the research process.

All the tests and assessment rubrics filled out by the participants were collected, checked for omissions, and archived by the researcher excellently. The data were entered and analyzed using the Statistical Package for the Social Sciences (SPSS) version 27, which was used to conduct the relevant statistical tests. Besides, mean, standard deviation, Analysis of variance (ANOVA), and Pearson correlation test were used to analyze the relationship between the independent variables (PE skills competence and KAT) and dependent variable (PE skill proficiency). These analyses had been conducted at a 0.05 significance level to prevent generalization of the results without

accurate information.

Data Analysis

Several statistical techniques were used in the data analysis in order to make inferences and offer suggestions regarding the issue at hand. The statistical tests were as follows:

Mean and Standard Deviation. These were used to describe the basic characteristics of the data obtained from the questionnaire.

One-way ANOVA. This was applied to compare the means of college courses—BSED, BEED, and BTVTED.

Pearson Product Moment Correlation. This was applied to determine the relationship between students' competence in Physical Education skills and knowledge assessment scores and their overall proficiency in Physical Education.

All statistical computations were processed using the Statistical Package for the Social Sciences (SPSS) version 27, and the level of significance was set at 0.05.

Results and Discussion

This section contains information on analyzing data and interpreting the research findings. It presents the relationship of competence of physical education skills, knowledge assessment and proficiency in physical education.

This section is divided into two parts: (1) Descriptive Data Analysis and (2) Inferential Data Analysis.

Part One, Descriptive Data Analysis, presents descriptive statistics of the participants' skills integration, knowledge assessment and proficiency in physical education. This section provides a foundational understanding of the sample's characteristics and behavioral patterns.

Part Two, Inferential Data Analysis, presents the results of hypothesis testing to determine significant differences and relationships between: competence in physical education skills, knowledge assessment and proficiency in physical education.

Descriptive Analysis

Level of Competence in Physical Education Skills of First-Year College Students

This section provides an overview of their average competency levels and highlights areas needing improvement.

Table 1. *Mean and Standard Deviation of Competence in Physical Education Skills*

Variable	*Mean*	*Description*	*SD*
Competence in Physical Education Skills	59.36	Developing	6.08

Legend: *75.00–100.00, Proficient; 55.00–74.99, Developing; 40.00–54.99, Needs Improvement; 25.00–39.99, Inadequate.*

The mean and standard deviation of competence in physical education skills are displayed in Table 1. Participants, on average, reported developing-level of competence in physical education skills (M = 59.36, SD = 6.08), indicating emerging competency with room for refinement. This means that college students show emerging competency needing refinement. Their programs are functional but have noticeable gaps, some exercise errors exist, and explanations are adequate but could be clearer or more detailed.

This implies a need for targeted interventions, such as enhanced hands-on practice, clearer instructional materials, and structured feedback mechanisms. Additionally, curriculum designers and educators should consider whether assessment methods adequately measure competency or if adjustments are needed to better support student development. Ultimately, these results highlight an opportunity to refine teaching strategies and program structures to ensure students achieve a higher level of proficiency before entering professional or advanced academic settings.

The results can be anchored to Blegur et al. (2023) and Anira et al. (2021), who found that integrating cognitive and life skills in physical education enhances student learning and social development. Additionally, Pullen et al. (2020) and Condello et al. (2021) support the idea that structured physical education programs improve motor and decision-making skills, which aligns with the current findings of developing-level competency.

This suggests that while students demonstrate foundational proficiency, there is still room for improvement in exercise execution and clarity of instruction. The findings also resonate with Talaghir et al. (2023) and Michael et al. (2021), who emphasize the importance of cognitive and affective domains in physical literacy, reinforcing the need for further refinement in program implementation.

Level of Knowledge Assessment of First-Year College Students

This section provides an overview of the overall performance of students in competence in physical education skills, highlighting their developing competency and areas for improvement.

The mean and standard deviation of knowledge assessment are displayed in Table 2. Participants, on average, reported good knowledge assessment scores (M = 42.84, SD = 5.30), reflecting strong foundational understanding of fitness, motor skills, and health with minor

gaps in advanced topics. This means that the college students have strong knowledge on fitness, motor skills, and health. They show considerable understanding with only minor gaps in more complex topics.

Table 2. *Mean and Standard Deviation of Knowledge Assessment*

Variable	*Mean*	*Description*	*SD*
Knowledge Assessment	42.84	Good	5.30

Legend: *0.00–19.00, Poor; 19.01–29.00, Below Average; 29.01–39.00, Average; 39.01–44.00, Good; 44.01–50.00, Excellent.*

This implies that educational programs could further enhance their curriculum by incorporating advanced modules or targeted review sessions to bridge these gaps. Strengthening instruction in nuanced topics would ensure students achieve comprehensive expertise, better preparing them for professional applications or higher-level studies in the field.

The results on the level of knowledge assessment can be anchored to Baumgartner et al. (2023) and Montoya et al. (2022), whose studies emphasize the importance of validated knowledge assessments in physical education. The findings reflect a strong foundational understanding of fitness and motor skills, which aligns with Arban et al. (2023), who found that effective teaching enhances students' cognitive and memory retention in PE. However, minor gaps in advanced topics resonate with Sulistiantoro and Setyawan (2021), who highlighted the need for more diverse assessment methods to deepen comprehension. Additionally, Moura et al. (2020) and Evangelou et al. (2022) support the idea that while students generally perform well in PE assessments, there is room for improvement in applying higher-order thinking skills, reinforcing the current findings of strong but not yet mastery-level knowledge.

Level of Proficiency in Physical Education of First-Year College Students

This section provides an overview of the proficiency of students in physical education, showcasing their advanced mastery and consistent performance.

Table 3. *Mean and Standard Deviation of Proficiency in Physical Education*

Variable	*Mean*	*Description*	*SD*
Proficiency in Physical Education	88.40	Very Good	1.69

Legend: *90.00–100.00, Excellent; 85.00–89.99, Very Good; 80.00–84.99, Satisfactory; 75.00–79.99, Passing; below 75.00, Failed.*

The mean and standard deviation of proficiency in physical education are displayed in Table 3. Participants demonstrated very good (M = 88.40, SD = 1.69), suggesting that first-year college students exhibit advanced mastery of physical education skills, with consistent performance and minimal gaps in ability.

This implies that their prior training or foundational preparation in physical education has been highly effective. Moving forward, programs could leverage this strong baseline to introduce specialized or high-level skill development, ensuring continued growth and challenge for students who have already achieved advanced competency.

The results on proficiency in Physical Education can be anchored to Hermosa et al. (2024) and Dimarucot et al. (2024), whose studies on PATHFit implementation demonstrate how structured fitness programs enhance physical competencies of students. The outstanding proficiency levels (M = 88.40, SD = 1.69) align with Malones (2024), who found that PATHFit significantly improved students' kinesthetic intelligence and leadership skills. Furthermore, Gorospe & Ferrer (2022) support these findings, showing that PE majors exhibit higher physical self-concept and motor skills, mirroring the advanced mastery observed in this study. The minimal performance gaps also resonate with Ompoc & Aguinaldo (2025), whose research on AI-enhanced PE suggests that modern approaches can lead to highly consistent skill development. These collective findings validate that first-year students have achieved exceptional proficiency, likely due to effective program design and instruction.

Inferential Data Analyses

Difference in Proficiency in Physical Education Among the Levels of Competence in Physical Education Skills of First-Year College Students

This section provides an overview of the statistically significant difference in physical education proficiency across varying levels of competence in physical education skills, as determined by a one-way ANOVA.

Table 4. *Analysis of Variance of Proficiency in Physical Education Among the Levels of Competence in Physical Education Skills*

Source of Variation	*SS*	*df*	*MS*	*F*	*Sig.*
Between Groups	36.42	1	36.4	13.504*	0.000
Within Groups	601.4	223	2.7		
Total	637.8	224			

** $\rho < 0.05$ significant @ 5% alpha level*
ns $\rho > 0.05$ not significant @ 5% alpha level

Table 4 shows that there was a statistically significant difference in proficiency in physical education among the levels of competence of physical education skills, as determined by a one-way ANOVA ($F(1, 223) = 13.50$, $\rho < .001$).

This implies that targeted interventions to improve competence of physical education skills —such as focused practice on technique, error correction, and cohesive skill application—could further enhance overall physical education outcomes. For educators, this underscores the importance of not just teaching discrete skills but ensuring students can effectively combine and apply them. Moving forward, curriculum designers might consider incorporating more integrative drills and assessments to bridge any gaps between skill acquisition and holistic performance.

The significant difference in proficiency levels based on competence of physical education skills can be substantiated by several key studies. Blegur et al. (2023) and Condello et al. (2021) provide empirical support, demonstrating that integrated skill development in physical education directly enhances overall proficiency. The ANOVA results ($F(1, 223) = 13.50$, $p < .001$) align with Pullen et al. (2020), whose findings revealed that structured, multi-dimensional PE programs yield significant variations in student performance outcomes. Additionally, Talaghir et al. (2023) emphasize that comprehensive physical literacy approaches—encompassing cognitive, affective, and psychomotor domains—create measurable disparities in proficiency, which corresponds with the current study's findings. This suggests that higher levels of integrated skill development in PE curricula lead to substantially improved student performance, reinforcing the need for holistic program designs. Therefore, the hypothesis that states "There is no significant difference in proficiency in physical education among the levels of competence of physical education skills of first-year college students." was not accepted.

Difference in Proficiency in Physical Education Among the Levels of Knowledge Assessment Test of First-Year College Students

This section provides an overview of the lack of a statistically significant difference in physical education proficiency across different levels of Knowledge Assessment, as determined by a one-way ANOVA.

Table 5. *Analysis of Variance of Proficiency in Physical Education Among the Levels of Knowledge Assessment*

Source of Variation	*SS*	*df*	*MS*	*F*	*Sig.*
Between Groups	3.054	2	1.53	0.534ns	0.587
Within Groups	634.7	222	2.86		
Total	637.8	224			

** ρ < 0.05 significant @ 5% alpha level*
ns ρ > 0.05 not significant @ 5% alpha level

Table 5 shows that there was no statistically significant difference in proficiency in physical education among the levels of knowledge assessment, as determined by a one-way ANOVA ($F(2, 222) = 0.53$, $\rho = .587$).

This implies that theoretical understanding alone may not translate to practical performance in PE. Educators should consider balancing knowledge-based instruction with hands-on application to ensure comprehensive skill development. The findings highlight the need for teaching strategies that bridge the gap between cognitive knowledge and physical competency.

The lack of significant difference in proficiency across knowledge assessment levels ($F (2, 222) = 0.53$, $p = .587$) aligns with Moura et al. (2020), who found that traditional knowledge assessments in PE often fail to capture actual physical competency. This finding is further supported by Baumgartner et al. (2023), whose research suggests that theoretical knowledge and practical performance may develop independently in physical education contexts. The results also resonate with Backman & Barker (2020), who argue that PE proficiency depends more on psychomotor and affective domains than cognitive knowledge alone. This suggests that while students may vary in their understanding of fitness concepts (as shown in Table 3), these differences do not necessarily translate to variations in their physical performance capabilities. The findings highlight the multidimensional nature of PE proficiency, where factors beyond knowledge – such as motivation, practice opportunities, and motor skill development – play more decisive roles. Therefore, the hypothesis that states "There is no significant difference in proficiency in physical education among the levels of knowledge assessment of first-year college students." was accepted.

Relationships Among Competence in Physical Education Skills, Knowledge Assessment, and Proficiency in Physical Education of First-Year College Students

This section provides an overview of the Pearson correlation analyses, highlighting the relationships between competence of physical education skills, knowledge assessment, and proficiency in physical education.

Table 6. *Pearson r Among Competence of Physical Education Skills, Knowledge Assessment and Proficiency in Physical Education*

Variables	*r*	*Sig*
Competence of Physical Education Skills and Knowledge Assessment	0.047ns	0.487
Competence of Physical Education Skills and Proficiency in Physical Education	0.225*	0.001
Knowledge Assessment and Proficiency in Physical Education	(-)0.051ns	0.451

** ρ < 0.05 significant @ 5% alpha level*
ns ρ > 0.05 not significant @ 5% alpha level

A small but statistically significant positive correlation was found between competence of physical education skills and proficiency in physical education ($r = .225$, $\rho = .001$). This suggests that as students' ability to design, demonstrate, and present fitness programs

improved, so did their overall proficiency in physical education. A positive correlation means that as one variable increases, the other tends to increase as well. Although the strength of the relationship is weak, the result is significant, indicating a meaningful connection. Therefore, the hypothesis stating that there is no significant relationship between these two variables was not accepted.

No significant relationship was observed between competence of physical education skills and knowledge assessment ($r = .047$, $\rho = .487$). This means students' performance in practical skills did not directly relate to their scores in the theoretical knowledge test. Similarly, no significant correlation was found between knowledge assessment and proficiency in physical education ($r = -.051$, $\rho = .451$). This indicates that theoretical understanding of physical education concepts did not predict students' overall physical education proficiency.

The mixed correlational findings can be contextualized within existing literature on physical education outcomes. The small but significant positive relationship between competence of physical education skills and proficiency in physical education ($r = .225$, $p = .001$) aligns with Condello et al. (2021), whose multisport intervention study demonstrated that integrated skill development enhances practical performance. This finding is further supported by Blegur et al. (2023), who found that incorporating analytical thinking into PE improves both cognitive engagement and physical execution.

The non-significant relationship between competence of physical education skills and knowledge assessment ($r = .047$, $p = .487$) mirrors Baumgartner et al.'s (2023) distinction between procedural and declarative knowledge in PE, suggesting these domains may develop independently. Similarly, the lack of correlation between knowledge assessment and proficiency ($r = -.051$, $p = .451$) reinforces Backman & Barker's (2020) critique of overemphasizing cognitive measures in physical education evaluation.

The hypothesis that states “There is no significant relationship between competence in physical education skills and knowledge assessment” was accepted, as the correlation was not statistically significant.

The hypothesis that states “There is no significant relationship between competence in physical education skills and proficiency in physical education” was rejected, as a weak but statistically significant positive correlation was found.

The hypothesis that states “There is no significant relationship between knowledge assessment and proficiency in physical education” was accepted, as the correlation was not statistically significant.

Conclusions

Based on the findings of the study, several conclusions were drawn regarding the competence of first-year college students in physical education. Firstly, their competence in PE skills is at an emerging level, allowing them to demonstrate moderate integration of these skills. This indicates the potential for development through strategic instructional methods such as demonstration, practice, and consistent feedback. However, if these skills remain underdeveloped, students may struggle with applying advanced physical education knowledge in real-life settings, particularly in future teaching roles or fitness-related professions. While students possess strong foundational knowledge in fitness, motor skills, and health, bridging the gap between theory and practice is essential. Without experiential learning opportunities, even those with solid mental health literacy may fail to make healthy physical choices or translate theoretical understanding into physical competence. Thus, effective instruction must connect academic content with practical application to avoid knowledge-practice disconnection, especially for aspiring educators.

Moreover, the very good proficiency levels observed in students suggest strong capabilities in applying both skills and knowledge to physical activities, positioning them as potential peer role models and promoting long-term engagement in physical fitness. However, maintaining high proficiency requires continuous skill development to prevent stagnation and overconfidence. Despite varying levels of skill competence, proficiency remains consistent, which suggests that the current curriculum provides adequate challenges across skill levels. Still, without tailored instruction, students—particularly advanced ones—might not maximize their potential. The lack of significant correlation between knowledge assessment and both competence and proficiency imply that theoretical understanding alone does not ensure skill acquisition. Therefore, a balance between theory and practice is crucial. Programs that emphasize theory over physical application may produce graduates with theoretical expertise but lacking practical fitness skills, highlighting the importance of curriculum revisions that promote hands-on learning alongside conceptual instruction.

To enhance students' competence in physical education, colleges may integrate structured skill-building activities such as guided practice sessions, peer coaching, and targeted instructor feedback. Regular performance assessments and personalized training programs can support the refinement of individual skills and help identify and address gaps. Physical education programs should also be designed with progressive training modules that allow students to gradually build their skills with proper technique before advancing to more complex exercises. Additionally, offering regular skill-based competitions, fitness challenges, and specialized training sessions can maintain and enhance student proficiency. Encouraging participation in extracurricular physical activities and sports clubs will further reinforce these skills outside the classroom setting.

Educators may enrich theoretical instruction with interactive strategies such as case studies, real-world applications, and hands-on workshops. Providing supplementary materials on advanced topics and integrating technology-based assessments can deepen students’ understanding. Since theoretical knowledge alone does not significantly impact proficiency, programs should balance classroom learning with practical, hands-on experiences. Implementing a "learn-by-doing" approach—such as task-based or scenario-based

learning—can help students apply what they know in physical contexts. Colleges may prioritize experiential learning through skill drills, group workouts, and real-life physical education scenarios. Combining knowledge with physical activity, such as explaining concepts during exercises, can effectively bridge the gap between theory and practice.

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