Jurnal SPORTIF: Jurnal Penelitian Pembelajaran
Vol. 12 No. 1, April 2026, pp. 176 - 193
https://doi.org/10.29407/js_unpgri.v12i1.28649

Self-confidence, motivation, and concentration as predictors of perceived futsal knowledge in physical education students

Imanuddin Siregar[1abcd], Alwi Fahruzy Nasution[1def].

[1]Department of Physical Education, Health, and Recreation, Faculty of Teacher Education and Educational Sciences, Universitas Pembinaan Masyarakat Indonesia Medan, Medan, North Sumatra, Indonesia.

Received: 9 February 2026; Revised: 30 March 2026; Accepted: 26 April 2026; Available online: 30 April 2026.

Abstract

Conceptual understanding in futsal learning remains a challenge for physical education students, who often prioritize practical performance over theoretical engagement. This study aims to examine the influence of self-confidence, motivation, and concentration on undergraduate students' perceived knowledge of futsal in the Physical Education, Health, and Recreation (PJKR) program at Universitas Pembinaan Masyarakat Indonesia. A quantitative correlational design with a cross-sectional approach was employed. Data were collected from 115 students using Likert-scale questionnaires measuring self-confidence, motivation, concentration, and perceived futsal knowledge. The data were analyzed using multiple regression after the assumptions for regression were met. The results showed that self-confidence ($t = 5.606$, $p < .001$), motivation ($t = 2.333$, $p = .021$), and concentration ($t = 2.187$, $p = .031$) each had a positive and significant effect on perceived futsal knowledge. Collectively, these variables significantly predicted perceived futsal knowledge ($F = 16.552$, $p < .001$), accounting for 30.9% of the variance, indicating a moderate explanatory power. These findings suggest that psychological factors contribute meaningfully to students' perceived understanding in futsal learning, although a substantial proportion of variance remains influenced by other factors. This study extends sport education research by highlighting the role of psychological variables in shaping perceived conceptual understanding. It expands the field's scope by examining psychological predictors of perceived conceptual knowledge in futsal learning, emphasizing the importance of addressing psychological factors and integrating psychological support into instructional design in physical education to enhance students' conceptual engagement.

Keywords: Self-confidence, motivation, concentration, perceived knowledge, futsal learning.

How to Cite: Siregar, I., & Nasution, A. F. (2026). Self-confidence, motivation, and concentration as predictors of perceived futsal knowledge in physical education students. *Jurnal SPORTIF : Jurnal Penelitian Pembelajaran*, *12*(1), 176–193. https://doi.org/10.29407/js_unpgri.v12i1.28649

Authors contribution: a – Preparing concepts; b – Formulating methods; c – Conducting research; d – Processing results; e – Interpretation and conclusions; f - Editing the final version.

Correspondence author: Imanuddin Siregar, Universitas Pembinaan Masyarakat Indonesia Medan, Medan, North Sumatra, Indonesia.
Email: imanuddin.siregar@gmail.com

INTRODUCTION

Futsal learning in higher education requires not only the mastery of technical skills but also a comprehensive understanding of conceptual elements such as game rules, tactical principles, and decision-making processes. However, in practice, an imbalance often occurs between these aspects, where students tend to emphasize practical performance during gameplay while conceptual understanding receives less attention. This tendency has been identified in sport pedagogy literature, which suggests that physical education learning frequently prioritizes motor execution over deeper cognitive engagement, particularly in game-based learning contexts (Carpentier & Mageau, 2013; Garcia-Jimenez, 2023). As a result, students may demonstrate adequate technical performance but struggle to explain the rationale for their actions, leading to fragmented learning experiences (Garcia-Jimenez, 2023). Such fragmentation may limit the development of tactical awareness, reflective thinking, and the ability to transfer knowledge across different game situations, which are essential competencies in sport education. (Domínguez-González et al., 2024; Widhi Harita et al., 2022).

In the context of higher education, particularly in Physical Education, Health, and Recreation (PJKR) programs, this issue becomes more critical as students are not only prepared as performers but also as future educators. They are expected to possess both practical skills and a solid conceptual understanding to effectively teach and facilitate learning (Kusuma et al., 2024). Preliminary observations in the PJKR program at Universitas Pembinaan Masyarakat Indonesia indicate that although students demonstrate high enthusiasm during practical sessions, their conceptual understanding of rules, tactics, and structured gameplay may still be limited. These observations suggest a potential gap between practical performance and conceptual understanding, indicating the need to examine whether students' psychological characteristics are associated

with their perceived knowledge of futsal; however, this condition should be interpreted as contextual evidence rather than formal empirical findings.

Importantly, this gap is not solely influenced by instructional design but may also be associated with students' psychological readiness to receive, process, and retain information during learning activities. From an educational psychology perspective, knowledge acquisition is closely related to students' psychological readiness, as psychological factors influence how individuals process information, engage in learning activities, and retain knowledge over time (Rasberry et al., 2011). These factors are particularly relevant in sport-based learning environments, where cognitive and physical demands occur simultaneously (James et al., 2023; Weinberg & Gould, 2019). In sport pedagogy, learning is not limited to motor execution but also involves students' ability to understand tactical problems, interpret game situations, and connect practical experiences with conceptual knowledge. Therefore, understanding the role of psychological variables becomes essential in explaining variations in students' perceived knowledge of futsal, particularly in how they interpret and internalize theoretical knowledge within practical contexts.

Among various psychological constructs, self-confidence, motivation, and concentration are considered highly relevant in supporting learning processes. Self-confidence has been associated with students' willingness to engage in learning, express ideas, and persist in challenging tasks (Afrizal et al., 2025; Cruz, 2021; Darmayasa et al., 2025; Kamberi, 2025). In futsal learning contexts, self-confidence may support students' cognitive engagement by encouraging them to ask questions, attempt to understand rules and strategies, and participate in reflective learning processes, while also enabling them to approach learning tasks with greater assurance and persistence. Motivation has also been widely recognized as a key determinant of learning success, influencing students' willingness to engage, persist, and invest effort in learning tasks (Anderson et al., 2018; Gardner et al., 2022; Syahruddin, 2022). In the context of futsal learning, motivated students are more likely to actively

seek understanding of game rules, tactical principles, and strategic decision-making, rather than merely focusing on physical performance (BİRİCİK et al., 2025). In addition to self-confidence and motivation, concentration plays a crucial role in supporting cognitive processes such as attention control, information processing, and memory retention. In sports learning contexts, concentration becomes particularly important because students are required to integrate physical execution with cognitive understanding. High levels of concentration enable students to maintain focus, minimize distractions, and process information more effectively during learning activities (Ayu et al., 2023; Khataybeh et al., 2024; Waluyo, 2023).

Taken together, these variables may function in an integrated manner in shaping students' perceived knowledge of futsal. Self-confidence may foster cognitive courage to engage in learning, motivation may support the intensity and persistence of learning efforts, and concentration may facilitate effective information processing. This integrated role is particularly important in futsal learning, which requires the simultaneous coordination of cognitive understanding and physical execution.

Previous studies have extensively examined psychological factors in relation to performance outcomes, technical skills, and physical conditioning in sports contexts (Cruz, 2021; Kamberi, 2025; Mercader-Rubio et al., 2023; Rasberry et al., 2011). However, limited attention has been given to how these factors influence students' conceptual understanding, particularly within futsal learning in higher education. Research that specifically examines students' conceptual knowledge, particularly in relation to psychological variables, remains limited, and the role of psychological factors in supporting students' knowledge development in futsal courses has not been adequately addressed. This gap is important because effective learning in physical education requires not only skill acquisition but also the integration of conceptual knowledge and practical performance.

Therefore, this study aims to examine the influence of self-confidence, motivation, and concentration on students' perceived knowledge of futsal. The novelty of this study lies in its focus on perceived conceptual knowledge as the primary outcome variable, rather than performance or technical skills, and in examining the predictive role of multiple psychological variables simultaneously within the context of futsal learning in higher education. By addressing this gap, the study is expected to contribute to a more comprehensive understanding of learning processes in physical education, particularly in bridging the gap between practical performance and conceptual understanding. Furthermore, the findings are expected to provide practical implications for designing more balanced and effective instructional strategies in futsal learning that integrate both cognitive and physical dimensions, including game-based learning, tactical discussion, and reflective learning activities.

METHOD

This study employed a quantitative correlational design to examine the influence of self-confidence, motivation, and concentration on students' perceived knowledge of futsal. A correlational approach was considered appropriate because the study aimed to investigate the relationships and predictive contributions among variables without manipulating them (Creswell, 2018). Specifically, this study utilized a cross-sectional design in which data were collected at a single point in time to explain the extent to which psychological variables predict students' perceived knowledge of futsal. The conceptual model of this study assumes a directional relationship in which self-confidence, motivation, and concentration function as independent variables (predictors), while perceived knowledge of futsal serves as the dependent variable (outcome).

The participants of this study were 115 undergraduate students enrolled in the Physical Education, Health, and Recreation (PJKR) program at Universitas Pembinaan Masyarakat Indonesia. The sample was selected using a purposive sampling technique, which allows

researchers to select participants based on specific characteristics relevant to the research objectives (Etikan, 2016). The inclusion criterion required that participants had taken or were currently enrolled in a futsal course, ensuring that they possessed relevant learning experiences related to the variables examined. The sample size met the minimum requirement for multiple regression analysis, which recommends at least 10–15 participants per predictor variable (Hair et al., 2022).

Data were collected using a structured questionnaire consisting of four main variables: self-confidence, motivation, concentration, and perceived knowledge of futsal. All items were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Likert-scale data were treated as interval data in the regression analysis, as commonly accepted in social science research when scale assumptions are reasonably met (Astiena & Asdi, 2026).

Self-confidence was measured using six items reflecting students' beliefs in their ability to understand and apply futsal concepts. Motivation was assessed using five items capturing students' interest, persistence, and engagement in learning futsal. Concentration was measured using four items focusing on students' ability to maintain attention and avoid distractions during learning activities. Perceived knowledge of futsal was measured using five Likert-scale items assessing students' self-reported understanding of the game's rules, tactics, and basic concepts. The use of perceived knowledge was intended to capture students' subjective cognitive awareness; however, it is acknowledged that this approach may not fully represent objective knowledge. Therefore, future research is recommended to complement self-report measures with objective knowledge tests to enhance measurement accuracy.

Prior to data collection, the instrument underwent a content review process involving subject matter consideration to ensure clarity and relevance of items. Item validity was assessed using item-total correlation analysis, with all items exceeding the minimum threshold ($r > .361$), indicating acceptable internal consistency. Reliability was evaluated using

Cronbach's alpha, with coefficients ranging from .547 to .718. Although the instruments demonstrated acceptable item-total correlations, several reliability coefficients were below the commonly recommended threshold of .70. Therefore, these reliability values should be acknowledged as a measurement limitation. In addition, construct validity was not examined using exploratory or confirmatory factor analysis. Future studies are recommended to refine the items and employ factor analysis to strengthen the validity and internal consistency of the measurement model.

Data collection was conducted during the academic semester through direct questionnaire distribution in classroom settings. Participants were given a brief explanation of the study's purpose and asked to complete the questionnaire in approximately 15–20 minutes. Participation was voluntary, and respondents were assured of the confidentiality and anonymity of their responses. This study was conducted in accordance with institutional ethical guidelines for educational research. All participants provided informed consent, and their participation was voluntary, anonymous, and confidential. Ethical approval for this study was obtained from [0117/08/D.0012].

The collected data were analyzed using multiple linear regression to examine the partial and simultaneous predictive effects of self-confidence, motivation, and concentration on students' perceived knowledge of futsal. Multiple regression was selected because it aligns with the objective of this study, which was to assess the predictive contribution of several independent variables to a single dependent variable (Field, 2018). The conceptual model assumed that self-confidence, motivation, and concentration function as predictor variables influencing students' perceived knowledge of futsal.

Before conducting hypothesis testing, classical assumption tests were performed to ensure the appropriateness of the regression model. The normality assumption was tested using the Kolmogorov–Smirnov test, which showed that the residuals were normally distributed ($D = 0.148$, $p = .197$). Heteroscedasticity was examined through scatterplot analysis,

showing no systematic pattern, thereby indicating homoscedasticity. Multicollinearity was assessed using tolerance and Variance Inflation Factor (VIF), with all tolerance values exceeding .10 and VIF values below 10, indicating no multicollinearity among independent variables (Hussey et al., 2023).

Hypothesis testing was conducted using t-tests to evaluate the partial effects of each independent variable and an F-test to assess their simultaneous effect on the dependent variable. Additionally, the coefficient of determination (R^2) was used to determine the proportion of variance in students' perceived knowledge of futsal. Despite the robustness of the analysis, it is acknowledged that potential external variables, such as prior playing experience, gender, and learning environment, were not controlled for in this study and may have influenced the results. Therefore, future research is encouraged to include these variables to provide a more comprehensive analysis.

RESULT

This section reports the findings of the data analysis aimed at investigating the effects of self-confidence, motivation, and concentration on students' futsal knowledge. The analytical procedure consists of classical assumption testing followed by hypothesis testing through multiple linear regression.

1. Normality Test

The normality assumption was evaluated using the Kolmogorov–Smirnov test to assess whether the residuals followed a normal distribution.

Table 1. One-Sample Kolmogorov–Smirnov Test

Variable	Value
N	115
Test Statistic	0.148
Asymp. Sig. (2-tailed)	0.197

The findings indicate that the significance value is 0.197 ($p > .05$), suggesting that the residuals are normally distributed. Thus, the normality assumption required for regression analysis has been satisfied.

2. Heteroscedasticity Test

Heteroscedasticity was examined through scatterplot analysis. The results show that the data points are dispersed randomly, without forming any systematic pattern, and are distributed both above and below the zero line. This indicates the absence of heteroscedasticity, meaning that the assumption of homoscedasticity is fulfilled.

3. Multicollinearity Test

Multicollinearity was evaluated using tolerance values and the Variance Inflation Factor (VIF).

Table 2. Multicollinearity Test Results

Variable	Tolerance	VIF
Self-confidence	0.991	1.009
Motivation	0.891	1.123
Concentration	0.898	1.113

All tolerance values exceed 0.10, and the VIF values are below 10, indicating that multicollinearity is not present among the independent variables. Therefore, all variables are considered suitable for inclusion in the regression model.

4. Partial Test (t-test)

The t-test was employed to assess the individual effect of each independent variable on students' knowledge.

Table 3. Results of Partial Test (t-test)

Variable	B	SE	β	t	p
(Constant)	0.356	2.450	—	0.145	.885
Self-confidence	0.478	0.085	0.444	5.606	< .001
Motivation	0.194	0.083	0.195	2.333	.021
Concentration	0.255	0.116	0.182	2.187	.031

The partial analysis indicates that self-confidence, motivation, and concentration each have a significant positive effect on students' knowledge of futsal. Self-confidence makes the strongest contribution, with a statistically significant effect, $t(111) = 5.606$, $p < .001$, suggesting that students with higher confidence tend to demonstrate a better understanding of futsal concepts. Similarly, motivation also has a significant positive influence, $t(111) = 2.333$, $p = .021$, indicating that students with stronger motivation are more likely to engage in learning and

acquire knowledge effectively. In addition, concentration significantly contributes to students' knowledge, t(111) = 2.187, p = .031, highlighting the importance of sustained attention during the learning process. Overall, these findings confirm that each psychological factor independently supports students' conceptual understanding in futsal learning.

5. Simultaneous Test (F-test)

The F-test was applied to evaluate the combined effect of all independent variables on the dependent variable.

Table 4. ANOVA Results

Source	SS	df	MS	F	p
Regression	159.651	3	53.217	16.552	< .001
Residual	356.871	111	3.215	—	—
Total	516.522	114	—	—	—

The findings indicate that the regression model is statistically significant, F(3, 111) = 16.552, p < .001. This suggests that self-confidence, motivation, and concentration jointly exert a significant influence on students' knowledge.

6. Coefficient of Determination (R^2)

Table 5. Model Summary

R	R^2	Adjusted R^2	Std. Error
0.556	0.309	0.290	1.793

The coefficient of determination (R^2) is 0.309, indicating that self-confidence, motivation, and concentration account for 30.9% of the variance in students' futsal knowledge. The remaining 69.1% of the variance may be attributed to other variables not included in the model.

DISCUSSION

The findings of this study indicate that self-confidence, motivation, and concentration significantly predict the dependent variable, namely, students' perceived knowledge of futsal, suggesting that psychological factors may play a meaningful role in shaping students' perceived knowledge of futsal within sport-based learning in physical education. Rather than being determined solely by instructional delivery, students' perceived understanding is closely associated with their internal

psychological conditions during the learning process. This finding aligns with the broader perspective that learning in sport contexts involves an interaction between cognitive processes and psychological readiness (James et al., 2023), while also extending previous work by highlighting perceived conceptual knowledge as an outcome of interest. These findings suggest that psychological factors play complementary roles in supporting students' perceived knowledge. However, such relationships were not directly tested through interaction or mediation analysis in this study.

The strong contribution of self-confidence can be understood as its role in supporting students' willingness to engage in learning activities and to express their understanding during instructional interactions. Students with higher confidence levels may be more inclined to participate actively, articulate their ideas, and respond to instructional cues, which in turn may support their perceived understanding of futsal concepts. This interpretation is consistent with previous research showing that self-confidence is positively associated with learning engagement and performance outcomes in sport settings (Afrizal et al., 2025) and that confidence may reduce hesitation and allow greater allocation of cognitive resources to task-related processing (Chen & Sukying, 2024).

However, it is important to interpret this finding with caution. Some studies have suggested that excessive self-confidence may lead to overestimation of ability and reduced effort (Swafford, 2018). In the context of this study, the positive relationship observed may reflect a functional level of confidence that supports students' engagement and self-evaluation, rather than indicating improvements in objective knowledge alone. Given that the dependent variable in this study is based on self-reported measures, self-confidence influences not only engagement but also how students appraise their own level of understanding.

The positive effect of motivation on perceived knowledge suggests that more motivated students engage more with the learning process and may invest more effort in understanding instructional content. Motivation

may serve as a sustaining factor, encouraging persistence and deeper involvement in learning activities, particularly in futsal contexts where conceptual understanding of tactics, rules, and decision-making is required. These findings are in line with previous studies indicating that motivation is associated with learning engagement and academic outcomes (Gardner et al., 2022; Syahruddin, 2022), as with deeper levels of understanding in sport education settings (Schiff & Supriady, 2023).

Nevertheless, the interpretation of motivation should be approached carefully. While prior research distinguishes between intrinsic and extrinsic motivation, the present study does not explicitly measure these dimensions. Therefore, it cannot be concluded that students' motivation is predominantly intrinsic. Instead, the findings suggest that higher overall motivation, regardless of its source, is associated with higher perceived understanding of futsal concepts. Future studies may further explore the quality of motivation to understand its role in learning outcomes better.

Concentration also emerged as a significant predictor of perceived knowledge, highlighting its role in supporting students' ability to process instructional information during learning activities. In futsal learning environments, students are required to simultaneously attend to explanations, observe demonstrations, and engage in physical execution. Because futsal requires rapid decision-making, tactical understanding, and the integration of theoretical knowledge with practical actions, students' psychological readiness becomes particularly relevant in supporting their perceived conceptual understanding. Under such conditions, the ability to maintain focus may facilitate the processing and retention of information, as well as the perceived integration of theoretical explanations with practical experience. This finding is supported by previous research showing that concentration is associated with cognitive performance and learning outcomes (Ayu et al., 2023; Khataybeh et al., 2024).

At the same time, the relatively smaller contribution of concentration compared to self-confidence should be interpreted cautiously. Although it may reflect differences in the relative strength of predictors, the present

study does not directly examine contextual factors such as fatigue, environmental distractions, or task complexity. Therefore, the lower coefficient should not be overinterpreted as evidence of lesser importance, but rather as an indication that concentration contributes alongside other psychological factors within the model.

Taken together, the findings suggest that self-confidence, motivation, and concentration play complementary roles in shaping students' perceived knowledge. While the present study does not test interaction or mediation effects, the simultaneous significance of these variables indicates that learning in physical education may involve multiple interrelated psychological dimensions. These results are consistent with prior research emphasizing the role of psychological readiness in sport learning contexts (Kamberi, 2025; Mercader-Rubio et al., 2023) and suggest that students' learning experiences cannot be fully understood by examining single variables in isolation.

The coefficient of determination ($R^2 = 0.309$) indicates that the model explains a moderate proportion of variance in perceived knowledge. This suggests that while psychological factors contribute meaningfully to students' perceived understanding, a substantial proportion of variance remains unexplained. This finding highlights the likelihood that additional factors, such as instructional methods, prior knowledge, the learning environment, and teaching quality, also play important roles in shaping learning outcomes (O'Connor, 2019). Therefore, the present model should be understood as providing a partial, rather than comprehensive, explanation of students' perceived knowledge in futsal learning.

Several limitations of this study should be acknowledged. First, the use of a cross-sectional design limits the ability to draw causal conclusions about the relationships among variables. Second, the measurement of knowledge is based on self-reported perceptions, which may not fully reflect students' objective understanding. Third, the study does not include other potentially relevant variables, such as instructional strategies or prior learning experiences, which may influence the observed relationships.

These limitations suggest that the findings should be interpreted with caution and that further research is needed to develop a more comprehensive model of learning in physical education.

From a practical perspective, the findings suggest that educators in physical education should consider psychological factors as part of the learning process. Instructors may support students' learning by applying game-based learning, facilitating tactical discussions, providing structured feedback, using guided reflection, and minimizing distractions during instructional activities to help students connect practical experience with conceptual understanding. Additionally, learning activities that combine explanation, demonstration, and guided practice may help students engage more actively and sustain attention throughout the learning process.

Overall, this study contributes to the literature by extending the focus of sports psychology research from performance and skill outcomes to the domain of perceived conceptual knowledge in futsal learning, particularly within higher education contexts, and by highlighting the role of psychological variables in shaping students' perceived knowledge within futsal learning contexts. These findings emphasize that futsal learning in higher education should be understood not only as technical skill development but also as a cognitive-psychological process that shapes students' perceived knowledge and learning engagement in physical education.

CONCLUSION

This study shows that self-confidence, motivation, and concentration significantly contribute to students' perceived knowledge of futsal, indicating that learning outcomes in sport-based education are influenced not only by instructional factors but also by students' psychological conditions. This is particularly important in futsal learning contexts, where students must integrate tactical understanding, decision-making, and practical execution, making psychological readiness a key component of effective learning. Among these variables, self-confidence makes the

strongest contribution. At the same time, the model demonstrates moderate explanatory power, suggesting that other factors, such as instructional strategies, prior knowledge, and the learning environment, also play a role. From a practical perspective, futsal learning should not only focus on technical skills but also support students' psychological readiness. Instructors are encouraged to implement active learning strategies such as game-based learning, tactical discussions, structured feedback, and guided reflection to help students connect practical performance with conceptual understanding while maintaining students' attention during learning activities.

Overall, this study contributes to the field of physical education and sport pedagogy by emphasizing that futsal learning in higher education should be understood as a cognitive-psychological process that shapes students' perceived knowledge and engagement, and by extending the role of psychological factors beyond performance outcomes into the domain of perceived knowledge.

REFERENCES

Afrizal, A., Alfiansyah, A., Karo, P., & Sari, L. P. (2025). The Relationship Between Physical Activity in Physical Education and Student Academic Achievement. *ACPES Journal of Physical Education, Sport, and Health*, *5*(1). https://doi.org/10.15294/ajpesh.v5i1.31166

Anderson, J. C., Woods-Wells, T. M., Amal, T. M., & Bass, R. T. (2018). Examining the Relationships Among Motivational Factors and the Academic Achievement of Students Enrolled in a Comprehensive Agricultural Education Program. *Journal of Career and Technical Education*, *33*(1). https://doi.org/10.21061/jcte.v33i1.a2

Astiena, A. K., & Asdi, Y. (2026). Beyond the standard : Rethinking Likert scale use in measuring patient satisfaction at public health center in Indonesia. *Journal of Public Health Research*, *15*(2), 1–12. https://doi.org/10.1177/22799036261441329

Ayu, A., Trisna, N., Dewi, N., Hendra, M., Nugraha, S., Luh, N., Gita, P., & Saraswati, K. (2023). The effectiveness of sensorimotor games in improving concentration and physical fitness during the COVID-19 pandemic. *Jurnal Penelitian Pembelajaran*, *9*(1), 14–25. https://doi.org/10.29407/js_unpgri.v9i1.18956

BİRİCİK, Y. S., SİVRİKAYA, M. H., & ALAEDDINOGLU, V. (2025). Motivation in University Students Participating in Regular Physical

Activity: Relationship with Self-Compassion and Psychological Resilience. *Journal of Education and Recreation Patterns*, *6*(1), 101–112. https://doi.org/10.53016/jerp.v6i1.241

Carpentier, J., & Mageau, G. A. (2013). When change-oriented feedback enhances motivation, well-being, and performance: A look at autonomy-supportive feedback in sport. *Psychology of Sport and Exercise*, *14*(3), 423–435. https://doi.org/10.1016/j.psychsport.2013.01.003

Chen, Z., & Sukying, A. (2024). Relationship between Intrinsic Motivation, Self-Efficacy, Self-Regulated Learning, and English Achievement among Chinese High School Students. *Journal of English Language and Linguistics*, *5*(3), 261–276. https://doi.org/10.62819/jel.2024.578

Creswell, J. W. (2018). A Mixed-Method Approach. In *SAGE Publications Asia-Pacific Pte. Ltd.* SAGE Publications Asia-Pacific Pte. Ltd. https://doi.org/10.4324/9780429469237-3

Cruz, T. B. (2021). Lifestyle attributes and academic performance in physical education. *Edu Sportivo: Indonesian Journal of Physical Education*, *2*(1), 61–75. https://doi.org/10.25299/es:ijope.2021.vol2(1).6365

Darmayasa, I. P., Suratmin, G. W., & Indrawati, N. P. V. (2025). Psychological profiles of martial arts athletes: Self-confidence, aggressiveness, motivation, and competitive drive. *Jurnal SPORTIF : Jurnal Penelitian Pembelajaran*, *11*(3), 582–599. https://doi.org/10.29407/js_unpgri.v11i3.27586

Domínguez-González, J. A., Reigal, R. E., Morales-Sánchez, V., & Hernández-Mendo, A. (2024). Analysis of the Sports Psychological Profile, Competitive Anxiety, Self-Confidence, and Flow State in Young Football Players. *Sports*, *12*(1). https://doi.org/10.3390/sports12010020

Etikan, I. (2016). Comparison of Convenience Sampling and Purposive Sampling. *American Journal of Theoretical and Applied Statistics*, *5*, 1. https://doi.org/10.11648/j.ajtas.20160501.11

Field, A. (2018). Discovering Statistics Using IBM SPSS Statistics. In *Sage Edge* (5th ed., Vol. 53, Issue 9). Sage Publications.

Garcia-jimenez, J. V. (2023). Physical activity and academic performance in students from same primary education school. *Pedagogy of Physical Culture and Sports*, *27*(5), 378–385. https://doi.org/10.15561/26649837.2023.0504

Gardner, A. C., Maietta, H. N., Gardner, P. D., & Perkins, N. (2022). Postsecondary Adult Learner Motivation: An Analysis of Credentialing Patterns and Decision Making Within Higher Education Programs. *Adult Learning*, *33*(1), 15–31. https://doi.org/10.1177/1045159520988361

Hair, J. F., Babin, B. J., Anderson, R. E., & Black, W. C. (2022). *Multivariate Data Analysis*. Cengage Learning. https://books.google.co.id/books?id=PONXEAAAQBAJ

Hussey, I., Alsalti, T., Bosco, F., Elson, M., & Arslan, R. (2023). *An aberrant abundance of Cronbach's alpha values at .70*. https://doi.org/10.31234/osf.io/dm8xn

James, J., Pringle, A., Mourton, S., & Roscoe, C. M. P. (2023). The Effects of Physical Activity on Academic Performance in School-Aged Children: A Systematic Review. *Children 2023*, *10*. https://doi.org/10.3390/children10061019

Kamberi, M. (2025). The types of intrinsic motivation as predictors of academic achievement : the mediating role of deep learning strategy. *Cogent Education*, *12*(1). https://doi.org/10.1080/2331186X.2025.2482482

Khataybeh, A., Al-shadiedh, M., & Khasawneh, G. (2024). The effectiveness of cooperative learning strategy for mastery in enhancing the skill performance of some gymnastics floor movements. *Pedagogy of Physical Culture and Sports*, *28*(4), 292–300. https://doi.org/10.15561/26649837.2024.0406

Kusuma, D. W. Y., Yuwono, C., Qoriah, A., Supriyono, & Wiyanto, A. (2024). Psychological and nutritional analysis of athletes for Semarang sports week championship 2023 Donny Wira Yudha Kusuma. *Jurnal SPORTIF : Jurnal Penelitian Pembelajaran*, *10*(2), 288–304. https://doi.org/10.29407/js_unpgri.v10i2.23338

Mercader-Rubio, I., Ángel, N. G., Silva, S., Furtado, G., & Brito-Costa, S. (2023). behavioral sciences Intrinsic Motivation : Knowledge, Achievement, and Experimentation in Sports Science Students — Relations with Emotional Intelligence. *Behavioral Sciences*, *13*(7). https://doi.org/10.3390/bs13070589

O'Connor, J. (2019). Exploring a pedagogy for meaning-making in physical education. *European Physical Education Review*, *25*, 1093–1109. https://doi.org/10.1177/1356336X18802286

Rasberry, C. N., Lee, S. M., Robin, L., Laris, B. A., Russell, L. A., Coyle, K. K., & Nihiser, A. J. (2011). The association between school-based physical activity, including physical education, and academic performance: A systematic review of the literature. *Preventive Medicine*, *52*, S10–S20. https://doi.org/10.1016/j.ypmed.2011.01.027

Schiff, N. T., & Supriady, A. (2023). Sports education model (SEM) on students' motivation and physical activity in classroom: A literature review. *Jurnal SPORTIF : Jurnal Penelitian Pembelajaran*, *9*(1), 40–58. https://doi.org/10.29407/js_unpgri.v9i1.19067

Swafford, M. (2018). The Relationship Between Motivation and Online Self-Regulated Learning The Relationship Between Motivation and Online Self-Regulated Learning. *Journal of Human Sciences and*

Extension Volume, *6*(3), 92–106. https://doi.org/10.54718/AWIJ9321

Syahruddin. (2022). The effect of learning methods and motivation on learning outcomes of long jump skills. *Jurnal SPORTIF: Jurnal Penelitian Pembelajaran*, *8*(4), 426–439. https://doi.org/10.29407/js_unpgri.v8i4.18904

Waluyo, W. (2023). The Effect of low impact aerobic gymnastics on improving physical fitness in students. *Jurnal SPORTIF : Jurnal Penelitian Pembelajaran*, *9*(2), 185–197. https://doi.org/10.29407/js_unpgri.v9i2.19982

Weinberg, R. S., & Gould, D. (2019). *Foundations of Sport and Exercise Psychology, 7E*. Human Kinetics. https://books.google.co.id/books?id=YJ6btQEACAAJ

Widhi Harita, A. N., Suryanto, S., & Ardi, R. (2022). Effect of Mindfulness Sport Performance Enhancement (MSPE) to Reduce competitive state anxiety on Karate Athletes. *Jurnal SPORTIF : Jurnal Penelitian Pembelajaran*, *8*(2), 169–188. https://doi.org/10.29407/js_unpgri.v8i2.17807