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Vol. 12, n.º 1; p. 1-19, January 2026. <https://doi.org/10.17979/sportis.2026.12.1.12132>

Association between sports enjoyment and academic resilience: expanding empirical evidence in the Philippine higher education context

Asociación entre el disfrute del deporte y la resiliencia académica: ampliación de la evidencia empírica en el contexto de la educación superior filipina

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Editorial schedule: Article received 24/05/2025 Accepted: 09/09/2025 Published: 01/01/2026

<https://doi.org/10.17979/sportis.2026.12.1.12132>

To cite this article use the following reference:

Eroa, L. J. O. (2026). Association between sports enjoyment and academic resilience: expanding empirical evidence in the Philippine higher education context. Sportis Sci J, 12 (1), 1-19 <https://doi.org/10.17979/sportis.2026.12.1.12132>

Author contribution: The sole author did all the aspects of the manuscript from editing to final submission.

Funding: The study did not receive any support from either private or public institutions.

Conflict of interest: The author declares no conflict of interest.

Ethical aspects: Ethical aspect of the study is stated herein.

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Abstract

This study investigated the association between sports enjoyment and academic resilience among college student-athletes from a selected higher education institution in the Philippines. Existing research suggests that enjoyment derived from physical activity can positively influence psychological outcomes, yet the direct relationship between sports enjoyment and academic resilience remains underexplored in Southeast Asian contexts. Employing a quantitative, correlational research design, data were collected from 229 purposively selected student-athletes through an online survey consisting of the Physical Activity Enjoyment Scale-8 (PACES-8) and the Academic Resilience Scale-30 (ARS-30). Instrument reliability and validity were first established. Descriptive and inferential statistical analyses were performed using IBM SPSS Version 29 for macOS. A simple linear regression analysis indicated that sports enjoyment was not significantly associated with academic resilience ($R^2 = .002, p = .477$), leading to the rejection of the study's hypothesis. This result suggests that although sports enjoyment may enhance well-being and athletic participation, it may not directly contribute to the development of academic resilience. The findings point to the need for more comprehensive models that include mediating or moderating variables such as academic self-efficacy, social support, or perceived control. This study contributes context-specific evidence to the literature on student-athlete well-being in the Philippines and underscores the importance of multidimensional interventions that extend beyond emotional experiences in sport.

Keywords: sports enjoyment, academic resilience, student-athletes, Philippine higher education

Resumen

Este estudio investigó la asociación entre el disfrute deportivo y la resiliencia académica en estudiantes-atletas universitarios de una institución de educación superior seleccionada en Filipinas. La literatura existente indica que el disfrute derivado de la actividad física puede influir positivamente en los resultados psicológicos; sin embargo, la relación directa entre disfrute deportivo y resiliencia académica sigue poco estudiada en contextos del sudeste asiático. Se utilizó un diseño de investigación cuantitativo y correlacional. Los datos se recopilaron de 229 estudiantes-atletas seleccionados de forma intencional mediante una encuesta en línea que incluía la Escala de Disfrute de la Actividad Física-8 (PACES-8) y la Escala de Resiliencia Académica-30 (ARS-30). Primero se estableció la validez y confiabilidad de los instrumentos. Se realizaron análisis estadísticos descriptivos e inferenciales utilizando IBM SPSS Versión 29 para macOS. El análisis de regresión lineal simple mostró que el disfrute deportivo no se asoció significativamente con la resiliencia académica ($R^2 = .002, p = .477$), lo que llevó al rechazo de la hipótesis del estudio. Este resultado sugiere que, aunque el disfrute deportivo puede mejorar el bienestar y la participación atlética, no necesariamente contribuye directamente al desarrollo de la resiliencia académica. Los hallazgos resaltan la necesidad de modelos más amplios que incluyan variables mediadoras o moderadoras como la autoeficacia académica o el apoyo social. El estudio aporta evidencia contextualizada sobre el bienestar de los estudiantes-atletas en Filipinas y destaca la importancia de intervenciones multidimensionales más allá del disfrute emocional en el deporte.

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Palabras clave: disfrute deportivo, resiliencia académica, estudiantes-atletas, educación superior en Filipinas

Introduction

In contemporary sports psychology, the constructs of sports enjoyment (Bugten et al., 2025) and sports resilience (Kegelaers, 2023) have increasingly garnered empirical interest for their crucial roles in shaping athlete development, performance sustainability, and overall well-being (Fletcher & Sarkar, 2012; Martin et al., 2012). As competitive and recreational sports environments continue to evolve, so too do the psychological demands placed upon student-athletes, particularly in higher education institutions where academic rigor coexists with athletic commitment (Martín-Rodríguez et al., 2024). The Philippine higher education context presents a unique landscape, marked by rapid educational reforms, socio-economic challenges and growing investment in collegiate sports development (Chao, 2022; Paghubasan, 2022). Recent concerns about stress, burnout and academic disengagement among Filipino student-athletes highlight the pressing need to better understand the psychological factors that sustain both learning and athletic performance (Estaño & Gomez, 2025; J. C. Longakit et al., 2025). The absence of timely evidence may overlook the very psychosocial foundations that allow student-athletes to thrive in demanding environments for institutions and coaches. In fact, few studies were only conducted in relation to resilience among athletes in the Philippines (Batucan, Panganiban, Rojales, et al., 2025; Batucan, Panganiban, Salaguste, et al., 2025; Orlanes et al., 2024). Yet, studies that probe the interrelation between enjoyment and resilience within this localized framework remain sparse, specifically in the higher education setting. This study addresses this empirical gap by examining the association between sports enjoyment and academic resilience among college student-athletes in the Philippines, thereby contributing novel insights to global literature and offering contextualized evidence for educational and coaching stakeholders.

The construct of sports enjoyment is broadly defined as a positive emotional response derived from engaging in sport activities, characterized by feelings of pleasure, fun, satisfaction, and intrinsic interest (Rodríguez Macías et al., 2021). Enjoyment has been consistently linked to intrinsic motivation, continued sport participation and psychological well-being (McCarthy et al., 2008). In fact, self-determination theory posits

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that autonomy, competence and relatedness, are often fulfilled when athletes genuinely enjoy their sporting experiences (Deci & Ryan, 1985; J. Longakit et al., 2025). Enjoyment does not merely reflect a fleeting emotional state but represents a multidimensional affective disposition that reinforces athletic engagement (Hashim et al., 2008), especially during adverse experiences such as failure, injury, or competitive setbacks. Consequently, enjoyment may act as a protective factor, buffering the deleterious effects of stress and contributing to an athlete's psychological endurance (Chiou et al., 2020).

Meanwhile, academic resilience refers to a student's capacity to successfully overcome academic challenges, setbacks, and stressors (Lobo, 2023, 2024; Panganiban et al., 2024). Furthermore, academically resilient individuals usually are capable of maintaining motivation, emotional balance, and performance (Jaspe et al., 2024). It is not a fixed trait but a dynamic developmental process influenced by personal, social, and contextual factors (Yang & Wang, 2022). According to Qi (2025), the key attributes of academic resilience include self-regulation, perseverance, adaptability, and help-seeking behavior. These are essential traits for thriving in the demanding landscape of higher education (Ross et al., 2023). Recent perspectives emphasize that resilience can be cultivated through positive learning experiences, supportive academic environments, and emotionally engaging activities that promote intrinsic motivation and self-efficacy (Amoadu et al., 2025; Guo et al., 2025).

In the Philippine context, emerging empirical studies provide valuable insight into this linkage. Pasno (2024) found that sports enjoyment significantly predicted academic resilience, explaining 18.9% of its variance among college student-athletes. This was supported by Jaspe et al. (2024), who confirmed that enjoyment in sports activities is associated with higher academic resilience, citing mechanisms such as enhanced self-worth, reduced stress, and strengthened social bonds. Both studies underscore the potential of sports enjoyment as a psychological asset in coping with academic pressures (Jaspe et al., 2024; Pasno, 2024). Nevertheless, they also call for further exploration using more nuanced methodologies and institutional comparisons, reinforcing the relevance of the current study's contribution (Jaspe et al., 2024; Pasno, 2024).

While significant progress has been made in understanding the psychological dimensions of academic success, the potential role of emotional experiences remains

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underexplored. International studies suggest that students who derive high enjoyment from physical activity are more likely to exhibit motivation, engagement, and adaptive coping mechanisms that spill over into academic domains (Boonekamp et al., 2021; Cao et al., 2024; Zhang et al., 2024). However, the empirical linkage between sports enjoyment and academic resilience is still emerging, especially in non-Western and developing country contexts.

In the Philippine higher education setting, student-athletes often face dual-role demands (Jaspe et al., 2024). As added by Jaspe et al. (2024), they are expected to excel academically while maintaining commitment to training and competition. This balancing act is compounded by limited institutional resources, economic pressures, and academic workloads (Jaspe et al., 2024). Under such circumstances, enjoyment in sport may serve not only as a motivator for participation but also as a psychological buffer (Martín-Rodríguez et al., 2024). In turn, can enhance mood, relieving stress, and promoting mental stamina that supports academic functioning (Eather et al., 2023). However, empirical evidence confirming this link in the local context remains sparse.

While previous research has explored resilience in educational settings, it often emphasizes cognitive and behavioral predictors, overlooking the emotional and motivational factors that may facilitate academic resilience. This study, therefore, fills a crucial gap by examining whether perceived enjoyment in sports is associated with academic resilience among college student-athletes in the Philippines. Understanding this relationship is particularly important in a post-pandemic academic climate, where students face heightened emotional, social, and cognitive stressors.

The theoretical foundation of this study draws from Self-Determination Theory (SDT) and Resilience Theory. SDT posits that intrinsic motivation enhances self-regulation, persistence, and well-being, all of which are essential for academic resilience (Deci & Ryan, 1985, 2015; Ryan & Deci, 2018). Resilience Theory, on the other hand, asserts that protective factors such as positive emotional experiences, supportive environments, and adaptive personal traits interact to buffer the effects of risk and foster positive outcomes (Southwick et al., 2014). In this context, sports enjoyment can be viewed as both a personal resource and a protective factor that potentially supports academic adaptation.

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Thus, the current study investigates the association between sports enjoyment and academic resilience among student-athletes in a selected higher education institution in the Philippines. Specifically, it seeks to determine whether enjoyment in sports plays a role in enhancing students' ability to navigate academic stress. The study employs a quantitative, correlational research design to provide empirical data on this understudied relationship within a culturally specific and institutionally relevant context.

The significance of this study is threefold. First, it contributes empirical evidence to the growing body of literature on academic resilience by introducing sports enjoyment as a potential predictor. Second, it offers context-specific insights for Philippine higher education institutions aiming to design holistic, athlete-supportive academic programs. Third, it advances the discourse on inclusive, culturally responsive sport and educational psychology by amplifying the voices and lived experiences of Filipino student-athletes.

Method

Participants

The participants of this study were purposively selected college student-athletes enrolled at a selected higher education institution in the Philippines during the academic year 2024-2025. A total of 229 student-athletes took part in the study, all of whom were actively involved in university-accredited sports programs and concurrently pursuing their academic coursework. This specific group was chosen due to their dual engagement in both athletic and academic pursuits, aligning with the study's focus on sports enjoyment and academic resilience.

In terms of sex, a greater proportion of participants were female (58.2%) compared to male (41.8%). The mean age of respondents was 18.51 years (SD = 0.86). The largest age group was 18 years old (51.5%), followed by 19 years old (27.6%), 20 years old (12.6%), 17 years old (6.7%), and 21 years old (1.7%). Results are illustrated in Table 1.

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Table 1. Demographic attributes of the respondents of the study (n = 229)

Demographic attributes	Items	n(%)
Sex	Male	100(41.8%)
	Female	139(58.2%)
Age ($\bar{x} = 18.51 \pm .86$)	17	16(6.7%)
	18	123(51.5%)
	19	66(27.6%)
	20	30(12.6%)
	21	4(1.7%)

Instruments

Data were collected through an online survey administered via Google Forms, allowing for efficient, cost-effective, and timely distribution and retrieval of responses. The survey consisted of three sections. The first gathered demographic information from the participants. The second section utilized the Physical Activity Enjoyment Scale-8 (PACES-8), a self-report instrument developed by Mullen et al. (2011) to assess individuals' enjoyment of physical activity. This 8-item scale captures various dimensions of enjoyment with responses rated on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The final section employed the Academic Resilience Scale-30 (ARS-30) by Cassidy (2016), which measures students' capacity to recover from academic setbacks, manage stress, maintain motivation, and seek support when needed. The ARS-30 consists of 30 items rated on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). In this study, a composite score was used for ARS-30.

To ensure the suitability of the PACES-8 and ARS-30 instruments in the current study context, a measurement model assessment was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM) in SmartPLS4 (see Table 2) (Hair et al., 2019, 2021). All item loadings exceeded the recommended threshold of ≥ 0.70 , indicating strong individual indicator reliability (Hair et al., 2019, 2021). Internal consistency reliability was confirmed, with Cronbach's alpha (CA) values of 0.860 for PACES-8 and 0.921 for ARS-30, and composite reliability (CR) values exceeding 0.90 for both constructs (Hair et al., 2019, 2021). Convergent validity was established as both constructs met the average variance extracted (AVE) threshold of ≥ 0.50 ; 0.682 for

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PACES-8 and 0.592 for ARS-30 (Hair et al., 2019, 2021). Additionally, variance inflation factor (VIF) values for all indicators were below ≤ 5 , indicating no issues with multicollinearity (Hair et al., 2019, 2021). These results demonstrate that the PACES-8 and ARS-30 instruments are psychometrically sound and adaptable for use among college student-athletes in the Philippine higher education setting.

Table 2. Measurement model assessment of PACES-8 and ARS-30

Constructs	Item	Item loadings	CA	CR	AVE	VIF
PACES-8	PACES-8_1	0.757	0.860	1.111	0.682	1.460
	PACES-8_2	0.950				3.096
	PACES-8_3	0.758				2.434
	PACES-8_4	0.822				2.720
ARS-30	ARS30_1	0.755	0.921	1.019	0.592	2.156
	ARS30_3	0.749				2.114
	ARS30_12	0.812				2.296
	ARS30_17	0.862				2.313
	ARS30_19	0.790				2.623
	ARS30_21	0.732				2.250
	ARS30_23	0.731				2.092
	ARS30_26	0.746				2.370
	ARS30_28	0.737				2.179

To assess discriminant validity, both the Fornell-Larcker criterion and Heterotrait-Monotrait ratio (HTMT) were examined using SmartPLS4 (see Table 3). The square root of the average variance extracted (AVE) for each construct exceeded its correlations with other constructs, supporting the Fornell-Larcker criterion (Fornell & Larcker, 1981). Additionally, the HTMT value between PACES-8 and ARS-30 was 0.86, which remains below the conservative threshold of 0.90, further affirming discriminant validity. These findings confirm that the constructs are conceptually distinct and can be validly used to examine separate psychological domains among student-athletes in the Philippine higher education context.

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Table 3. Discriminant validity metrics

	ARS-30	PACES-8
	Fornell-Larcker Criterion	
ARS-30	0.769	
PACES-8	-0.107	0.826
	Heterotrait-Monotrait Ratio (HTMT)	
ARS-30		
PACES-8	0.86	

Lastly, descriptive statistics were computed to evaluate the central tendency and distributional characteristics of the study variables prior to conducting linear regression (see Table \diamond). The results showed that student-athletes reported relatively high levels of sports enjoyment ($M = 5.41$, $SD = 1.13$) and academic resilience ($M = 4.52$, $SD = 0.56$). Skewness values for PACES-8 (-0.912) and ARS-30 (-1.124), along with kurtosis values (1.524 and 0.601, respectively), were all within the acceptable range of -2 to +2. These results indicate that the data distributions were sufficiently normal, supporting the appropriateness of applying parametric techniques in the subsequent regression analysis.

Constructs	Mean \pm SD	Skew	Kurt
PACES-8	5.41 ± 1.13	-.912	1.524
ARS-30	$4.52 \pm .56$	-1.124	.601

Statistical analysis

All data analyses were performed using IBM SPSS Statistics Version 29 for macOS. Descriptive statistics were used to summarize the participants' responses, including measures of central tendency and variability. To test the hypothesized association between sports enjoyment and academic resilience, a simple linear regression analysis was conducted. The significance level was set at $p < .05$ for all statistical tests.

Ethical statement

This study complied with the ethical principles outlined in the Philippine Data Privacy Act of 2012 (Republic Act No. 10173), ensuring the protection of participants' privacy and the confidentiality of their responses. As the research involved minimal risk

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and utilized an anonymous, voluntary online survey, it qualified for exemption from full ethics review as determined by the institutional research authority. Informed consent was obtained electronically, and participants were assured of their right to refuse or withdraw at any point without consequence. No personally identifiable information was collected, and all responses were handled with strict confidentiality and used solely for academic purposes.

Results

A simple linear regression analysis was conducted to examine whether sports enjoyment, as measured by the Physical Activity Enjoyment Scale (PACES-8), was significantly associated with academic resilience, as measured by the Academic Resilience Scale (ARS-30). The results indicated that sports enjoyment was not significantly associated with academic resilience $F(1, 237) = .507, p = .477$. The model accounted for only 0.2% of the variance in academic resilience, indicating a negligible association between the two variables. The non-significant result suggests that the level of enjoyment students experience from engaging in sports activities is not meaningfully associated with their reported levels of academic resilience. Although physical activity enjoyment is generally linked to emotional and psychological well-being, it may not correspond directly to the psychological adaptability and perseverance required to succeed academically. These resilience-related traits are likely shaped more by personal cognitive and emotional resources than by the hedonic aspects of sports participation. Accordingly, Hypothesis 1 was rejected. This finding highlights the importance of examining more complex or mediated pathways through which physical activity enjoyment may be related to academic functioning and psychological resilience in educational contexts.

Hypothesis	Regression weights	Beta Coefficient	R ²	F	t	p	Decision
H ₁	PACES-8 → ARS-30	-	.002	.507	-	.477	Rejected

Note: Significance $p < .05$.

PACES-8- Sports Enjoyment, ARS-30- Academic Resilience

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Discussion

This study examined the association between sports enjoyment and academic resilience among college student-athletes from a selected higher education institution in the Philippines. Contrary to theoretical expectations and previous empirical findings, the analysis revealed no statistically significant relationship between sports enjoyment (as measured by PACES-8) and academic resilience (measured by ARS-30), with an extremely small proportion of variance explained ($R^2 = .002$, $p = .477$). This suggests that, within this context, student-athletes' enjoyment of sports activities does not meaningfully relate to their ability to adapt, recover, and persist when confronted with academic challenges.

These findings contrast with previous studies conducted in similar educational and cultural settings. For instance, Pasno (2024) found that sports enjoyment significantly predicted academic resilience among student-athletes at Bulacan State University, accounting for 18.9% of the variance. Likewise, Jaspe et al. (2024) observed a significant positive association in their sample from a state university, with sports enjoyment predicting 8.9% of academic resilience. Both studies emphasized that sports enjoyment may foster psychological strengths such as motivation, mood regulation, and self-confidence.

The absence of a significant association in the present study may reflect the indirect and context-dependent nature of the relationship between these two constructs. Although sports enjoyment contributes positively to affective and psychological well-being (Eather et al., 2023; Li et al., 2024), it may not exert a direct relationship with academic resilience. Rather, it is likely that sports enjoyment influences resilience through mediating variables, such as perceived competence, academic motivation, self-efficacy, or social support, as stated by previous works (Hu et al., 2025; Xia et al., 2025). This view aligns with Self-Determination Theory, which posits that intrinsic motivation, of which enjoyment is a component, must be accompanied by the satisfaction of basic psychological needs (autonomy, competence, and relatedness) to result in adaptive outcomes such as resilience (Deci & Ryan, 1985, 2015; Ryan & Deci, 2018).

Furthermore, differences in institutional context and student-athlete experiences may account for the divergent findings. In the selected institution where this study was

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conducted, student-athletes may face heightened academic pressure, time constraints, or limited access to academic support systems. These conditions can overshadow the potential benefits of sports enjoyment on resilience, especially if the structural environment does not reinforce both athletic and academic development in a balanced manner. Jaspe et al. (2024) emphasized that Filipino student-athletes often struggle with dual-role stress, which may weaken the impact of any single motivational factor.

It is also important to consider the nature of the constructs being measured. PACES-8 captures affective, short-term responses to physical activity (Mullen et al., 2011), while ARS-30 measures more stable, trait-like capacities related to academic persistence and adaptability (Cassidy, 2016). While both constructs contribute to student well-being, they may operate on different functional levels, and the influence of one on the other may only become evident through prolonged engagement or in combination with other psychological processes (Chen et al., 2022; Xu et al., 2021).

From a practical standpoint, these findings suggest that while promoting enjoyment in physical education and sports remains important for encouraging participation, it may not be sufficient to cultivate academic resilience on its own. Coaches, PE teachers, and academic advisors should consider integrating strategies that explicitly target resilience development, such as goal-setting workshops, stress management training, and academic counseling services tailored for student-athletes. Programs should aim to strengthen not only students' enjoyment of sport but also their ability to apply motivational and emotional strengths to academic settings.

This finding contributes to the ongoing discourse by emphasizing that sports enjoyment, while beneficial for engagement, may not directly translate into academic resilience among college student-athletes in selected higher education institutions in the Philippines. It highlights the need for more comprehensive and theoretically grounded models that consider mediating and contextual factors. Future studies may benefit from employing longitudinal or mixed-methods designs to explore how enjoyment interacts with other psychological variables to support resilience across both athletic and academic domains.

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Conclusion

This study examined the association between sports enjoyment and academic resilience among college student-athletes from a selected higher education institution in the Philippines. The results revealed no significant relationship between the two variables, indicating that enjoyment derived from sports activities does not directly relate to students' capacity to persist and adapt in the face of academic challenges. The findings suggest that while sports enjoyment contributes positively to affective experiences and engagement in physical activity, it may not be sufficient to foster the complex traits associated with academic resilience. This underscores the need to consider other psychological, motivational and contextual factors that may play a more direct role in strengthening students' academic coping mechanisms.

Despite the lack of statistical significance, the study contributes to a deeper understanding of student-athlete experiences in Philippine higher education. It challenges assumptions of a direct link between enjoyment and resilience, and highlights the importance of exploring more comprehensive models that capture the multifaceted nature of academic adaptation. In conclusion, promoting sports enjoyment remains important for sustaining participation and enhancing well-being. However, fostering academic resilience among student-athletes may require more targeted interventions that go beyond enjoyment, focusing instead on building psychological skills, strengthening academic support systems and addressing the broader demands faced by student-athletes.

It is important to note that the study has limitations. The sample was drawn from a single institution, which restricts the generalizability of findings to broader student-athlete populations. The cross-sectional design also limits the ability to capture changes in enjoyment and resilience over time. Additionally, reliance on self-report measures may introduce response biases. Therefore, future research is recommended to adopt multi-institutional and longitudinal designs, integrate qualitative perspectives to capture nuanced experiences, and explore additional predictors such as social support, motivation and coping strategies. These directions may provide a more comprehensive understanding of how to sustain both enjoyment and resilience in the dual context of sports and academics.

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