

Original article. Perceived Physical Education Instructor's Autonomy Support to Students' University Engagement: Deciphering an unexplored issue in the case of a State University in the Philippines. Vol. 10, n.º 3; p. 437-463, Septiembre 2024. <https://doi.org/10.17979/sportis.2024.10.3.10642>

## **Perceived Physical Education Instructor's Autonomy Support to Students' University Engagement: Deciphering an unexplored issue in the case of a State University in the Philippines**

### **Percepción del apoyo de la autonomía del profesor de educación física a la participación universitaria de los estudiantes: descifrando una cuestión inexplorada en el caso de una universidad estatal de Filipinas**

Joseph Lobo; Ramon Carlo Masagca; John Mathew Serrano; Jessie Reyes; Martín James Esteban

College of Sports, Exercise and Recreation, Bulacan State University, Philippines

Autor de correspondencia: [joseph.lobo@bulsu.edu.ph](mailto:joseph.lobo@bulsu.edu.ph)

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## Abstract

Scholarly articles from various disciplines have established that instructor's autonomy support positively influences students' university engagement. On the one hand, studies that were conducted in relation to this current topic in the field of Physical Education, most specifically in the Higher Education context in the Philippines remain unexplored. In this regard, this present study investigated the direct influence of perceived instructor's emotional support to students' university engagement. Additionally, it also examined the direct influence of IAS to the three components of UE namely, vigor, dedication, and absorption. After surveying 702 students enrolled in Physical Education courses in a State University, it was unraveled that IAS has a significant and direct influence to UE. IAS also has a significant and direct relationship with VI, DE, and ABS. Based on the findings, PE instructors' autonomy support is crucial as it enables students to assume responsibility for their fitness progress, cultivating a feeling of purpose and motivation. Autonomy-supportive instructors promote increased engagement and commitment in physical education classes by offering choices and encouragement in goal setting, potentially encouraging students to embrace a healthy active lifestyle even outside university. Recommendations and future research directions are also presented in this paper.

**Keywords:** active healthy lifestyle, instructor's autonomy support, physical education, university Engagement.

## Resumen

Artículos académicos de varias disciplinas han establecido que la autonomía del instructor apoya positivamente la participación de los estudiantes en la universidad. Por un lado, los estudios que se llevaron a cabo en relación con este tema actual en el campo de la Educación Física, más específicamente en el contexto de la Educación Superior en Filipinas, siguen sin explorarse. En este sentido, este estudio actual investigó la influencia directa del apoyo emocional percibido del instructor en la participación universitaria de los estudiantes. Además, también examinó la influencia directa del IAS en los tres componentes de la UE, a saber, vigor, dedicación y absorción. Después de encuestar a 702 estudiantes matriculados en cursos de Educación Física en una Universidad Estatal, se descubrió que el IAS tiene una influencia significativa y directa en la UE. El IAS también tiene una relación significativa y directa con VI, DE y ABS. Según los hallazgos, el apoyo a la autonomía de los instructores de Educación Física es crucial, ya que permite a los estudiantes asumir la responsabilidad de su progreso físico, cultivando un sentimiento de propósito y motivación. Los instructores que apoyan la autonomía promueven un mayor compromiso y participación en las clases de educación física al ofrecer opciones y estímulo en el establecimiento de objetivos, lo que potencialmente alienta a los estudiantes a adoptar un estilo de vida activo y saludable incluso fuera de la universidad. En este documento también se presentan recomendaciones y direcciones futuras de investigación.

**Palabras clave:** estilo de vida activo y saludable, apoyo a la autonomía del docente, educación física, participación universitaria

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## Introduction

All across the academic spectrum, the degree to which instructors are allowed a certain level of autonomy has an important influence on the learning experiences and outcomes that students achieve. *Autonomy support* describes how much instructors help students feel like they have agency in the classroom, drawing on ideas from Self-determination Theory (SDT) that highlights the fundamental psychological requirements for competence, relatedness, and autonomy (Hsu et al., 2021). Significant scholarly interest has been devoted to the potential of instructor autonomy support in higher education to enhance students' engagement, motivation, and well-being across all disciplines (Gutiérrez & Tomás, 2019; Olivier et al., 2021). Instructors that foster autonomy in their students help them feel more in control of their learning, which in turn increases their intrinsic motivation and dedication to their studies by giving them more chances to make decisions that matter, share a subject they are passionate about, and take responsibility of their own progress. Research has shown that autonomy-supportive teaching approaches are effective in many academic contexts, including traditional classrooms (C. Li et al., 2019; Martinek et al., 2020). However, the implications of these practices in more specialized settings, like Physical Education classes, have received inadequate attention. PE instructors have a special opportunity to influence their students' participation and growth in the field by virtue of the specific responsibilities they play in fostering health, wellness, and active lifestyles (Pulimeno et al., 2020). To improve the quality and efficacy of physical education activities, it is vital to fully understand the degree to which instructors encourage student autonomy and the influence that this encouragement has on students' attitudes, behaviors, and academic performance in PE classes.

Meanwhile, *University engagement* (UE) in Physical Education involves a comprehensive approach to students' participation in physical activity and health promotion initiatives (Y. Li et al., 2021; Liu et al., 2021). It consists of three interconnected components: *vigor*, *dedication*, and *absorption* (Jaya & Ariyanto, 2021). Firstly, *vigor* (VI) refers to the energy, passion, and active involvement that students demonstrate during physical activities and sports (Demirbatır, 2020; Pulido-Martos et al., 2020). It shows that students are eager to fully participate in physical education

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programs, embracing the chance for physical activity, exercise, and improving skills with enthusiasm and energy. In addition, *dedication* (DE) requires students to show commitment and tenacity in maintaining a healthy and active lifestyle (Listau et al., 2017; Teuber et al., 2021). It refers to their dedication to investing time and effort in enhancing their physical fitness, honing motor abilities, and embracing lifelong habits of consistent exercise and health practices. Lastly, *absorption* (ABS) pertains to the level of cognitive immersion and attentiveness students have during physical activities and fitness programs (Koob et al., 2021; Rautanen et al., 2021). It entails a heightened state of focus and cognitive involvement, in which students are completely immersed in the physical movements and problems they experience. Students may experience absorption in physical education programs, feeling fully engaged in the current moment and deriving increased happiness and satisfaction from their participation. Instructors can enhance students' well-being, physical fitness, and commitment to healthy lifestyle practices by emphasizing vitality, dedication, and focus on the physical education curriculum. This contributes to a comprehensive university experience that addresses both academic and physical aspects of learning. According to Estévez et al (2021), these three components of university (study) engagement are unique from each other, but they have a strong interrelatedness.

On the other hand, the lack of participation by university students in physical education courses is a significant problem in higher education institutions (Ferreira Silva et al., 2022). Academic constraints, schedule issues, and cultural emphasis on academic subjects over physical activity contribute to students' disinterest and lack of engagement in physical education (Moore et al., 2023; Wilson et al., 2021). This pattern is alarming because physical education is crucial for enhancing students' holistic health, well-being, and academic achievements. Furthermore, the COVID-19 pandemic has made it increasingly difficult for students to participate in physical education due to constraints on in-person classes and limited access to outdoor spaces, which have curtailed possibilities for physical activity (Frömel et al., 2023; Harangi-Rákos et al., 2022; Kistorz et al., 2022). The importance of dealing with the insufficient involvement of university students in physical education is crucial in the present scenario, emphasizing the essential requirement for successful methods to encourage student

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engagement and well-being among these complex obstacles (Arik & Erturan, 2023; Behzadnia et al., 2023; Granero-Gallegos et al., 2023).

The importance of autonomy support from physical education instructors is made apparent by the phenomenon of poor engagement among university students in physical education classes. Lacking autonomy assistance students may view physical education as an obligatory task rather than a beneficial chance for holistic growth (Holt et al., 2019). Physical Education instructors have a vital role in cultivating students' own drive and excitement for physical exercise through offering choices, empowering them to set their own goals, and creating a welcoming and diverse learning atmosphere (Cale, 2023). PE teachers may empower students by promoting autonomy support in their teaching techniques, leading to students taking control over their overall wellness and health journey and building a sense of purpose and commitment that goes beyond the classroom. This method boosts students' engagement and satisfaction in physical education while fostering enduring practices of consistent exercise and wellness, ultimately fostering a culture of health and energy throughout the university community (Garcia Bengoechea et al., 2018).

### ***Relationship between instructors' autonomy support and university engagement***

The association between perceived instructor autonomy support and university engagement with physical education is critical for creating a dynamic and rewarding atmosphere for learning. Students are more likely to engage and participate when their PE teachers support their autonomy by providing them with chances to exercise option, initiative, and decision-making in the context of physical activity (Boonekamp et al., 2022). Autonomy-supportive teaching techniques in PE encourage students to take ownership of their physical fitness journey, giving them a sense of agency and desire to achieve their health and wellness goals (Huéscar et al., 2020). Students who are valued and respected as independent people in the PE setting are more likely to accept physical challenges, try novel activities, and actively participate in the learning process.

Moreover, perceived autonomy support from physical education instructors helps create a pleasant and nurturing learning atmosphere, enabling students to freely express themselves, work together with classmates, and expand their physical limits in a secure



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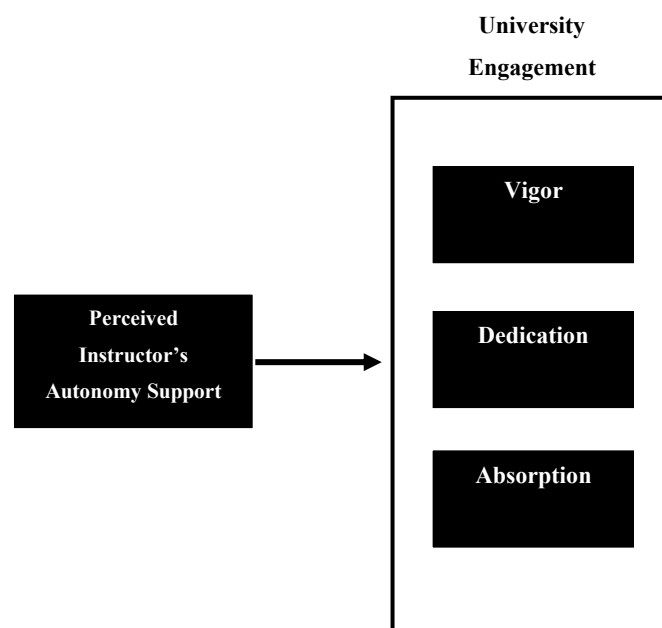
and empowering setting (K. Guo et al., 2022; Lochbaum & Jean-Noel, 2016). The encouraging environment promotes a feeling of inclusion and fellowship among students, improving their overall enjoyment and satisfaction with the physical education program. In PE classes, instructors can enhance students' physical fitness and overall well-being by focusing on autonomy-supportive teaching methods (Behzadnia et al., 2022). This approach helps students develop important life skills like disciplined behavior, resilience, and goal setting, which are crucial for their holistic growth and sustained involvement in physical activities.

### ***Study objectives and hypotheses formulation***

This study investigated how perceived autonomous support from instructors directly influences students' engagement in university-level Physical Education, including components such as vigor, dedication, and absorption. Additionally, the present study examined the association between students' perceptions of autonomous support from their physical education instructors and their engagement and participation levels in physical education classes. Although autonomy support from instructors is crucial in influencing students' academic experiences and outcomes, especially in physical education, there is a dearth of empirical evidence on how autonomy support directly influences the three components of university engagement in Philippine Higher Education. Previous studies have shown that autonomy support is important for improving student motivation, satisfaction, and well-being in different academic environments. However, there is a scarcity of studies on how autonomy support specifically affects the vigor, dedication, and absorption of students in various physical education classes at Philippine higher education institutions. In this regard, this study investigated how perceived emotional support from instructors directly influences university engagement in Physical Education. The findings provided valuable insights for improving pedagogical practices and interventions to enhance student engagement and academic success in higher education institutions in the Philippines. In relation to these objectives, the study has tested the following hypotheses and is presented in Figure 1:

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- H1:** Perceived Instructor’s Autonomy Support do not predict University Engagement;
- H2:** Perceived Instructor’s Autonomy Support do not predict Vigor;
- H3:** Perceived Instructor’s Autonomy Support do not predict Dedication;
- H4:** Perceived Instructor’s Autonomy Support do not predict Absorption;



**Figure 1.** Conceptual Framework examining the direct influence to Perceived Instructor’s Autonomy Support to University Engagement

**Methods**

***Participants and Sampling Technique***

The respondents in the research investigation are first- and second-year undergraduate students presently attending in the 2nd Semester of the Academic Year 2023-2024 at Bulacan State University in Malolos City, Bulacan, Region III, Philippines. The study specifically concentrated on these year levels because minor physical education classes are only available during the first and second semesters for first- and second-year students. Data from the respondents were obtained using *purposive sampling technique*. Purposive sampling involves intentionally selecting respondents or cases with specific attributes of interest to achieve the research goals (Rahman et al., 2022). This technique strives to offer a concentrated and precise sample that can successfully address the

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research questions at hand. Subsequently, the specified attributes will be used to choose the participants for the study:

1. First- or second-year students currently enrolled in Physical Education 2 (PATH-Fit 2) and Physical Education 4 (PATH-Fit 4) during the 2<sup>nd</sup> Semester, Academic Year 2023-2024 at Bulacan State University; and,
2. Across all spectrums of gender.

At present, 6,000 first- and second-year students are enrolled in Physical Education 2 and Physical Education 4. With a confidence level of 95% and a margin of error of 5%, the exact sample size required to ensure statistical power and precision was calculated using the *Raosoft Sample Size Calculator* for the current study. Interestingly, 737 students participated in the online survey. After conducting the data cleansing procedure, the final tally stood at 702 responses, which corresponds to a response rate of 95.25%.

### ***Instruments***

The survey questionnaire that was used to obtain data from the respondents is subdivided into three parts:

1. The first part obtained data about respondents' demographic characteristics (i.e., year level and gender).
2. The second part consists of the Learning Climate Questionnaire adapted by Williams and Deci (1996) from to study of Williams et al (1996), which is derived from their work to assess perceptions of autonomy supportiveness in educational environments. Particularly tailored to the context of instruction, the items are occasionally modified to suit the circumstances under investigation, as is the case with the current study. A short variant of the LCQ contains six items, while the long form comprises fifteen. The questionnaire consisting of 15 items was utilized for the purpose of this study. An example of an item is "My instructor conveyed confidence in my ability to do well in the course." A 7-point Likert scale ranging from 0 (strongly disagree) to 7 (strongly agree) is utilized to evaluate each item.
3. The last part is the Utrecht Work Engagement Scale for Students (UWES-9S) which was originally developed by Schaufeli (2017) and adapted by Carmona-



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Halty et al. (2019). This particular scale is a nine-item self-report instrument that measures overall university engagement in Physical Education classes. Also, this particular instrument is subdivided into three unique features: Vigor (e.g., “I feel energetic and capable when I’m studying or going to class.”), Dedication (e.g., “I am proud of my studies”), and Absorption (e.g., “I get carried away when I am studying”). A 6-point Likert scale ranging from 0 (never) to 6 (always) is used to evaluate each item.

### ***Statistical Analysis***

The present study has used *cross-tabulation analysis*. It is a contingency table that displays the frequency of respondents in terms of gender and year level. Lastly, *repeated simple linear regression* was performed. This method entails conducting several simple linear regression analyses. Each analysis is conducted individually for distinct subsets or categories within a dataset (Mohr et al., 2022). This particular statistical treatment has been performed to determine the direct influence of Perceived Instructor's Autonomy Support to University Engagement. Furthermore, Perceived Instructor's Autonomy Support is regressed to each of the components of University Engagement namely, vigor, dedication, and absorption.

### ***Ethical Statement***

Highest Ethical considerations were strictly followed in the conduct of the study. The data gathering was conducted through online survey using Google Forms. In the Google Forms, the purpose of the study, inclusion criteria, instruments to be used, and the components/variables which will only be measured in the entire conduct of the study are presented. Additionally, the researchers provided the benefits of the study to the institution, community, and its contribution to scientific knowledge. The online survey underlined that participating in the study is voluntary, and respondents can choose to withdraw at any moment. The respondents were similarly advised of the potential minor hazards associated with their involvement in the research, including the experience of unease when responding to personal and/or sensitive survey inquiries. In addition, respondents were informed that there is no monetary compensation associated with providing information for the study. The respondents were additionally informed regarding the information that would be gathered via Google Forms and transferred to

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an Excel file for evaluation. The protected password for this data was disclosed, with only the researchers granted personal access to it. Additionally, they were informed that the aforementioned data would be stored on a USB drive for a duration of three (3) months, after which it would be irrevocably removed from the system. Additionally, respondents were notified that the data that were obtained would no longer be used in any subsequent or secondary research. Withdrawal of respondents’ participation in the study will not have any adverse effects on their relationships with the involved researchers or research organizations, nor will it affect their contributions to any future services or current programs. In order to maintain the anonymity and confidentiality of the respondents, their identities and names were withheld throughout the data collection, analysis, and reporting of the study’s findings. Due to the aforementioned conditions, respondents were at any moment permitted to withdraw from the study or request a debriefing. All respondents’ information were securely protected in accordance with the Data Privacy Act of 2012, also known as Republic Act 10173.

## Results

Normality estimations, reliability tests, and inter-variable correlational analysis were conducted on the study’s instruments. As seen in table 1, the majority of the variables met the 2 and -2 thresholds, as evidenced by the skewness and kurtosis values, showing that the data is normally distributed. Furthermore, the reliability tests revealed that all of the instruments are very reliable, with Cronbach's Alpha values ranging from .76 to .95. Lastly, the inter-variable correlational analysis unraveled that all the variables are interrelated to each other.

**Table 1.**  
Normality estimates, reliability, and inter-variable correlational analysis

Variable	Mean ± SD	Skew	Kurt	1	2	3	4
PAS	5.90 ± 1.00	-1.554	3.851	(.95)			
VI	4.11 ± 1.18	-.483	-.809	.36**	(.79)		
DE	4.58 ± 1.11	-.809	.579	.30**	.71**	(.86)	
ABS	4.33 ± 1.09	-.484	-.001	.29**	.61**	.75**	(.76)

Note: \*\*. Correlation is significant at the 0.01 level (2-tailed).

PAS- Perceived Autonomy Support, VI- Vigor, DE- Dedication, ABS- Absorption

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Based on the data provided in Table 2, a total of 702 students were surveyed, with 518 (73.79%) in first year and 184 (26.21%) in second year. In terms of gender distribution, female students comprised the majority, accounting for 63.71% (330) of first-year students and 29.35% (54) of second-year students, for a total of 54.70% (384) across both year levels. Male students made up 27.03% (140) of first-year students and 65.76% (121) of second-year students, totaling 37.18% (261) of the entire sample. Furthermore, 44 students (6.27%) identified as LGBTQIAP+ at both year levels, with 37 (7.14%) in the first year and 7 (3.80%) in the second. Furthermore, 13 students (1.85%) chose not to disclose their gender, with 11 (2.12%) in the first year and two (1.09%) in the second year.

**Table 2.**  
Crosstabulation of respondents’ demographic characteristics based on gender and year level

Gender	Year Level		Total N(%)
	1 <sup>st</sup> year N(%)	2 <sup>nd</sup> year N(%)	
Male	140(27.03%)	121(65.76)	261(37.18%)
Female	330(63.71%)	54(29.35%)	384(54.70%)
LGBTQIAP+	37(7.14%)	7(3.80%)	44(6.27%)
Prefer not to say	11(2.12%)	2(1.09%)	13(1.85%)
<b>Total</b>	<b>518(73.79%)</b>	<b>184(26.21%)</b>	<b>702(100.00%)</b>

Table 3 illustrates the result of the multiple linear regression analysis examining the direct influence of perceived instructor’s autonomy support to students’ university engagement. Based on the findings, it can be seen that perceived autonomy support predicts university engagement [ $F(1, 700) = 102.838, p <.001$ ], postulating that perceived autonomy support is significantly and directly related to university engagement. Moreover, the  $R^2 = .128$  indicates that the model accounts for 12.8% of the variance in university engagement. In this regard, it can be concluded that when students perceived higher levels of autonomy support from their physical education instructors, their engagement towards their physical education class is being bolstered. In this regard,  $H_1$  has been rejected.

Furthermore, it was observed that PAS predicts vigor, suggesting that PAS is directly related and leverages VI [ $F(1, 700) = 106.615, p <.001$ ]. Additionally, the  $R^2 = .128$  construes that the model accounts for 13.2% of the variance in vigor. Based on this observation, it is reasonable to speculate that when students recognize great autonomous support from their

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physical education instructors, their enthusiasm and excitement for PE classes are also increased. Hence,  $H_2$  has been rejected.

Moreover, it was seen that PAS predicts dedication, extrapolating that PAS is directly and significantly influence DE [ $F(1, 700) = 67.564, p <.001$ ]. Also, the  $R^2 = .088$  suggests that the model accounts for 8.8% of the variance in dedication. Based on this finding, it is hypothesized that when students receive more autonomous support from their physical education instructors, their dedication to investing time and effort in improving their physical fitness, honing motor abilities, and adopting lifelong habits is strengthened. Therefore,  $H_3$  has been rejected.

Lastly, it was discovered that PAS predicts absorption, interpreting that PAS is significantly related to ABS [ $F(1, 700) = 65.169, p <.001$ ]. Also, the  $R^2 = .085$  suggests that the model accounts for 8.5% of the variance in absorption. It can be interpreted that when students perceived higher level of autonomous support from their physical education instructors, their level of cognitive immersion and attentiveness students have during physical activities and fitness programs is increased. In connection to this,  $H_4$  has been rejected.

**Table 3.**  
Hypotheses testing and repeated simple linear regression analysis results

Hypothesis	Regression weights	Beta Coefficient	$R^2$	$F$	$t$ -value	$p$ -value	Decision
$H_1$	PAS → UE	.358	.128	102.838	-	<.001	Rejected
$H_2$	PAS → VI	.427	.132	106.615	-	<.001	Rejected
$H_3$	PAS → DE	.328	.088	67.564	-	<.001	Rejected
$H_4$	PAS → ABS	.319	.085	65.169	-	<.001	Rejected

Note: Significance  $p <.05$ .

PAS- Perceived Autonomy Support, UE- University Engagement, VI- Vigor, DE- Dedication, ABS- Absorption

## Discussion

Based on the findings, perceived instructor’s autonomy support significantly influences students’ engagement in university Physical Education, emphasizing the important role PE instructors have in shaping students’ involvement and commitment in higher education, especially in physical activity and well-being as supported by previously conducted studies (Ma, 2021; Miao & Ma, 2023; Yang et al., 2022). Students’ perception of autonomy support from their physical education instructors

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strongly influences their interest and participation in physical education classes and related activities (Leisterer & Paschold, 2022). Perceived autonomy support from physical education instructors enhances students' sense of independence and agency, motivating them to engage actively in physical activities, sports, and training programs (Jankauskiene et al., 2022; Meng & Keng, 2016). Moreover, the finding suggest that students are more inclined to actively participate in physical education classes and adopt living an active life when they see their physical education instructors as recognizing their autonomy, providing options, and accommodating their individual preferences and capabilities. It is known that active participation enhances students' physical health, well-being, and satisfaction with their physical education experience (Roccliffe et al., 2023; Sun et al., 2024; Zhang et al., 2022).

Furthermore, the substantial correlation between students' perception of instructor autonomy support and their level of vigor in PE classes highlights the significant influence of instructor conduct on students' excitement and involvement in physical activities (Fin et al., 2019; Leyton-Román et al., 2020), as also supported by other scholarly works from other fields of discipline (Johansen et al., 2023; Martinek et al., 2022). When students feel that their physical education instructors support their autonomy by allowing them to make choices and decisions about their physical activities, they are more inclined to engage in PE sessions with increased energy and enthusiasm. This empowerment dynamic fosters ownership and agency in students, leading to increased intrinsic drive to actively participate in physical activities, which enhances the classroom climate. Additionally, teaching methods that practices autonomy promotes students' feelings of competence and mastery, motivating them to challenge themselves and aim for self-improvement (Guay, 2022; Muth & Lüftenegger, 2024). PE instructors can increase students' emotional engagement in physical education (Leisterer & Jekauc, 2019), by establishing a friendly and inclusive learning environment that fosters feelings of value and respect (Bertills et al., 2019). The strong connection between students' perception of instructor autonomy support and their enthusiasm in physical education classes emphasizes the significant influence of subject teacher behavior on students' involvement and enjoyment in physical activities. This



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underscores the importance of teaching practices that promote autonomy to cultivate a healthy and energetic atmosphere in the educational environment.

Moreover, the link between Perceived teacher's Autonomy Support and students' dedication in physical education provides substantial evidence about how instructor conduct influences students' commitment and persistence in doing physical activities as supported by previously conducted studies (Burgueño et al., 2020; Waaler et al., 2022). The finding indicates that students are more likely to show increased dedication in their participation in physical education classes when they perceive their instructors as being supportive of their autonomy, allowing them opportunity and motivation to pursue their fitness objectives and interests. This commitment can be shown through regular attendance, active engagement, and a readiness to dedicate time and effort to enhance their physical health and abilities (Amerstorfer & Freiin von Münster-Kistner, 2021; Teixeira et al., 2012). Also, autonomy-supportive teaching approaches in physical education classes promote a feeling of being in control and personal investment in students, empowering them to be responsible for their health and well-being (Christodoulakis et al., 2024). When students perceive that their physical education instructors respect their autonomy and have confidence in their decision-making, they are more inclined to engage in physical activity with purpose and dedication. The innate drive to strive and reach personal fitness goals enhances students' dedication in physical education classes, creating a positive and encouraging atmosphere that motivates students to pursue their fitness goals with perseverance and passion (Yuan et al., 2022). The clear connection between perceived instructor's autonomy support and students' dedication in PE emphasizes the crucial role of instructor conduct in fostering students' drive in achieving physical fitness and well-being.

Likewise, the strong relationship between the perceived autonomy support from the instructor and students' participation in Physical Education highlights the significant influence of instructor conduct on students' cognitive involvement and deep involvement in doing physical activities, as supported by various researchers in the field (Q. Guo et al., 2023; Maldonado et al., 2019), and other disciplines (Hinnersmann et al., 2020). When students feel that their physical education instructors are supportive of



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their independence by allowing them to make choices and decisions in their physical activities, they are more likely to be fully engaged and absorbed in their physical education classes. This absorption can be seen as profound attention, strong focus, and a feeling of flow (El-Hilali et al., 2015), when students are completely engaged in the physical activities they are involved in, enjoying a seamless and immersive experience with their task at hand (Koehn et al., 2017). In this regard, methods that highly emphasize autonomy-supportive teaching in physical education classrooms promote students' feelings of competence and mastery, leading to increased engagement in the learning process (Bessa et al., 2021; Oldervik & Lagestad, 2021). Students are more likely to feel confident and accomplished when their physical education instructors recognize their individuality and offer possibilities that allow them to push themselves and enhance their physical skills. This positive reinforcement motivates students to actively participate in the PE curriculum, assimilating new knowledge, honing new abilities, and achieving success in their physical activities (Hutmacher et al., 2020; Sierra-Díaz et al., 2019). The connection between Perceived Instructor's Autonomy Support and students' engagement in PE emphasizes the significant influence of instructor behavior on promoting students' cognitive involvement and enjoyment of physical activity, creating an encouraging and enabling educational environment that motivates students to excel.

To conclude, received autonomous support from physical education instructors influences students' long-term attitudes and habits towards physical exercise and health. Students who view their physical education instructors as advocates for their independence and welfare are more inclined to cultivate favorable perspectives on physical activity, embrace healthy lifestyle practices, and sustain their physical fitness after university, which has also been emphasized by other scholarly articles (Polet et al., 2019; Wintle, 2022). This highlights the significant influence that autonomy-supportive physical education instruction may have on students' holistic well-being, satisfaction, and achievements in higher education and beyond.

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## Conclusion

This present study highlights the significant influence of Perceived Instructor's Autonomy Support on several aspects of student engagement in Physical Education classes. The clear connections shown between autonomy support and students' vigor, dedication, and absorption emphasize the crucial influence of instructors' conduct on students' experiences and results in the field of physical education. The importance of promoting autonomy-supportive teaching approaches in physical education is highlighted in these findings. Instructors should provide students choices, include them in making decisions, and focus on developing competencies to encourage students to take control of their physical activities. Moreover, the implications go beyond the physical education classroom to include wider educational settings, highlighting the importance of autonomy support in enhancing student engagement and welfare in several academic areas. Educators can encourage intrinsic drive, cognitive engagement, and a feeling of belonging and independence among students by emphasizing autonomy support in their teaching methods. Moreover, physical education instructors can boost student engagement by incorporating various strategies. This entails providing a diverse range of activities and offering students the autonomy to choose the activities that captivate their attention the most. By doing so, it caters to individual preferences and fosters a sense of ownership in their educational journey. Engaging students in decision-making can be accomplished by seeking their feedback on class regulations, project topics, and even evaluation techniques, so fostering a more inclusive and interactive classroom atmosphere. Moreover, by emphasizing the enhancement of skills and abilities through personalized feedback and the establishment of attainable goals, students' self-assurance and proficiency can be enhanced, leading to an intrinsic desire for motivation. By implementing these suggestions, physical education instructors can establish a dynamic educational experience that not only improves student engagement in physical education but also nurtures a lifelong dedication to active living and learning. The results highlight the significant influence of autonomy-supportive teaching methods on enhancing student achievement and satisfaction in higher education. It is necessary to conduct further investigations and implement autonomy-

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supportive measures to enhance student engagement and improve educational experiences.

Also, policy makers should provide the most attention to developing autonomy-supportive teaching in physical education in order to cultivate a sustained interest in physical activity beyond the university setting. This can be accomplished by implementing rules that advocate professional development programs aimed at preparing educators in ways that promote autonomy and providing resources for a wide range of student-centered learning opportunities. By incorporating flexibility into physical education programs, institutions can effectively cater to the unique needs of each student, thereby fostering an inclusive and motivating atmosphere. Policy makers may improve student engagement and academic success by prioritizing these activities, while also fostering a long-term dedication to physical activity. This strategy not only provides advantages to students during their time in university but also motivates them to sustain a dynamic and healthful way of life throughout their lives, therefore contributing to the overall well-being of society.

On the other hand, aside from quantitative methods, investigating perceived instructor's autonomy support and its influence on students' engagement in PE can be enhanced by qualitative techniques like interviews, FGDs, and observational studies. Qualitative methods offer a more profound insight into the contextual elements and personal encounters that impact students' views on autonomy support in the physical education classroom. By conducting interviews with students and physical education instructors, researchers can uncover the particular behaviors, interactions, and teaching methods that lead to perceived autonomy support and its impact on student engagement. Additionally, focus group discussions (FGD) provide a forum for students to collectively express their opinions and experiences, enabling a detailed examination of social processes and influence of peers in the physical education classroom environment. Likewise, observational studies allow for direct observation of classroom interactions and instructional techniques, capturing the subtleties of autonomy-supportive behaviors and their influence on student engagement in real-time. By combining qualitative research methods with quantitative methodologies, researchers

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can achieve a thorough grasp of the many aspects influencing students' experiences and outcomes in physical education classrooms.

Most importantly, it is critical to recognize the limitations and scope of this study, despite the fact that its results reveal significant data about the association between students' engagement in PE classes and their perceptions of their instructors' autonomy support. Undergraduates from a one state university in the Philippines make up the majority of the responses, so it may be difficult to extrapolate their results to the student body at larger universities in the Philippines and other higher education institutions around the globe. The influence of autonomy support on PE engagement should be more fully recognized in subsequent studies if it includes a more representative sample of students from a range of socioeconomic and educational backgrounds. Regardless of these limitations, the study brings substantially to what is already known about the benefits of autonomy-supportive teaching practices in PE classrooms for student engagement and well-being, laying the groundwork for future studies and pedagogical interventions to improve PE for students around the world.

## References

- Amerstorfer, C. M., & Freiin von Münster-Kistner, C. (2021). Student perceptions of academic engagement and student-teacher relationships in problem-based learning. *Frontiers in Psychology, 12*. <https://doi.org/10.3389/fpsyg.2021.713057>
- Arık, A., & Erturan, A. G. (2023). Autonomy support and motivation in physical education: a comparison of teacher and student perspectives. *International Journal of Contemporary Educational Research, 10*(3), 649–657. <https://doi.org/10.52380/ijcer.2023.10.3.470>
- Behzadnia, B., Mollaei Zangi, F., Rezaei, F., & Eskandarnejad, M. (2023). Predicting students' basic psychological needs, motivation, and well-being in online physical education: a semester-term longitudinal study. *International Journal of Sport and Exercise Psychology, 1*–19. <https://doi.org/10.1080/1612197X.2023.2237051>
- Behzadnia, B., Rezaei, F., & Salehi, M. (2022). A need-supportive teaching approach among students with intellectual disability in physical education. *Psychology of Sport and Exercise, 60*, 102156. <https://doi.org/10.1016/j.psychsport.2022.102156>

Original article. Perceived Physical Education Instructor's Autonomy Support to Students' University Engagement: Deciphering an unexplored issue in the case of a State University in the Philippines. Vol. 10, n.º 3; p. 437-463, Septiembre 2024. <https://doi.org/10.17979/sportis.2024.10.3.10642>

- Bertills, K., Granlund, M., & Augustine, L. (2019). Inclusive teaching skills and student engagement in physical education. *Frontiers in Education*, 4. <https://doi.org/10.3389/educ.2019.00074>
- Bessa, C., Hastie, P., Rosado, A., & Mesquita, I. (2021). Sport education and traditional teaching: influence on students' empowerment and self-confidence in high school physical education classes. *Sustainability*, 13(2), 578. <https://doi.org/10.3390/su13020578>
- Boonekamp, G. M. M., Dierx, J. A. J., & Jansen, E. (2022). Shaping physical activity through facilitating student agency in secondary schools in the netherlands. *International Journal of Environmental Research and Public Health*, 19(15), 9028. <https://doi.org/10.3390/ijerph19159028>
- Burgueño, R., Macarro-Moreno, J., & Medina-Casabón, J. (2020). Psychometry of the multidimensional perceived autonomy support scale in physical education with spanish secondary school students. *SAGE Open*, 10(1), 215824401990125. <https://doi.org/10.1177/2158244019901253>
- Cale, L. (2023). Physical Education: At the centre of physical activity promotion in schools. *International Journal of Environmental Research and Public Health*, 20(11), 6033. <https://doi.org/10.3390/ijerph20116033>
- Carmona-Halty, M. A., Schaufeli, W. B., & Salanova, M. (2019). The utrecht work engagement scale for students (uwes-9s): factorial validity, reliability, and measurement invariance in a chilean sample of undergraduate university students. *Frontiers in Psychology*, 10. <https://doi.org/10.3389/fpsyg.2019.01017>
- Christodoulakis, A., Bouloukaki, I., Aravantinou-Karlatou, A., Margetaki, K., Zografakis-Sfakianakis, M., & Tsiligianni, I. (2024). The effectiveness of teaching the teacher interventions in improving the physical activity among adolescents in schools: A scoping review. *Healthcare*, 12(2), 151. <https://doi.org/10.3390/healthcare12020151>
- Demirbatır, R. E. (2020). Comparison of burnout, vigor and education satisfaction of music and art majors in department of fine arts education. *International Journal of Evaluation and Research in Education*, 9(3), 478-485. <https://doi.org/10.11591/ijere.v9i3.20548>



Original article. Perceived Physical Education Instructor's Autonomy Support to Students' University Engagement: Deciphering an unexplored issue in the case of a State University in the Philippines. Vol. 10, n.º 3; p. 437-463, Septiembre 2024. <https://doi.org/10.17979/sportis.2024.10.3.10642>

- El-Hilali, N., Al-Jaber, S., & Hussein, L. (2015). Students' satisfaction and achievement and absorption capacity in higher education. *Procedia - Social and Behavioral Sciences*, 177, 420–427. <https://doi.org/10.1016/j.sbspro.2015.02.384>
- Estévez, I., Rodríguez-Llorente, C., Piñeiro, I., González-Suárez, R., & Valle, A. (2021). School engagement, academic achievement, and self-regulated learning. *Sustainability*, 13(6), 3011. <https://doi.org/10.3390/su13063011>
- Ferreira Silva, R. M., Mendonça, C. R., Azevedo, V. D., Raof Memon, A., Noll, P. R. E. S., & Noll, M. (2022). Barriers to high school and university students' physical activity: A systematic review. *PLOS ONE*, 17(4), e0265913. <https://doi.org/10.1371/journal.pone.0265913>
- Fin, G., Moreno-Murcia, J. A., León, J., Baretta, E., & Júnior, R. J. N. (2019). Interpersonal autonomy support style and its consequences in physical education classes. *PLOS ONE*, 14(5), e0216609. <https://doi.org/10.1371/journal.pone.0216609>
- Frömel, K., Groffik, D., & Mitáš, J. (2023). Adolescents' participation in school physical activity before and during the covid-19 pandemic: An educational priority. *Education Sciences*, 13(3), 304. <https://doi.org/10.3390/educsci13030304>
- García Bengoechea, E., Lorenzino, L., & Gray, S. (2018). Not academic enough? Enjoyment of physical education and the arts and school engagement in early and middle adolescence. *Retos*, 35, 301–309. <https://doi.org/10.47197/retos.v0i35.63700>
- Granero-Gallegos, A., Gómez-López, M., & Manzano-Sánchez, D. (2023). Effect of a physical education teacher's autonomy support on self-esteem in secondary-school students: The mediating role of emotional intelligence. *Children*, 10(10), 1690. <https://doi.org/10.3390/children10101690>
- Guay, F. (2022). Applying self-determination theory to education: regulations types, psychological needs, and autonomy supporting behaviors. *Canadian Journal of School Psychology*, 37(1), 75–92. <https://doi.org/10.1177/08295735211055355>
- Guo, K., Ma, Q., Yao, S., Liu, C., Hui, Z., Chen, H., & Wen, P. (2022). The relationship between empowering motivational climate in physical education and social



Original article. Perceived Physical Education Instructor's Autonomy Support to Students' University Engagement: Deciphering an unexplored issue in the case of a State University in the Philippines. Vol. 10, n.º 3; p. 437-463, Septiembre 2024. <https://doi.org/10.17979/sportis.2024.10.3.10642>

adaptation of senior high school students: An analysis of chain mediating effect. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.854279>

Guo, Q., Samsudin, S., Yang, X., Gao, J., Ramlan, M. A., Abdullah, B., & Farizan, N. H. (2023). Relationship between perceived teacher support and student engagement in physical education: A systematic review. *Sustainability*, 15(7), 6039. <https://doi.org/10.3390/su15076039>

Gutiérrez, M., & Tomás, J. M. (2019). The role of perceived autonomy support in predicting university students' academic success mediated by academic self-efficacy and school engagement. *Educational Psychology*, 39(6), 729–748. <https://doi.org/10.1080/01443410.2019.1566519>

Harangi-Rákos, M., Pfau, C., Bácsné Bába, É., Bács, B. A., & Kőmives, P. M. (2022). Lockdowns and physical activities: sports in the time of covid. *International Journal of Environmental Research and Public Health*, 19(4), 2175. <https://doi.org/10.3390/ijerph19042175>

Hinnersmann, P., Hoier, K., & Dutke, S. (2020). Executing learning activities and autonomy-supportive instructions enhance autonomous motivation. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.02109>

Holt, A.-D., Smedegaard, S., Pawlowski, C. S., Skovgaard, T., & Christiansen, L. B. (2019). Pupils' experiences of autonomy, competence and relatedness in 'Move for Well-being in Schools': A physical activity intervention. *European Physical Education Review*, 25(3), 640–658. <https://doi.org/10.1177/1356336X18758353>

Hsu, W.-T., Shang, I.-W., & Hsiao, C.-H. (2021). Perceived teachers' autonomy support, positive behaviour, and misbehaviour in physical education: The roles of advantageous comparison and non-responsibility. *European Physical Education Review*, 27(3), 529–542. <https://doi.org/10.1177/1356336X20971332>

Huésca, E., Moreno-Murcia, J. A., Domenech, J. F., & Núñez, J. L. (2020). Effects of an autonomy-supportive physical activity program for compensatory Care Students During Recess Time. *Frontiers in Psychology*, 10. <https://doi.org/10.3389/fpsyg.2019.03091>

Hutmacher, D., Eckelt, M., Bund, A., & Steffgen, G. (2020). Does motivation in physical education have an impact on out-of-school physical activity over time? A

Original article. Perceived Physical Education Instructor's Autonomy Support to Students' University Engagement: Deciphering an unexplored issue in the case of a State University in the Philippines. Vol. 10, n.º 3; p. 437-463, Septiembre 2024. <https://doi.org/10.17979/sportis.2024.10.3.10642>

longitudinal approach. *International Journal of Environmental Research and Public Health*, 17(19), 7258. <https://doi.org/10.3390/ijerph17197258>

Jankauskiene, R., Urmanavicius, D., & Baceviciene, M. (2022). Associations between perceived teacher autonomy support, self-determined motivation, physical activity habits and non-participation in physical education in a sample of lithuanian adolescents. *Behavioral Sciences*, 12(9), 314. <https://doi.org/10.3390/bs12090314>

Jaya, L. H. S., & Ariyanto, E. (2021). The effect of vigor, dedication and absorption on the employee performance of pt garuda indonesia cargo. *European Journal of Business and Management Research*, 6(4), 311–316. <https://doi.org/10.24018/ejbmr.2021.6.4.1006>

Johansen, M. O., Eliassen, S., & Jenø, L. M. (2023). The bright and dark side of autonomy: How autonomy support and thwarting relate to student motivation and academic functioning. *Frontiers in Education*, 8. <https://doi.org/10.3389/educ.2023.1153647>

Koehn, S., Stavrou, N. A. M., Cogley, J., Morris, T., Mosek, E., & Watt, A. P. (2017). Absorption in sport: A cross-validation study. *Frontiers in Psychology*, 8. <https://doi.org/10.3389/fpsyg.2017.01419>

Koob, C., Schröpfer, K., Coenen, M., Kus, S., & Schmidt, N. (2021). Factors influencing study engagement during the COVID-19 pandemic: A cross-sectional study among health and social professions students. *PLOS ONE*, 16(7), e0255191. <https://doi.org/10.1371/journal.pone.0255191>

Kostorz, K., Zwierzchowska, A., & Ziemia, M. (2022). Effects of the covid-19 pandemic on the perception of inclusion in school education and physical activity among polish students. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.880791>

Leisterer, S., & Jekauc, D. (2019). Students' emotional experience in physical education—a qualitative study for new theoretical insights. *Sports*, 7(1), 10. <https://doi.org/10.3390/sports7010010>

Leisterer, S., & Paschold, E. (2022). Increased perceived autonomy-supportive teaching in physical education classes changes students' positive emotional perception

Original article. Perceived Physical Education Instructor's Autonomy Support to Students' University Engagement: Deciphering an unexplored issue in the case of a State University in the Philippines. Vol. 10, n.º 3; p. 437-463, Septiembre 2024. <https://doi.org/10.17979/sportis.2024.10.3.10642>

compared to controlling teaching. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.1015362>

Leyton-Román, M., Núñez, J. L., & Jiménez-Castuera, R. (2020). The importance of supporting student autonomy in physical education classes to improve intention to be physically active. *Sustainability*, 12(10), 4251. <https://doi.org/10.3390/su12104251>

Li, C., Kee, Y. H., Kong, L. C., Zou, L., Ng, K. L., & Li, H. (2019). Autonomy-supportive teaching and basic psychological need satisfaction among school students: The role of mindfulness. *International Journal of Environmental Research and Public Health*, 16(14), 2599. <https://doi.org/10.3390/ijerph16142599>

Li, Y., Qiu, L., & Sun, B. (2021). School engagement as a mediator in students' social relationships and academic performance: a survey based on CiteSpace. *International Journal of Crowd Science*, 5(1), 17–30. <https://doi.org/10.1108/IJCS-02-2020-0005>

Listau, K., Christensen, M., & Innstrand, S. T. (2017). Work engagement: a double-edged sword? a study of the relationship between work engagement and the work-home interaction using the ARK research platform. *Scandinavian Journal of Work and Organizational Psychology*, 2(1), 1–13. <https://doi.org/10.16993/sjwop.20>

Liu, F., Gai, X., Xu, L., Wu, X., & Wang, H. (2021). School engagement and context: A multilevel analysis of adolescents in 31 provincial-level regions in China. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.724819>

Lochbaum, M., & Jean-Noel, J. (2016). Perceived autonomy-support instruction and student outcomes in physical education and leisure-time: A meta-analytic review of correlates. *RICYDE. Revista Internacional de Ciencias Del Deporte*, 12(43), 29–47. <https://doi.org/10.5232/ricyde2016.04302>

Ma, Q. (2021). the role of teacher autonomy support on students' academic engagement and resilience. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.778581>

Maldonado, E., Zamarripa, J., Ruiz-Juan, F., Pacheco, R., & Delgado, M. (2019). Teacher autonomy support in physical education classes as a predictor of

Original article. Perceived Physical Education Instructor's Autonomy Support to Students' University Engagement: Deciphering an unexplored issue in the case of a State University in the Philippines. Vol. 10, n.º 3; p. 437-463, Septiembre 2024. <https://doi.org/10.17979/sportis.2024.10.3.10642>

motivation and concentration in mexican students. *Frontiers in Psychology*, 10. <https://doi.org/10.3389/fpsyg.2019.02834>

Martinek, D., Zumbach, J., & Carmignola, M. (2020). The impact of perceived autonomy support and autonomy orientation on orientations towards teaching and self-regulation at university. *International Journal of Educational Research*, 102, 101574. <https://doi.org/10.1016/j.ijer.2020.101574>

Martinek, D., Zumbach, J., & Carmignola, M. (2022). How much pressure do students need to achieve good grades?—The relevance of autonomy support and school-related pressure for vitality, contentment with, and performance in school. *Education Sciences*, 12(8), 510. <https://doi.org/10.3390/educsci12080510>

Meng, H. Y., & Keng, J. W. C. (2016). The effectiveness of an autonomy-supportive teaching structure in physical education. *RICYDE. Revista Internacional de Ciencias Del Deporte*, 12(43), 5–28. <https://doi.org/10.5232/ricyde2016.04301>

Miao, J., & Ma, L. (2023). Teacher autonomy support influence on online learning engagement: The mediating roles of self-efficacy and self-regulated learning. *SAGE Open*, 13(4). <https://doi.org/10.1177/21582440231217737>

Mohr, D. L., Wilson, W. J., & Freund, R. J. (2022). Linear Regression. In *Statistical Methods* (pp. 301–349). Elsevier. <https://doi.org/10.1016/B978-0-12-823043-5.00007-2>

Moore, R., Edmondson, L., Gregory, M., Griffiths, K., & Freeman, E. (2023). Barriers and facilitators to physical activity and further digital exercise intervention among inactive British adolescents in secondary schools: a qualitative study with physical education teachers. *Frontiers in Public Health*, 11. <https://doi.org/10.3389/fpubh.2023.1193669>

Muth, J., & Lüftenegger, M. (2024). Associations between autonomy-supportive teaching, the use of non-academic ICTs, and student motivation in English Language Learning. *Sustainability*, 16(3), 1337. <https://doi.org/10.3390/su16031337>

Oldervik, S., & Lagestad, P. (2021). Importance of providing additional choices in relation to pupils' happiness, mastery, well-being, contentment, and level of

Original article. Perceived Physical Education Instructor's Autonomy Support to Students' University Engagement: Deciphering an unexplored issue in the case of a State University in the Philippines. Vol. 10, n.º 3; p. 437-463, Septiembre 2024. <https://doi.org/10.17979/sportis.2024.10.3.10642>

physical activity in physical education. *Frontiers in Sports and Active Living*, 3. <https://doi.org/10.3389/fspor.2021.599953>

Olivier, E., Galand, B., Morin, A. J. S., & Hospel, V. (2021). Need-supportive teaching and student engagement in the classroom: Comparing the additive, synergistic, and global contributions. *Learning and Instruction*, 71, 101389. <https://doi.org/10.1016/j.learninstruc.2020.101389>

Polet, J., Hassandra, M., Lintunen, T., Laukkanen, A., Hankonen, N., Hirvensalo, M., Tammelin, T., & Hagger, M. S. (2019). Using physical education to promote out-of-school physical activity in lower secondary school students – a randomized controlled trial protocol. *BMC Public Health*, 19(1), 157. <https://doi.org/10.1186/s12889-019-6478-x>

Pulido-Martos, M., Cortés-Denia, D., de la Rosa-Blanca, J. J., & Lopez-Zafra, E. (2020). The Shirom-Melamed Vigor Measure for students: Factorial analysis and construct validity in Spanish undergraduate university students. *International Journal of Environmental Research and Public Health*, 17(24), 9590. <https://doi.org/10.3390/ijerph17249590>

Pulimeno, M., Piscitelli, P., Colazzo, S., Colao, A., & Miani, A. (2020). School as ideal setting to promote health and wellbeing among young people. *Health Promotion Perspectives*, 10(4), 316–324. <https://doi.org/10.34172/hpp.2020.50>

Rahman, Md. M., Tabash, M. I., Salamzadeh, A., Abdul, S., & Rahaman, Md. S. (2022). Sampling Techniques (Probability) for Quantitative Social Science Researchers: A conceptual guidelines with examples. *SEEU Review*, 17(1), 42–51. <https://doi.org/10.2478/seeur-2022-0023>

Rautanen, P., Soini, T., Pietarinen, J., & Pyhältö, K. (2021). Primary school students' perceived social support in relation to study engagement. *European Journal of Psychology of Education*, 36(3), 653–672. <https://doi.org/10.1007/s10212-020-00492-3>

Rocliffe, P., Adamakis, M., O'Keeffe, B. T., Walsh, L., Bannon, A., Garcia-Gonzalez, L., Chambers, F., Stylianou, M., Sherwin, I., Mannix-McNamara, P., & MacDonncha, C. (2023). The impact of typical school provision of physical education, physical activity and sports on adolescent mental health and wellbeing:



Original article. Perceived Physical Education Instructor's Autonomy Support to Students' University Engagement: Deciphering an unexplored issue in the case of a State University in the Philippines. Vol. 10, n.º 3; p. 437-463, Septiembre 2024. <https://doi.org/10.17979/sportis.2024.10.3.10642>

A systematic literature review. *Adolescent Research Review*.  
<https://doi.org/10.1007/s40894-023-00220-0>

Schaufeli, W. B. (2017). General Engagement: Conceptualization and Measurement with the Utrecht General Engagement Scale (UGES). *Journal of Well-Being Assessment*, 1(1-3), 9-24. <https://doi.org/10.1007/s41543-017-0001-x>

Sierra-Díaz, M. J., González-Villora, S., Pastor-Vicedo, J. C., & López-Sánchez, G. F. (2019). Can we motivate students to practice physical activities and sports through models-based practice? A systematic review and meta-analysis of psychosocial factors related to physical education. *Frontiers in Psychology*, 10(October). <https://doi.org/10.3389/fpsyg.2019.02115>

Sun, H., Du, C.-R., & Wei, Z.-F. (2024). Physical education and student well-being: Promoting health and fitness in schools. *PLOS ONE*, 19(1), e0296817. <https://doi.org/10.1371/journal.pone.0296817>

Teixeira, P. J., Carraça, E. V, Markland, D., Silva, M. N., & Ryan, R. M. (2012). Exercise, physical activity, and self-determination theory: A systematic review. *International Journal of Behavioral Nutrition and Physical Activity*, 9(1), 78. <https://doi.org/10.1186/1479-5868-9-78>

Teuber, Z., Tang, X., Salmela-Aro, K., & Wild, E. (2021). Assessing engagement in Chinese upper secondary school students using the Chinese Version of the Schoolwork Engagement Inventory: Energy, Dedication, and Absorption (CEDA). *Frontiers in Psychology*, 12, 638189. <https://doi.org/10.3389/fpsyg.2021.638189>

Waalder, R., Halvari, H., Skjesol, K., & Ulstad, S. O. (2022). Students' personal desire for excitement and teachers' autonomy support in outdoor activity: Links to passion, intrinsic motivation, and effort. *Journal for Research in Arts and Sports Education*, 6(2), 61-80. <https://doi.org/10.23865/jased.v6.2958>

Williams, G. C., & Deci, E. L. (1996). Internalization of biopsychosocial values by medical students: A test of self-determination theory. *Journal of Personality and Social Psychology*, 70(4), 767-779. <https://doi.org/10.1037/0022-3514.70.4.767>

Williams, G. C., Grow, V. M., Freedman, Z. R., Ryan, R. M., & Deci, E. L. (1996). Motivational predictors of weight loss and weight-loss maintenance. *Journal of*



Original article. Perceived Physical Education Instructor's Autonomy Support to Students' University Engagement: Deciphering an unexplored issue in the case of a State University in the Philippines. Vol. 10, n.º 3; p. 437-463, Septiembre 2024. <https://doi.org/10.17979/sportis.2024.10.3.10642>

*Personality and Social Psychology*, 70(1), 115–126. <https://doi.org/10.1037/0022-3514.70.1.115>

Wilson, O. W. A., Walters, S. R., Naylor, M. E., & Clarke, J. C. (2021). Physical activity and associated constraints following the transition from high school to university. *Recreational Sports Journal*, 45(1), 52–60. <https://doi.org/10.1177/1558866121995138>

Wintle, J. (2022). Physical education and physical activity promotion: Lifestyle sports as meaningful experiences. *Education Sciences*, 12(3), 181. <https://doi.org/10.3390/educsci12030181>

Yang, D., Chen, P., Wang, H., Wang, K., & Huang, R. (2022). Teachers' autonomy support and student engagement: A systematic literature review of longitudinal studies. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.925955>

Yuan, Y., Ji, X., Yang, X., Wang, C., Samsudin, S., & Omar Dev, R. D. (2022). The effect of persistence of physical exercise on the positive psychological emotions of primary school students under the STEAM education concept. *International Journal of Environmental Research and Public Health*, 19(18), 11451. <https://doi.org/10.3390/ijerph191811451>

Zhang, Y., Ren, M., & Zou, S. (2022). Effect of physical exercise on college students' life satisfaction: Mediating role of competence and relatedness needs. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.930253>