Canadian Journal of Educational and Social Studies
Vol. 6(1), 2026, pp. 161-182

Motivational Climate and Attitudes towards Physical Education: Implications for Student Engagement in Community Youth Sport

Paulo Pereira[1] & Fernando Santos[2] & Daniel A. Marinho[3,4]

[1,2] Centro de Investigação e Inovação em Educação, InED, Escola Superior de Educação, Instituto Politécnico do Porto, Rua Dr. Roberto Frias, 602, 4200-465 Porto, Portugal
[3] Department of Sport Sciences, University of Beira Interior, Covilhã, Portugal
[4] Research Centre in Sports, Health and Human Development (CIDESD), Covilhã, Portugal
Correspondence: Paulo Pereira, Centro de Investigação e Inovação em Educação, InED, Escola Superior de Educação, Instituto Politécnico do Porto, Portugal
Email: paulopereira@ipp.pt

DOI: 10.53103/cjess.v6i1.444

Abstract

Fostering quality physical education and sport programs are complex endeavors. Therefore, the purpose of the present study was three-fold: (a) assess students' varying motivations towards engagement in community sports in relation to age and gender; (b) examine the relationship between students' perceptions towards the motivational climate in physical education classes and their attitudes towards physical education; and (b) analyze the influence of students' attitudes towards physical education and their motivation to engage in community sports. A total of 288 Portuguese adolescent students participated in the present study. Findings highlight that mastery-oriented climates have a significant influence on students' attitudes towards physical education, which also positively influenced intrinsic motivation towards participation in community youth sport programs. Collaborative efforts to design physical education and community youth sport programs may be needed. Such collaborative efforts may create solid grounds for articulated and coherent plans and strategies employed by schools and youth sport organizations.

Keywords: Policy, Youth; Sport, Development, Pedagogy

Motivational Climate and Attitudes towards Physical Education: Implications for Student Engagement in Community Youth Sport

Within contemporary society, youth's physical literacy has decreased considerably, largely due to reduced and thus insufficient physical activity (PA) levels as well as the lack of quality physical education and sport (PES) programming (Guthold et

al., 2018; Johnson & Ginicola, 2021; Mazzoli et al., 2024). To overcome these trends, scholars have deployed efforts within schools, community youth sport organizations and across socio-cultural contexts with the purpose of increasing youth's physical literacy, PA levels as well as fostering positive youth development outcomes such as social responsibility and prosocial behaviors (e.g., Fredrick et al., 2022; Martinek & Hemphill, 2020). Nonetheless, these applied efforts have been unable to help overcome the trends described previously. Indeed, the decline in PA levels can have negative consequences on physical and mental health (Rhodes et al., 2017), particularly across youth cohorts (Guthold et al., 2020). Health issues often associated with physical inactivity and a sedentary lifestyle include obesity and mental health risks (Bedard et al., 2022; Sañudo et al., 2024).

Taken together, despite there is an evident need for quality PA and PES programming, efforts to change the status quo have been somewhat ineffective (Bruner et al., 2023; Iglesias et al., 2023; Lee et al., 2016) due to several interrelated and systemic factors that warrant attention. For instance, policymakers have centered their attention on quantifying PA and PES programming instead of facilitating quality PA and PES programming that fits the needs of socio-cultural contexts (Malcolm et al., 2023). PA and PES programming have indeed been considered unjust and de contextualized. As highlighted by Malcolm et al. (2023) "guideline development should be more inclusive, embrace different types of evidence and disciplinary perspectives, and contribute to the ongoing de-colonisation of global public health" (p. 605). Moreover, the marginalization of physical education across society and schools has hindered teachers' efforts towards quality programming and inherently negatively impacted student outcomes (Shirotriya & Beighle, 2023). Also, the COVID-19 pandemic has intensified these issues and created additional challenges to the feasibility of quality PA and PES programming (Blain et al., 2022; Varea et al., 2023).

Quality PA and PES programming is contingent on multiple processes and attached to several desired outcomes such as the development of an appropriate motivational climate (Huhtiniemi et al., 2022; Pereira et al., 2021; Pons et al., 2023) and positive attitudes towards physical education (Baek & Kim, 2024; Silverman, 2017), respectively. If students are to adopt an active lifestyle and adhere to PA, particularly partake in community youth sport programs carefully attention is needed towards these two variables (Burns et al., 2023). The motivational climate experienced in physical education settings is paramount for students to engage in PA and community sport programs (Pons et al., 2023).

To better understand the motivational climate, scholars have developed several theories to map and situate relevant variables such as achievement goal theory (Nicholls, 1984) and self-determination theory (Deci & Ryan, 1985). Achievement goal theory is based on the premise that individuals engage in PES due to perceived competence and motivational climate. Perceived competence is guided by task-orientation (i.e., competence

is contingent on individual progress) or ego-orientation (i.e., competence is normative and always associated with the competence of others; Roberts, 1992). Moreover, achievement goal theory considers motivational climate as a situational variable (Jaakkola et al., 2016). Ego-oriented performance climates tend to hinder students' attitudes towards PES (García-González et al., 2019). Conversely, task-oriented mastery climates reflect supportive motivational climates whereas students present increased levels of engagement and positive attitudes towards physical education (Pereira et al., 2023). Therefore, attitudes towards PES are influenced by how teachers structure the motivational climate (İlker & Demirhan, 2012).

Another theory that has been used to examine motivational climates is self-determination theory (Deci & Ryan, 1985). Self-determination theory can help provide guidelines towards the processes and mechanisms associated with intrinsic motivation within PES programming (Llanos-Muñoz et al., 2023; Sun et al., 2017). To foster intrinsic motivation, individuals must fulfill their needs for autonomy, relatedness and positive social relationships (Saugy et al., 2019). Hence, self-determination moves across the motivational spectrum that involves amotivation (absence of motivation to engage in an activity), extrinsic motivation (i.e., reward-driven motivation towards an activity) and intrinsic motivation (i.e., self-determined motivation). Based on these notions, previous studies have attempted to examine students and teachers' perceptions concerning the motivational climate within PES programming (Leo et al., 2020; Ntoumanis & Standage, 2009; Ulstad et al., 2018). However, there are pitfalls that must be considered moving forward.

Despite these advances in scholarly work and teaching practice, there are still limitations in current research efforts that warrant attention if scholarly work is to meaningfully impact PA levels and engagement in community youth sport programs. First, there is a scarcity of studies that have examined the association between students' perceptions towards the motivational climate, attitudes towards physical education and participation in community youth sport programs as interrelated variables (Bryan & Solmon, 2012; Gutiérrez et al., 2018). Such understanding is critical to enhance scholars' understandings about PES programming within and outside the school environment, which can yield relevant insights for more socially just policy development processes, teacher education programming and quality teaching practice (Brinkley, 2024; Kirk, 2005). Second, more research is also needed across diverse socio-cultural contexts where social norms, policies, culture and teacher-student interactions have different nuances, which can inherently have an impact on the aforementioned variables (e.g., Chen et al., 2020; Pereira et al., 2023). There is a contemporary research agenda that has pushed the needle towards examining non-English speaking countries as a way to extend changes to less privileged school settings. The present study represents a way to provide voices to actors that have been in some cases marginalized and erased from discussions on PA and PES. Finally,

efforts to decenter research from teachers and focus on students is a needed step to enable scholars to understand how youth position PES programming and its impacts (Russell, 2016).

Purpose

Therefore, the purpose of the present study was three-fold: (a) assess students' varying motivations towards engagement in community sports in relation to age and gender; (b) examine the relationship between students' perceptions towards the motivational climate in physical education classes and their attitudes towards physical education; and (b) analyze the influence of students' attitudes towards physical education and their motivation to engage in community sports. To achieve (b) and (c), a structural equation model (SEM), which suggests that the motivational climate in physical education classes and students' attitudes towards physical education are predictors of motivation to engage in community sports was utilized (see Figure 1).

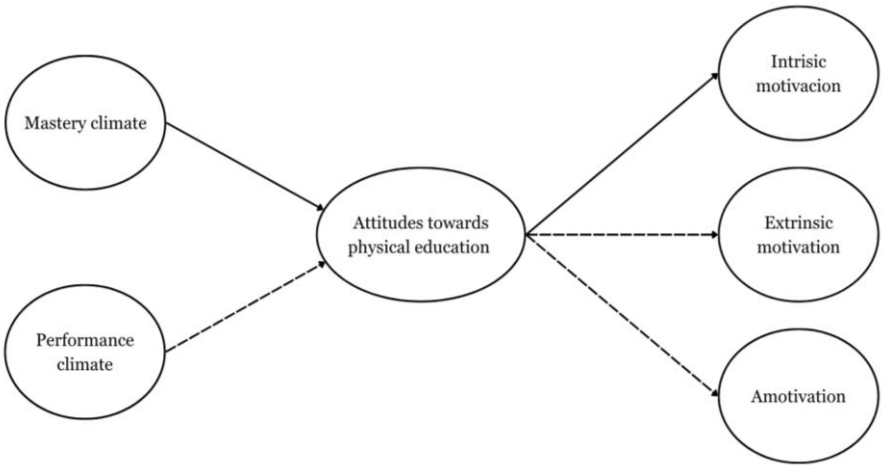


Figure 1: Hypothetical relationships model between motivational climate, students' attitudes towards physical education and motivation for engaging in community sport

Methods

Sample

A total of 288 students participated in the present study (155 males = 53.8%; 133 females = 46.2%), aged 12-17 years old (M = 14.56; SD = 1.38), attending the 7th, 8th and 9th grades of five secondary schools located in urban areas within five districts in northern

and central Portugal. These students engaged in various sports such as handball, athletics, basketball, football, swimming and volleyball, and had on average 3.27 years of experience in community sport programs (*DP* = 1.45).

Procedure

Ethical approval was attained from the Portuguese Ministry of Education (Office of Statistics and Educational Planning). Then, school administrators were contacted via phone and/or email, as well as informed about the aims and implications of the present study, in order to obtain permission to collect data. Subsequently, parents and students were contacted and briefed about the study's aims and implications. To participate in the present study, students needed to be involved in community sports for at least a year. Students were informed they were not obliged to answer any of the questions if they did not feel comfortable, and that they could withdrawal from the study at any time. Moreover, students were also informed that the study was not part of any assessment from their teachers. Once parents and athletes agreed to participate in the present study, data collection was conducted at the beginning or at the end of a physical education class.

Data Collection

Attitudes towards Physical Education

Students' attitudes towards physical education were assessed using the Portuguese version of the Student's Attitudes towards Physical Education questionnaire (SAtPE; Subramaniam & Silverman, 2000), adapted and validated by Pereira et al. (2020). In this instrument, attitudes are conceptually understood as a construct with two components: cognitive (perceived usefulness); and affective (pleasure). The cognitive component refers to beliefs about the characteristics of the attitude object while the affective component assesses the degree of emotional attraction or feeling towards an attitude object (Subramaniam & Silverman, 2007). Each of these components contains two sub-factors which are the teacher and the curriculum. Therefore, the SAtPE consists of 20 items, 8 of which are worded negatively. The answers to the items are presented on a 5-point Likert scale ranging from totally disagree (corresponding to 1 point) to totally agree (5 points). Thus, the score on the questionnaire can range from a minimum of 20 to a maximum of 100 points. The higher a student's score, the more positive their attitude towards PE is.

Motivational Climate in Physical Education

Students' perceptions of the motivational climate in physical education were assessed using the Portuguese version of the English version of the Echelle de Perception

du Climat Motivational (EPCM; Biddle et al., 1995), adapted and validated by Pereira et al. (2022). This questionnaire contains 19 items and was developed with the aim of assessing the extent to which students perceive the motivational climate in physical education classes to be mastery-oriented or performance-oriented (Standage et al., 2003a, 2003b). It includes five first-order factors: (1) 'pupil's pursuit of progress' (5 items); (2) 'teacher's promotion of learning' (4 items); (3) 'pupil's pursuit of comparison' (3 items); (4) 'teacher's promotion of comparison' (3 items); (5) 'worrying about making mistakes' (4 items). The first two factors are part of a second-order factor called 'mastery climate', while the remaining three are included within the 'performance climate'. The questionnaire includes a 5-point Likert scale ranging from strongly disagree (1) and strongly agree (5).

Motivation for Sport Practice

The Portuguese version of the Sport Motivation Scale II (SMS-II, Pelletier et al., 2013), adapted and validated by Pereira et al. (2024) and Rodrigues el al. (2021) was used to examine students' motivation to engage in community sports. The SMS-II consists of 18 items, which are grouped into six subscales that measure motivational regulation situated on the self-determination continuum: (a) amotivation; (b) extrinsic regulation; (c) introjected regulation; (d) identified regulation; (e) integrated regulation; and (f) intrinsic motivation. Students are asked to state the extent to which their reasons for engaging in community sports correspond to their own personal reasons. Motivation is assessed using a 7-point Likert scale ranging from 'does not fully correspond' (1) to 'fully corresponds' (7). Based on the purpose of this study, only three dimensions of SMS-II were used: intrinsic motivation, external regulation and demotivation.

Data Analysis

Based on the study's purposes, a descriptive analysis of the data was conducted to assess the mean and standard deviation concerning the three subscales of the SMS-II: intrinsic motivation, extrinsic motivation and demotivation. Differences in students' motivation to engage in community sports in relation to age and gender were determined through the analysis of variance (ANOVA). Once the ANOVA was significant, the Sheffe's post-hoc test was utilized. The usage of SEM enabled the research team to develop a series of analytical steps to confirm the type and direction of the relationships between the variables that are present in the model (see Figure 2). The fit indices used were the CFI (comparative fit index), the RMSEA (root mean square error of approximation) and the RMSR (root mean square residual). To examine causal relationships between variables, a multiple regression analysis was conducted.

Results

Descriptive Statistics

Table 1 presents the average scores across the three dimensions of the SMS-II. Findings highlight that students have higher levels of intrinsic motivation (*M* = 17.22; *SD* = 4.13) than extrinsic motivation (*M* = 8.76; *SD* = 5.54), as well as showed low levels of demotivation (*M* = 7.72; *SD* = 5.00).

Table 1: Mean and standard deviation associated with the dimensions of the SMS - II

Dimensions	Boys	Girls	Total
Demotivation	8.50 (± 5.48)	6.82 (± 4.22)	7.72 (± 5.00)
External regulation	9.83 (± 5.78)	7.52 (± 4.99)	8.76 (± 5.54)
Intrinsic motivation	16.90 (± 4.30)	17.60 (± 3.90)	17.22 (± 4.13)

The analysis of variance (one-way ANOVA) showed that there were statistically significant differences between the values associated with intrinsic dimension and those for external regulation ($t = 5.67$; $df = 15$; $p = .046$), as well as concerning demotivation ($t = 9.23$; $df = 15$; $p = .000$). Moreover, there were no significant differences in intrinsic motivation [$F(5,281) = 1.23$; p= ns] and demotivation [$F(5,280) = 2.14$; p= ns] according to age. However, there were differences in external regulation in relation to age [$F(5,281) = 3.14$; $p < .01$]. Hence, Sheffe's post-hoc test showed significant differences ($p < .001$) between students aged 12 (*M*= 10.63; *SD*= 5.18) and 14 (*M*= 7.51; *SD*= 5.60). Interestingly, with regards to gender male students obtained significantly higher average scores than females on the demotivation subscale [$F(1,285) = 8.26$; $p < .01$] and the external regulation subscale [$F(1,286) = 13.01$; $p < .001$]. As for intrinsic motivation, there were no statistically significant differences between the two groups [$F(1,286) = 2.09$; p= ns].

Correlations

Correlations between the factors of the three scales were assessed (SApTE, EPCM and SMS-II; see Table 2). Findings showed there was a positive correlation between the following EPCM factors: (a) 'pupil's pursuit of progress'; (b) 'teacher's promotion of learning'; and (c) 'pupil's pursuit of comparison'. The remaining EPCM factors were also positively correlated. Also, there was an association between 'pupil's pursuit of comparison' and 'teacher's promotion of comparison'.

The four factors associated with attitudes towards physical education were also strongly and positively correlated with each other. Moreover, intrinsic motivation for engaging in community sports was negatively associated with extrinsic motivation and

demotivation. Also, there was a strong positive correlation between extrinsic motivation and demotivation.

Table 2: Correlations between the variables associated with the model

	1	2	3	4	5	6	7	8	9	10	11
1											
2	,54**										
3	,33**	,39**									
4	,06	,11	,15*								
5	,13	,12	,09	,14*							
6	,67**	,61**	,18**	-,04	,07						
7	,61**	,53**	,14*	-,09	-,04	,79**					
8	,64**	,62**	,17**	-,06	,08	,84**	,77**				
9	,62**	,47**	,16**	-,03	-,09	,78**	,73**	,76**			
10	,28**	,23**	,12	-,05	-,15*	,21**	,25**	,09	,14*		
11	-,01	,07	,10	,16*	,23**	,10	,11	-,16*	,08	-,21**	
12	-,03	,06	,09	,19**	,14*	,06	,09	-,11	,07	-,37**	,75**

* p< .05; ** p<.01

1. Pursuit of progress by pupils; 2. Promotion of learning by teacher; 3. Pursuit of comparison by pupils; 4. Promotion of comparison by teacher; 5. Worries about mistakes; 6. Attitudes pleasure professor; 7. Attitudes pleasure curriculum; 8. Attitudes usefulness professor; 9. Attitudes usefulness curriculum; 10. Intrinsic motivation; 11. Extrinsic motivation; 12. Amotivation.

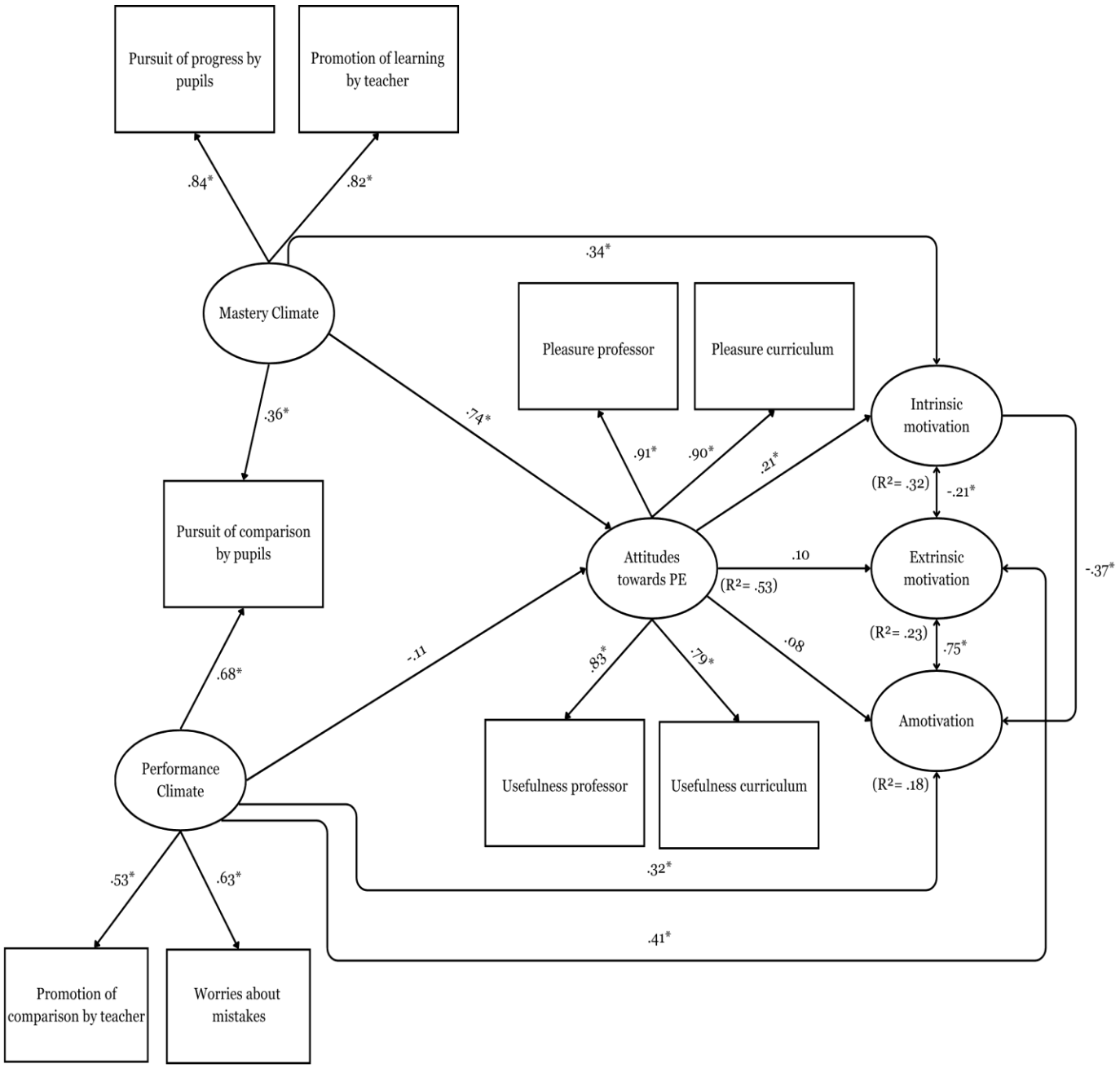
The variables ‘pupil’s pursuit of progress’, ‘teacher’s promotion of learning’ and ‘pupil’s pursuit of comparison’ were positively associated with all the factors related to attitudes towards physical education. Moreover, there was also a positive relationship between ‘pupil’s pursuit of progress’ and ‘teacher’s promotion of learning’, as well as between these variables and intrinsic motivation. Conversely, ‘teacher’s promotion of comparison’ and ‘worrying about making mistakes’ were positively correlated with extrinsic motivation and demotivation. It should also be noted the three factors associated with attitudes towards physical education (i.e., teacher enjoyment, curriculum enjoyment and curriculum usefulness) were positively correlated with extrinsic motivation. On other hand, the ‘teacher usefulness’ factor was negatively correlated with extrinsic motivation.

Predictability of Motivations to Engage in Community Sport

In the initial model, it was thought that the motivational climate in physical education classes was associated with student attitudes. Moreover, student attitudes were considered to be a predictor of the reasons that lead students to partake in community sport programs. However, findings showed that this model presented an unsatisfactory quality of fit {χ^2 (96) = 408.52; χ^2/df = 4.26; CFI = .76; TLI = .73; RMSEA = .11; [90% CI; .09 - .12]}. In order to improve the quality of fit, certain non-significant relationships were eliminated. This resulted in a model with an acceptable fit when comparing with the original version {χ^2 (62) = 140.35; χ^2/df = 2.34; CFI = .88; TLI = .86; RMSEA = .06; [90% CI; .04 - .05]}.

Concerning the standardized factor weights, their values vary between .36 and .91. In light of the relationships between factors, the climate of mastery in physical education classes was positively correlated with students' attitudes (β = .74) and intrinsic motivation (β = .37). Conversely, the performance climate was associated with external motivation (β = .33) and demotivation (β = .28). Students' attitudes towards physical education were associated with intrinsic motivation (β = .21).

In order to examine the predictors of students' attitudes towards physical education, as well as their motivations for practicing community sports, a multiple regression analysis was conducted. Findings highlight that students' perceptions of a mastery climate explain 53% of the variance in their attitudes towards physical education. Student attitudes were not influenced by students' perceptions about the existence of a performance climate. Conversely, a mastery climate and student attitudes were able to explain 32% of the total variance in intrinsic motivation to engage in community sports. A performance climate is a predictor of extrinsic motivation and demotivation, with 23% and 18% of the variance, respectively.



Note: * p< .05

Figure 2: Results of the proposed model

Discussion

The purpose of the present study was three-fold: (a) assess students' varying motivations towards engagement in community sports in relation to age and gender; (b) examine the relationship between students' perceptions towards the motivational climate in physical education classes and their attitudes towards physical education; and (b) analyze the influence of students' attitudes towards physical education and their motivation to engage in community sports. The present study can yield meaningful implications for PES programming, particularly concerning the transfer of motivation processes from-within physical education to community youth sport programming. Such an holistic and integrated approach towards PES participation can help policymakers, schools and sport administrators, as well as teachers, coaches and other decision makers create quality environments that translate into long-lasting participation and the adoption of a healthy lifestyle, as well as multiple positive outcomes (Bandeira et al., 2023; Dudley et al., 2011; Owen et al., 2022)

Findings highlight the fact this sample of Portuguese adolescent students showcased higher levels of intrinsic motivation than extrinsic motivation, which can be interpreted by considering diverse variables that determine quality physical education programming. Physical education teachers' ability to fulfill students' needs for relatedness, autonomy and increased perceived competence is known to be paramount for intrinsic motivation amongst youth cohorts (Llanos-Muñoz et al., 2023; Saugy et al., 2019; Sun et al., 2017). Previous studies have emphasized the need for physical education teachers to create a mastery-oriented climate instead of a performance-oriented one by relying on autonomy supportive behaviors (Abós et al., 2022; Carcamo-Oyarzun et al., 2023; Estevan et al., 2020; Simonton et al., 2024). Hence, a mastery-oriented climate can provide meaningful opportunities for students to become intrinsically motivated towards PES (Fernández-Bustos et al., 2024), which may help explain these findings.

Nonetheless, the Sheffe's post-hoc test showed significant differences concerning external regulation between students aged 12 and 14, which may warrant attention. Notably, variations regarding students' external regulation indexes throughout adolescence may reflect different teachers' profiles and behaviors (Burgueño et al., 2022; De Meyer et al., 2016). It should be noted that teachers, including physical education teachers, within the Portuguese educational system have in many cases unstable positions and rarely stay in same school for extended periods of time, which can impact their well-being and burnout (Mota et al., 2021; Castro Silva et al., 2023). Hence, such unstable career prospects can help explain why there may be varying teaching practices, motivational climates and students' external regulation indexes. Can a physical education teacher who faces unpredictability (e.g., employment, school, housing, family life), lacks organizational support (e.g., motivations and rewards to develop quality programming), as well as faces

challenges in terms of their well-being and burnout create positive motivational climates? Thus, mastery-oriented climates and intrinsically motivated students may also come at the cost of appropriate working conditions.

Moreover, physical education teachers who resort to need-thwarting behaviors, particularly autonomy thwarting, competence thwarting and relatedness thwarting may create environments contingent on external regulation that may subsequently lead to amotivation. Based on previous notions, is it probable that amotivated physical education teachers foster positive motivational climates? A more ecological understanding about students' perceptions and teaching practices may be needed. Beyond curriculum-centered approaches towards increasing the quality of PES programming, efforts may need to be deployed towards understanding the processes and mechanisms associated with a pedagogy that prioritizes students' needs and interests as active learners, as well as that enables them to explore possibilities to move bodies across diverse spaces-times (Moy et al., 2015). It should be noted that scholars across diverse socio-cultural contexts have raised the need to consider how politics, social norms and culture impact PES programming, and enable-hinder meaningful opportunities for youth development (Annerstedt, 2008; Chepyator-Thomson, 2014; Evans, 2014).

Interestingly, male students obtained significantly higher average scores than females on the demotivation and external regulation subscales. Previous research has highlighted that girls (a) experience higher levels of demotivation and external regulation than boys, as well as (b) suffer discrimination and face negative experiences in PES (e.g., power of heteronormative communication; Brazier et al., 2025; Organista et al., 2024), which does not corroborate this finding. It is important to note that PES programming can also place pressures on youth (e.g., performance-oriented climates, normative comparisons), create negative environments (e.g., unhealthy masculinity) and induce need-thwarting behaviors, which may also impact male students. Indeed, PES has been postulated as a gendered and heteronormative discipline that can harm diverse youth cohorts (Metcalfe, 2018; Mitchell et al., 2013). The fact that boys have in some cases additional opportunities to develop in physical education when compared to girls, because they are more competitive, fully able and competent may also help explain this finding (Hortigüela-Alcalá et al., 2021). By upholding a masculinized physical education subculture, teachers may be placing significant pressures on boys when compared to girls and impacting their motivation, which is cause for concern.

Additionality, findings highlighted that mastery-oriented climates have a significant influence on students' attitudes towards physical education, which also positively influenced intrinsic motivation towards participation in community youth sport programs, which is supported by previous studies (Farias et al., 2019; Säfvenbom et al., 2014; Wallhead et al., 2014). These findings highlight the need to position physical education-community youth sport programs as inseparable variables in terms of policy,

research and practice (Kay et al., 2024). Extending Kay's et al. (2024) arguments on the need to revisit the concepts of youth sport participation, retention, and dropout, efforts may also need to be developed towards investigating and intervening with physical education-community youth sport programs. Such an integrated approach to understand motivational processes and attitudes may help reduce sustained disengagement and dropout across diverse youth cohorts (Emmonds et al., 2023; Moulds et al., 2022). Collaborative efforts to design physical education and community youth sport programs that include policymakers, administrators, as well as teachers and coaches may need be needed. Such collaborative efforts may create solid grounds for *programmatic redundancy*, which translates into consistent, articulated and coherent plans and strategies employed by schools and youth sport organizations. The entanglement between policy-research-practice needs to be carefully considered in order to support PES to overcome contemporary challenges such as students' amotivation and physical inactivity.

Findings showcase that performance-oriented climates do not have a statistically significant relationship with positive attitudes towards physical education. Moreover, positive attitudes towards physical education did not have a significant relationship with extrinsic motivation and amotivation. Thus, one might question: how does performance and competition (i.e., when used to focus on results and winning) become relevant for PES programming? Indeed, scholars have argued the need to develop pedagogical approaches centered on students, their needs and interests (Metz et al., 2024). Current trends regarding physical (in)activity, dropout and participation in community youth sport programs may facilitate an understanding about how teaching practice has yet, in some cases, to follow evidence-based recommendations and impact the status quo (Emmonds et al., 2023).

Conclusions

The present study inherently includes several limitations that need to be acknowledged. First, the characteristics of the sample impact the extent to which these findings can be generalizable and are representative of diverse populations cohorts (e.g., diverse gender identities, sexual orientations, ethnicities/races). Second, the characteristics of the sample (e.g., Portuguese districts represented) also impact the extent to which certain inferences can be made. Finally, aligning teachers' and students' perceptions could have enabled a better comprehension of PES programming.

In light of the findings of the present study, efforts may be needed towards creating mastery-oriented climates across PES programming that can (a) induce positive attitudes towards physical education; (b) help students become intrinsically motivated towards PES and sustain such motivation, as well as (c) facilitate engagement in community youth sport programs. To achieve such outcomes, *programmatic redundancy* may serve the purpose of aligning agendas, organizational plans and pedagogical practices. Moving forward, future

studies may attempt to understand how working conditions amongst other socio-cultural factors impact teachers and coaches' practices towards creating positive motivational climates, as well as students' perceptions. Studies that examine if/how *programmatic redundancy* occurs across socio-cultural contexts may also be needed. Such studies could assess the relationship between *programmatic redundancy* and students' perceptions of attitudes towards physical education and motivation towards PES. Ultimately, more research that considers geopolitical and socio-cultural variables is needed to enable a comprehensive understanding of the entanglement between policy-research-practice. Hopefully, the present study can serve a prompt to challenge scholars to question the status quo and increase opportunities for youth to develop, become healthy, as well as live sustainable and fulfilling lives.

Disclosure Statement

No potential conflict of interest was reported by the authors.

Funding

This work was supported by the National Funds through the FCT-Fundação para a Ciência e a Tecnologia, I.P., under the scope of the project UIDB/05198/2020 (Center for Research and Innovation in Education, inED).

Data Availability Statement

The data that support the findings of this study are available from the corresponding author, [PP], upon reasonable request.

References

Abós, Á., Burgueño, R., García-González, L., & Sevil-Serrano, J. (2022). Influence of internal and external controlling teaching behaviors on students' motivational outcomes in physical education: Is there a gender difference? *Journal of Teaching in Physical Education*, *41*(3), 502-512. https://doi.org/10.1123/jtpe.2020-0316

Annerstedt, C. (2008). Physical education in Scandinavia with a focus on Sweden: a comparative perspective. *Physical Education and Sport Pedagogy*, *13*(4), 303–318. https://doi.org/10.1080/17408980802353347

Baek, S., & Kim, G. C. (2024). Students' attitudes toward physical activity and physical education bring differences. *Journal of Physical Education, Recreation &*

Dance, *95*(9), 54–55. https://doi.org/10.1080/07303084.2024.2400010

Bedard, C., King-Dowling, S., Obeid, J., Timmons, B., & Ferro, M. (2022). Correlates of moderate-to-vigorous physical activity in children with physical illness and physical–mental multimorbidity. Health Education & Behavior, 49(5), 780-788. https://doi.org/10.1177/10901981221100697

Biddle, S., Cury, F., Goudas, M., Sarrazin, P., Famose, J.P., & Durand, M. (1995). Development of scales to measure perceived physical education class climate: A cross-national project. *British Journal of Educational Psychology*, 65(3), 341–358. https://doi.org/10.1111/j.2044-8279.1995.tb01154.x

Blain, D. O., Standage, M., & Curran, T. (2022). Physical education in a post-COVID world: A blended-gamified approach. *European Physical Education Review, 28*(3), 757-776. https://doi.org/10.1177/1356336X221080372

Brazier, R., Fitzgerald, H., & Stride, A. (2025). 'There's nothing wrong with me': experiencing Physical Education at the intersections of disability, ethnicity and gender. *Physical Education and Sport Pedagogy*. Advance online publication. https://doi.org/10.1080/17408989.2025.2449821

Brinkley A. J. (2024). Physical activity, sports participation and school exclusion: An analysis of the millennium cohort study. *The British Journal of Educational Psychology*, *94*(2), 571–585. https://doi.org/10.1111/bjep.12664

Bryan, C. L., & Solmon, M. A. (2012). Student motivation in physical education and engagement in physical activity. *Journal of Sport Behavior*, 35, 267-285.

Bruner, M. W., McLaren, C. D., Sutcliffe, J. T., Gardner, L. A., Lubans, D. R., Smith, J. J., & Vella, S. A. (2023). The effect of sport-based interventions on positive youth development: A systematic review and meta-analysis. *International Review of Sport and Exercise Psychology*, *16*(1), 368–395. https://doi.org/10.1080/1750984X.2021.1875496

Burgueño, R., García-González, L., Abós, Á., & Sevil-Serrano, J. (2022). Students' motivational experiences across profiles of perceived need-supportive and need-thwarting teaching behaviors in physical education. *Physical Education and Sport Pedagogy*, *29*(1), 82–96. https://doi.org/10.1080/17408989.2022.2028757

Burns, R. D., Bai, Y., Podlog, L. W., Brusseau, T. A., & Welk, G. J. (2023). Associations of physical activity enjoyment and physical education enjoyment with segmented daily physical activity in children: Exploring tenets of the trans-contextual model of motivation. *Journal of Teaching in Physical Education*, *42*(1), 184-188. https://doi.org/10.1123/jtpe.2021-0263

Carcamo-Oyarzun, J., Herrmann, C., Gerlach, E., Salvo-Garrido, S., & Estevan, I. (2023). Motor competence, motivation and enjoyment in physical education to profile children in relation to physical activity behaviors. *Physical Education and Sport Pedagogy*. Advance online publication.

https://doi.org/10.1080/17408989.2023.2265399

Castro Silva, J., Peixoto, F., Galhoz, A., & Gaitas, S. (2023). Job demands and resources as predictors of well-being in Portuguese teachers. *European Journal of Teacher Education*. Advance online publication. https://doi.org/10.1080/02619768.2023.2288552

Chen, R., Wang, L., & Wang, B. (2020). Motivational climate, need satisfaction, self-determined motivation, and physical activity of students in secondary school physical education in China. *BMC Public Health, 20*, 1-14. https://doi.org/10.1186/s12889-020-09750-x

Chepyator-Thomson, J. R. (2014). Public policy, physical education and sport in English-speaking Africa. *Physical Education and Sport Pedagogy*, *19*(5), 512–521. https://doi.org/10.1080/17408989.2014.891579

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. Plenum.

De Meyer, J., Soenens, B., Aelterman, N., De Bourdeaudhuij, I., & Haerens, L. (2016). The different faces of controlling teaching: implications of a distinction between externally and internally controlling teaching for students' motivation in physical education. *Physical Education and Sport Pedagogy*, *21*(6), 632–652. https://doi.org/10.1080/17408989.2015.1112777

Dudley, D., Okely, A., Pearson, P., & Cotton, W. (2011). A systematic review of the effectiveness of physical education and school sport interventions targeting physical activity, movement skills and enjoyment of physical activity. *European Physical Education Review, 17*(3), 353-378. https://doi.org/10.1177/1356336X11416734 (Original work published 2011)

Emmonds, S., Till, K., Weaving, D., Burton, A., & Lara-Bercial, S. (2023). Youth sport participation trends across Europe: Implications for policy and practice. *Research Quarterly for Exercise and Sport*, *95*(1), 69–80. https://doi.org/10.1080/02701367.2022.2148623

Estevan, I., Bardid, F., Utesch, T., Menescardi, C., Barnett, L. M., & Castillo, I. (2020). Examining early adolescents' motivation for physical education: associations with actual and perceived motor competence. *Physical Education and Sport Pedagogy*, *26*(4), 359–374. https://doi.org/10.1080/17408989.2020.1806995

Evans, J. (2014). Neoliberalism and the future for a socio-educative physical education. *Physical Education and Sport Pedagogy*, *19*(5), 545–558. https://doi.org/10.1080/17408989.2013.817010

Farias, C., Wallhead, T., & Mesquita, I. (2019). "The project changed my life": Sport education's transformative potential on student physical literacy. *Research Quarterly for Exercise and Sport*, *91*(2), 263–278. https://doi.org/10.1080/02701367.2019.1661948

Fernández-Bustos, J. G., Cuesta-Valera, P., Zamorano-García, D., & Simón-Piqueras, J. Á. (2024). Health-based physical education in an elementary school: effects on physical self-concept, motivation, fitness and physical activity. *Physical Education and Sport Pedagogy*. Advance online publication. https://doi.org/10.1080/17408989.2024.2342826

Fredrick, R. N., III, Marttinen, R., Johnston, K., & Fernandez, J. (2022). Broadening horizons: A case study of an international partnership to promote sport, positive youth development, and literacy. *Journal of Teaching in Physical Education*, *41*(2), 223-231. https://doi.org/10.1123/jtpe.2021-0012

García-González, L., Sevil-Serrano, J., Abós, A., Aelterman, N., & Haerens, L. (2019). The role of task and ego-oriented climate in explaining students' bright and dark motivational experiences in Physical Education. *Physical Education and Sport Pedagogy*, *24*(4), 344–358. https://doi.org/10.1080/17408989.2019.1592145

Gutiérrez, M., Tomás, J. M., & Calatayud. P. (2018). Determinantes de la práctica deportiva de los adolescentes en horario extraescolar. *Revista Iberoamericana de Psicología del Ejercicio y el Deporte*, 13(1), 91-100.

Guthold, R., Stevens, G. A., Riley, L. M., & Bull, F. C. (2018). Worldwide trends in insufficient physical activity from 2001 to 2016: A pooled analysis of 358 population-based surveys with 1·9 million participants. *The Lancet Global Health*, *6*(10), 1077–1086. https://doi.org/10.1016/S2214-109X(18)30357-7

Guthold, R., Stevens, G., Riley, L., & Bull, F. (2020). Global trends in insufficient physical activity among adolescents: A pooled analysis of 298 population-based surveys with 1·6 million participants. *The Lancet Child & Adolescent Health, 4*(1), 23-35. https://doi.org/10.1016/S2352-4642(19)30323-2

Hortigüela-Alcalá, D., Barba-Martín, R. A., González-Calvo, G., & Hernando-Garijo, A. (2021). 'I hate physical education': An analysis of girls' experiences throughout their school life. *Journal of Gender Studies*, *30*(6), 648–662. https://doi.org/10.1080/09589236.2021.1937077

Huhtiniemi, M., Sääkslahti, A., Tolvanen, A., Watt, A., & Jaakkola, T. (2022). The relationships among motivational climate, perceived competence, physical performance, and affects during physical education fitness testing lessons. *European Physical Education Review, 28*(3), 594-612. https://doi.org/10.1177/1356336X211063568

Iglesias, D., Fernandez-Rio, J., & Rodríguez-González, P. (2023). Moderate-to-vigorous physical activity in physical education: A review of reviews. *Journal of Teaching in Physical Education*, *42*(4), 640-646. https://doi.org/10.1123/jtpe.2022-0084

İlker, G. E., & Demirhan, G. (2012). The effects of different motivational climates on students' achievement goals, motivational strategies and attitudes toward physical education. *Educational Psychology*, *33*(1), 59–74.

https://doi.org/10.1080/01443410.2012.707613

Jaakkola, T., Ntoumanis, N., & Liukkonen, J. (2016). Motivational climate, goal orientation, perceived sport ability, and enjoyment within Finnish junior ice hockey players. *Scandinavian Journal of Medicine & Science in Sports*, *26*(1), 109–115. https://doi.org/10.1111/sms.12410

Johnson, I. L., & Ginicola, M. (2021). Quality physical education: The missing ingredient for success. *Journal of Physical Education, Recreation & Dance*, *92*(4), 3–4. https://doi.org/10.1080/07303084.2021.1886847

Kay, J., Elliott, S., & Côté, J. (2024). (Re)defining youth sport participation. *International Journal of Sport Policy and Politics*, *16*(4), 715–725. https://doi.org/10.1080/19406940.2024.2377543

Kirk, D. (2005). Physical education, youth sport and lifelong participation: The importance of early learning experiences. *European Physical Education Review, 11*(3), 239-255. https://doi.org/10.1177/1356336X05056649

Lee, J. E., Pope, Z., & Gao, Z. (2016). The role of youth sports in promoting children's physical activity and preventing pediatric obesity: A systematic review. *Behavioral Medicine*, *44*(1), 62–76. https://doi.org/10.1080/08964289.2016.1193462

Leo, F. M., Mouratidis, A., Pulido, J. J., López-Gajardo, M. A., & Sánchez-Oliva, D. (2020). Perceived teachers' behavior and students' engagement in physical education: the mediating role of basic psychological needs and self-determined motivation. *Physical Education and Sport Pedagogy*, *27*(1), 59–76. https://doi.org/10.1080/17408989.2020.1850667

Llanos-Muñoz, R., Vaquero-Solís, M., López-Gajardo, M. Á., Sánchez-Miguel, P. A., Tapia-Serrano, M. Á., & Leo, F. M. (2023). Intervention programme based on self-determination theory to promote extracurricular physical activity through physical education in primary school: A study protocol. *Children (Basel, Switzerland)*, *10*(3), 504. https://doi.org/10.3390/children10030504

Malcolm, D., Marcén, C., & Pullen, E. (2023). The World Health Organization, physical activity and the contradictions of neoliberal health promotion. *International Journal of Sport Policy and Politics*, *16*(4), 593–607. https://doi.org/10.1080/19406940.2023.2242874

Martinek, T., & Hemphill, M. A. (2020). The evolution of Hellison's teaching personal and social responsibility model in out-of-school contexts. *Journal of Teaching in Physical Education*, *39*(3), 331-336. https://doi.org/10.1123/jtpe.2019-0222

Mazzoli, E., Xu, J., & Barnett, L. M. (2024). Physical literacy is associated with children's adherence to physical activity guidelines during COVID-19. *Physical Education and Sport Pedagogy*. Advance online publication. https://doi.org/10.1080/17408989.2024.2335143

Metcalfe, S. (2018). Adolescent constructions of gendered identities: The role of sport and (physical) education. *Sport, Education and Society, 23*(7), 681–693. https://doi.org/10.1080/13573322.2018.1493574

Metz, S., Zander, B., & Hunger, I. (2024). The suffering of students in physical education. Unsettling experiences and situational conditions. *Physical Education and Sport Pedagogy*. Advance online publication. https://doi.org/10.1080/17408989.2024.2352825

Mitchell, F., Gray, S., & Inchley, J. (2013). 'This choice thing really works … ' Changes in experiences and engagement of adolescent girls in physical education classes, during a school-based physical activity programme. *Physical Education and Sport Pedagogy*, *20*(6), 593–611. https://doi.org/10.1080/17408989.2013.837433

Mota, A. I., Lopes, J., & Oliveira, C. (2021). Teachers voices: A qualitative study on burnout in the Portuguese educational system. *Education Sciences*, *11*(8), 392. https://doi.org/10.3390/educsci11080392

Moulds, K., Galloway, S., Abbott, S., & Cobley, S. P. (2022). Youth sport dropout according to the process-person-context-time model: A systematic review. *International Review of Sport and Exercise Psychology*, *17*(1), 440–481. https://doi.org/10.1080/1750984X.2021.2012817

Moy, B., Renshaw, I., & Davids, K. (2015). The impact of nonlinear pedagogy on physical education teacher education students' intrinsic motivation. *Physical Education and Sport Pedagogy*, *21*(5), 517–538. https://doi.org/10.1080/17408989.2015.1072506

Nicholls, J. G. (1984). Achievement motivation: Conceptions of ability, subjective experience, task choice, and performance. *Psychological Review, 91*(3), 328–346. https://doi.org/10.1037/0033-295X.91.3.328

Ntoumanis, N., & Standage, M. (2009). Motivation in physical education classes: A self-determination theory perspective. *Theory and Research in Education, 7*(2), 194-202. https://doi.org/10.1177/1477878509104324

Owen, K. B., Foley, B. C., Wilhite, K., Booker, B., Lonsdale, C., & Reece, L. J. (2022). Sport participation and academic performance in children and adolescents: A systematic review and meta-analysis. *Medicine and Science in Sports and Exercise*, *54*(2), 299–306. https://doi.org/10.1249/MSS.0000000000002786

Pascoe, M., Bailey, A., Craike, M., Carter, T., Patten, R., Stepto, N., Parker, A. (2020). Physical activity and exercise in youth mental health promotion: A scoping review. *BMJ Open Sport & Exercise Medicine, 6*(1), 1-11. https://doi.org/10.1136/ bmjsem-2019-000677

Pelletier, L. G., Rocchi, M. A., Vallerand, R. J., Deci, E. L., & Ryan, R. M. (2013). Validation of the revised sport motivation scale (SMS-II). *Psychology of Sport and Exercise*, 14(3),329–341. http://doi.org/10.1016/j.psychsport.2012.12.002

Pereira P., Santos F., & Marinho D.A. (2020) Examining Portuguese High School Students' Attitudes Toward Physical Education. *Frontiers in Psychology*, 11, 1-11. https://doi: 10.3389/fpsyg.2020.604556

Pereira, P., Santos, F., & Marinho, D. A. (2022). Portuguese students' perceptions about the motivational climate in physical education. *Journal of Teaching in Physical Education*, *42*(2), 313-322. https://doi.org/10.1123/jtpe.2021-0149

Pereira, P., Santos, F., & Marinho, D. A. (2024). Validation of the sport motivation scale-II: Implications for the Portuguese youth sport system. *Sage Open*, *14*(1), 1-10. https://doi:10.1177/21582440231218512

Pereira, P., Santos, F., & Marinho, D. A. (2023). Portuguese students' perceptions about the motivational climate in physical education. *Journal of Teaching in Physical Education*, *42*(2), 313-322. https://doi.org/10.1123/jtpe.2021-0149

Pereira, P., Marinho, D. A., & Santos, F. (2021). Positive motivational climates, physical activity and sport participation through self-determination theory: Striving for quality physical education. *Journal of Physical Education, Recreation & Dance*, *92*(6), 42–47. https://doi.org/10.1080/07303084.2021.1936307

Pons, J., Ramis, Y., Torregrossa, M., Sarrazin, P., Maltagliati, S., Krommidas, C., … Papaioannou, A. G. (2023). Physical education motivational climate, on the achievement goals, and intrinsic motivation of students: a multilevel approach. *International Journal of Sport and Exercise Psychology*. Advance online publication. https://doi.org/10.1080/1612197X.2023.2224841

Ramires, V. V., Dos Santos, P. C., Barbosa Filho, V. C., Bandeira, A. D. S., Marinho Tenório, M. C., de Camargo, E. M., Ravagnani, F. C. P., Sandreschi, P., de Oliveira, V. J. M., Hallal, P. C., & Silva, K. S. (2023). Physical education for health among school-aged children and adolescents: A scoping review of reviews. *Journal of Physical Activity & Health*, *20*(7), 586–599. https://doi.org/10.1123/jpah.2022-0395

Rhodes, R. E., Janssen, I., Bredin, S. S. D., Warburton, D. E. R., & Bauman, A. (2017). Physical activity: Health impact, prevalence, correlates and interventions. *Psychology & Health*, *32*(8), 942–975. https://doi.org/10.1080/08870446.2017.1325486

Roberts, G.C. (1992). Motivation in sport and exercise: Conceptual constraints and conceptual convergence. In G.C. Roberts (ed.), *Motivation in sport and exercise* (pp. 3-30). Human Kinetics.

Rodrigues, F., Pelletier, L., Rocchi, M., Cid, L., Teixeira, D., & Monteiro, D. (2021). Adaptation and validation of a Portuguese version of the sports motivation scale-II (SMS-II-P) showing invariance for gender and sport type. *Perceptual and Motor Skills*, 128(6), 2669–2687. http://doi.org/10.1177/00315125211039362

Russell S. T. (2016). Social justice, research, and adolescence. *Journal of Research on*

Adolescence: The Official Journal of the Society for Research on Adolescence, *26*(1), 4–15. https://doi.org/10.1111/jora.12249

Säfvenbom, R., Haugen, T., & Bulie, M. (2014). Attitudes toward and motivation for PE. Who collects the benefits of the subject? *Physical Education and Sport Pedagogy*, *20*(6), 629–646. https://doi.org/10.1080/17408989.2014.892063

Sañudo, B., Sánchez-Oliver, A.J., Fernández-Gavira, J., Gaser, D., Söcker, N., Peralta, M., Marques, A., Papakonstantinou, S., Nicolini, C., & Sitzberger, C. (2024). Physical and psychosocial benefits of sports participation among children and adolescents with chronic diseases: A systematic review. *Sports Medicine – Open, 10,* 1-28. https://doi.org/10.1186/s40798-024-00722-8

Saugy, J. J., Drouet, O., Millet, G. P., & Lentillon-Kaestner, V. (2019). A systematic review on self-determination theory in physical education. *Translational Sports Medicine*, *3*(2), 134–147. https://doi.org/10.1002/tsm2.121

Shirotriya, A. K., & Beighle, A. (2023). Physical education moving from marginalized to materialized. *Journal of Physical Education, Recreation & Dance*, *94*(9), 39–43. https://doi.org/10.1080/07303084.2023.2260440

Silverman, S. (2017). Attitude research in physical education: A review. *Journal of Teaching in Physical Education*, *36*(3), 303-312. https://doi.org/10.1123/jtpe.2017-0085

Simonton, K. L., Wallhead, T., & Kern, B. D. (2024). Relationships between students' emotional experiences and cognitive and physical achievement during a middle school hybrid sport education tactical model season. *Journal of Teaching in Physical Education*, *43*(3), 405-415. https://doi.org/10.1123/jtpe.2023-0022

Standage, M., Duda, J., & Ntoumanis, N. (2003a). A model of contextual motivation in physical education: Using constructs from selfdetermination and achievement goal theories to predict physical activity intentions. *Journal of Educational Psychology*, 95(1), 97–110. https://doi.org/10.1037/0022-0663.95.1.97

Standage, M., Duda, J., & Ntoumanis, N. (2003b). Predicting motivational regulations in physical education: The interplay between dispositional goal orientations, motivational climate and perceived competence. *Journal of Sports Sciences*, 21(8), 631–647. https://doi.org/10.1080/0264041031000101962

Subramaniam, P. R., and Silverman, S. (2000). The development and validation of an instrument to assess student attitudes toward physical education. *Measurement in Physical Education and Exercise Science*, 4, 29–43. https://doi:10.1207/S15327841Mpee0401_4

Subramaniam, P. R., and Silverman, S. (2007). Middle school students' attitudes toward physical education. *Teaching and Teacher Education*, 23, 602–611. https://doi:10.1016/j.tate.2007.02.003

Sun, H., Li, W., & Shen, B. (2017). Learning in physical education: A self-determination

theory perspective. *Journal of Teaching in Physical Education*, *36*(3), 277-291. https://doi.org/10.1123/jtpe.2017-0067

Ulstad, S. O., Halvari, H., & Deci, E. L. (2018). The role of students' and teachers' ratings of autonomous motivation in a self-determination theory model predicting participation in physical education. *Scandinavian Journal of Educational Research*, *63*(7), 1086–1101. https://doi.org/10.1080/00313831.2018.1476917

Varea, V., Riccetti, A., González-Calvo, G., Siracusa, M., & García-Monge, A. (2023). Physical education and COVID-19: What have we learned? *Curriculum Studies in Health and Physical Education*, *15*(3), 340–357. https://doi.org/10.1080/25742981.2023.2241443

Wallhead, T. L., Garn, A. C., & Vidoni, C. (2014). Effect of a sport education program on motivation for physical education and leisure-time physical activity. *Research Quarterly for Exercise and Sport*, *85*(4), 478–487. https://doi.org/10.1080/02701367.2014.961051